Workgroup Activities – Third Quarter 2013

A. Contaminant Fate Workgroup

Purpose of Workgroup
The purpose of the workgroup is to evaluate the fate of contaminants in the Bay, to understand the contribution of Bay margins to the overall health of the Bay, and to assess the potential impacts of Bay management actions on Bay recovery.

Meetings:
Fate workgroup will not meet this year.

Milestones:

- The Modeling Technical Team held its first meeting on March 20th to discuss the draft outline of the Nutrient Modeling Tactical Plan.

Activities for the Third Quarter of 2013:

- Finishing the tactical plan. Upon completion of the tactical plan, the nutrient modeling group will be convened to discuss the plan.

For more information, see previous CFWG minutes and agendas at our website http://www.sfei.org/rmp/cfwg or contact the CFWG leader, Don Yee, at don@sfei.org.

B. Sources Pathways and Loading Workgroup (SPLWG)/Small Tributaries Loading Strategy Work Group (STLS)

Purpose of Workgroup
The purpose of the workgroup is to monitor storm water, small tributaries, and delta outflow to understand contaminant loads to the Bay, to identify high priority tributaries for management actions, to evaluate how loads are changing over time, and to assess possible options for improving water quality.

Meetings:
The workgroup will meet on October 23, 2013 from 10 AM to 4 PM.
The STLS group continues to hold monthly phone conferences to discuss project progress on the sediment RWSM and POC monitoring, and to discuss potential EMC monitoring in water year 2014.

Milestones:
Products in progress (in various stages of review):

- WY 2013 POC loads monitoring report

- RWSM 2013 regional scale water, sediment, PCB, and mercury loads report
- PBDE and OC pesticides profiles to support RWSM structure (BASMAA funding)
- Sediment RWSM (BASMAA funding)
- QAQC protocol for continuous stormwater data (BASMAA funding)
- Completed water year 2013 stormwater monitoring

One of the outcomes of STLS discussion was the development of a scope of work for the RMP Land-Use Source Area/EMC Development pilot study task for 2013. This task has a budget of $80,000 to support developing source area Event Mean Concentration (EMC) estimates as input data to the Regional Watershed Spreadsheet Model. Preliminary scoping has identified the following tasks:

- Additional computations of PCB and Hg EMC data using inverse optimization methodologies for the land use and source areas developed in the GIS layers
- Complete model runs for mercury and PCBs, develop user interface and documentation
- Identification of EMC source area data gaps and how gaps could be addressed with field monitoring or other method for developing EMCs

At this time, empirical field data collection of EMC data for specific land uses or source areas has not been implemented but we are aware of large weaknesses in the currently available input data for the first comprehensive PCB and Hg model runs. The STLS will decide during fall 2013, post PCB and Mercury model development, on additional methodologies for developing EMC input data for the RWSM and how the remaining funds will be utilized.

Activities for the Third Quarter of 2013:

- Continued work on RWSM and EMC. Prepare for the SPLWG meeting in October.

For more information, see SPLWG minutes and agenda at our website http://www.sfei.org/rmp/splwg or contact the SPLWG lead, Lester McKee, at Lester@sfei.org. Next SPLWG meeting is scheduled for mid-summer.

C. Exposure and Effects Workgroup

Purpose of Workgroup
The Exposure and Effect workgroup (EEWG) seeks to answer the following questions: Are pollutants individually or in combination having adverse impacts on Bay biota?; Are there spatial and temporal trends?; Which pollutants are responsible for the impacts?; Are there cost-effective tools that can be used to easily monitor these impacts?; and What are the appropriate guidelines?

Meetings:

- The workgroup met on May 16th to discuss bioanalytical tools and EEWG projects for 2014.

Milestones:

- Completion of draft 2011/2012 SQO Assessment and hotspot studies

Activities for the Third Quarter of 2013:

- Continuation of work on the Mesohaline Index Development (SCCWRP).
- Continuation of work on bioanalytical tools.

The next workgroup meeting will be held in 2014. For more information, see previous EEWG minutes and agenda at our website http://www.sfei.org/rmp/eewg or contact the EEWG lead, Meg Sedlak, at meg@sfei.org.

D. Emerging Contaminants Workgroup

Purpose of Workgroup
The purpose of the emerging contaminant workgroup is to identify contaminants of emerging concern (CECs) that have the potential to adversely impact beneficial uses of the Bay.

Meetings:
The ECWG met on April 5th, 2013 to discuss the recently completed strategy document, the PBDE summary report, siloxanes, and an update on the non-targeted screening of Bay Wildlife and recommendations for 2014 work.

Milestones:

- A manuscript was completed and submitted that summarize the National Mussel Watch sampling in California for chemicals of emerging concern. The paper will focus on personal care products, alkylphenols, current use pesticides, flame retardants and perfluorinated compounds. This work is being conducted by SCCWRP.
- Completion of the CEC strategy document (responded to comments).
- A manuscript on PFC sources was completed and will be submitted to a journal.
- Completion of the PBDE summary report.

Activities for the Third Quarter of 2013:

- Evaluate Current Use Pesticides used in agricultural areas of the Bay Area.
- Continuation of NIST broadscan work. Samples of harbor seals manuscript in preparation. Mussels analyses will be conducted in early summer with a write up completed during the fall.

Next ECWG meeting will be held Spring 2014.

For more information, see previous EC workgroup minutes and agenda at our website http://www.sfei.org/rmp/ecwg or contact the ECWG lead, Meg Sedlak meg@sfei.org.

E. Nutrients

Purpose of Workgroup
The purpose of this workgroup is to evaluate nutrients, methods for monitoring nutrients/ indicators, and scenarios that may result in adverse impacts to the Bay.

Meetings
The Nutrient Stakeholder Advisory Group met on March 8th, 2013 to discuss current and future nutrient studies in Suisun Bay and to receive an update on the Suisun Synthesis report (completed by SFEI, funded by the Bay Area Clean Water Agencies). The conceptual model technical team met on May 21st, 2013 to review the draft report and develop an approach for finalizing the document.

Milestones
- A draft Nutrient Conceptual Model was complete in May 2013, and was distributed to SC/TRC as well as the technical team for review. A final draft is expected in July 2013.
- Moored sensor monitoring equipment (2 YSI EXO 2 sondes and one SUNA v2 nitrate sensor) was purchased and the sensor will be deployed in July. SFEI is working with collaborators at USGS to finalize deployment logistics as well as develop priority science questions and investigations.
- A draft of the Nutrient Loading Study was completed in early April and was distributed to the TRC and SC for review. The study estimated current nutrient loads from POTW and refinery discharge, stormwater runoff and Delta efflux, and characterized seasonal and spatial variability in the relative importance of different loading sources. The comment period was complete on May 31st and a final version is expected in July 2013.
- Field work for nutrient stormwater measurements for water year 2013 is complete. This year, sampling occurred for 2-3 storms at each of 6 watersheds for the following analytes: total kjedhal nitrogen (TKN), total phosphorous, PO4, NH4, NO3 and NO2.

Activities for the Third Quarter of 2013:
- Development of a laboratory and field calibration procedure for the moored sensor equipment will continue. Laboratory calibration will begin in May, and field deployment will begin in July (including a trial deployment and intensive calibration on the Redwood City dock).
- Analysis of 2012 and 2013 nutrient stormwater data will begin this summer and a report will be available by Q4 2013.
- The first draft of the modeling tactical plan will be revised to reflect feedback from the modeling technical team. The second draft will be distributed for another round of review from this team in July, and then the plan will be presented to stakeholders.
- Work will begin on exploring potential goals, structures and costs of a Nutrient Monitoring Plan for San Francisco Bay. Currently San Francisco Bay has no regionally-funded and regionally-coordinated nutrient monitoring program. With the guidance of a technical advisory team, key goals of a monitoring plan will be identified, possible programmatic structures and institutional agreements will be explored and costs estimates

will be developed. A draft report of recommendations will be completed by November 2013, with a final draft in December 2013. [This work is funded by the State Water Resources Control Board]

For more information, please contact David Senn at davids@sfei.org or Emily Novick Emily@sfei.org.

F. Status and Trends Sport Fish

Purpose of Workgroup
The purpose of the workgroup is to design RMP studies relating to sport fish contamination.

Meetings
RMP sport fish monitoring has been switched from a three-year cycle to a five-year cycle to maximize cost-effectiveness and to coordinate with state-wide monitoring efforts. The next round of sampling will occur in 2014. A planning meeting will be held late in 2013.

For more information, please contact Jennifer Hunt at jhunt@sfei.org.

G. Monitoring and Management of Restored Tidal Marshes Workshop

Purpose of Workshop
The purpose of the workshop is to review information needs relating to managing mercury in restored tidal marshes and salt ponds in San Francisco Bay. The RMP mercury synthesis (Davis et al. 2012) recommended a focus on the design and maintenance of restored marshes and managed ponds as a means of potentially reducing methylmercury impairment in Bay wildlife. Additionally, the Mercury TMDL Implementation Plan includes monitoring of wetland restoration projects to address concerns that as restoration projects develop into fully functioning tidal marshes, they may increase the exposure of fish and wildlife to mercury. There is a need for a consistent regional approach to monitor these wetland restoration projects. The workshop will address the role wetland restoration and management play in mercury impairment locally and regionally, and the workshop will help inform decision-making about monitoring efforts.

For more information, please contact Jay Davis (jay@sfei.org) or April Robinson at (april@sfei.org).

H. Items of Interest

Exploratorium Museum
SFEI was a technical resource for developing the new Exploratorium exhibit "Bay Observatory Gallery." The gallery features a relief map of the Bay that projects data about the region, sensors attached to the pier that collect water and weather condition data, and an interactive dictionary that describes the Bay landscape and dynamic shoreline. SFEI staff attended the opening

reception for Bay researchers on Sunday, June 29th. The Exploratorium is now located at Pier 15 and is open Tuesday and Thursday-Sunday from 10 a.m. to 5 p.m.; Wednesdays the museum is open from 10 a.m. to 10 p.m. For more information on the gallery, please visit http://www.exploratorium.edu/visit/bay-observatory-gallery.

Oakland Museum

The Oakland Museum exhibit "Above and Below: Stories From Our Changing Bay" will open on August 30th, 2013 and run until February 23rd, 2014. SFEI Historical Ecology and RMP staff, led by Robin Grossinger and Ruth Askevold, helped develop the Bay exhibit. The exhibit will celebrate the opening of the Bay Bridge, explore the complex ecosystem of the Bay, and encourages viewers to discuss the Bay's future. For more information on the exhibit please visit the webpage: http://www.museumca.org/exhibit/above-and-below.