RMP Technical Review Committee Meeting

June 22, 2010

San Francisco Estuary Institute

Draft Meeting Minutes

Meeting Participants

Mike Connor (EBDA)
Bridgette DeShields (Arcadis (WSPA))
Eric Dunlavey (City of San Jose)
Naomi Feger (SFRWQCB)
Tom Hall (EOA, Inc (South Bay Dischargers))
Mike Kellogg (City and County of San Francisco)
Trish Mulvey (SFEI Board of Directors)
Chris Sommers (EOA, Inc (BASMAA))
Karen Taberski (SFBRWQCB)
Ian Wren (Baykeeper)
Saskia van Bergen (EBMUD) for Francois Rodigari
Rachel Allen (SFEI)
Jay Davis (SFEI)
Ben Greenfield (SFEI)
Jennifer Hunt (SFEI)
Susan Klosterhaus (SFEI)
Sarah Lowe (SFEI)
Lester McKee (SFEI)
Kat Ridolfi (SFEI)
Don Yee (SFEI)

1. **Introductions and Approval of Agenda and Minutes, Review of Action Items**

Jay Davis asked for comments on the March TRC meeting minutes. Karen Taberski noted that the sentence on page 5 that reads "It was noted that recent RMP monitoring has shown no toxicity in Suisun Bay" is incorrect and should be deleted. In response to Tom Hall's question, she noted that a TIE in Suisun Bay was completed in 2001 or 2002, and indicated that copper was the cause of Suisun Bay toxicity.

Karen Taberski made a motion to approve the minutes contingent upon the noted corrections, Mike Kellogg seconded, and the minutes were approved by consensus.

Jay Davis reviewed the action items from the previous meeting. He noted that RMP reports will be posted on the web as they are released. He also mentioned that the Steering Committee (SC) meeting agenda in May was too full to include the recommendation on allocating funds for modeling and the fact sheet plan, and will be addressed in the August 2010 SC meeting. Coordination of fact sheets will continue to move forward. Regarding a broader synthesis on sediment data, Jay Davis noted that he has discussed the possibility with Terry Fleming, who indicated that the EPA could use funds for EMAP sampling in the Bay to support a synthesis report. Regarding the long-term coring plan, Jay Davis informed the TRC that the SC discouraged this idea at their planning workshop in April, and that it will be considered as part of the Status and Trends Strategy, to be developed after Meg Sedlak returns in September 2010.

Action Items:

- Revise the March 2010 meeting minutes per Karen Taberski's corrections.
- Continue to progress with outstanding action items from March 2010 meeting.

2. **Information: Steering Committee Report**

Jay Davis noted that the SC has had issues with attendance, and is working to identify alternates for the representatives. Additionally, the group is encouraging more participation in general. While the TRC does not have attendance problems, it should also work to identify alternates for each of the representatives.

The SC supported the recommendations from the TRC to cancel analysis of organophosphates in water samples from two years ago, and to fund the management and reporting of the AXYS mussel study and the collaboration with NOAA on contaminants of emerging concern (CECs).

Jay Davis noted that the reserve budget will be boosted to about $400,000 because the Caltrans fees are coming in. The RMP wants to keep some money in reserve, but not the entirety of the funds, so some of it could be used for special studies in 2011. The TRC should keep this in mind when recommending studies to the SC.

In 2009, the SC approved the analysis of cores from 2006 for dioxins. The results of the 2009 surface sediments have now been reviewed and the majority of congeners were detected with a high frequency. The dioxin team is currently assessing the need for analysis of the 2008 sediment samples (dry season) or 2010 samples (wet season).

The SC directed that the TRC review the Pulse on behalf of the stakeholders, to ensure that there are no technical issues or mischaracterizations, and provide the needed content review. It is too late for detailed content review for the 2010 Pulse, but the TRC should keep this in mind for the 2011 Pulse.

The SC also discussed the Annual Meeting, the CTAG-TRC meeting, and the new deliverables spreadsheet. The new Master Plan will be distributed at the end of July for review by the TRC, with feedback to be received before the SC meeting on August 4th, 2010.

The SC decided that fees for 2011 will not be increased from the 2010 level.

Action Items:

- TRC members identify alternates to ensure good attendance and participation at TRC meetings
- TRC review Pulse content on behalf of the stakeholders
- TRC review draft Master Plan at end of July

3. Action: TRC-CTAG Meeting

Jay Davis reviewed the action items from the TRC-Commission Technical Advisory Group (CTAG) of the Southern California Coastal Research Project (SCCWRP) joint meeting in May of 2010. He noted that Susan Klosterhaus and Keith Maruya will discuss collaborating on the EC white paper in June.

Mike Connor suggested that a representative from SCCWRP discuss barcoding and sediment profiling at the next Benthic Workgroup meeting, rather than at a TRC meeting, and the Workgroup recommend a proposal for consideration by the EEWG and TRC. Mike Kellogg noted that there are no direct costs to the RMP from barcoding work – the Canadian lab performs the analyses for free. Naomi Feger noted that a lot of sediment profiling work has already been done in the bay by Joe Germano, and that the RMP should contact him before pursuing this idea. The next RMP sediment cruise is in summer 2011, so the issue is not time sensitive. Chris Sommers requested to join the Benthic Workgroup.

The TRC-CTAG meeting concluded that it may be productive to convene a day long joint meeting focused on stormwater with interested parties from northern and southern California. Chris Sommers and Ken Schiff (SCCWRP) will work together to frame this meeting in the next 6 months. Because there is so much stormwater work occurring outside the RMP, it is important to have Chris Sommers' (BASMAA's) perspective. Lester McKee will provide Chris with a list of SFEI projects (RMP and other projects).

Jay Davis mentioned that TRC and CTAG noted a general information need on CEC toxicity. Efforts are continuing to improve communication among SFEI, SCCWRP, the Ocean Protection Council, and Green Chemistry Initiative.

Chris Sommers and Naomi Feger supported the concept of holding a joint meeting between SFEI and SCCWRP on nutrients. Naomi Feger noted that the statewide nutrient estuary project has identified SF Bay as a special area; Lester McKee is currently working on this issue. Karen Taberski noted that there will be several talks on this topic at the Delta Science Conference. Lester McKee added that a technical advisory team will be convened in August 2010 and that the SFEI/ SCCWRP meeting could build on the findings of the technical advisory team. Karen also stated that she is planning on developing a proposal on ammonium work in July.

Bridgette DeShields asked for comments on the minutes from the CTAG-TRC meeting. It was decided that TRC members would review the minutes in the following week, and if there were no comments to them, then they are approved. *No comments were received on the minutes following the meeting.*

Action Items:

- Invite a SCCWRP staff member to the next Benthic Workgroup meeting to inform the workgroup about barcoding and sediment profiling.
- Contact Joe Germano about sediment profiling in SF Bay.
- Add Chris Sommers to the Benthic Workgroup.
- Chris Sommers and Ken Schiff (SCCWRP) will work together to plan a joint north-south stormwater meeting in the next 6 months.
- Lester McKee will send a list of stormwater projects he is working on to Chris Sommers.
- Explore holding a joint meeting between SFEI and SCCWRP on nutrients in about a year.
- TRC members to review the CTAG-TRC meeting minutes.

4. Information: Planning Update

Jay Davis informed the TRC about the SC planning workshop, from which the master budget planning summary table was created. The SC gave good guidance on information priorities, and agreed that it would be valuable to convene these meetings annually, with the next one in early 2011.

Jay Davis described the master plan summary table, which outlines total RMP funds for 2009 through 2016, and the expected costs for the proposed studies. He noted that available funds for special studies (SS) after 2012 in this projection shrink because projected fee increases do not keep up with inflation. He also noted that SQO work falls primarily under S&T; however it is listed separately on the spreadsheet to reflect the significant investment the RMP is making on this topic.

Jay Davis gave context for the proposals for 2011.

1) Hg in Small Fish ($52,000).
2) Hg Synthesis and Conceptual Model Update($75,000)

The SC requested that a synthesis and conceptual model be developed based on information from the RMP and other projects before deciding on future work to fund. At the June CFWG meeting, the workgroup also reviewed proposals from Holger Hintelmann and Joel Blum on future DGT and isotope work, but none were strongly recommended.

3) PCB Synthesis and Conceptual Model Update ($53,000)

Similar to Hg, a synthesis of current knowledge on PCBs in the Bay is warranted before future studies should be considered. No proposals are currently on the table for 2012 and beyond.

4) Dioxins ($27,000 and $60,000)

The dioxin strategy is underway with a number of studies providing results this year. A synthesis of information and modeling effort is proposed for 2013-2014.

5) EC Broadscan Screening of biota ($70,000)

This is the second year of a two-year study.

6) EC Synthesis ($45,000)

Like PCBs and Hg, a synthesis is needed for planning future work.

7) Small Tributary Spreadsheet Model ($20,000)
8) Small Tributary Load Monitoring ($300,000)
9) Small Tributary Land Use Monitoring Coordination ($20,000)

Source specific information will be gathered in 2012, which will feed into more long-term projects.

10) Effects of Copper on Salmon ($37,000)

This project was revised based on stakeholder's comments.

11) SQO Assessment at Hotspots ($90,000)

This proposal is a follow-up to SQO assessments at hotspots from the Bay Protection and Toxic Cleanup Program, and has been vetted by the Exposure and Effects Workgroup (EEWG). A synthesis on SQO drivers is slated for 2012.

12) 3D Model for South Bay: Empirical Data ($100,000)

Following the completion of this work this year, a specific proposal for 2011 will be developed. The funds are requested as an allotment, contingent upon successful completion of the work this year.

13) Trash Particle Strategy ($24,000)
There is interest in developing a trash strategy, so the proposal is put forth as scoping and strategy development.

Susan Klosterhaus clarified that the CEC White Paper is in progress. It has morphed from a paper into a collection of sections on specific chemicals. The section on triclosan and triclocarban has been completed, and three more are scheduled to be completed this year. It is anticipated that the triclosan/ triclocarban section will also be translated into a factsheet.

Chris Sommers asked about SS listed on the spreadsheet without funding. Jay Davis clarified that the current list was from 2008 onwards, and includes proposals that were rejected by the workgroups. The coring work, for example, was put off and moved to S&T, and ammonium and phytoplankton proposal was rejected at the SC planning workshop because of uncertainty about the connection. Karen Taberski mentioned that this is a larger issue, and that SWAMP is evaluating this.

The rainfall tool, which received strong support at the SC planning workshop, did not receive a strong recommendation from the SPLWG. Lester McKee mentioned that there was some uncertainty regarding the SC's needs and the ability of the tool to address them. Chris Sommers suggested that the proposal be better defined this year and resubmitted for consideration at the Planning Workshop in 2011. Trish Mulvey noted that the Golden Guardian disaster response program exercise in 2011 will be based on a rain event, and that data from that exercise may be informative for the rainfall tool, and helpful for science communication to the larger public. Chris Sommers noted that it is important to include the BASMAA flood control districts that operate rainfall gages in the discussion of this tool, and Trish Mulvey added that one of the SFEI Board members is connected with their organization.

5. Action: Special Study Proposals for 2011

Mike Connor proposed that TRC submit a complete packet of special studies to fund to the SC, rather than the ranking of individual projects approach that has been used in the past few years.

1. Mercury Synthesis (Davis)
Jay Davis distributed an outline of the structure of the proposed Hg synthesis report. The SFEI group would meet with the Hg strategy team and interested stakeholders to develop the final outline. The final product would refer back to the CEP conceptual model.

- Mike Connor stated that the proposal as written does not focus on mercury methylation, which is the driver of mercury issues in the Bay. He suggested that the document focus more on what it will take to understand methylation and whether the conceptual model needs to be changed, rather than a complete rehash of information to date.
- Chris Sommers suggested that the document be revised and discussed at the next Hg strategy team meeting, and that funds be included in the proposal to cover coordination of the technical oversight. He recommended reorganizing it to include the management questions, holes in the conceptual model, and additional data needs for modeling. Naomi Feger suggested that the document refer to the Hg strategy, and address what will drive decision making.

- Jay Davis noted that the CFWG is slated to provide oversight for the project, and that project is scheduled to be completed in early 2011, so that it can inform Hg proposals for 2012. The budget is realistic. Additional value will be added through participation in the CMERC effort. Chris Sommers noted that if they are involved, CMERC should not dictate the focus of the product.
- The Committee thought that the proposed budget seems appropriate.

2. Mercury in Small Fish: Continue Time Series (Ridolfi)

Kat Ridolfi proposed that the small fish study be extended in 2011 at a reduced scale (1/3 of the effort of 2010). Preliminary results from 2009 show that 90% of small fish are exceeding the TMDL target, and this target is being exceeded at spatially distributed areas. Additionally, there are numerous salt marsh restoration projects occurring in the near future, and small fish studies will enable the RMP to monitor the effects on Bay water quality. The proposed effort would continue once a year sampling at 11 long term sites, and seasonal monitoring at 1 site.

- Mike Connor asked if there was another funding source for the salt marsh monitoring efforts. Ben Greenfield clarified that the salt marsh projects are conducting monitoring; however, these efforts are more site-specific and do not reflect a long-term comprehensive plan. Naomi Feger noted that the salt pond project is performing their own monitoring as they open the restored wetlands, and the study includes small fish. Jay Davis mentioned that maintaining the small fish time series at Eden Landing as restoration occurs will be interesting, and that the RMP should try to influence USGS to maintain the time series.
- Karen Taberski noted the need to consider small fish as an index of PCBs as well as mercury.
- Mike Connor asked if small fish require annual sampling. Ben Greenfield stated that if the RMP is interested in 10-20 year trends, then three year sampling is adequate, however if more short term trends are sought, then annual sampling is needed to account for interannual variability.
- Chris Sommers suggested that the more interesting results are seasonal, and suggested that the project focus on seasonal sampling at two sites, and skip annual sampling at the long-term sites for 2011.
- Chris Sommers and Naomi Feger commented that the mercury synthesis should make recommendations for future small fish work.

3. PCB Synthesis (Davis)

Jay Davis noted that the PCB synthesis is more straightforward than the Hg synthesis. The final product is an updated conceptual model, and the PCB strategy team will provide oversight.

- Mike Connor suggested that the project could save money by being more strategic. Currently, SF Bay is failing PCB standards from the Water Board; however these standards are uniquely low, and could be met simply by raising them. The project should evaluate legacy vs. new sources of PCBs. The 100-fold decrease in PCB concentrations from point sources at their peak has been seen in ambient water; however recent 3-5 fold decreases in point source concentrations have produced no ambient changes, indicating that legacy sources are still a significant contributor. The paper should also address the question of how changing loading will affect levels in Bay biota.

- Chris Sommers mentioned that the biggest pieces to add to the revised conceptual model are new information on degradation rates and PCB congeners. Jay Davis added that unexpectedly high concentrations in small fish are also important to consider, and that 2010 small fish information will be available in the summer of 2011. Mike Connor suggested doing half of the work in the second half of 2011 and half in early 2012, to lighten the load on SFEI staff and make more information, such as the small fish data, available for the synthesis.
- Jay Davis noted that the question of sources of PCBs and other contaminants to fish will also be addressed in the biota conceptual model. However, Lester McKee pointed out that the conceptual models do not describe the linkage between changing inputs and biological response. Future studies addressing this question should focus on management solutions.

4. Dioxin Measurements (Klosterhaus)

Susan Klosterhaus presented the long-term dioxin strategy plan, which includes surface water and tributary loading studies for 2011. Mike Connor mentioned that dioxins were detected in 2009 surface waters, without the high spikes seen in prior USEPA studies. SF Bay is one of the cleanest locations nationwide for dioxins.

As a separate issue, Susan Klosterhaus suggested that the TRC consider analyzing 2010 wet season sediment samples instead of 2008 dry season samples, as planned. Both samples are archived and the decision on which samples to analyze can be made at a later date.

- Lester McKee noted that the small tributary monitoring proposal for 2011 includes randomized sampling of many small tributaries (about 15 to 20 watersheds), collecting 5-7 samples per site, rather than fixed station monitoring. Mike Connor therefore suggested that dioxins in small tributaries be postponed until 2012.
- Chris Sommers suggested that dioxins could be added to the MRP monitoring that will occur at at least 4 long term sites in 2012. Lester McKee added that by delaying dioxin monitoring in small tributaries, the study will have the benefit of the small tributary reconnaissance, and will be able to prioritize watersheds based on 2011 results.
- Chris Sommers noted that the goal of the 2010 and 2011 dioxin work is to include dioxin loading information in a dioxin TMDL. Given this, Naomi Feger suggested that the goal be worked into the data collection.
- Bridgette DeShields summarized the TRC's conclusions, stating that the group approves of dioxin monitoring in surface water in 2011, but the tributary sampling should be delayed until 2012.

Tom Hall requested that as 209 PCB congener data is compiled, that the dioxin-like congeners be highlighted. Susan Klosterhaus noted that the dioxin strategy team does not want to address dioxin-like PCBs, but that this information will be included and discussed in the PCB synthesis.

Chris Sommers requested that the proposals have a defined scope of work, with a clear description of how money will be spent (e.g., field work, lab work, and project management). The proposals should illustrate how the projects tie back to priority management questions and to previous work, and what the specific tasks are. He offered his help in developing a standard

format for proposals. Karen Taberski added that a schedule (knowing that they can change) would be helpful in the proposals.

5. **Broadscan Screening of Emerging Contaminants** (Kucklick)

This proposal is for the second year of a two-year project with the National Institute of Standards and Technology (NIST). The goal of the project is to identify significant contaminants of emerging concern (CECs) that are accumulating in San Francisco biota. The project has also received matching funding from SCCWRP and NIST.

- NIST is currently developing methods for the analysis of seal samples. Susan Klosterhaus confirmed that the project is on schedule.
- There was general agreement to continue supporting the project.

6. **Emerging Contaminant Synthesis** (Klosterhaus)

This synthesis was based on guidance from the SC workshop, and will be a summary report of CEC work conducted in the Bay to date. It will incorporate recommendations from the State Advisory Panel reports on CECs in recycled water (completed June 2010) and discharges to ambient waters (due summer 2011), as well as the NOAA Mussel Watch data from San Francisco Bay. It will also identify next steps for the RMP.

- Naomi Feger suggested delaying this project until the Broadscan (proposal #5) data are available.
- Susan Klosterhaus mentioned that this paper will also provide an opportunity to summarize the NOAA Mussel Watch data from the 2010 Pilot Study.
- Mike Connor noted that the RMP will likely be affected by the ambient water CEC report to be released in summer of 2011 and that the synthesis will help in the implementation of the recommendations from the report.
- Given the timing of the CEC ambient water report, Bridgette DeShields suggested delaying the project until the summer of 2011 with the idea that it will be completed by the summer of 2012. Mike Connor suggested carrying $15,000 of the funding into 2012 for the second piece of the project.
- Naomi Feger suggested that the Water Board should provide feedback on the outline and the proposal, in order to put it in context for management decisions. Susan Klosterhaus mentioned that the ECWG would also provide guidance and oversight, and would review the outline.

Naomi Feger asked about the status of the NOAA Mussel Watch project. Susan Klosterhaus mentioned that the project has been on the "fast track" since it began and it is progressing well. Reporting on this work will likely not include a specific assessment of CECs in SF Bay, but rather a more general statewide analysis.

7. **Small Tributary Spreadsheet Model** (McKee)

The spreadsheet model is currently in development, and will continue to be updated as more information is gathered. Work in 2011 will consist of further updating and refining. The model will continue to be updated in future years.

8. **Small Tributary Load Monitoring** (McKee)

Load monitoring for 2011 will expand to reconnaissance efforts at 15 to 20 watersheds. To accommodate the budget of $300,000, 17 watersheds are proposed, collecting between five and seven samples at each site. The goal is to rank the watersheds into tiers based on contaminant concentrations.

- Mike Connor asked if the budget could be reduced by $50,000, and what the rationale behind 17 watersheds was. Lester McKee indicated that 17 watersheds would enable monitoring at approximately four each of the four watershed strata. Mike Connor recommended that the number of watersheds be reduced to 12-15 to reduce the budget. The analyte list (total and dissolved copper, total and methyl mercury, PCBs, SSC, nitrate, and ancillary parameters) could also be modified to reduce the budget.
- The project would focus on storms occurring before the end of January, as these events typically produce the highest concentrations of contaminants in storm water. Efficient sampling will include a large and small watershed in the same storm, so that one sampling team can cover two watersheds.
- Mike Connor suggested not including the full 209 PCB congeners to reduce the budget, but Lester McKee stated that having 209 PCB characterization for a large number of small tributaries could be very helpful for a future analysis of PCBs.

A recently completed statistical evaluation of sampling indicated that the most cost-effective sampling plan with the best load characterization consisted of 12 samples per year, over four storms.

9. Small Tributary Source Characterization Monitoring Coordination (McKee)

Coordination efforts for source characterization monitoring will include: management support, a continuation of the Small Tributary Loading Strategy (STLS) team meetings and technical review.

- Jay Davis mentioned that source characterization monitoring will take a large amount of coordination, which is why $20,000 is contributed to the early years of the project.
- Chris Sommers noted that the term “land-use” does not apply to some pollutants, and “source characterization” should be used instead.

All three Small Tributary proposals were recommended by the STLS, and are focused on assuring that the RMP is coordinating with MRP activities.

10. Effects of Copper on Salmon (Baldwin)

This project was postponed in 2010, and the proposal was reworked in December 2009 to incorporate stakeholder concerns regarding dissolved organic carbon (DOC) and test conditions (e.g. ligands and copper concentrations).

- Chris Sommers requested that Don Yee send out an email to the TRC with a clear explanation of how the DOC concerns are addressed in the proposal.
- It was generally agreed that the project was a high priority.

11. SQO Assessment at Hotspots (Lowe)

Sarah Lowe described the SQO Assessment proposal, which will use the sediment triad approach to evaluate sediment quality at toxic hotspots, as identified by the Bay Protection and Toxic Cleanup Program (BPTCP). The Exposure and Effects Workgroup (EEWG) expressed strong

support for the first task: to convene a focus group and develop the final plan, and supported the field work contingent upon successful and timely completion of task 1.

- Trish Mulvey noted that the project requires $90,000 over 2 years for successful completion. Sarah Lowe added that the bulk of the expenses (roughly $60,000), would not be needed until 2012.
- Sarah Lowe noted that the final proposal submitted to the TRC was revised based on comments from the EEWG.
- Naomi Feger expressed her support for the proposal.

12. 3D Model for South Bay: Empirical Data (Yee)

Jay Davis noted that there was no proposal submitted for the 3D model, because the 2010 work is still underway, and the specifics of 2011 work will need to be determined based on 2010 results. The funds are requested as an allotment, contingent upon successful completion of 2010 work, and will be used to collect empirical data to be used as input for the model. The margin conceptual model is currently behind schedule, and John Oram will be leaving SFEI at the end of June 2010, however the modeling team will focus intensively on the project for the next 3 months, with monthly check-ins.

- Jay Davis noted that most of the 3D modeling work is subcontracted out to other organizations, and $20,000 was designated to John Oram for oversight. Jay Davis will determine if existing SFEI staff can take on this oversight role. Chris Sommers strongly agreed that RMP staff should remain involved in the project management (this role should not be subcontracted out).

13. Trash Particle Strategy (Klosterhaus)

Susan Klosterhaus proposed a summary report of current knowledge regarding marine debris monitoring, which could then be developed into a marine debris monitoring strategy. Currently, NOAA is developing methods to monitor microplastics in the water column; these methods are currently being tested in Chesapeake Bay and Puget Sound. The strategy would outline a conceptual model for marine debris in the Bay, draft management questions, and make recommendations for next steps.

- Susan Klosterhaus noted that the RWQCB and SCCWRP are conducting beach/ shoreline monitoring for microplastics in San Francisco Bay during the summer of 2010, but the effort is focused only at a small creek leading into Oyster Bay in San Leandro.
- Naomi Feger mentioned that there is currently no regulatory driver or 303(d) listing for trash in the water column, but that it could be included in the future.
- Chris Sommers noted that characterization of the Bay is necessary; however the methodology is not fully developed. The specific concerns of the regulatory agencies in trash monitoring still need to be articulated, and the State Board is currently working on a trash strategy. Given this, Mike Connor suggested that the trash strategy development be postponed for a year.
- Chris Sommers noted that SCCWRP is working on beach monitoring of trash. Mike Connor suggested funding the RMP at a low level to collect some initial pilot data; however Chris Sommers indicated that it would be better to have stakeholders involved from the start (e.g., to formulate the focus of the project and purpose) rather than jumping into a sampling effort. He supported a synthesis of existing information, but asked that stakeholders be invited to the meeting before sampling.

Shellfish

Jay Davis mentioned that in 2009, the RMP funded Andy Cohen to conduct a shellfish survey. There is a potential for RMP funds to support his continued work. Tom Hall added that shellfish harvesting is considered a "beneficial use" under the Basin Plan, and that there is an increased interest in being able to document how that use is protected. For example, are effluent limits in permits protective of shellfish use, and where are shellfish harvested? This work would piggy-back off of existing field work for the eradication of invasive shellfish (non RMP funded) to determine where shellfish exist in accessible harvestable quantities.

- Jay Davis suggested that Andy Cohen could write a proposal for this project.
- Tom Hall added that Andy Cohen produced a report in the middle of 2009. The Bay Conservation and Development Commission (BCDC) also recently published the Subtidal Habitat Goals report (available online at: http://www.bcdc.ca.gov/planning/shg/shgv1_4rpt.pdf) that has a section on shellfish harvesting. The proposed work would be complementary to this report.
- Mike Kellogg noted that the current surveying by Andy Cohen might not serve the desired purpose, as Andy will only be looking at hard substrate. Infauna of soft substrate are the dominant harvestable resource.
- Trish Mulvey suggested that this proposal be delayed for another year; however it needs to be addressed eventually because of fecal coliform issues.
- The group agreed that it would be desirable to do a comprehensive survey, and to design a study after thoroughly reviewing existing information (e.g., the BCDC report).

General Discussion

The TRC discussed proposals for 2011, and recommended a package of studies to the SC, as summarized in the table below.

After deliberation, the TRC recommended that the following studies be funded for 2011:

1) Mercury Synthesis
2) Hg Food Web Uptake (Small Fish) (funded at a reduced amount)
3) PCB Synthesis
4) Dioxins in Status and Trends
5) Broadscan Screening
6) Emerging Contaminant Synthesis (funding 2/3:1/3 2011:2012)
7) Small Tributary Spreadsheet Model
8) Small Tributary Load Monitoring in Representative Watersheds
9) Small Tributary Land Use Monitoring
10) Effects of Copper on Salmon
11) SQO Assessment at Hotspots (funding 2/3:1/3 2011:2012)

Bridgette DeShields pointed out that there is still money in the reserve that could potentially be used.

Regarding the 3D model of the South Bay, Chris Sommers noted that John Oram was the primary point of contact for the project, and that remaining SFEI staff likely do not have time available to manage and oversee this project. Trish Mulvey indicated that John Oram's

departure did not affect the original 3D model plan, and that by revoking the $100,000 for 2011, the project could suffer a loss of momentum. The group agreed with Mike Connor's suggestion that the $100,000 slated for 2011 be pushed back to 2012, and that if the project is ready to move forward in 2011, the funds could be made available from the reserve.

Bridgette DeShields and Chris Sommers suggested that as a long-term trend indicator, small fish data are not required every year. Kat Ridolfi suggested that $20,000 would fund a study evaluating seasonal variation with sampling every 6-8 weeks at 2 sites, with no reporting. She will draw up a proposal that will be vetted through the mercury strategy team.

Karen Taberski stated that the PCB model update is a high priority for the RWQCB.

The TRC decided to recommend funding the SQO Assessment at Hotspots study with 2/3 of the funds ($60,000) allotted from the 2011 Special Studies pool, and 1/3 ($30,000) from 2012.

Jay Davis noted that there is $5,000 each for coordinating modeling and sediment strategies, without proposals. Bridgette DeShields indicated that it is worthwhile to have funds for coordination. Mike Connor suggested that the funds be removed, to make more money available for special studies.

Bridgette DeShields asked that the proposal spreadsheet be distributed to the TRC.

SPECIAL STUDIES	Proposed for 2011	Approved for 2011	Proposed for 2012
1) Hg Synthesis/Conceptual Model Update [a]	$75,000	$75,000	
2) Hg Food Web Uptake (Small Fish) [b]	$52,000	$20,000	
3) PCB Conceptual Model Update [a]	$53,000	$53,000	
4) Dioxins in S&T Indicators [a]	$28,000	$28,000	$90,000
4) Dioxins Tributary Loading [d]	$68,000		$68,000
5) EC Broadscan Screening of Biota [a]	$70,000	$70,000	
6) EC Synthesis [c]	$45,000	$30,000	$15,000
7) STLS Regional Loadings: Spreadsheet Model [a]	$20,000	$20,000	$10,000
8) STLS Load Monitoring in Representative Watersheds [a]	$300,000	$300,000	$300,000
9) STLS Monitoring at Representative Land Use Sites [a]	$20,000	$20,000	$80,000
STLS Dynamic Modeling in 2nd Watershed			$150,000
EE Synthesis on SQO Drivers			$50,000
10) EE Effects of Copper on Salmon [a]	$37,000	$37,000	
11) EE Hotspot Followup [c]	$90,000	$60,000	$30,000
12) F South Bay Model [d]	$100,000		$150,000
F Modeling Coordination [e]	$5,000		$5,000
13) Trash Particle Monitoring [d]	$24,000		$24,000
Sediment Strategy Coordination [e]	$5,000		$5,000

Proposal Status	Total Amount
(a) fully funded in 2011	$566,000

(b) funded at reduced amount in 2011	$20,000
(c) fully funded, split between 2011 and 2012	$90,000
(d) delayed to 2012	$192,000
(e) not funded	$10,000

Spent in 2011	$713,000
Not spent on proposed 2011 studies	$279,000
Obligated for studies in 2012	$45,000

Action items:

- Revise proposal #1 to include TRC comments on its focus, for consideration by the Mercury Strategy Team.
- Work with Chris Sommers to develop a standard format for RMP proposals.
- Change the reference to "land use" to "source characterization".
- Don Yee to send out an email to the TRC with a clear explanation of how the DOC concerns are addressed in the effects of copper on salmon proposal
- Create a proposal for seasonal small fish sampling which the Hg strategy team will review.
- Review existing information on shellfish, and consider designing a comprehensive shellfish survey.
- Distribute the spreadsheet with proposals for 2011 through 2016 to the TRC.

6. **Action: Small Fish Monitoring**

Kat Ridolfi indicated that the PCB in small fish project still needs input on site selection for the 2010 project. Sampling is set to begin in August. Jay Davis suggested that the PCB team provide the feedback necessary for this work.

Action item:

- Take small fish site selection to PCB strategy team.

7. **Information: Update on Pulse and Annual Meeting**

Jay Davis indicated that the SC asked for more active involvement from the TRC reviewing the Pulse. Tom Mumley suggested at the last SC meeting that at least one representative (either TRC or SC) from each stakeholder group should be involved. This year, there has been good input from BASMAA and the RWQCB, with less input from BACWA and WSPA. A process for review from stakeholders will be formally developed for 2011.

Jay Davis passed around a list of potential speakers for the 2010 Annual Meeting. Lester McKee indicated that Tom Schuler has accepted an invitation to speak at the meeting. Jay Davis suggested that Ken Schiff would provide a good comparison between the North and South stormwater efforts, and Robin Grossinger could give a historical perspective. Lester McKee will check with John Sansalone. Mike Connor asked that Lester McKee, in his 20 minute slot, step back and provide the big picture on Loading Studies and Stormwater BMPs. Jay Davis

suggested that Chris Sommers or Richard Looker could potentially present the Small Tributary Loading Strategy.

Mike Kellogg suggested a talk on LID, and Jay Davis noted that it had been proposed at the SC. He will bring this to the SC for discussion. The TRC suggested several potential speakers on this topic: Laura Prickett, Rosie Jenks, and Sarah Minick.

Action items:

- Begin developing a review process for future Pulses.
- Contact Ken Schiff, John Sansalone, Robin Grossinger, and Chris Sommers about speaking at the annual meeting.
- Discuss LID speakers with the Steering Committee.

8. **Information: Deliverables Update**

Jen Hunt presented the new format for deliverables tracking, including a review of carryover items. Bridgette DeShields asked that the list be emailed to the TRC. Mike Connor asked about the land use classification carryover, and Lester McKee indicated that it is now due by early 2011, and no more changes in the time frame will occur without oversight by BASMAA.

Action item:

- Email the deliverables scorecard to the TRC.

9. **Action: Plus/Delta, Set Agenda and Date for Next Meeting**

- Bridgette DeShields and Karen Taberski noted that the method of reviewing proposals without an explicit ranking was more successful than the previous method.
- Time management at the meeting was good.
- Proposals should have a more consistent format that includes the information discussed today.

The next meeting is set for September 21st.

#	**Action Items – June 2010**	**Who?**	**When?**	**Status 7/26/2010**
1	TRC members to identify alternates to ensure good attendance and participation at TRC meetings	TRC members	When needed	
2	TRC review Pulse content on behalf of the stakeholders	TRC members	Annually	
3	TRC review draft Master Plan at end of July	TRC members	July	
4	Invite a SCCWRP staff member to the next Benthic Workgroup meeting to inform the workgroup about barcoding and sediment profiling.	Jay Davis	Next BWG meeting	
5	Contact Joe Germano about sediment profiling in SF Bay.	Jay Davis	Next BWG meeting	
6	Add Chris Sommers to the Benthic Workgroup.	Rachel Allen, Sarah Lowe	June	done
7	Send a list of SFEI stormwater projects to Chris Sommers.	Lester McKee	July	
8	Chris Sommers and Ken Schiff (SCCWRP) will work together to plan a joint north-south stormwater meeting in the next 6 months.	Chris Sommers, Ken Schiff	By December 2010	
9	Explore holding a joint meeting between SFEI and SCCWRP on nutrients in about a year.	SFEI Staff	2011	
10	TRC members to comment on the CTAG-TRC meeting minutes.	TRC members	By June 29, 2010	No comments received, minutes are approved
11	Revise proposal #1 to include TRC comments on its focus, for consideration by the Mercury Strategy Team.	Jay Davis	July	
12	Standardize the format of RMP proposals	Jay Davis, Chris Sommers	Next round of proposals	
13	Change the reference to “land use” to “source characterization”.	Lester McKee	July	
14	Send an email to the TRC with a clear explanation of how the DOC concerns are addressed in the effects of copper on salmon proposal	Don Yee	July	
15	Develop a proposal for seasonal small fish sampling to be reviewed	Kat Ridolfi, Ben	Q3 2010	

	by the mercury strategy team.	Greenfield		
16	Review existing information on shellfish, and consider designing a comprehensive shellfish survey.	Meg Sedlak and Jay Davis	Spring 2011	
17	PCB Strategy team to review small fish site selection.	Kat Ridolfi, Ben Greenfield	July	Phone conference held on June 30, 2010 – site selection in progress
18	Begin developing an improved review process for future Pulses.	Jay Davis	Spring 2011	
19	Get feedback from TRC members on 2010 Pulse.	TRC members	August	
20	Contact Ken Schiff, John Sansalone, Robin Grossinger, and Chris Sommers, about speaking at the annual meeting.	Jay Davis, Meredith Williams, Lester McKee	July	
21	Discuss LID speakers for the Annual Meeting with the Steering Committee	Jay Davis	August	
22	Distribute the proposal spreadsheet and deliverables scorecard to the TRC.	Rachel Allen	June	done
23	Revise the March 2010 meeting minutes per Karen Taberski's corrections.	Jay Davis	July	Done
24	Continue to progress with outstanding action items from March 2010 meeting	SFEI Staff		
25	Determine if September 21st will work for the next meeting	Rachel Allen	July	September 21st is set as the next TRC meeting

#	**Outstanding Action Items – March 2010**	**Who?**	**When?**	**Status 7/15/2010**
1	Create web pages for the reports coming out of RMP each year	Rachel	As needed	
2	Bring the recommendation on allocating funds for modeling to the Steering Committee	Jay	August SC meeting	
3	Take fact sheet plan to the Steering Committee	Jay	August SC meeting	
4	Coordinate with SFEP, BACWA, and BASMAA on fact sheets	Jay		Pending
5	Discuss possibility of a synthesis on sediment data with Terry Fleming	Jay		Completed

TRC Participation

RMP Sector Represented	MEMBER	Affiliation	2008				2009				2010			
			1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
POTWs	Francois Rodigari	EBMUD	P	P	P	P	P	P	P	P	P	(2)		
POTWs	Rod Miller	SF PUC	X	P	P	X	X	P	P	X	X	X		
South Bay Dischargers	Tom Hall	EOA, Inc.	P	P	P	P	P	P	P	P	P	P		
CCSF	Mike Kellogg	City and County of San Francisco	P	P	P	P	P	P	X	P	P	P		
City of San Jose	Eric Dunlavey	City of San Jose	P	P	X	P	P	X	P	P	P	P		
Refineries	Bridgette DeShields	Arcadis/ WSPA	P	P	P	P	P	P	P	P	P	P		
Industry	Dave Allen	USS POSCO	X	X	X	X	X	X	X	X	X	X		
Stormwater	Chris Sommers	EOA, Inc.	P	P	P	X	P	P	P	P	P	P		
Dredgers	John Prall	Port of Oakland	P	P	X	X	P	P	X	P	P	X		
Corps of Eng.	Rob Lawrence	Army Corps of Engineers	X	X	X	X	X	X	X	X	X	X		
SFBRWQCB	Karen Taberski	SFBRWQ CB	P	P	(1)	P	P	P	P	P	P	P		
US-EPA IX	Luisa Valiela	US EPA	X	P	X	P	X	C	X	C	P	X		

P = present

W* = provided input at RMP master planning workshop 4/21/10

C = call-in

X = not present

Notes:

1. Richard Looker substituted for Karen Taberski
2. Saskia van Bergen substituted for Francois Rodigari