

**RMP Technical Review Committee Meeting
July 17th, 2008
San Francisco Estuary Institute
Draft Meeting Minutes**

Attendees:

Bridgette DeShields (BBL/WSPA)	Mike Connor (SFEI)
Eric Dunlavey (City of San Jose)	Jay Davis (SFEI)
Tom Hall (South Bay Dischargers (EOA))	Lester McKee (SFEI)
Mike Kellogg (CCSF)	Aroon Melwani (SFEI)
John Prall (Port of Oakland)	Meg Sedlak (SFEI)
Francois Rodigari (EBMUD/BACWA)	Don Yee (SFEI)
Rod Miller (CCSF/BACWA)	
Chris Sommers (Stormwater Agencies (EOA))	
Karen Taberski (RWQCB)	
Luisa Valiela (USEPA)	

1. Introductions and Approval of Agenda and Minutes

Meg Sedlak gave a short update on the action items table. A motion for approval of the minutes was made by Mike Kellogg and seconded by Karen Taberski.

2. Information: Steering Committee Report

Meg Sedlak reviewed the major items from the Steering Committee meeting on May 9th and noted that many of the items such as the Pulse, Annual Meeting agenda, and dioxin were included in the day's agenda.

Ms. Sedlak noted that the Steering Committee had recommended that the cores be analyzed for dioxin and requested that funding for this come from the existing unallocated funds. In part this recommendation was based on the fact that the cores have already been collected. The Steering Committee requested that a strategy be outlined to provide a context for the analyses.

Ms. Sedlak stated that SFEI/RMP financial accounts had recently been audited by an outside auditor. No significant issues were identified. The auditors noted that the RMP currently has unallocated funds that totaled \$548,216 in December 2007. Ms. Sedlak explained that approximately \$100,000 of this would be spent writing contracts for bivalve and pesticide analyses; \$200,000 would be set aside for the reserve; \$46,350 would be used for replenishing the contingency funds which were spent on the vessels for this year. The unallocated funds remaining, approximately \$200,000, could be used for other purposes such as dioxin analyses or to supplement the 2009 pilot and special studies.

Chris Sommers requested that the ten-year plan be revised to include the unallocated funds.

Action item: Include unallocated funds in ten-year plan**3. Information: Updates on Workgroups**

Each of the workgroup leads provided a brief update on status of the workgroup and an explanation of the rationale for the recommended pilot and special studies.

The Exposure and Effects workgroup (EEWG) met in May to discuss pilot and special studies and the five-year plan. The five-year plan is almost complete; the risk to birds chapter and introduction need to be revised and completed.

Ms. Sedlak indicated that there would be a benthic workshop on September 3rd to discuss developing methods for assessing benthos from the mesohaline areas such as San Pablo Bay and South Bay and oligohaline area such as Suisun. Chris Sommers requested that the benthic workshop information be sent out to the TRC and SC. (Note: This workshop was subsequently rescheduled for January 2009.) Agendas for all workgroup meetings should be sent to the TRC and SC. Chris Sommers also expressed a high degree of interest in where the small fish sampling locations would be, the site characteristics, and the rationale for site selection.

The Emerging Contaminants workgroup (ECWG) met in April to review the five-year plan and the pilot and special studies. The five-year plan has been completed. A new advisory member has been appointed to the panel, Dr. Lee Ferguson of University of South Carolina. Dr. Ferguson has an expertise in nanomaterials, endocrine disruptors, and organic contaminants. The ECWG was pleased with the progress that Susan Klosterhaus has made on the alternatives to brominated flame retardants. Ms. Sedlak indicated that Susan and her colleagues at Duke University have published a paper on alternative flame retardants in house dust that will appear in Environmental Science and Technology. This article will also be highlighted in a summary article in the A section of the journal. The ECWG recommended that the perfluorinated study and a white paper on emerging contaminants be considered for funding for 2009.

Chris Sommers commented that the areas of elevated mercury or PCBs may not be indicative of areas of high perfluorinated compounds. Chris also noted that the emerging contaminants study would have sources beyond just wastewater. Jay Davis clarified that the focus of the study was wastewater. Eric Dunlavey and Karen Taberski thought the study idea was sound and would consolidate what we understand about these chemicals and highlight the ones that may be of potential concern. This would be useful for both managers and the public, and a good reference for a technical audience. Mike Kellogg thought this was an important project for the RMP, but expressed some concern as to how the results of this study might be interpreted by the public. Ms. Sedlak stated that part of the intent was to evaluate the relative risks of the contaminants so that the RMP can prioritize which chemicals may be of concern and which were not. She indicated that in light of Associated Press article of emerging contaminants in drinking water there was some concern that we need to be monitoring more emerging contaminants and this white paper could provide some guidance on what is and is not of concern for the Bay. Rod Miller indicated the importance of framing the document well and to keep the focus on ecological issues not human health. Tom Hall thought this project might be a multi-year effort and that the ECWG five year plan should consider partnerships and leveraging opportunities.

Don Yee indicated that the Contaminant Fate workgroup (CFWG) had convened a meeting of Bay Area modelers to discuss modeling capabilities and development of a modeling strategy. It was agreed that no one model could meet all needs. RMP staff will develop a conceptual model for hot spots and the estuary interface. Preliminary results of the methylmercury mass budget model were also presented.

Jay Davis indicated that the preliminary results of the methyl mercury mass budget were reasonable (i.e., methylation and demethylation are the dominant processes). The CFWG suggested it would be helpful to develop a linkage between the water column, the sediment, and the foodweb. The PCB model report was reviewed by the CFWG. The committee indicated that the model was robust but suggested that homologues of PCBs be included in the model. John Oram will review whether this is feasible on the existing budget or whether this should be deferred to a task for 2009.

Lester McKee indicated that the Sources Pathways and Loading workgroup (SPLWG) met on May 14th to discuss Zone 4 Line A, a USGS national lake cores project, and pilot and special studies for 2009. Out of the May 14th meeting, a request was made by workgroup members to develop a strategy for tributary monitoring. A Small Tributaries Loading Strategy meeting was convened on July 11th. Based on this meeting, it was agreed that the monitoring requirements for the MRP would be coordinated with the RMP and that the primary focus of the RMP monitoring would be to address the following question: What is the relative contribution of each watershed to impairment of the Bay? The group is in the process of preparing a written strategy that will list the priority questions and the methods that will be taken to address the questions. The workgroup recommended that approximately \$100,000 be set aside for development of the strategy and implementation of monitoring. The RWQCB will develop a list of key information needs and decisions that will need to be address in the next three, five, ten and twenty years. BASMAA will develop a similar list.

Lester indicated that the SPLWG was also very supportive of the Guadalupe monitoring effort and recommended that a second year be funded. The USGS is implementing a nation-wide survey of lake cores. Two of the cores will be located in northern California area. One will be located in a reference site in the Bay area (unimpacted by urban development); the second reference site will be in the Sierras. There was a lack of clarity as to what lakes the USGS would be monitoring. The TRC requested that Lester contact Dr. Mahler to clarify whether urban lakes or reference lakes were being monitored. (Dr. Mahler subsequently confirmed that two reference lakes will be monitored as part of the USGS effort.) The RMP could augment the USGS work by the addition of an urban lake or an additional reference lake at a nominal cost. There was a question whether the USGS could analyze for dioxin (it appears that there is insufficient volume of core to do this). Francois Rodigari stated that with regard to the study idea for funding more sections within a core, it was probably more important to collect samples from additional lake than to do finer segments. Chris Sommers noted that a second reference lake would provide some indication of the variation of deposition within the Bay Area. Karen Taberski noted that it could be helpful to include a coastal lake to provide an understanding of global deposition.

Jay Davis indicated that the focus of the year thus far has been primarily on developing the specific strategies for mercury, modeling, and small tributaries, and as a result, we have not made as much progress as was anticipated on the overall Master Plan.

Chris Sommers indicated that it was important to develop the strategies and it would be fine to shoot for early next year for the Master Plan. Chris also asked whether there are other strategies that need to be developed? Jay Davis mentioned that the EEWG recommended developing a strategy for measuring and understanding sediment toxicity in the Bay. It was recommended that a glossary be developed for the Master Plan that would be helpful in standardizing nomenclature within the Program.

Action items: Send information on the benthic workshop to the TRC and SC. Agendas for all workgroup meetings should be sent to the TRC and SC. Develop a sediment toxicity strategy.

4. Action: Ranking of 2009 Pilot and Special Study Ideas

Regarding the NOAA proposal, Bridgette DeShields asked whether NOAA had tested the sediments located near the aluminum smelter for presence of other contaminants such as metals. (The NOAA proposal selected these sediments because they were only contaminated with PAHs.)

Luisa Valiela asked which studies had been rejected by the EEWG. Ms. Sedlak explained that a proposal regarding the prevalence of cross-bills in song sparrows from the South Bay had been eliminated because several of the committee members were not certain that PCBs could be measured in feathers and because cross-bills can be formed as a result of parasites. Interestingly, Michael Fry of the American Bird Conservancy had indicated in the meeting that bills can cross and uncross depending on exposure or parasites. Luisa stated that she found this study to important because of the high incidence of cross-billed observed: approximately 6 percent of birds collected had cross bills. She requested that RMP staff investigate whether a study was possible and that if it was, that it would be brought back to the TRC.

Chris Sommers noted that the allocation of funds to the workgroup (approximately \$150,000 each) may not correspond to the priority needs. This issue should be resolved with the Master Plan which should give some indication of priorities. Chris also noted that three of the pilot studies were two-year studies that have not yet provided results from the first year but should be considered a high priority. As a result, it is somewhat difficult to assess whether funding for the second year is recommended. Ms. Sedlak noted that the mercury studies were originally conceived as two-year studies and if the work from the first year is poorly executed or managed that the TRC could elect to terminate the contract.

Chris Sommers recommended dropping the wading bird study as this study somewhat duplicates the existing tern study and would not provide information that would be likely to influence management actions.

Francois Rodigari requested time to take the studies back to his constituency. The other participants agreed that this was a good idea and would provide the TRC votes by July 30th.

Action items: TRC members provide rankings by July 30.

5. Dioxin Strategy

Susan Klosterhaus reviewed the dioxin materials that were presented in March to the TRC and April to the SC in a Powerpoint presentation. She summarized the potential matrices to sample (e.g., sport fish, sediment, cores, and stormwater) and the questions that the RMP is seeking to answer. Much of this information was outlined in an accompanying handout.

With regard to which fish to monitor, Karen Taberski indicated that white croaker was a popular consumption fish; Luisa Valiela indicated that it might not represent the highest concentrations. Karen was somewhat concerned about the detection limits; however, Susan indicated that since we have begun using AXYS this has not been an issue.

Rod Miller indicated that for water that detection limits are a big issue as the permit limits are currently well below the method detection limits. Bridgette DeShields commented that you will not see similar congener patterns between the fish and the sediments as there are different uptake mechanisms. She also commented that the congener profiles in cores could be useful, and recommended that this study be part of a comprehensive dioxin strategy. The group recommended that tissue, sediment, and cores be analyzed. The group recommended waiting on stormwater until the small tributary loading strategy had been developed. Francois Rodigari indicated that the older cores would help to validate the method (e.g., if the concentrations were elevated this would raise some concerns about the method). Both Francois and Chris Sommers agreed that the loading information from the cores would be important. Karen Taberski agreed that it was clear that we need the data.

There was a short discussion on the coplanar PCBs (that exhibit dioxin like toxicity). Jay Davis reminded the group that the dioxin concentrations are substantially above the screening values irrespective of the PCB concentrations and for the purposes of this discussion, the group should focus on dioxin.

Chris Sommers asked when a TMDL is likely to be developed. Mike Connor indicated that it was likely to be in the next two to five years. Chris also requested that a dioxin strategy team similar to the tributary loading group be formed. The team should include Bridgette DeShields, Jon Konnan, Francois Rodigari, Rod Miller, and Water Board staff.. Tom Hall and Rod Miller requested that any analysis include the dioxin-like PCBs.

Bridgette DeShields made a motion for approval of \$121,000 from the unallocated funds for dioxin analyses of sediment, sediment cores, and sport fish. Karen Taberski seconded and the motion passed unanimously.

Action item: Form a dioxin strategy team, develop a dioxin strategy and bring back to the TRC at the September meeting

6 & 7. Information: Pulse Update and Annual Meeting Agenda

Jay Davis passed out the multi-year schedule for topics for the Pulse. Luisa Valiela asked whether South Bay Salt Ponds was included (it is). He requested that the participants think about topics and ideas.

Jay Davis then distributed the agenda for the Annual Meeting and requested ideas for a keynote speaker. Chris Sommers indicated that Peter Gleick of the Pacific Institute had been a good speaker for the SoCal Stormwater conference. He also stated that he like the broad perspective that John Conomos brought to the Annual Meeting several years ago.

Mike Connor recommended that the dredging talk and the USGS sediment talk be grouped together. Chris Sommers suggested a talk on the oil spill, wastewater spills or the pelagic organism decline (POD). Mike suggested Inge Werner of UC-Davis could give a POD keynote talk. Mike suggested that it might be interesting to have a speaker from a similar monitoring program to discuss challenges and opportunities. Mike recommended Robert Tudor from the Delaware River Basin; Delaware has similar issues (recently passed a PCB TMDL). He also indicated that Rob Mason's mercury WERF study was particularly interesting and Rob could be a good keynote.

8. Information: Results of Copper Intercomparison Exercise

Meg Sedlak gave an update on the results of the copper intercomparison exercise. As background, Ms. Sedlak explained that at the December TRC meeting, she had provided preliminary information indicating that the Brooks Rand dissolved copper data in the Lower South Bay and South Bay was higher than historical data (approximately 1 ug/liter higher). Split samples were conducted with UCSC for 9 of the 22 stations. These nine stations were located in Central and Lower South bays. The splits are in good agreement for Central Bay; however, for South Bay and Lower South Bay the samples do not agree, with the UCSC data being consistent with historical data. UCSC uses a column chelating method to purify and preconcentrate; Brooks Rand uses reductive precipitation. Both labs use ICP-MS to analyze the extracts.

Two studies were initiated to begin to understand the cause of the discrepancy. To determine whether dissolved organic matter or chelating agents such as EDTA were masking copper concentrations, a round robin study with City of San Jose (column chelating), Brooks Rand (reductive precipitation) and Battelle laboratories (reductive precipitation) was initiated using synthetic seawater and varying concentrations of copper, dissolved organic matter, and EDTA. The results showed no significant bias.

A second study was undertaken to determine whether different 0.45 micron filters were causing the discrepancies. Again no disparity was found; however, interestingly, the results from the Brooks Rand analysis of the samples agreed well with the City of San Jose results and historic results.

Ms. Sedlak explained that for S&T this year splits would be collected at every site and sent to City of San Jose and Brooks Rand and that RMP staff would continue to determine the cause of discrepancy.

9. Information: Update on Air Deposition Study in the South Bay

Don Yee presented the results of a Proposition 13 project examining local sources of mercury deposition. An article has been prepared and was sent out for TRC review. Lester McKee indicated that this work would continue through the summer.

10. Information: Update on the results of the NWQMC Pilot Study

Mike Connor indicated that as a result of the pilot study that was conducted by SFEI staff, an additional \$100,000 has been allocated to the USGS for nutrient monitoring (Dr. James Cloern - \$50K) and for suspended sediment flux calculations at the Dumbarton Bridge (Dr. Dave Schoellhammer - \$50K). Mike Connor indicated that as Bay water becomes less turbid, it will be important to understand the effects of nutrients on water quality. For comparison, he said that the concentration of nitrogen in the Bay are similar to those in the Chesapeake Bay where nutrients are a big issue.

11. Program Update and Laboratory Data Status

Ms. Sedlak reported that all 2007 data have been received and are currently being reviewed.

Next TRC meeting is scheduled for October 2.

ACTION ITEMS

ACTION	WHO	STATUS
SC to develop a list of information needs based on RWQCB and RMP participants	Meg Sedlak	To be addressed as part of the RMP Master plan
Coordinate with RWQCB and US EPA (Patti Tenbrook) on conducting pyrethroid analysis in the Bay	Meg Sedlak	Completed
Revised management questions sent out to the TRC	Jay Davis	Completed
Draft RMP Master plan to be prepared for July meeting	Jay Davis	Completed
Template of information needs sent out to RMP sectors. A schedule will be included for when comments are needed by.	Jay Davis	Completed
Include Draft Do Not Cite or Quote on all presentations posted to web	Meg Sedlak	Completed
Confirm priority status of dioxins	Karen Taberski and Tom Mumley	Discussed at July meeting
Dioxin white paper sent to TRC and need to convene additional dioxin meetings	Mike Connor	White paper sent and need for additional meetings to be discussed at SC
Save the Bay comments on trash article and data management timetable to Chris Sommers	Jay Davis / Cristina Grosso	Completed
Small fish source pool sent to TRC and determine whether DGTs can dry out.	Ben Greenfield	Completed -- Ben sent out new version of plan to TRC.
Develop a special study idea or data integration task to look at PCB congener fingerprints in tributaries, bay and fish.	Jay Davis	To be included as a data integration task for 2009
Revise ten-year plan to include unallocated reserves	Meg Sedlak	

ACTION ITEMS (continued)

ACTION	WHO	STATUS
Send information to the TRC and SC on the benthic workshop	Meg Sedlak	
Develop a strategy for measuring and assessing sediment toxicity	Meg Sedlak	
Determine whether a scientific study can be designed to determine causes of cross-bills in South Bay birds	Meg Sedlak/ Letitia Grenier	
Develop a dioxin strategy	Susan Klosterhaus and Mike Connor	