



## RMP Technical Review Committee Meeting

March 23rd, 2010

San Francisco Estuary Institute

First Floor Conference Room

7770 Pardee Lane, Oakland

10:00 am-3:00 pm

**Lunch will be provided. We will take a short break and then keep working through lunch.**

### DRAFT AGENDA

1.	<b>Introductions and Approval of Agenda and Minutes</b> (Attachment)	10:00 Chair
2.	<b>Information: Steering Committee Minutes</b> (Attachment)	10:05 Meg Sedlak
3.	<b>Information: Planning Update</b> (Attachment) Update on the outcomes from the Master Planning Workshop.	10:20 Jay Davis
4.	<b>Discussion: S&amp;T Strategy</b> Management questions and priorities for the Status and Trends program will be presented for discussion.	10:45 Meg Sedlak
5.	<b>Information: Update on the Numeric Nutrient Endpoint Project</b> SFEI has recently completed a literature review of possible endpoints to monitor with regard to nutrients. A short overview of this work and the next steps will be presented.	11:30 Lester McKee
<b>LUNCH BREAK</b>		12:00
6.	<b>Information: Nutrient Strategy and Workshop</b> (Attachment) The RMP is developing a Nutrient Strategy. The first Nutrient Strategy team meeting will be held on April 22 <sup>nd</sup> and a workshop will be held on June 29 <sup>th</sup> with a second Strategy meeting following the workshop.	12:20 Meg Sedlak
7.	<b>Information: Status of RMP Modeling Efforts</b> The modeling team is finishing the 2010 3D-model tasks, the Bioaccumulation Model and the Margins Conceptual Model. An update on these tasks and next steps will be presented.	12:40 Jay Davis

8.	<p><b>Information: Results of 2009 Sport Fish Monitoring</b></p> <p>Results from the coordinated monitoring of the Bay, the Region 2 coast, and the Southern California Bight will be presented. A draft report is available for review at: <a href="http://www.sfei.org/content/contaminants-sport-fish-california-coast-draft-year-one-report">http://www.sfei.org/content/contaminants-sport-fish-california-coast-draft-year-one-report</a></p> <p>The page is password protected, and login information is given in the e-mail. Comments are due on Monday April 4<sup>th</sup>.</p>	1:00 Jay Davis
9.	<p><b>Information: Water Quality Report Card</b></p> <p>SFEI in collaboration with CEMAR, the Bay Institute, and the Point Reyes Bird Observatory is preparing a Report Card for the Bay. A water quality report card, based largely on RMP data, is one of the key components. A draft report on the water quality report card will be distributed to the TRC for review during the week of Mar 21<sup>st</sup>. Review comments will be requested by Friday April 1<sup>st</sup>.</p>	1:30 Jay Davis
10.	<p><b>Discussion: Approval of the CTAG-TRC Agenda (Attachment)</b></p> <p>The CTAG-TRC meeting is set for May 19<sup>th</sup>. CTAG has provided us with an updated agenda.</p> <p><b>Action: Approve agenda</b></p>	2:00 Meg Sedlak
11.	<p><b>Action: Pulse and Annual Meeting Update (Handout)</b></p> <p>An update on the status of the Pulse articles will be given. TRC input is also needed on the location, date, and speakers for the Annual Meeting.</p>	2:20 Jay Davis
12.	<p><b>Information: Program Update and Laboratory Data Status (Attachments/Handouts)</b></p>	2:45 Meg Sedlak
13.	<p><b>Action: Set Agenda and Date for Next Meeting, Plus/Delta</b></p>	3:00 Chair
	<p><b>Adjourn</b></p>	

## **RMP Technical Review Committee Meeting**

**December 15, 2010**

**San Francisco Estuary Institute**

**First Floor Conference Room**

**7770 Pardee Lane, Oakland, CA**

**10:00 am – 4:00 pm**

**DRAFT MINUTES**

### **Meeting Participants**

Bridgette DeShields (Arcadis (WSPA))

Eric Dunlavey (City of San Jose)

Tom Hall (EOA, Inc. (South Bay Dischargers))

Mike Kellogg (City and County of San Francisco)

Francois Rodigari (EBMUD)

Chris Sommers (BASMAA (EOA, Inc.))

Karen Taberski (SFB RWQCB)

Luisa Valiela (USEPA) (via telephone)

Rachel Allen (SFEI)

Jay Davis (SFEI)

Ben Greenfield (SFEI)

Jen Hunt (SFEI)

Michelle Lent (SFEI)

Lester McKee (SFEI)

Aroon Melwani (SFEI)

Meg Sedlak (SFEI)

Don Yee (SFEI)

Andy Jahn (Independent Consultant)

Trish Mulvey (SFEI Board)

Ian Wren (Baykeeper)

### **1) Introduction, Approval of Minutes, and Review of Action Items**

Meg Sedlak reviewed the action items from the previous Technical Review Committee (TRC) and Steering Committee (SC) meetings. She noted that planning for the proposed joint north-south stormwater meeting is just starting. Ms. Sedlak is meeting with the SFEI web developer in late December to discuss a web tool for uploading metals data from the wastewater treatment plants (WWTPs).

Francois Rodigari appreciated that the action items were included as a separate table. He asked if Jay was planning on working directly with Amy Chastain on the upcoming fact sheets. Jay Davis indicated that he will work with both RWQCB and BACWA on the fact sheets.

Tom Hall noted that he met with Brad Eggleston and Ken Kaufman to talk about transitioning from Ken Kaufman to Brad Eggleston as the SC rep. He also noted that the BACWA permits committee will put a standing item on their agenda to discuss the RMP, to promote more frequent interaction between the RMP and BACWA. Tom Hall and Jim Ervin of San Jose are both on the BACWA permits committee.

Francois Rodigari motioned to approve the minutes, Karen Taberski seconded, and the minutes were unanimously approved.

## **2) Information: SC meeting Update**

Meg Sedlak noted that the SC voted for a 0% increase of fees to the RMP for 2012. This will impact the RMP budget, and in 2011 she will look at the Status and Trends (S&T) budget to determine whether cuts can be made in 2012.

The SC approved funds for the analysis of dioxins, per the recommendation from the TRC. They also concluded that there was not a need to host the annual RMP Mercury conference in 2011, as it has in recent years. The need for a mercury conference, or a similar meeting on another topic in 2012, will be addressed in 2011.

Ms. Sedlak gave a brief update on the RMP Annual Meeting, noting that participation was down significantly. Only 160 people attended in 2010 – the lowest number in 5 years. Similarly, relatively few individuals completed the meeting survey. The SC suggested that stormwater people may have been less likely to attend the meeting. Karen Taberski noted that some organizations that focus on the Bay were disappointed that the RMP Annual Meeting was not about the Bay.

## **3) 2011 Pulse**

Jay Davis outlined the timetable for the 2011 Pulse, and asked for feedback on the proposed titles for management and feature articles. The SC approved the theme of “Contaminant Effects on Aquatic Life” in November.

The management section may only have one article: a discussion of the State of the Bay report card. Dr. Davis, Josh Collins, and other SFEI staff will be working collaboratively with Andy Gunther and the Bay Institute on the report card, and it will be released in the summer of 2011, in time for the State of the Estuary conference. The TRC will have a chance to review the report card during its creation, and it will also be vetted by OEHHA and the Water Board. Jay Davis clarified that the report card will likely be for specific contaminants and by Bay segment, and a companion document will accompany the report card to explain and elaborate on it. The Pulse article would present a summary of the report card from the RMP perspective.

With regards to other Pulse sections, the latest monitoring results will give new data and the water quality trends at a glance will be revamped and condensed down with input from Judy Kelly, and with added graphs from David Schoelhammer on SSC and salinity in the Bay.

The feature articles would each focus on a different taxon, including fish, birds, benthos, phytoplankton, and possibly seals.

Mike Kellogg offered to be involved in the benthos article, although he does not want to lead it. Jay Davis stated that he would like for Chris Werme to be involved and to assist in the writing of several of the Pulse articles. He suggested that the benthos article might

benefit from her input. SFEI is currently trying to hire a sediment quality scientist, but it is unclear how quickly this process will move along.

Jay Davis noted that the phytoplankton article has a head start because Thomas Jabusch drafted a phytoplankton article for the first Pulse of the Delta, which is in its final review stages. Tom Hall offered to be involved in the article, but was not interested in co-authoring it. It is likely that Jim Cloern will also assist in this article. Tom noted that the phytoplankton levels vary across the Bay with low levels observed in Suisun and increasing levels observed in South Bay. Karen Taberski asked that the draft articles for the Delta Pulse be sent around to the TRC.

Tom Hall and Karen Taberski noted that while there are a lot of phytoplankton data from Jim Cloern and Dick Dugdale's work in the Bay, there may be data gaps that the RMP may want to investigate in the future. Jim Cloern's retirement is approaching, and when he retires it is likely that the USGS will cease to fund the monitoring of water quality in SF Bay. Meg Sedlak, Mike Connor, Tom Mumley and Rainer Hoenicke recently met with Jim Cloern recently to discuss how to continue data collection after his retirement. The group decided to have a workshop in June 2011 to educate the community about the nutrient and phytoplankton issues in the Bay. In this meeting it will be important to discuss information needs and data gaps, to design a program that addresses these gaps, and to discuss where a program could be housed. Karen Taberski offered to participate in these discussions as the representative from the TRC. Andy Jahn suggested that species counts of chlorophyll be included in the phytoplankton section.

Meg Sedlak thought it would be timely to include an article or sidebar on seals given the wealth of contaminant studies that have been conducted. She also indicated that The Marine Mammal Center (Denise Greig) was completing a study on contaminant effects on seals.

Tom Hall noted that the State Board is in the process of creating a whole effluent toxicity policy. Although RMP data suggest that there is little water toxicity in the Bay, there is a perception that it may be a problem, perhaps in part because water column toxicity has been an issue in streams around the State. Data from these streams and tributaries might be interesting for comparative purposes. Jay Davis suggested compiling the water toxicity data, showing that it is not a problem, and potentially writing a management sidebar or article based on this information. Sediment toxicity tests will be discussed in the benthos feature article. Karen Taberski indicated that she had reviewed the toxicity data for a short technical memorandum from the SWAMP.

**Action items:**

- Send the draft Delta Pulse articles to the TRC members.
- Include Karen Taberski in the next USGS/Cloern Water Quality monitoring program meeting, to be held in January 2011.
- At the next TRC meeting, include an item on planning for nutrient analyses after Jim Cloern's retirement.

#### 4) CTAG-TRC meeting

The CTAG-TRC meeting is proposed for May 19<sup>th</sup>, 2011, at SCCWRP. Bridgette DeShields noted that she is unavailable that day, so Meg Sedlak will look into changing the date of the meeting (*After the meeting it was determined that it was not possible to reschedule the meeting based on a survey of CTAG members*). In the meantime, Karen Taberski offered to join the planning committee with Bridgette DeShields, Steve Weisberg, and Dominic Gregario, and could act as chair if it were held a day when Bridgette DeShields could not make it. Meg Sedlak will check with Steve Weisberg to determine if SCCWRP needs to do their director's report at the meeting (*Steve indicated that they can do the director's report before the CTAG-TRC meeting begins*).

The agenda currently proposes a discussion of effects, which would be a good opportunity to compare SCCWRP and RMP approaches, nutrients, stormwater, and emerging contaminants. There was also some discussion of inclusion of shellfish surveys because there is a state-wide effort underway. The stormwater update may not be necessary if a joint north-south stormwater meeting is held independently, although a briefing could be helpful.

#### Action items:

- Look into changing the date of the CTAG-TRC meeting to the week of May 23-27.
- Check with Steve Weisberg to determine if SCCWRP needs to do their director's report at the meeting.

#### 5) Detailed Workplan and Master Plan

RMP staff updated the TRC on progress made in 2010, and plans for 2011.

Jay Davis outlined the special studies as proposed in the RMP Master Plan. In 2011 and 2012, there are a lot of synthesis efforts, so the future work and funding is largely unknown at this time. There is a lot on the plate for 2012, so the RMP will need to do a lot of prioritization of its goals.

Karen Taberski pointed out that the figures listed as "available for special studies" are just projected, based on assumptions of RMP costs and available funding.

##### a. Sources, Pathways, and Loadings

Lester McKee reviewed the progress of the Sources, Pathways, and Loadings workgroup (SPLWG). It was originally formed in 1999, with the intent of gathering information on the major pathways of contaminants to the Bay. The Small Tributaries Loading Strategy (STLS) focuses on just one of these pathways – small tributaries – and provides a link between the RMP and the Municipal Regional Permit (MRP). Lester McKee presented the budget for the SPL proposed studies through 2015. The projects for each year total to between \$325K and \$550K.

Work in 2010 included meetings with the SPLWG and the STLS team, as well as the joint CTAG-TRC meeting in May 2010, and numerous projects and products. Chris Sommers pointed out that the 2010 Guadalupe River loads monitoring project was not RMP funded, although the RMP did support PCB monitoring in the Guadalupe River.

**i. 2010 Watershed Classification**

Jay Davis pointed out that this projection may need to be revised, as the RMP does not have sufficient funds at this point to cover all of the projected information needs. Chris Sommers added that the MRP requires twice as much work as the RMP is providing, which puts additional pressure on the Municipal agencies.

**ii. 2010 Optimizing sampling**

Lester McKee highlighted the optimizing sampling for loads and trends project, which was designed to determine a reasonable balance between cost and accuracy and precision in loading information.

**iii. 2010 Guadalupe Watershed Model**

Michelle Lent presented the progress on the Guadalupe watershed model. Currently, she is working on calibrating the sediment part of the model, and incorporating mercury data. The model simulates sediment transport reasonably well; however, the model is not very good at predicting catastrophic events such as bank failures that may release large Hg loads (2003 had particularly high mercury concentrations). In 2011, the project will focus on adding PCB modeling capabilities, jointly calibrating PCBs and mercury, and completing the draft report.

**iv. 2010 Regional Spreadsheet Model and Land-Use specific Event Mean Concentrations (EMCs)**

The regional spreadsheet model and land-use specific EMCs apply land-use information to predict runoff volumes. Initial results suggest that this approach is producing more accurate and precise results compared to a model based on percent imperviousness. A report is due in February 2011.

**v. 2011**

Lester McKee outlined the three main tasks for the SPLWG for 2011, which are the regional loading spreadsheet model (\$20K), monitoring stormwater from 16 small tributaries in the Bay Area (\$300K), and management support for the STLS (\$20K).

Chris Sommers pointed out that the 16 tributaries selected for loads monitoring were selected from 187 potential sites and represent watersheds more likely to have high contaminant loads, varying watershed size, and areas of mixed commercial/ residential use. This variety should help the STLS team understand variability in watershed type and loading. With the continued monitoring of watersheds over a number of years the team will begin to characterize the variability in loadings from watersheds, and will then be able to begin testing the efficacy of BMPs.

**b. Dioxin Strategy Update**

Don Yee updated the TRC on the dioxin strategy. The Master Plan outlines dioxin analyses in a number of matrices through 2012. Data from the 2009 fish, water and sediment analyses are currently being reviewed. Jay Davis indicated that OEHHA had requested the sport fish data as part of their update of the sport fish advisories for PCBs, Hg, and dioxin. It is likely that the sport fish data will be included as part of OEHHA's release of the new advisories.

A preliminary analysis of the 2009 dioxin sediment and water data shows higher concentrations in the South Bay. Based on the recommendation of the TRC, sediment samples from 2008 (dry season) and 2010 (wet season) and cores from the Bay and wetlands have been sent to the lab for dioxin analyses. The results are expected back by the first quarter of 2011.

Loading estimates are being developed for the San Joaquin/Sacramento River, Guadalupe River, and Zone 4 Line A tributary. The results of the Guadalupe loads are pending the release of SSC data from USGS. A draft report on air deposition of dioxins using the California Air Resources Board air concentration data will be completed in December 2010.

In 2011, the dioxin strategy team will focus on status and trends water sites.

**c. Mercury and PCB Strategy Update**

Jay Davis gave an overview of the RMP mercury strategy. In 2010, the mercury strategy focused on small fish monitoring, manuscripts on the Hg isotope work and a report from the diffusive gradient thin-film (DGT) work, the methylmercury mass budget, and a report on the effects on birds. Jay noted that the avian effects work was at a stopping point because the study concluded that the existing TMDL mercury monitoring target is protective of terns, so there is no need to revise the threshold.

**i. 2011 Mercury Synthesis**

In 2011, the mercury strategy is focused on preparing a synthesis report on what is known and what information is needed about mercury cycling in San Francisco Bay. The synthesis team is collaborating with the Coastal and Marine Mercury Ecosystem Research Collaborative (C-MERC), and the final report will be drafted by spring 2011, to be part of a journal special issue along with the other C-MERC papers. The paper was outlined at the C-MERC workshop in September 2010, and will also include a human health component. The next step for the project is a meeting with the coauthors in January 2011.

**ii. 2011 PCB Synthesis**



In the second half of 2011, the RMP will review the status of knowledge about PCBs in the Bay. This synthesis may overlap with the bioaccumulation conceptual model and the margins conceptual model, and will therefore have some linkage with these projects.

Tom Hall asked if the synthesis will evaluate information with respect to the most toxic PCBs. Jay Davis indicated that the report would address this topic.

### **iii. 2010 and 2011 Small Fish**

Rachel Allen updated the TRC on PCBs and Hg in small fish work in 2010 and 2011. 2010 was the last year of intensive spatial monitoring for Hg in small fish, and also included targeted and random PCB sites. Work on Hg isotopes in fish and sediment indicated that sediment is an important source of Hg to fish. A report on DGTs is being reviewed internally and by the CFWG.

In 2011, small fish work will be limited to four sites for seasonal sampling. This data will add to previous seasonal data sets to help in determining seasonal patterns in methylmercury uptake.

### **d. Modeling and Forecasting**

Jay Davis indicated that the RMP modeling strategy is moving away from using SUNTANS, the model in development by UC Berkeley and Stanford. Some of the issues with SUNTANS are the high level of expertise needed, the large amount of data needed as input, and the length of time it will take to develop the model. Craig Jones, who has helped with the margins conceptual model, recommended investigating other dynamic 3D approaches that are lower resolution than SUNTANS, and therefore more likely to be usable by the RMP community in a much shorter time frame such as two to three years. These models are less risky and more likely to provide the modeling capabilities needed for the next round of TMDL development. This advice from Craig Jones still needs to be vetted with the CFWG.

Karen Taberski indicated that SUNTANS was currently being used by Dick Dugdale and Jim Cloern to model nutrients. It was clarified that nutrients were likely part of the hydrodynamic portion of the model and that the link to sediment transport/contaminants is the difficult part.

The TRC requested that the CFWG weigh in on switching models and that RMP staff determine the remaining budget on the existing SUNTANS task to see whether this funding could be redirected. Ben Greenfield indicated that most of the work had been completed on the project.

The TRC requested to be kept more informed of significant changes in scope and that there be a good process when decisions are made to abandon or redirect work.

Chris Sommers requested a detailed table and matrix of what models exist and which ones we are likely to move forward with.

**i. 2010**

The 2010 forecasting projects included the margins conceptual model, which will be drafted in January, SUNTANS development, which is on track, and the bioaccumulation conceptual model, which will have a draft in February.

Ben Greenfield pointed out that because the RMP is proposing moving away from the SUNTANS model, we do not know if the 2010 work will be useful. Don Yee added that the first part of the model is focused on hydrodynamics, which may be useful for phytoplankton and nutrients. The SUNTANS team has not yet transitioned to sediments, which will be necessary for contaminant modeling, and they are less interested in this component of the model.

Chris Sommers asked about the timeframe for the 2010 work, and the status of the 2010 budget. Ben Greenfield indicated that the funding for Ed Gross has been spent, and that the majority of the work planned for Mark Stacey's team has been performed.

Jay Davis indicated that RMP staff would evaluate how much work has been completed by Mark Stacey's UC-Berkeley group, and determine if there are residual funds. Bridgette DeShields added that we should ask for a report on work that could be useful to the RMP. Chris Sommers suggested that the CFWG be consulted for a recommendation on what work from the SUNTANS team would be useful in the future, and what sort of model the RMP should pursue instead of SUNTANS.

**ii. 2011**

A revised forecasting strategy, based on recommendations from the CFWG, will be prepared by June 2011, and will feed into planning for 2012.

Francois Rodigari requested that the TRC have an opportunity to evaluate the options for future modeling work, to appropriately vet the decision to abandon SUNTANS and the choice of an alternative. Meg Sedlak confirmed that the TRC will be consulted for the next forecasting strategy.

**e. Exposure and Effects**

Aroon Melwani presented highlights and updates of Exposure and Effects work from 2010.

**i. Benthic Workgroup**

The benthic workgroup held meetings in April and October 2010. The team completed manuscripts on assemblages in San Francisco Bay and the Best Professional Judgment (BPJ) exercise, which are to be submitted shortly. The development of assessment indicators for mesohaline and limnetic assemblages has been put on hold pending the development of a "Gold Standard assemblage", which are reference assemblages for healthy and impact sites). A "Gold Standard Workshop" will be convened in the second quarter of 2011.

**ii. 2010 Causes of Sediment Toxicity**

The project is largely completed for 2010, with sediment and water LC50s developed. At spiked reference sites, toxicity was seen only with some of the contaminants. UC-Davis will send some of these samples to UC Berkeley for gene microarray analysis.

**iii. 2010 Molecular TIEs**

Due to staffing issues at SCCWRP, the project was somewhat delayed in 2010. It is moving forward with the calibration of molecular TIEs, and a report will be available in February 2011.

**iv. 2011 Sediment Hotspots**

This project will be led by the new sediment quality scientist. The second part of the project, including reporting, is due in 2012.

Trish Mulvey asked about the process for hiring this new scientist. Meg Sedlak stated that SFEI is reviewing some resumes, and will decide about the timeline in the future.

**v. 2011 SF Bay NCCA**

This USEPA funded project, which will be overseen by the EEWG, is set to assess the condition of the San Francisco Bay sediment using data from the RMP and NCCA, and will also be led by the new sediment quality scientist. The report deadline is March 2012.

Jay Davis noted that this work will not overlap with the State of the Estuary report card, because the report will focus on the triad, which will not be ready for the upcoming report card. Eventually, triad data will be incorporated into the report card.

**vi. 2010 PBDEs in Terns**

Meg Sedlak updated the group on the PBDEs in terns study lead by Barnett Rattner. To date, the team has seen pipping, hatching, and sublethal effects at environmentally relevant concentrations. Evaluations will continue in 2011.

**vii. 2011 Copper in Salmonids**

A study by David Baldwin will evaluate the impact of copper on the olfactory nerve of salmon in salt water in 2011.

**f. Contaminants of Emerging Concern**

Susan Klosterhaus updated the TRC on the Contaminants of Emerging Concern (CEC) strategy.

**i. Specimen Bank**

The RMP has established a memorandum of understanding with the National Institute of Standards and Technology (NIST) to archive RMP samples, including sport fish, bird eggs, sediments, and bivalves.

**ii. CEC Profiles**

Three profiles have been completed, with the goal of providing information to water/air quality managers, regulators, and the public. The next step will be to create fact sheets based on the profiles, and put them up on the website.

Trish Mulvey asked when the factsheets will be available, and Jay Davis responded that while the first half of 2011 is looking quite busy, the team will work to create a prototype soon.

### **iii. AXYS/ CEC Mussel Pilot Study**

Susan Klosterhaus presented the results from this work at the RMP annual meeting in October 2010. She is currently working on a manuscript for this project.

### **iv. Brominated Dioxins/ Furans**

Data from the AXYS pro bono analysis of brominated dioxins and furans in sediment, sport fish and seal blubber showed not many detects, with the penta furan appearing in the highest concentrations. It is currently unclear what will be done with this data.

Trish Mulvey asked who will decide what to do with the data, and Meg Sedlak said that they will consult with the ECWG. Susan will use TEQs to compare the brominated dioxins with the chlorinated dioxins.

In a partnership with the University of Minnesota, we will continue to investigate the formation and sources of brominated dioxins. One known source is impurities in brominated flame retardants. This topic will be discussed at the next ECWG meeting in March.

### **v. NOAA Mussel Watch California Pilot study**

The NOAA Mussel Watch pilot study incorporated winter sampling at existing mussel watch sites with summer sampling at targeted new sites, including passive samplers at four sites in SF Bay. All were analyzed for CECs, with the goal of developing a list of high priority CECs for the national program. Karen Taberski asked if fungicides are included in the list of current use pesticides. Susan Klosterhaus informed her that the plan to include them fell through, so they were not included. However, nanoparticles were analyzed.

### **vi. Broadscan Screening of Bay Wildlife**

The first year of this two-year study is complete, with the samples collected, method under development, and analysis of seal samples begun. The second year holds continued seal sample analysis, modification of methods for mussel analysis, and analysis of mussel samples. The collaboration with NIST, the Marine Mammal Center, SCCWRP, and San Diego State University has resulted in considerable contributions of time and funding from the partner organizations.

The final report, with a list of “new” chemicals that are present in wildlife tissue, is due in March of 2012.

**vii. CEC Synthesis Report**

A report summarizing CEC occurrence data in the Bay and the state Advisory Panel recommendations for CECs will be prepared in the second half of 2011 and the first half of 2012, with the final report due in the spring of 2012.

Jay Davis clarified that this report is scheduled to inform RMP special studies in 2013.

**viii. Surface Water Microplastics Survey**

In a collaboration with SF Baykeeper, Susan Klosterhaus will perform a small pilot study looking at microplastics in surface water at 5 central bay hotspots. A 15 minute manta trawl (the method used by the marine debris program) will be used to collect the samples, which can be compared to results from the Puget Sound and the Chesapeake Bay.

Due to limited resources, the study will focus on the worst case scenarios.

**g. Status and Trends**

Meg Sedlak reviewed the status and trends strategy. In 2010, the RMP performed wet season sediment sampling, which collected samples for the triad analysis at 27 sites. There was also dry season water sampling, as well as the biannual bivalve monitoring. In 2011, both water and sediment will be collected in the summer.

The last sport fish monitoring was performed in 2009, in collaboration with SWAMP and the Bight program. A draft of the integrated report combining regional and statewide information is due in February 2011.

In response to the chart showing total PCBs in different sportfish species in different locations, Karen Taberski and Chris Sommers requested that the data also be presented as lipid normalized.

**h. Data Management**

Cristina Grosso reviewed data management work from 2010 and plans for 2011. All the 2009 S&T data is available online, and the data management team is tracking the use of the web query tool. RMP data is also now available through CEDEN. There are also improved tools for data submission for labs, and improved reporting on the SFEI website. Goals for 2011 include reporting data within 1 year, enhancing web query tools, and coordinating the San Francisco Bay Regional Data Center.

Chris Sommers and Trish Mulvey commented that great improvements on timeliness of data submission have been made over the years. Tom Hall suggested that data management would make a good topic for a factsheet.

**Action Items:**

- Review existing SUNTANS work and see whether work should be put on hold. Get a recommendation from the CFWG on what pathway the RMP should pursue for modeling capabilities (including a table of model strengths and weaknesses).

#### **6) Approve Detailed Workplan, Set Date, and Plus/Delta**

Mike Kellogg moved to approve the 2011 Detailed Workplan, which Tom Hall seconded. The workplan was approved.

Meg Sedlak reviewed RMP deliverables and carryover items. Updating the QAPP is a high priority for the RMP. Francois Rodigari asked that stakeholders be involved in the planning stages of the update, and volunteered to help. Don Yee clarified that the team would vet it through the stakeholders and the labs, and keep it compatible with SWAMP format.

Trish Mulvey noted that she liked the format of the deliverables scorecard. She would like items to be called out based on how many months they are delayed, not whether or not they are delayed from one year to the next. Chris Sommers requested that all cells in the table be filled out.

Bridgette DeShields thought the lunch (hot meal) was good, and that the meeting stayed on time. Trish Mulvey thought the visual quality of presentations was improving, and that Cristina Grosso's presentation was particularly clear.

Chris Sommers requested that all the presentations be combined into a pdf, and send out to the meeting attendees.

The next meeting is set for March 23<sup>rd</sup>.

#### **Action Items:**

- Distribute the presentations from the TRC meeting to TRC reps as a collated pdf

#	Action Items – Dec 2010	Who?	When?	Status 3/15/2011
1	Send the draft articles for the Pulse of the Delta to the TRC	Thomas Jabusch	Dec 2010	Completed
2	Include an update on the planning of the transition of USGS water quality monitoring at next TRC meeting	Meg Sedlak	March 2011	On agenda
3	Include Karen Taberski as the TRC representative in a meeting with Jim Cloern to discuss the future of his nutrients program	Meg Sedlak	January 2011	Completed
4	Check with SCCWRP to see if they need to include the director's report in the agenda of the CTAG-TRC meeting, and if the meeting date can be changed	Meg Sedlak		Completed. Cannot move date, director's report will be presented before the start of the meeting
5	Assess status of SUNTANS work and get a recommendation from the CFWG on what pathway the RMP should pursue for modeling capabilities (including a table of model strengths and weaknesses)	Jay Davis, Don Yee, Ben Greenfield		CFWG meeting set for May 12, items on agenda
6	Distribute the presentations from the TRC meeting to TRC reps as a collated pdf	Rachel Allen	December 2010	Completed and available on the SFEI website

#	Action Items – Sept 2010	Who?	When?	Status 3/15/2011
2	Discuss fact sheet needs and development with BACWA and Regional Board. Develop list of factsheet topics	Jay Davis	January	Discussed at Jan SC meeting, will develop factsheets on topics as appropriate
5	Develop a 2012 RMP proposal for incorporating mercury into SQO indirect effect models	Ben Greenfield	June	To be addressed at EEWG

#	Action Items – June 2010	Who?	When?	Status 3/15/2011
3	Send a list of SFEI stormwater projects to Chris Sommers.	Jen Hunt		In progress
4	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	Tentatively set for June 2011	Meeting discussions in progress
5	Explore holding a joint meeting between SFEI and SCCWRP on nutrients in about a year.	SFEI Staff	May 19, 2011	Included as part of CTAG-TRC meeting; SCCWRP staff will attend USGS nutrients discussion in June
6	Standardize the format of RMP proposals	Meg Sedlak, Chris Sommers	Next round of proposals	Pending
7	Review existing information on shellfish, and consider designing a comprehensive shellfish survey.	Meg Sedlak and Jay Davis	Spring 2011	To be addressed at next EEWG meeting



RMP Water Qual 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)	P	P
POTWs	Rod Miller	SF PUC	X	P	P	X	X	P	P	X	X	X	P	X
South Bay Dischargers	Tom Hall	EOA, Inc.	P	P	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	P	P
City of San Jose	Eric Dunlavey	City of San Jose	P	P	X	P	P	X	P	P	P	P	P	P
Refineries	Bridgette DeShields	Arcadis/WSPA	P	P	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	X	X
Stormwater	Chris Sommers	BASMAA (EOA, Inc.)	P	P	P	X	P	P	P	P	P	P	X	P
Dredgers	John Prall	Port of Oakland	P	P	X	X	P	P	X	P	P	X	X	X
Corps of Eng.	Rob Lawrence	Army Corps of Engineers	X	X	X	X	X	X	X	X	X	X	X	X
SF-RWQCB	Karen Taberski	SF-RWQCB	P	P	(1)	P	P	P	P	P	P	P	P	P
US-EPA IX	Luisa Valiela	US EPA	X	P	X	P	X	C	X	C	P	X	C	C

## Notes:

1. Richard Looker substituted for Karen Taberski	X = not present	P = present
2. Saskia van Bergen substituted for Francois Rodigari		C = call-in

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**RMP Steering Committee Meeting**

**January 19<sup>th</sup>, 2011**

**San Francisco Estuary Institute  
Second Floor Conference Room  
7770 Pardee Lane, Oakland, CA**

**DRAFT MINUTES**

**Members Present**

Brad Eggleston, City of Palo Alto  
Kirsten Struve, City of San Jose  
Adam Olivieri, BASMAA (EOA, Inc)  
John Coleman, Bay Planning Coalition  
Tom Mumley, SFB RWQCB  
Dan Tafolla, Vallejo Sanitation and Flood Control District

**Others Present**

Rachel Allen, SFEI  
Meg Sedlak, SFEI  
Jay Davis, SFEI  
Lawrence Leung, SFEI  
Trish Mulvey, SFEI Board of Directors

**1) Approval of Agenda and Minutes**

Kevin Buchan, the Steering Committee (SC) Chair, was not present. Adam Olivieri served as interim chair in his absence.

Meg Sedlak reviewed the action items from the previous meetings. She noted that Jay Davis would present the draft of the triclosan fact sheet, which Amy Chastain and the Water Board have already commented on, and the SC would have a chance to comment on at this meeting. Craig Jones and SFEI staff are working on the Margins Conceptual Model. Meg Sedlak is working with the SFEI information technology team to create a web tool for uploading metals data from the wastewater treatment plants, which will be implemented in the summer of 2011. John Coleman announced that he is the new Executive Director of Bay Planning Coalition, replacing Ellen Johnck, and would follow up on items that were assigned to Ellen. Meg Sedlak is planning on developing the RMP status and trends (S&T) strategy in the 2<sup>nd</sup> quarter of 2011.

Tom Mumley noted that the SC will have an opportunity to discuss the scope of the S&T strategy at the Planning Workshop.

Tom Mumley motioned to approve the minutes from the November SC meeting, Kirsten Struve seconded, and the minutes were approved.

## **2) Information: Committee Member Updates**

There were no committee member updates.

## **3) Information: Technical Review Committee Meeting summary**

Meg Sedlak noted that the Technical Review Committee (TRC) meeting in December 2010 largely focused on what was accomplished in 2010. One issue of note was the change in direction of the modeling strategy, which was addressed in more detail later in the meeting.

In general, Kirsten Struve thought that shorter minutes would be acceptable; however Trish Mulvey and Brad Eggleston considered the level of detail appropriate for communication and new members.

### **Action items**

- Update the TRC minutes to reflect Adam Olivieri's comment on the total budget for upcoming Sources, Pathways and Loadings (SPL) projects.

## **4) Information: Budget Status**

Lawrence Leung gave an update on the status of the RMP budget. Tom Mumley noted that he prefers to transfer unspent money from previous years to the current year, so that only 1 year need be kept track of. Lawrence clarified that the 2010 surplus includes dredgers, subcontracts, and direct costs, and totals to about \$206,000. With these funds, he will set up two reserves. One of the reserves will be exclusively for dredgers to help balance out fluctuations in revenue from dredging activities.

Lawrence Leung indicated that 99% of RMP fees for 2011 were received, with the exception of Caltrans. The Caltrans fees for all years up to 2011 have been paid. Meg Sedlak thanked Tom Mumley for his hard work in obtaining the delinquent funds.

## **5) Information: Modeling Update**

Jay Davis noted that in hindsight the forecasting strategy now seems to have advocated the wrong approach. In 2010, the RMP started developing the SUNTANS model for contaminant fate with researchers at UC Berkeley and Stanford. The decision to pursue this approach was made with a lot of review, and though there were reservations, the CFWG and the TRC decided to move ahead with this strategy, in part due to John Oram's expertise in that area. With John Oram's departure from SFEI, the organization no longer has that in-house expertise. Additionally, the Master Planning process has helped highlight the modeling needs of the RMP, including providing better models for the next iterations of the Mercury and PCBs TMDLs. SUNTANS is slow moving and highly dependent on its partners, does not include sediment, and is not tailored to long-term predictions. In working with Craig Jones, RMP staff members have learned about other modeling approaches, such as the Delft3D model by USGS that recently became open source. Craig Jones suggested that with a \$100,000 per year investment in an alternative platform for the next 2-3 years, the RMP could have a useable product at the end of that time frame. These considerations will be discussed with the TRC and the Contaminant Fate Workgroup (CFWG) before any changes are implemented.

In the meantime, the RMP is still working on the Margins Conceptual Model and the Bioaccumulation Conceptual Model, both of which will be released soon.

Meg Sedlak noted that the RMP money and effort spent on this project was not wasted – it helped establish collaborations and funding, and in the long term, the RMP has the framework for making use of the final modeling product. Tom Mumley suggested that the SUNTANS model may be the best model of the Bay in the long term, and by establishing connections with it now, the RMP may be better able to make use of it once its full capacities are developed. The hydrodynamic platform of the SUNTANS model exists and is in use, but the sediment platform is still being developed. In contrast, the Delft3D sediment module is in use, and the USACE is using it in the North Bay, in lieu of their in-house model. Close coordination with the Corps is needed on our modeling work. Jay Davis suggested that the RMP include someone from the USACE at the CFWG meeting when these models will be discussed. The USACE (Megan Kaun and others) has already begun participating in Modeling Team meetings.

Chris Sommers asked that a table presenting the pros and cons of the available models be created. Jay Davis confirmed that these options would be discussed at the next CFWG meeting, and the modeling workplan would be brought back to the TRC in June and the SC in July.

### Action Items

- Include a representative from the USACE at the CFWG meeting.
- Develop a table comparing the various possible contaminant fate models.

### 6) Information: Nutrients and Phytoplankton

Meg Sedlak updated the SC on Jim Cloern's future retirement from USGS. She described the monitoring program in its current state and elaborated on its significance to the understanding of the Bay. Unfortunately, Jim Cloern will retire in 3 to 4 years, and USGS is likely not interested in continuing this work after his retirement. The RMP is starting to develop a strategy for how this important work can continue. In June 2011, the Nutrient Strategy Team will hold a workshop to inform the community about this issue and articulate key needs. A goal will be to encourage participation by POTWs and other stakeholders. Jim Cloern is interested in being involved in this process and being available as a resource. (*The first Nutrient Strategy meeting will be held on April 22<sup>nd</sup>.*)

Tom Mumley agreed that Jim Cloern's work needs to be sustained, and that SFEI is an appropriate home for the program. John Coleman offered the Bay Planning Coalition's assistance in establishing the workshop. Jay Davis suggested that the outcomes of the workshop form the basis for an RMP Nutrient Strategy. Because the program will be larger than the RMP can sustain on its own, the Strategy will address the broader plan and take into account the RMP's stake in it.

Meg Sedlak mentioned that SFEI may be able to identify a new senior staff member with experience in nutrients. (*Note added March 15, 2011: SFEI has recruited Dr. David Senn of the Swiss Technical University who will assist in the development and implementation of a nutrients strategy.*)

Brad Eggleston asked about the numeric nutrient endpoint (NNE) process, and expressed concern about possible redundancy. Meg Sedlak noted that it is underway, and the planning process will be finished this summer. The SC agreed that pursuing a Nutrient Strategy now is important to meet RMP needs while not forcing it to bear the full costs of the effort in the future. Tom Mumley suggested that other collaborators, such as IEP, be brought into the discussion. Adam Olivieri recommended that the Strategy be short and sweet, and suggested trying to obtain funding from the Water Quality Improvement Fund.

**Action Items**

- Develop a Nutrient Strategy based on the outcome of the Nutrient Workshop.

**7) Action: RMP Master Plan Workshop**

Jay Davis outlined the agenda for the upcoming Master Planning workshop. The goals of the meeting will be to provide guidance on anticipated information needs and broadly paint the RMP budget for 2012 special studies. He asked that the SC members review the Master Plan before the meeting, and assess whether it is accurate and up to date. Adam Olivieri asked that an updated version of the Master Plan be distributed at least one week before the workshop.

Kirsten Struve asked that the agenda include a discussion on criteria for prioritizing funding before specific priorities are addressed. She also suggested that the Master Plan note and anticipate permit requirements. Adam Olivieri noted that his priorities are fulfillment of permit requirements, investigatory work (on elements that may end up in permits, or that meet management needs), and research, in that order. Meg Sedlak relayed an inquiry from an ECWG panel member: "where do technical experts get a chance to comment on the Master Plan?". She wanted to be sure that the RMP is not missing an opportunity to have experts weigh in on strategic planning. Jay Davis suggested that this should happen at the workgroup meetings, and that the agendas be tailored to ensure that this discussion occurs.

Tom Mumley outlined some of the concerns that will be addressed at the Master Plan meeting. He noted that if all the proposed studies were to be accepted the RMP would be in the red for 2012. The information needs table on page 6 of the Master Plan currently focuses on Water Board needs. He asked the other agencies to consider their information needs for the Master Planning workshop.

**Action Items**

- Update the Master Plan and distribute it to SC members at least 1 week before the planning workshop.
- SC members to review the master plan and consider their information needs.

**8) Discussion: Joint CTAG-TRC meeting**

Meg Sedlak presented the proposed agenda for the upcoming joint meeting with the TRC and the Commission's Technical Advisory Group (CTAG) of the Southern California Coastal Water Research Project. This year will focus on nutrients and contaminant effects to aquatic life. Adam Olivieri suggested that recycled water would be another potential topic.

**9) Discussion: RMP Annual Meeting**

Meg Sedlak suggested Tuesday, October 4<sup>th</sup> as a possible date for the RMP Annual Meeting. If the SC is interested in considering venues other than the Oakland Museum, the Water Board auditorium (free) is a worthwhile option. She noted that the Oakland Museum costs about \$5,000 to rent the facility. Kirsten Struve noted that the San Jose Council meetings are held in the afternoon on Tuesdays, which could be a conflict if the RMP is interested in attracting elected officials or senior managers to the Annual Meeting. Meg Sedlak asked if the RMP was interested in teaming up with the State of the Estuary (SOE) Conference. Tom Mumley noted that the SOE conference is only two days this year. Meg Sedlak will follow up with Karen Taberski on the costs of appending the RMP

annual meeting as a third day to the SOE conference. Tom Mumley suggested that this collaboration be considered again for the 2013 SOE conference.

### **Action Items**

- Look into combining the RMP annual meeting with the SOE conference in 2011 and beyond.
- Consider other venues for the RMP 2011 annual meeting.

### **10) Information: Pulse and RMP Annual Meeting Speakers**

Jay Davis informed the SC that six articles are scheduled for the 2011 Pulse. Four of the articles have confirmed lead authors. He will be asking for volunteers from the TRC representatives to help on the articles. He will also include the EEWG panel members on some of the articles.

As keynote speakers for the Annual Meeting, Jay Davis suggested Jim Cloern or Dan Schlenk. Other presenters would be article authors and coauthors, and upper management would be included as panel members or speakers. Adam Olivieri suggested that Dan Schlenk could also give a good talk about the CEC ocean estuary effort, and offered to ask him about speaking. Adam Olivieri also suggested that Nancy Denslow (University of Florida) would be a possible speaker.

Tom Mumley asked how the articles would maintain consistency in scope and tone. Jay Davis confirmed that he would communicate closely with the authors as they write.

Meg Sedlak mentioned that SFEI is developing a Facebook strategy, partly in response to the lunchtime dot voting from the 2010 Annual Meeting. Kirsten Struve commented that it was not clear that the voting was intended to give recommendations on communication with RMP participants. Given that, she did not think that Facebook would be a useful platform for communication.

### **Action Items**

- Adam Olivieri to contact Dan Schlenk about speaking at the RMP annual meeting.

### **11) Information: Fact Sheets**

Jay Davis presented the RMP fact sheet plan. It is designed to give quick information on specific contaminants, and would be targeted at reporters, agency staff, decision makers, and scientists, as well as interested public, that is, people who are in communication with the general public. This would enable the fact sheets to strive for clarity and simplicity, but not be completely non-technical. The first fact sheet has been developed for triclosan, and needs input from the water board.

Kirsten Struve suggested that the summary be presented in bullets, rather than as a paragraph. Tom Mumley suggested that the summary may be unnecessary, as the document itself is intended as a summary. Given that triclosan is one of many contaminants we could focus on, Tom Mumley suggested that the RMP develop a list of priority pollutants for SF Bay, and develop fact sheets on all of the contaminants.

Kirsten Struve suggested that the fact sheet be united with a press release, in order to get the story out in as straightforward a manner as possible.

Adam Olivieri asked that the "Occurrence" section be renamed to "Occurrence and Potential Sources". He also asked that the toxicity thresholds include more than one measure. Tom Mumley suggested that the on-line version include electronic links to further RMP information on the subject.

The SC confirmed that the target audience is acceptable and that a 2 or 4 page document would serve the intended purpose – the length need not be limited to 2 pages. The fact sheet should be updated every few years, as new data and management is available.

The SC emphasized that the overall message - that the Bay Area community should not be using triclosan - should be highlighted.

Jay Davis and Steve Weisberg of SCCWRP are staying in touch about the development of fact sheets, and working together.

### **Action Items**

- Develop a list of RMP priority pollutants.

### **12) Information: Program update**

Meg Sedlak reviewed workgroup activities from the 4<sup>th</sup> quarter of 2010. Tom Mumley asked about the time frame for the 2011 project developing a CEC synthesis. Meg Sedlak noted that it would begin in June of 2011, following the recommendations from the SCCWRP science advisory panel on Recycled Water and Ambient Ocean.

### **13) Review Action Items/ Plus Delta/ Set Date for next meeting**

The next meeting is scheduled for April 19<sup>th</sup>, 2011. Trish Mulvey noted that Adam Olivieri did a great job as chair.

**Action Items: SC Meetings**

#	Action Items – January 2011	Who?	When?	Status 3/15/2011
1	Correct Adam Olivieri's comment on page 5 of the TRC minutes	Rachel Allen	January 2011	Done
2	Include a rep from the USACE at the CFWG meeting	Rachel Allen	May 12, 2011	Megan Kaun (USACE) is invited to the CFWG meeting
3	Develop a table comparing the various possible contaminant fate models.	Jay Davis	May 12, 2011	To be discussed at next CFWG meeting
4	Begin to draft an RMP nutrient strategy	Jay Davis, Meg Sedlak	2011	Preparing for April 22 <sup>nd</sup> meeting
5	Include John Coleman in the discussions of the future of nutrient monitoring	Meg Sedlak	January 2011	Included in list of invitees.
6	Stakeholders to review the RMP Master Plan and report on whether their information priorities are reflected in it	SC members	By SC Master Planning workshop (Feb 7, 2011)	Need additional feedback
7	Investigate other venues besides the Oakland Museum for the RMP Annual Meeting	Meg Sedlak	Present at March TRC meeting	On agenda
8	Contact Dan Schlenk about being a keynote speaker at the RMP Annual Meeting	Adam Olivieri	January 2011	Dan Schlenk confirmed to Meg Sedlak that he would speak at the RMP annual meeting
9	Incorporated comments on the triclosan fact sheet from the SC and Naomi Feger, and distribute it to the TRC for review. Continue to coordinate fact sheets with SCCWRP	Jay Davis	January 2011	Completed
10	Create a list of priority pollutants for future fact sheet topics for the San Francisco Estuary	Jay Davis	2011	Pending

#	Action Items – November 2010	Who?	When?	Status 3/15/2011
3	Develop website tool for uploading of WWTP metal loads	Meg Sedlak	December 22 <sup>nd</sup>	IT team is working on a site for the 2011 invoicing.
7	Include a Program Review as a potential task for 2012 at the Planning Workshop	Meg Sedlak	To be included in Feb 7 <sup>th</sup> agenda	Time limitations at 2011 Master Planning meeting



#	Action Items – August 2010	Who?	When?	Status 3/15/2011
1	Speak with Rob Lawrence to encourage more participation by the USACE in the RMP.	John Coleman		Pending
4	Speak with the USACE about RMP and USACE coordination and funding collaboration.	John Coleman and Rainer Hoenicke		Pending

#	Action Items – January 2010	Who?	When?	Status 3/15/2011
5.	Develop a Strategy for Status and Trends	Meg Sedlak	First quarter 2011	Presentation at March TRC meeting

**RMP SC Meeting attendance**

Notes:

1. Dave Tucker elected to SFEI Board, June 2008
2. Marcus Cole filled in for Kevin Buchan
3. Replaced Dave Tucker as Large POTW Rep in May 2010
4. Replaced Arleen Navarret as Large POTW Rep in Sep 2010
5. Replaced Ken Kaufman as Small POTW Rep in Nov 2010
6. Karin North filled in for Brad Eggleston
7. Replaced Ellen Johnck as Executive Director of Bay Planning Coalition

P = present	C = call-in
X = not present	W* = provided input at RMP master planning workshop 4/21/10
- = not a rep at time of meeting	

RMP Water Qual represented	MEMBER	Affiliation	2009				2010				2011			
			1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
POTW-Large	Dave Tucker (1)	City of San Jose	X	X	P	P	P	P	-	-	-			
POTW-Large	Arleen Navarret (3)	SFPUC	-	-	-	-	-	-	P	-	-			
POTW-Large	Kirsten Struve (4)	City of San Jose	-	-	-	-	-	-	-	P	P			
POTW-Med	Dan Tafolla	Vallejo Sanitation and Flood Control District	P	P	X	P	X	P	X	P	P			
POTW-Small	Ken Kaufman	South Bayside System Authority	X	X	X	X	X	X	X	X	X			
POTW-Small	Brad Eggleston (5)	City of Palo Alto	-	-	-	-	-	-	-	(6)	P			
Refineries	Kevin Buchan	WSPA	X	(2)	P	P	P	P	P	P	P	X		
Industry	Dave Allen	USS POSCO	X	P	P	P	X	P	P	P	X			
Cooling Water	Steve Bauman	Mirant Delta, LLC	X	X	X	X	X	X	X	P	X			
Stormwater	Adam Olivieri	BASMAA (EOA, Inc)	P	P	P	P	P	P	P	P	P			
Dredgers	Ellen Johnck	Bay Planning Coalition	X	X	X	P	P	W*	P	P	-			
Dredgers	John Coleman (7)	Bay Planning Coalition	-	-	-	-	-	-	-	-	P			
SF-RWQCB	Tom Mumley	SFB RWQCB	P	P	P	P	P	P	P	P	P			
SF-RWQCB	Karen Taberski (backup)	SFB RWQCB	-	-	-	-	-	-	-	-	-			
US Army Corps of Engineers	Rob Lawrence		X	X	X	X	X	X	X	X	X			

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**RMP Planning Workshop**  
February 7th, 2011  
San Francisco Estuary Institute  
First Floor Conference Room  
7770 Pardee Lane, Oakland, CA  
10:00 AM - 2:30 PM  
**Draft Minutes**

**Attendees:**

Amy Chastain, BACWA  
Mike Connor, EBDA  
Brad Eggleston, City of Palo Alto  
Trish Mulvey, SFEI Board of Directors  
Tom Mumley, SFB RWQCB  
Adam Olivieri, EOA/ BASMAA  
Chris Sommers, EOA/ BASMAA  
Kirsten Struve, City of San Jose  
Karen Taberski, SFB RWQCB  
Dan Tafolla, Vallejo Sanitation and Flood Control District

**Others Present:**

Rachel Allen, SFEI  
Jay Davis, SFEI  
Meg Sedlak, SFEI

**1. Goals, ground rules, chair selection**

The group selected Adam Olivieri to serve as chair for the meeting. Jay Davis noted that the goal of the meeting was to get at the big picture, and not to dwell too much on the details.

**2. Anticipated management decisions and policies, and related information needs**

Jay Davis provided context for the table of current and anticipated water quality management decisions, policies, and actions (p. 6 of the draft Master Plan), and asked for updates on information needs from the meeting participants.

Mike Connor stated that he did not find the table helpful, because it lays out so many more issues than the RMP has money for. He suggested focusing RMP efforts on finding information that will affect the decisions being made.

Tom Mumley responded to Mike Connor, indicating that the issues on the table are drivers for information needs, and they will still need to be addressed even if they are not high leverage areas. For example, although PCBs and mercury may not change much in the future, the TMDLs will need to be updated on the timeframes listed, and RMP studies can and should inform those processes. Jay Davis concurred, noting that the modeling strategy is in the process of being revised so that it can inform the next round of TMDLs in 2016-2020.

Tom Mumley also noted that some of the items listed, such as pathogens, PBDEs, and pyrethroids, did not have policies or deadlines associated with them. Adam Olivieri suggested lumping those items together with contaminants of emerging concern (CECs) as a paragraph discussion of items to revisit in a given timeframe, such as five years. The text should distinguish between regulatory drivers and research needs.

Meg Sedlak noted that the RMP study by Barnett Rattner on PBDE thresholds in terms was driven by a need for PBDE thresholds. Even though there was no regulatory driver for this study, the RMP found it important to pursue this information gap. Mike Connor indicated that the RMP may get more return on its investment if it focuses on pathogens and CECs now, rather than pushing them off for the future. Tom Mumley noted that the Water Board is planning on developing a policy on CECs, and that it is waiting for the RMP synthesis, which is due out in the first half of 2012.

Tom Mumley suggested that this table would address the questions of “why are we doing this?” and “can we afford not to do this?” when moving forward with RMP plans. It will help avoid making decisions in absence of sound technical information.

**Action items:**

- Change dates and column header listed as 2011-12 to 2011-2012 to reflect the fact that they represent windows of calendar years, not fiscal years, per Trish Mulvey’s comment.
- Tom Mumley will work with Jay Davis to revise the “Current and Anticipated Water Quality Management Decisions, Policies, and Actions” Table on page 6 of the Master Plan, and then the Table will be distributed to the group.
- Include PAHs on Water Quality Management Decisions table. Put pathogens, CECs, pyrethroids and PBDE in a paragraph at the bottom of the table.

**3. Existing plans and budgets**

Jay Davis presented an overview of the existing RMP plans and budgets as described in the Master Plan. This overview provided the background needed to address the questions of “how do we arrange plans and the budget in the long term?” and “how can we fund all of the special studies topics?” He noted that the Special Studies budget has been shrinking as costs go up and fees remain fixed.

In 2011, RMP staff will develop a Status and Trends (S&T) Strategy. Jay Davis noted that a review and revision of the S&T design was conducted a few years ago, but that the Strategy will be explicit about what questions the S&T program is trying to answer. It will also look for places to find efficiencies.

Mike Connor asked if S&T data are used for reasonable potential analyses, and Tom Mumley replied that reasonable potential analyses use RMP data, but they are not as powerful as they could be, as the highest results are used for the analysis. Adam Olivieri also pointed out that the dischargers do reasonable potential analyses in specific areas and Bay wide.

Chris Sommers thought it would be worthwhile to look at the power analysis that was performed. He noted that as a result of the last evaluation, the program saved a lot of money by cutting back on the sampling design. Mike Connor noted that the RMP trades time for space, and suggested that sampling less frequently than once per year could enable the RMP to do more detailed spatial analyses. Meg Sedlak noted that some of these questions have been articulated on page 26 of the Master Plan, and that the Strategy will go into how much uncertainty we think we can live with. It will be completed sometime in 2011, but the specific timeline has not yet been laid out. Adam Olivieri asked that the Steering Committee be kept informed of the timeline for developing the Strategy. Meg Sedlak indicated that she would have a list of Strategy questions for the TRC at the March TRC meeting. The TRC will be able to direct the rest of the Strategy development process at this meeting.

Tom Mumley asked that the Strategy address how other actions or climate change could affect what the S&T program does and how much information we need. Trish Mulvey asked: why do we look at specific chemicals? what are the trends for chemicals? how will the Bay be affected by large scale changes such as sea level rise and climate change? will changing brake pads make a difference? Mike Connor asked that the Strategy pose hypotheses for the strategy questions, for example “historically, we’ve found...”, or “we expect...”, that will indicate how quickly we expect to see change. In the future, the RMP may begin to incorporate more emerging contaminants into the S&T program.

Adam Olivieri and Tom Mumley suggested that S&T Strategy development will enable the Steering Committee to make an informed decision in the fall of 2011 about fee increases, because it will highlight the lack of funding for Special Studies.

Adam Olivieri asked that the RMP reconsider the reporting of work on page 9 of the Master Plan, because portraying Program Management as 40 percent of the costs sends out a red flag to administrators. Jay clarified that Program Management included all of the program’s activities such as data management and communications as well as contract and program management. Mike Connor suggested dividing the Program Management tasks up, with Data Management as its own category. Meg Sedlak elaborated on the “Communications” part of Program Management, which includes the Pulse, the Annual Monitoring Results, fact sheets, presentations, and the Annual Meeting; and “Direct Costs”, which includes buying gear, honorariums for panel

members, expenses, and renting the Museum for the Annual Meeting. Mike Connor suggested that these costs be broken out differently, and Karen Taberski suggested that the contingency funds should not be included in Program Management.

Tom Mumley asked if any modifications were being made to the communications element, and if they would affect the budget at all. Jay Davis indicated that the RMP is developing fact sheets, but that they can be produced within the existing budget.

Jay Davis pointed out that the number of recommended special studies far exceeds the available pool of funds. The Mercury Synthesis effort is under way, and recommendations for 2012 and beyond will be produced by May 2011. Possibilities for future projects include the development of a methylmercury fate model, more work on mercury isotopes, and more small fish studies.

The PCB Synthesis will be developed in the Fall of 2011 and will include suggestions for work in 2013 and beyond. Possible PCB studies include more small fish work and development of a model for PCBs in the margins. These synthesis efforts are part of a general quest to identify high leverage pathways.

The Dioxin Team will start a synthesis effort in 2013 or 2014, when results from current studies are in. A CEC Synthesis is scheduled to start in the 2<sup>nd</sup> half of 2011, finishing in the first half of 2012, so that it can inform studies for 2013. The broadscan screening project that NIST is working on will help the RMP identify compounds that are high priorities to evaluate. The EC Strategy will be partly based on the outcome of this work. The EC Synthesis is scheduled for the 2<sup>nd</sup> half of 2011 so that the statewide advisory panel recommendations for surface waters, due in the Fall of 2011, can be incorporated into the RMP summary.

The Small Tributaries Loading Strategy is the most fully developed of all the RMP strategies, and currently receives the largest allocation of RMP Special Study funds. Its plan includes monitoring to help the stormwater agencies meet permit requirements.

A number of Exposure and Effects studies are being wrapped up, and studies for this year include a sediment quality assessment of Bay sediment hotspots and an evaluation of copper and the impact on the olfactory nerve by NOAA. A synthesis on SQO drivers is part of the long term plan. The next EEWG meeting will evaluate fish effect studies and make recommendations for 2012. Jay Davis noted that SFEI is conducting a synthesis on Bay water quality for the EPA, which is relevant to the RMP but not using RMP funds. He will work on including matching funds in the Master Plan.

The Forecasting/ Modeling Strategy is currently being revised. The original Strategy was focused on developing the SUNTANS model of the Bay in collaboration with researchers at UC Berkeley and Stanford; however, recent developments have indicated that other currently available models may be more appropriate and timely for RMP 3D modeling needs. Craig Jones, an outside consultant to the RMP, estimated that with an investment of \$100,000 per year for 2-3 years, a 3D-model could be running for RMP use. The

specific approach needs to be discussed with the CFWG in the upcoming months. Once in place, the improved model will be critical for updating the PCB and mercury TMDLs.

The RMP Master Plan does not yet include nutrients, for which a strategy will be developed in 2011. Jay Davis noted that Jim Cloern is planning on retiring in the next few years, and when he does, his funding from USGS will be discontinued. The RMP currently pays for approximately a quarter of this work. One of the goals of the Nutrient Strategy will be to identify other sources of funding for continued nutrient work.

Jay Davis noted that the studies on the books for 2012 need more funds than available for Special Studies, and that this does not take into account less developed strategies, like Forecasting. The challenge for this group is to prioritize the Special Studies needs to fit into the existing budget, and to consider the consequences of decreasing funds due to static fees.

Kirsten Struve and Trish Mulvey suggested that the RMP look into collaborations and other funding sources, like SEPs, to maximize RMP resources.

#### **Action Items**

- Add a line to the Master Plan that indicates that it is updated annually (e.g. “This document is updated annually in January.”).
- Get feedback from the SC and TRC on the Status and Trends Strategy (page 26 of the Master Plan).
- Distribute the results from the previous S&T power analysis.
- Scope out the first part of S&T Strategy with the TRC.
- Reorganize the Program Management costs in the Master Plan to reflect the individual entities such as Communication, Data Management etc.
- Include matching funds in the Master Plan.

#### **4. Specific program priorities for 2012 and general priorities for 2013-2016**

Jay Davis indicated that the goal for the remainder of the meeting was to come to agreement on the general budget allocation as estimated on page 11 of the Master Plan, and to review the specific plans for Special Studies in 2012.

Chris Sommers pointed out that in the past program elements that were dedicated to S&T had funds allocated to them indefinitely, and the money was not up for debate within the SS pool. Therefore, if the RMP is comfortable pulling more elements into S&T designation, it would save the effort of debating their funding year after year. Jay Davis suggested that a compromise would be to commit to set timeframes of funding, such as 5 years, for specific projects, without necessarily designating them as S&T. This distinction is pertinent, because the current discussion focuses only on the SS funds, without discussing other portions of the budget such as program management or S&T.

Mike Connor suggested that the group prioritize funding to projects that will change management decisions. Adam Olivieri indicated that he prefers prioritizing projects based on 3 tiers: 1) permit related 2) investigatory and 3) research. Amy Chastain

suggested starting with the studies currently in the budget, and asked whether using 50% of the budget for small tributary loading, for example, is appropriate.

In response to Amy Chastain's inquiry, Adam Olivieri noted that the small tributary loading studies were driven by the MRP, and that the municipal agencies are counting on this continued RMP funding in order to meet their permit requirement. The RMP's \$300,000 contribution covers approximately one third of the required monitoring. Chris Sommers pointed out that the Small Tributary Loading Strategy is well laid out, and has regular check-ins with its advisory panel. The current monitoring was designed to respond to the management questions posed in the strategy document. Therefore, the Small Tributary Loading Strategy will affect management decisions to the fullest extent. It will identify high leverage watersheds to focus management efforts on, and provide an estimate of loads to the Bay from small tributaries. Mike Connor suggested that the Strategy also include an evaluation of its effectiveness at identifying the high leverage watersheds. Kirsten Struve asked that the write-up of the small tributary loads monitoring work include a mention of the benefit it will have for other dischargers.

Tom Mumley indicated that the Small Tributary Loading Strategy is the clearest and most developed of the RMP strategies to date. For 2012, it allocates \$20,000 for the spreadsheet model, \$150,000 for dynamic modeling, and \$380,000 for load and land use monitoring. The dynamic modeling does not need to be pursued in the near future and could be deferred.

Tom Mumley noted that when the Small Tributary Loading Strategy was set in place, the RMP made a conscious decision to lock in funding for this work for a set period of time. Chris Sommers suggested that the group focus on locking in funding for other projects, for time periods as required.

Mike Connor mentioned that the stormwater monitoring could emphasize pathogens as a benefit to other agencies. In Southern California, for example, most of the benefit of stormwater control has been to neighboring beaches. In addition, most of the lawsuits brought against wastewater treatment plants are pathogen-related. Even though pathogens are not linked to a management decision, they may eventually serve as an indicator or need to be monitored.

Tom Mumley stated that the group should also consider increases in the RMP budget in the context of using RMP funds. Kirsten Struve indicated that the large WWTPs would only be willing to increase fees to the RMP if it saves money overall due to reduction of other monitoring requirements. Mike Connor suggested that other collaborations or funding sources could include the Bay Area Ecosystems Climate Change Consortium, which recently hired Andy Gunther as their executive coordinator. Mike also pointed out that the dischargers spend money monitoring parameters such as the Whole Effluent Toxicity. If the Water Board gave some regulatory relief, perhaps these funds could be re-directed. Kirsten Struve suggested that the RMP could coordinate with the Salt Ponds program to align their questions with RMP questions. Meg Sedlak indicated that the RMP is working with Numeric Nutrients Endpoint project to see whether there are areas of overlap.



Chris Sommers suggested that the proposed STLS project on a dynamic model of a selected watershed is not ready for 2012 or 2013. Tom Mumley considered not continuing modeling in the Guadalupe River watershed a sign of failure. Chris Sommers stated that in fact it did serve the purpose of training and creating institutional knowledge about watershed modeling.

Adam Olivieri and Chris Sommers asked that the \$400,000 for the remaining STLS studies be “locked in” for 2012 – 2014 in the multi-year plan. This will provide BASMAA with the certainty it needs for long-term budgeting. Tom Mumley pointed out that the group is willing, but hesitant to lock in these funds because future needs for RMP Special Study money are unknown, and will be limited by this commitment.

Amy Chastain pointed out that nutrients in particular will likely need a significant amount of money in the upcoming years. She suggested that RMP money be directed towards the development of a Nutrient Strategy. Adam Olivieri suggested that other players will contribute to the nutrients research, but Brad Eggleston noted that there are no currently known possibilities for nutrients funding. Tom Mumley predicted that the nutrients work could grow into a \$500,000 - \$1 million per year program.

Jay Davis noted that no specific plans for mercury work are slated for 2012 because the Mercury Synthesis is currently underway and will not have recommendations for future work until mid April 2011. He indicated that a few possibilities could be the development of a methylmercury model, more isotope work, and more small fish work. Chris Sommers suggested that the RMP could postpone mercury work to 2013 with no consequences. Mike Connor suggested that stormwater loads may be a major source of mercury to the Bay, and that future studies should be based on the loading estimates that will be developed during the 2010-2011 stormwater loads monitoring work. No allocations for mercury work were made for 2012. Similarly, PCB work will be put on hold for 2012, awaiting the recommendations of the PCB Synthesis which will be finished in late 2011.

Jay Davis noted that that the Dioxin Strategy recommends analyzing the 2012 sport fish and stormwater samples. This totals \$68,000 for the small tributaries, and \$90,000 for the sport fish. Conducting the dioxin analysis in 2012 will enable it to inform the dioxin synthesis that is scheduled for 2013-2014.

Tom Mumley indicated that \$15,000 is locked in for the Emerging Contaminants Synthesis in 2012. Recommendations from that work can inform emerging contaminants studies in 2013. Therefore, for 2012, the ECWG need not make recommendations of emerging contaminants studies, because the RMP will not be likely to have available funding.

Other Sources Pathways and Loading projects, including Central Valley loads monitoring and atmospheric deposition, will be discussed by the Sources Pathways and Loading Workgroup, It is likely the workgroup will come back to the planning committee with

recommendations for 2013. There is no stated need for air deposition work, but there will be more information available in one year's time.

Jay Davis indicated that the 2010 Master Planning workshop recommended a synthesis on SQO drivers. Mike Connor suggested looking at the bigger picture, and evaluating "to what extent are contaminants affecting the ecology of the Bay". Therefore, the scope of the synthesis was changed to "drivers of aquatic life impairment," and the scope should include consideration of sediment quality impacts. The final decision for this study will be made upon reviewing the scope of work.

Chris Sommers pointed out that no funds are allocated for modeling work. Jay Davis indicated that the CFWG will likely recommend a modeling strategy. Tom Mumley suggested allocating \$100,000 to modeling for each of the next three years. Mike Connor noted that modeling nutrients may become a higher priority than modeling mercury.

Jay Davis indicated that the trash particle monitoring included in the five-year plan was proposed in order to get a baseline estimate of trash conditions in the Bay as trash collection is implemented in the creeks over the next 3 years. Tom Mumley noted that he likes the idea of directing some attention to trash, but the RMP needs to develop a conceptual model and strategy. Without a strategy, it is not a priority for 2012 funding.

Mike Connor noted that it would be easier to get other organizations, such as BACWA, on board with a Nutrient Strategy if the RMP is contributing money. The first formal meeting of the Nutrient Strategy Team is April 22, and a workshop will be held on June 29 and 30. Mike Connor suggested allocating \$100,000 to nutrients in 2012, \$200,000 in 2013, and \$300,000 in 2014.

A \$5,000 coordination line item, originally connected with modeling coordination, was dropped from the five-year plan.

Jay Davis will take the direction from the Master Planning workshop back to the workgroups for proposal development and recommendations. Meg Sedlak noted that they will inform the workgroups that they are not looking for new proposals for 2012, although they are encouraged to develop long term strategies.

Adam Olivieri summarized the significant action items:

- 1) Review the S&T strategy
  - a. What does the revised budget look like?
- 2) Develop a Nutrient Strategy
- 3) Evaluate Program Management costs and present them differently
- 4) Evaluate modeling needs
- 5) Form a SC committee to submit proposals to SEP funding

**Action items:**

- Have the SPLWG make recommendations for Central Valley loads monitoring and atmospheric deposition work

- ECWG consider inclusion of CECs in stormwater load monitoring as part of the CEC Synthesis.

## 5. Plus/Delta

Brad Eggleston noted that it was useful to walk through the items before looking at the bigger picture. Mike Connor suggested that more long term funding strategies should be discussed.

#	Action Items – Planning Workshop Feb 2011	Who?	When?	Status 3/15/2011
1	Revise Master Plan per SC comments	Jay Davis	April SC meeting	Pending
2	Develop S&T strategy and inform the SC of the timeline	Meg Sedlak	Prepare for March TRC meeting	Presentation to TRC in March, follow-up discussion at June TRC meeting
3	Distribute the results from the previous S&T power analysis	Meg Sedlak/ Rachel Allen		Done
4	Review reporting of Program Management costs	Meg Sedlak	Present to SC at the April 19 <sup>th</sup> meeting	On agenda
5	Develop a Nutrient Strategy	Jay Davis / Meg Sedlak	April 22 <sup>nd</sup> first Strategy Team meeting	Pending
6	Evaluate modeling needs	CFWG	May 12, 2011	On agenda
7	Form a SC subcommittee to submit proposals to SEP funding	SC, Adam Olivieri	Discuss status at April SC Meeting	
8	ECWG consider inclusion of CECs in stormwater load monitoring as part of the CEC synthesis	ECWG	March 25, 2011 ECWG meeting	
9	Have the SPLWG make recommendations for Central Valley loads monitoring (Mallard Island) and the need for follow-up atmospheric deposition work	SPLWG	May 12-13, 2011 SPLWG meeting	On agenda

## Item 6: Memorandum on Preliminary Nutrient Management Questions

March 16<sup>th</sup>, 2011

### MEMORANDUM

To: RMP Technical Review Committee

From: Jay Davis and Meg Sedlak

**Re: Preliminary Nutrient Management Questions for the April 22<sup>nd</sup> Strategy meeting**

#### *Background*

Much of the work that the USGS has conducted in recent years suggests that there are fundamental changes occurring in San Francisco Bay. Dr. Jim Cloern and his colleagues at USGS have shown an increase in the frequency and strength of phytoplankton blooms in the Bay. Although San Francisco Bay has nutrient concentrations that are on par with highly productive east coast estuaries such as the Chesapeake Bay, San Francisco Bay has historically been considered resilient to the effects of heavy nutrient loads. In part, this is attributable to the Bay being light-limited as a result of the fine sediments and highly dynamic environment. However, recent work by Dr. Schoelhammer and his colleagues at USGS has shown a decrease in suspended sediment concentrations in the Bay. In addition to changes in suspended sediment, the USGS has shown changes in the Bay's ecology as a result of ocean currents, a decline in herbivores and an increase in predators. There is some concern that in the future, the San Francisco Bay may be unable to sustain its resiliency to the adverse impacts of heavy nutrient loads.

There is much to be learned about the nutrients and the management of nutrients in the Bay. As a first step, the RMP is convening a workshop of national and local experts to discuss this issue on June 29<sup>th</sup>. An RMP planning meeting will occur on April 22<sup>nd</sup> to obtain consensus on the high priority management questions regarding nutrients and to discuss the workshop. To facilitate the discussion on the 22<sup>nd</sup>, we have outlined several priority management questions below.

#### *Preliminary Nutrient Management Questions*

- 1) Are anthropogenic nutrient inputs presently causing impairment of beneficial uses of San Francisco Bay?

This covers both concerns over eutrophication and growth inhibition.

- 2) Is impairment of beneficial uses of San Francisco Bay by anthropogenic nutrient inputs forecast in the future?

Item 6: Memorandum on Preliminary Nutrient Management Questions

- 3) What are trends in the best indicators of impairment or potential future impairment of the Bay due to anthropogenic nutrient inputs?
- 4) What are the least costly and most effective management approaches to prevent or reduce impairment of the Bay due to anthropogenic nutrient inputs?

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**RMP TRC / SCCWRP CTAG Joint Meeting****May 19th, 2011****SCCWRP****10:00 AM – 6:30 PM****(9:00 am start for CTAG members)****Lunch will be provided****AGENDA**

<b>0.</b>	<b>CTAG only - Business Meeting</b> (60 min) <ul style="list-style-type: none"> <li>• Approval of Feb 2011 meeting minutes</li> <li>• Contract review</li> <li>• CWA theme report</li> <li>• CTAG voting on draft SCCWRP Research Plan</li> </ul> <b>CTAG voting on draft SCCWRP Research Plan</b>	9:00 Tim Stebbins
<b>1.</b>	<b>Welcome, Introductions, and Goals for the Meeting</b>	10:00 Tim Stebbins/ Karen Taberski
<b>2.</b>	<b>Highlights of RMP and SFEI 2011 Study Plan</b> (Attachment: RMP Program Plan for 2011) Highlights from the 2011 RMP Program Plan will be presented (25 min presentation, 20 min Q&A).	10:15 Jay Davis
<b>3.</b>	<b>SCCWRP Director's Report &amp; Research Plan Highlights</b> (Attachment: SCCWRP 2010-2011 Research Plan) Highlights from the 2011 SCCWRP Program Plan will be presented (45 min presentation, 15 min Q&A).	11:00 Steve Weisberg
	<b>Lunch</b> (to be brought in)	12:00
<b>4.</b>	<b>Effects: RMP and SCCWRP Activities</b> Presentations on effect work conducted to date will be presented <ul style="list-style-type: none"> <li>• Birds - Josh Ackerman/ Collin Eagle-smith</li> <li>• Fish – Meg Sedlak</li> <li>• Benthos – Steve Bay</li> </ul>	12:45

	<b>Break</b>	2:30
<b>5.</b>	<b>Nutrients</b> The San Francisco Bay is unique in that it has relatively high nutrient concentration; however, it is a low productivity estuary as a result of elevated suspended sediment concentrations. This is in contrast to some of the bays and coastal areas located in Southern California.	2:45 Martha Sutula and Lester McKee
<b>6.</b>	<b>Update Collaborative Activities: Emerging Contaminants</b> <ul style="list-style-type: none"> <li>• NOAA Mussel Watch Activities/ Pro bono studies (10 min)</li> <li>• 2011 RMP/SCCWRP Special study with NIST (10 min)</li> <li>• State Review Panels (Recycled Water and Ambient Ocean Report)</li> <li>• Ideas for further collaboration and Q&amp;A (10 minutes)</li> </ul>	3:45 Susan Klosterhaus; Keith Maruya
<b>7.</b>	<b>General Discussion</b> Discussion of: <ul style="list-style-type: none"> <li>• Other potential opportunities for collaboration</li> <li>• Plans for future meetings (discussion of data management and communication)</li> <li>• Formal interchange between SCCWRP/SFEI working groups</li> <li>• Other topics that arise during the day</li> </ul>	4:45 Group
<b>8.</b>	<b>Wrap-up and Identification of Action Items</b>	5:15 Tim Stebbins, Karen Taberski
<b>9.</b>	<b>Adjourn</b>	5:30
	<b>Socializing</b>	5:30 to 6:30

## Workgroup Activities – Second Quarter 2011

### A. Contaminant Fate Workgroup

#### Meetings:

The Modeling Team met on November 23<sup>rd</sup> to discuss the Margins Conceptual report, the Bioaccumulation report, and progress on the 3-D SUNTANS model. In addition, Dr. Patrick Barnard presented USGS Sand and Mud Provenance studies that are currently underway, with the intention of receiving SFEI input on study design (e.g., sampling locations, techniques, etc.) for the Mud Provenance Study. The USGS Sand and Mud Provenance studies are primarily intended to inform the USACE's dredging operations; however, the USGS is interested in providing as much information as possible to increase our knowledge of sediment transport within the San Francisco Bay and along the coast.

#### Milestones:

- Acceptance of methylmercury simple mass balance manuscript to Environmental Toxicity and Chemistry.
- Completion of a Draft Air Deposition Strategy which will be sent to the workgroup for review.
- Submitted abstract to the Halifax International Mercury conference as part of the Mercury Synthesis project.
- Completion of 3D-Modeling effort (March)

#### Activities for the second quarter of 2011:

- Completion of a Draft Estimate of Atmospheric Deposition of Dioxin. We are planning on submitting an abstract to NorCal SETAC May meeting on the results of this study.
- Completion of Bay Margin Model (April).
- Completion of the Bioaccumulation Model (April).

The next CFWG will be May 12th. For more information, see previous CFWG minutes and agenda at our website [http://www.sfei.org/rmp/rmp\\_minutes\\_agendas.html](http://www.sfei.org/rmp/rmp_minutes_agendas.html) or contact the CFWG leader, Don Yee, at [don@sfei.org](mailto:don@sfei.org).

### B. Sources Pathways and Loading Workgroup (SPLWG)

#### Meetings:

The STLS team met in December, January, February and March to discuss BASMAA products and timelines, the WY 2011 POC monitoring, and 2011/2012 sampling sites/methodology. An update on the spreadsheet model was given and received feedback and guidance on next steps.



Milestones:

- Staff has been mobilized and wet weather sampling has commenced at 16 sites.

Activities for second quarter of 2011:

- Continue wet weather sampling.
- Meeting with subset of STLS and SPLWG advisors to review wet weather sampling to date.
- Completion of Zone 4 Line A Report that summarizes four years of data (April 2011).
- Completion of Guadalupe HSPF manuscript (April 2011).
- Completion of the Regional Storm Water Spreadsheet Model and Land Use Classification (May 2011).
- Completion of the Mallard Island Report (June 2011). Report delayed due to lack of USGS SSC data.

The next SPLWG meeting will be May 12th. The STLS meeting will be held the following day. For more information, see previous SPLWG minutes and agenda at our website [http://www.sfei.org/rmp/rmp\\_minutes\\_agendas.html](http://www.sfei.org/rmp/rmp_minutes_agendas.html) or contact the SPLWG lead, Lester McKee, at [Lester@sfei.org](mailto:Lester@sfei.org).

## **C. Exposure and Effects (EE) Workgroup**

Meetings:

No meeting this quarter.

Milestones:

- Dr. Kelley completed his report titled “Characterization Studies of a Thyroid Endocrine Disrupted Condition in Wild Fishes of San Francisco Bay”
- Completion of 2010 small fish sampling.
- Preparation of a manuscript on the first year of the NOAA PAH and flatfish study.

Activities for the second quarter 2011:

- Continuation of NOAA study on juvenile flatfish. The first year of the study was focused on zebra fish as a model fish and exposure of the fish to four and five ringed PAHs that are common in SF Bay sediments. As a result of the oil spill, NOAA’s resources have been moved to the Gulf. This prevented John Incardona from collecting sediments from Kitimat Alaska for the second year of his study which will focus on exposure of field sediments to juvenile California halibut. He anticipates conducting this study in the Spring of 2011 when halibut larvae are available.
- Dr. Barnett Rattner will continue his PBDE and terns study. At present, no changes to tern skeletal systems was noted based on exposure to PBDEs. Kestrel hatchlings were found to have reduced skeletal lengths and deformed spines. These results will be

further investigated. No effects to the bursa follicle were noted from exposure to PBDEs. (Bursa follicle is an epithelial and lymphoid organ found only in birds.)

- Completion of the EEPS Synthesis document (May 2011)

The next workgroup meeting will be held in June 2011. The advisory panel is being consulted in the selection of a date.

For more information, see previous EEWG minutes and agenda at our website [http://www.sfei.org/rmp/rmp\\_minutes\\_agendas.html](http://www.sfei.org/rmp/rmp_minutes_agendas.html) or contact the EEWG lead, Meg Sedlak, at [meg@sfei.org](mailto:meg@sfei.org).

## **D. Emerging Contaminants Workgroup**

### Meetings:

No meetings this quarter.

### Milestones:

- Completion of draft CEC chemical profiles on Carbamazepine.
- Submittal of manuscript on PFCs in Bay Area Wildlife.
- Submittal to USEPA of chemical profile on Triclosan and Triclocarban.
- Invited Presentations:
  - “Flame Retardant Chemicals in San Francisco Bay: More Than Just PBDEs?”, USGS Seminar Series, Jan 13, 2011
  - “Emerging Contaminants in San Francisco Bay”, California Water Environment Association 38th Annual Pretreatment Pollution Prevention Stormwater Training Conference, February 28, 2011.

### Activities for the second quarter 2011:

- Completion of a manuscript on Sources of PFCs to San Francisco Bay (April).
- Preparation of a draft report/manuscript on alkylphenols and PPCPs in San Francisco Bay (March).
- Preparation of a draft report/manuscript on alternative flame retardants in San Francisco Bay (March).
- Continuation of NIST broadscan work. Samples of harbor seals and mussels have been sent to NIST for method development and analysis.

Next ECWG meeting date will be on Friday, March 25, 2011.

For more information, see previous EC workgroup minutes and agenda at our website [http://www.sfei.org/rmp/rmp\\_minutes\\_agendas.html](http://www.sfei.org/rmp/rmp_minutes_agendas.html) or contact the ECWG lead, Meg Sedlak, at [meg@sfei.org](mailto:meg@sfei.org).

## **E. Ambient Sediment Conditions Discussion**

The Regional Water Quality Control Board is facilitating discussions among NOAA NMFS, the EPA, LTMS, and the USACE regarding the creation of threshold values for management and testing of dredged sediment.

### Milestones:

- The RMP gave two presentations, on February 10 and March 4, on the RMP sediment sampling plan and the calculation of ambient conditions using RMP data, as well as approaches for the calculation of ambient conditions.

### Activities for the second quarter 2011:

- Provide recommendations to the regulating agencies on appropriate statistical methods for calculation of ambient sediment conditions thresholds.

For more information, please contact Meg Sedlak at [meg@sfei.org](mailto:meg@sfei.org).

## **F. Causes of Toxicity**

The scope of work for the UC-Davis Granite Canyon work under the Causes of Toxicity element includes:

- Develop LC50 thresholds of effects for three compounds (cyfluthrin, chlordane and pyrene).
- Develop a collaborative state-wide workgroup and research effort to address causes of persistent moderate toxicity.
- Further research solid phase toxicity identification and evaluation (TIE) methods.

### Milestones:

- The first of two Stressor Identification work group meetings was held at SFEI on April 7, and a second meeting is planned for the third quarter of 2011. The Agenda and Minutes from the first meeting are available on the SFEI website at: <http://www.sfei.org/node/3117>.
- Exposed amphipods from selected RMP Status and Trends monitoring stations were provided to UC Berkeley researchers for the development of gene microarray technology for *Eohaustorius estuarius*. Additional exposed amphipods will be provided as additional exposures are conducted with cyfluthrin, pyrene, and trans-chlordane.

### Activities for the second quarter 2011:

- Range finding tests indicate that pyrene and trans-chlordane are not sufficiently toxic to *Eohaustorius estuarius* to conduct TIE method development. Definitive tests will be conducted for pyrene and trans-chlordane to determine the LC-50.
- TIE Method Development will be conducted for cyfluthrin using both sediment and interstitial water.
- Results are encouraging but incomplete. A draft report will be completed by the end of March 2011, with a final report and presentation to the EEWG in June 2011.

For more information, please contact Meg Sedlak at [meg@sfei.org](mailto:meg@sfei.org).

## **G. Benthic Workshops**

### Meetings:

Sediment Quality Objectives for Enclosed Bays and Estuaries (SQO Phase I) was promulgated in February 2008. Benthic indicators form one line-of-evidence in the SQO assessment procedure. However, in mesohaline areas of San Francisco Estuary, such as San Pablo and South bays, current benthic indices require revision. In oligohaline areas, such as Suisun Bay, benthic indices have yet to be developed.

### Milestones:

- Bruce Thompson and his collaborators completed a draft manuscript titled “Benthic Macrofaunal Assemblages of San Francisco Estuary and Delta.”
- Bruce Thompson and his collaborators completed a draft manuscript titled “Levels of Agreement Among Experts Using Best Professional Judgment to Assess Mesohaline and Limnetic Benthic Macrofaunal Condition in the San Francisco Estuary”, which was submitted to *Journal of Ecological Indicators*.
- Work on the mesohaline assessment method report is on hold pending the workgroup recommendation that a gold standard assessment of the taxonomy in freshwater and estuarine environments be conducted. The mesohaline assessment includes a comparison of good/bad indicators in BPJ samples to good/bad indicators in reference vs. non reference samples and tables based on presence/absence have been prepared.

### Activities for the second quarter 2011:

- No activities are planned for the second quarter.

For more information, please contact the benthic workgroup lead, Aroon Melwani, at [aron@sfei.org](mailto:aron@sfei.org).

## **H. Status and Trends Sport Fish**

Sportfish results have been reviewed by SFEI. Preliminary results have been submitted to OEHHA to assist in the development of sportfish advisories. The draft SWAMP/RMP sportfish monitoring report is being reviewed.

For more information, please contact Jennifer Hunt at [jhunt@sfei.org](mailto:jhunt@sfei.org).

Item 12 Attachment 2:  
Workgroup Meeting Schedule

	<b>Products</b>	<b>Meeting Date</b>	<b>Purpose of meeting</b>
<b>CFWG</b>	3D Model (completed March 2011)	May 12th	Fieldwork 2011
	Bay Margin Model (April 2011)		Proposals for 2012
	Bioaccumulation (April 2011)		
	Hg Synthesis (April 2011)		
	Modeling strategy (In progress)		
<b>EEWG</b>	Mesohaline Report (Draft - on hold)	June	Develop plans for fish and benthos (next steps)
	EDC in fish (completed Nov 2010)		Proposals (KKelley; Dschlenk; EGallagher)
	Sediment toxicity (March 2011)		
	Molecular TIE (June 2011)		
	PBDE in terns (Aug 2011)		
<b>ECWG</b>	Progress Report- NIST (completed Dec 2010)	March 25th	Check-in on synthesis outline
	PFC articles (1 submitted, 1 draft in prep)		Proposals for 2012? Likely an off-year
	CEC pro bono work (draft out to co-authors)		
	Alt BFR Draft (draft in prep)		
	CEC profiles (completed February 2011)		
	Synthesis (March 2012)		
<b>SPLWG</b>	Guadalupe model (April 2011)	May 12th and 13th	
	Mallard Island (June 2011)		
	Land Use Classification/ Regional Loads (May 2011)		
	Zone 4 Line A (April 2011)		