



**RMP**  
**Technical Review Committee**  
**September 23th, 2014**  
**San Francisco Estuary Institute**  
**DRAFT Meeting Summary**

**Attendees**

Bridgette DeShields, Arcadis/WSPA  
 Ian Wren, San Francisco Baykeeper  
 Karen Taberski, SF RWQCB  
 Eric Dunlavey, City of San Jose  
 Tom Hall, EOA, Inc. (South Bay Dischargers)  
 Mike Connor, EBDA  
 Chris Sommers, EOA, Inc. (BASMAA)  
 Bonnie de Berry, EOA, Inc. (BASMAA)  
 Naomi Feger, SFB RQWCB  
 Maureen Downing-Kunz, USGS

Don Yee, SFEI  
 Ellen Willis-Norton, SFEI  
 Jay Davis, SFEI  
 Phil Trowbridge, SFEI  
 Dave Senn, SFEI  
 Rebecca Sutton, SFEI  
 Lester McKee, SFEI  
 Jim Kelly, SFEI

**Call In**

Robert Lawrence, US Army Corps of Engineers

**I. Information: Committee Member Updates [Bridgette Deshields]**

Chris Sommers informed the TRC that Dave Ceppos, Senior Mediator at the Center for Collaborative Policy, has completed interviews of TRC members that he is using to facilitate the RMP charter development. He will report the results to the Steering Committee on November 13, 2014.

**II. Decision: Approval of Summary from June 17, 2014 TRC Meeting [Bridgette Deshields]**

Tom Hall asked about why aquatic toxicity changed from a 5 year monitoring cycle to biennial sampling when there was 10 to 15 years of no discernible aquatic toxicity. Bridgette Deshields responded that the EPA is interested in more frequent sampling and it would help identify if any new pollutants were added to the Bay. Jay Davis added that it is inexpensive parameter to analyze and Mike Connor supported biennial monitoring. Tom stated that he would like to see a clearer rationale for increasing the frequency of aquatic toxicity testing if the RMP is moving toward a design that provides more useful information.

Phil Trowbridge noted that it would be useful to note any decisions that were made after TRC meetings. For example, after the June 17<sup>th</sup> meeting the TRC agreed to use the \$76,000 from the reserve to fund the remaining special studies. Chris Sommers agreed

and added that Phil should inform the TRC how he is going to frame the TRC's decisions and suggestions to the SC. Phil stated that Dave Ceppos is working on a standard procedure to facilitate that communication.

Items to Approve:

*Karen Taberski motioned to approve the TRC meeting summary with the modifications, Tom Mumley seconded, and the June 17<sup>th</sup> TRC summary was unanimously approved.*

Action Items:

1. Phil Trowbridge will add the table that details the changes to the S&T monitoring design to the RMP webpage.
2. Phil Trowbridge will add a parenthetical note to the minutes of the June 17, 2014 TRC meeting to document the decision made by the TRC over email regarding the recommended special studies for 2015.

**III. Information: Steering Committee Report [Phil Trowbridge]**

Phil Trowbridge noted that the SC agreed to not fund the second year of the benthic mesohaline study; agreed to fund the Nutrients Strategy and Small Tributaries Loading Strategy at \$470,000 each; and agreed to use funds from the unencumbered reserve to fund the remaining special studies. Additionally, the SC allocated \$23,000 from the reserve to fund a study on Se in sturgeon muscle; \$26,000 from the reserve to complete a study on the correlation between Se in sturgeon tissue and sturgeon eggs; and \$20,000 to support CEC Strategy development. The SC also approved changes to the S&T monitoring design.

The SC discussed fee increases for the 2016-2018 cycle. In the past, there has been a 2% increase per year. Phil is putting a document together for the next SC meeting that documents what the RMP budget would be with various fee increases.

**IV. Information: Proposed Bay Margins Sampling Plan**

Don Yee presented a potential margins sampling plan. He began his presentation by stating the RMP currently excludes the margins, which in Lower South Bay is three quarters of the total area. The sample sites would be chosen using a GRTS sample draw, similar to the Bay S&T design, which is a spatially distributed and unbiased design. The nearest neighbor would be at least 1 km away. Don proposed an initial sampling effort that included sampling 40 margin sites within 2 events. The cost of each event would be between \$165,000 and \$181,000. Don suggested a final density of 64 to 128 stations per segment. Don stated that the decision to collect composite samples depends on whether the TRC is interested in small scale variation. The analytical cost would be \$435,000 if ancillary parameters, TMDL pollutants, trace metals, organics, CECs, toxicity, and benthos were analyzed.

Don noted that sampling will likely begin half-way through 2015. Phil Trowbridge suggested continuing the margins discussion at the December TRC meeting and fine-

tuning the sampling design in March. Bridgette stated that she would like to know how much savings there was from changing the S&T design.

Discussion:

Karen Taberski noted that Bay Protection sampled the margins for six times less than the cost Don proposed. The cost per site was \$1,488 per site for the EPA's Environmental Monitoring and Assessment Program study. Don Yee said that he consulted with Paul Salop at AMS about the field sampling costs, but will talk to Karen's contacts to see if there is a way to reduce the costs.

Chris Sommers stated that Don should develop sample site exclusion criteria; he wondered if there were other reasons to not sample a site other than it is not logistically feasible. Lester McKee provided an example, asking whether a site next to the end of a storm drain should be included or removed from the design. Phil asked if superfund sites should be included; Chris stated that he would suggest including sites like Hunter's Point because it is part of the distribution.

Bridgette Deshields noted that the RMP should not sample a site that is already being monitored by the Water Board or another agency. Chris also suggested that Don talk with Josh Collins about the commonalities between CRAM and margins field sampling.

Phil Trowbridge noted that the sampling design for future years depends on whether the variability in concentrations between sites is reasonable. Chris stated that the RMP must be ready to embrace the variability in the data. Lester noted that there are margins data collected by other agencies that could be used to help compare and interpret the results. Phil and Chris agreed that the data could be used to help compare the results, but could not be included in the statistical analysis. Chris noted that bringing in outside data could help determine what the sampling design may be missing. Chris reminded the group that the data will not be normally distributed.

Karen Taberski stated that Tom Mumley and Naomi Feger would like the margins sampling to be both a probabilistic and targeted design. The Water Board would like to have targeted sampling below watersheds with known problems where management actions may take place in the future. Don responded that he is aware that targeted sampling will take place, but that the process for choosing the locations will be separate from the probabilistic GRTS design. Jay Davis noted that choosing those targeted margin sampling locations is a priority for the PCB strategy.

Bridgette stated that if the dredging community starts using the margins data set to set disposal limits, the limit should probably no longer be the 90% UTL of the 99<sup>th</sup> percentile because the number would be too high. Rob Lawrence agreed that there needs to be a discussion of how the new data will affect the dredging disposal limits.

*Parameters to Include*

The TRC suggested including ancillary parameters, TMDL pollutants, and trace metals. The TRC agreed not to include toxicity, benthos, and legacy pesticide sampling. The

TRC also suggested including PAHs in the sampling effort. Chris suggested archiving samples that could later be used for legacy pesticides, current use pesticides, and PBDE analyses. Rob Lawrence suggested including any parameters that the dredging community includes in their monitoring design.

Action Items:

3. Don Yee will talk to Karen Taberski's contacts to see if there is a way to reduce the costs for margins field sampling.
4. Don Yee will develop sample site exclusion criteria for margins monitoring.
5. Phil Trowbridge will determine the amount of savings there was from changing the S&T design.

**V. Information: Redesign of the POC Monitoring Program for the 2015 Wet Season [Lester McKee]**

Lester McKee began his presentation by stating the Small Tributaries Loading Strategy (STLS) is shifting its focus from loading studies to a targeted reconnaissance study to find high leverage watersheds. The STLS is finishing a report on the 2014 loading study and in 2015 it will produce a report that synthesizes the results loading studies from 2001 to 2014 and provides a rationale for moving to a reconnaissance design.

The 2015 reconnaissance study's field locations are currently being chosen. The sites chosen will be in known polluted areas or in areas that are potentially polluted. An additional 20 to 25 data points will be added each year using the reconnaissance design. At least two larger watersheds will be sampled, Alameda and San Francisco Creeks, because the 10 largest watersheds are responsible for 73% of the water that enters the Bay. Lester noted that composite samples rather than discrete samples will be collected. Additionally, in 2015 remote samplers will also be deployed in 12 locations and compared to the collected water samples.

The Sources Pathways and Loading Workgroup (SPLWG) will also continue to work on the RWSM in 2015. RWSM tasks include improving GIS layers, developing a regional "relative loadings map" with uncalibrated parameters to help pick future reconnaissance sites, and calibrating the models. The 2015 model results will include a range of expected values rather than a single result. The final 2015 tasks include watershed loadings trends strategy support and STLS coordination support.

**VI. Information: Proposed Nutrient Modeling Workplan [Phil Trowbridge]**

Phil Trowbridge stated that Phase I of the nutrient modeling workplan is subembayment modeling and Phase II will be full Bay modeling. The Phase I model will inform any potential changes that need to be made before embarking on Phase II of the model. The workplan follows a structured modeling process recommended by the EPA and other modeling partners. The model is not proprietary and will be available to the community to contribute to and improve. The overall budget is \$3.7 million for six years of work.

Dave Senn then showed data visualization tools for USGS' and SFEI's moored sensors in the Bay. Different parameters can be compared on the same graph at various time frames.

Discussion:

Tom Hall asked about any potential issues with maintaining the model and hosting the model at SFEI. Dave Senn responded that USGS will be responsible for hosting the hydrodynamic model and Deltares is offering to host the complete model on their website and manage different versions of the model.

**VII. Information: Suspended Sediment Fluxes in South San Francisco Bay**  
**[Maureen Downing-Kunz]**

Maureen Downing-Kunz provided the TRC with an updated in Suspended Sediment work in San Francisco Bay. The current suspended sediment monitoring stations include Mallard Island, Benicia Bridge, Richmond Bridge, Alcatraz, Pier 17, Dumbarton Bridge, and Alviso Slough. However, Alviso Slough is only funded until the end of September by the Coastal Conservancy. Maureen noted that suspended sediment concentration (SSC) monitoring study has been on-going for 20 years and they have observed a clearing trend in Bay waters.

Maureen's team also monitors salinity and Dissolved Oxygen (DO) in the Bay. The collaboration with the Nutrient Strategy has helped install and maintain the Dumbarton Bridge, San Mateo Bridge, and Alviso Slough monitoring stations. DO concentrations are more variable at the perimeter of the Bay than in the main channel. Alviso Slough DO concentrations reach below 5 mg/L (the water quality objective in the Basin Plan). Additionally, the sensors reveal that the lowest DO in the open Bay occurs when the shallow, low DO water drains from the perimeter of the Bay into the open Bay during the end of the spring ebb tide.

Mike Connor asked if Maureen had looked into respiration. She responded that Dave Senn and she are interested in monitoring respiration. Maureen added that her team is also interested in researching the effects of Delta outflow on Lower South Bay sediment flux; measuring the effect of restoration activities on south bay mudflats; running a reference slough study in South Bay; and sampling at the Golden Gate to measure sediment flux.

*Funding*

Maureen stated that her team lost \$225,000 in funding for Corte Madera Creek and the Alviso Slough Stations. Additionally, \$50,000 per year in funding for monitoring Dumbarton Bridge sediment flux was lost. Maureen noted that DO was added to the program, but funding has not increased accordingly.

**VIII. Decision: Funding for USGS Suspended Sediment Monitoring in 2015**  
**[Bridgette Deshields]**

Phil Trowbridge informed the TRC that the RMP contributed to USGS Suspended Sediment and DO monitoring by directing the Army Corps contribution to the RMP to USGS. The RMP funds have stayed level since the beginning of the program and Maureen's team is requesting an additional \$60,000. If the TRC does not agree to raise the RMP's contribution then one of the seven moored sensor stations will no longer be

funded. It is possible that other funding sources may become available, but Maureen will not know until October.

Discussion:

Mike Connor stated that he wants everyone in the Bay working on continuous monitoring to collaborate. He is interested in an integrated moored sensor program in the Bay. Bridgette Deshields suggested approving allocating an additional \$60,000 with the recommendation of creating a coherent monitoring program.

Mike Connor asked Maureen what station would be removed if the TRC did not approve the additional funding. Maureen responded that the Alcatraz and Pier 17 station were close to each other so potentially one could be removed. Phil noted that Pier 17 is a DO station so it should not be removed; Maureen added that Pier 17 is deep so it is easier to see the effects of ocean inflow. Bridgette replied that the dredging community may be using the Alcatraz data since they place dredged sediment in the area.

Mike stated that he does not believe that removing one station will result in a significant loss of useful information; Naomi Feger agreed with Mike. Tom Hall responded that the RMP advocated strongly for adding DO sensors to the stations, which increased the cost of the program. Phil stated that he will talk to Rob Lawrence to learn about the dredging community's interest in the Alcatraz monitoring station and will wait to hear from other funders to see if RMP funds are needed to maintain the program.

Action Items:

6. Phil Trowbridge will talk to Rob Lawrence about the dredging community's interest in the Alcatraz monitoring station and will wait to hear from other funders to see if RMP funds are needed to maintain the program.

**IX. Information: Update on RMP Annual Meeting [Jay Davis]**

Jay Davis stated that the meeting is three weeks away and he is going to touch base with all of the speakers. He will ask the speakers to share their presentations with him to ensure there is no redundancy. Jay will also share the presentations with the moderators and asked the moderators to come up with interesting discussion topics.

**X. Information: Update on RMP Update Report [Jay Davis]**

Jay Davis informed the TRC that the RMP Update is being sent to the printer on Thursday, September 25<sup>th</sup>. A draft of the ebook will be released to the stakeholders at the RMP Annual Meeting. Once feedback is received from the stakeholders, the updated ebook will be finalized by the Steering Committee in November. Mike Connor noted that it would be more useful for the ebook to be released at the meeting. Jay responded that the ebook is a pilot project and the RMP Update is mainly for stakeholder use anyways. Next year the ebook will be released on time to increase the public's interest in the RMP.

**XI. Decision: Theme and Outline for 2015 Pulse Report [Jay Davis]**

Jay Davis informed the TRC that the Steering Committee agreed to create a 2015 Pulse of the Bay on priority contaminants using the same formula as the 2013 Pulse of the Bay

on CECs. The 2015 Pulse would be a companion document to the State of the Estuary Report. The Pulse would contain a management overview quality, a summary of Bay water quality, and profiles on each priority contaminant; it would not include the typical sections on the S&T program and Trends at a Glance. The priority contaminants that Jay wants to include are Hg, PCBs, Cu, Nutrients, Exotic Species, Trash, Se, PAHs, Dioxins, Legacy Pesticides, and Pathogens.

Jay stated that the SFEI graphics department will be working on both the State of the Estuary Report and the Pulse of the Bay in 2015. Therefore, they cannot be released at the time. Jay suggested moving the release of the Pulse up a quarter.

Discussion:

Bridgette Deshields asked if there would be sidebar profiles; Jay replied that Current Use Pesticides would be a sidebar. Mike Connor stated that copying the layout of the 2013 Pulse of the Bay does not make sense because there is not a lot of data about CECs while there is 30 years of data for the priority contaminants that Jay mentioned. Mike suggested that the focus for each priority contaminant should be on load and reservoir estimates and how our understanding of these estimates has changed over time. Jay replied that each profile will spend more time on the elements Mike suggested. Mike added that the Pulse should state what portion of the budget is spent on the priority pollutants versus new contaminants. Jay agreed that the Pulse should make clear what the RMP has learned from monitoring the contaminants and where to go from here.

Mike noted that the schedule is very tight; Jay responded that the summary and management articles can be completed later than the profiles.

**XII. Decision: RMP Fiscal Year Change and its Impact on TRC Meeting Schedule [Phil Trowbridge]**

Phil Trowbridge noted that SFEI moved to the State's fiscal year and to save on audit costs the RMP will do the same. Phil mentioned two time frames for switching from a calendar to a fiscal year: 1) starting in fiscal year 2016 and having a full year of special studies and a half year of operations followed by a half year of special studies and a full year of operations in fiscal year 2017 or 2) simply changing to a fiscal year in 2017. The TRC recommended changing to a fiscal year in 2017. Phil Trowbridge will bring the TRC's recommendation to the Steering Committee.

**XIII. Decision: Funding Request for Updating the Bird Egg Bioaccumulation Report with 2012 Data [Phil Trowbridge]**

Phil Trowbridge informed the TRC of an \$8,000 funding request for adding 2012 data to the 2006/2009 bird egg bioaccumulation report. The funds would cover two weeks of work for data management staff and time to update the report. The TRC approved the use of the funds and Phil will email the Steering Committee to ask for their approval.

Action Items:

7. Phil Trowbridge will email the Steering Committee to ask for their approval of using \$8,000 to include 2012 data in the 2006/2009 bird egg report.

**IVX. Information: Update on Workgroups and Scorecard [Phil Trowbridge]**

Jay Davis mentioned that he is not completely finished with the PCB Synthesis report, but is getting very close. Meg Sedlak will be done with her manuscript on PFCs in Bay biota by December. The Nutrient Conceptual Model will be completed by the end of September.

**I. Decision: Set Next Meeting Date and Agenda Topics**

The next TRC meeting date is December 10<sup>th</sup>, 2014. Chris Sommers stated that it would be useful to have a standing date for TRC meetings, such as the second or third Wednesday of the month.

Discussion:

Tom Hall asked about what the specific modules of the nutrient assessment framework were. Phil Trowbridge stated he will ask Dave Senn and Emily Novick to get back to him. Tom asked that RMP staff inform the TRC of sidebar meetings (e.g., Nutrients meetings) and give the TRC notice of when they are happening.

Action Items:

8. Phil Trowbridge will send out a poll to the TRC to ask if the second or third Wednesday of the month work as a standing date for TRC meetings.
9. Phil Trowbridge stated he will ask Dave Senn and Emily Novick to get back to Tom Hall about what the specific modules of the nutrient assessment framework were.