

Workgroup Activities – Fourth Quarter 2009

A. Contaminant Fate Workgroup

Meetings:

The Contaminant Fate Workgroup meeting was held June 10th, 2009. There were presentations and discussion on an RMP modeling strategy and the coring project. Presentations can be viewed at our website.

The date for the next CFWG meeting will be January 26th (Tuesday) 2010. The Annual Mercury Meeting will be held the following day on January 27th (Wednesday) 2010.

Milestones:

- Sediment coring project
 - All laboratory analyses are complete. Pulse article was prepared and a presentation was given at the Annual Meeting.
- Submittal of the methylmercury mass balance manuscript to ET&C.
- Preparation of a draft Modeling workplan with milestones and deliverables for the modeling project. Funding for the 2010 project is contingent upon the review and approval of this workplan at the December TRC meeting

Activities for the fourth quarter of 2009:

- Bay Margins model to be completed for the January CFWG meeting
- Incorporating PCB homologues into the existing multi-box model
- Produce technical report/manuscripts for coring study for the January CFWG meeting
- Remote sensing report for the January CFWG meeting
- Mercury sediment article

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

B. Sources Pathways and Loading Workgroup (SPLWG)

Meetings:

Previous meeting in the 2nd quarter was held on May 27th. Presentations from the meeting are posted to the SFEI website.

Milestones:

- Preparation for first flush sampling.

Activities for fourth quarter 2009

- Continue work on the strategy elements presently funded (3a Develop Criteria and Rank Watersheds; 3b Optimize Sampling Methods Including Trends Analysis; 3c Develop Multi-year Watershed Loading Sampling Plan)
- Complete and submit manuscripts for PCBs and OC pesticides and trace metals in Guadalupe River

For more information, see previous SPLWG minutes and agenda at our website http://www.sfei.org/rmp/rmp_minutes_agendas.html or contact the SPLWG lead, Lester McKee, at Lester@sfei.org.

C. Exposure and Effects Workgroup (EEWG)

Meetings:

A workgroup meeting was met on July 6th. Date of the next meeting will be March 11th, 2010.

Milestones:

- The Small Fish intensive sampling for 2009 was successfully completed. The DGT mercury films were deployed at a subset of the Small Fish sites.

Activities for the fourth quarter 2009:

- Continuation of USGS and USFWS study on terns and hatchability success and mercury egg concentrations.
- 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. This year will focus on juvenile California halibut.
- Discussion of the scope of the NOAA Copper and Olfactory Nerve pilot study for 2011. A telephone conference call has been scheduled for December 14th to discuss this project.
- Planning for the 2010 PBDE relative sensitivity in terns has begun. A new sampling location in the Chesapeake has been chosen, Poplar Island.

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

D. Emerging Contaminants Workgroup

Meetings:

The workgroup met on April 17th to review the proposed pilot and special studies for 2010.

Milestones:

- Sample collection and analyses for alternative flame retardants. Preliminary reporting of some of the data sets.
- Collection of wastewater samples for the Sources of PFCs completed this quarter. Small fish and ambient water samples have been sent to the laboratory for analyses.
- Hosted the NOAA Mussel Watch meeting at SFEI on October 20th and 21st. NOAA will analyze forgo routine analyses of bivalves nationally to focus on a pilot study of chemicals of emerging concern in California bivalves at approximately 80 sites. The list of compounds to be analyzed includes: pharmaceuticals, flame retardants, alkylphenol ethoxylates, and perfluorinated compounds.
- Developed a pro bono pilot study with AXYS Analytical to evaluate pharmaceuticals, alkylphenol ethoxylates, and perfluorinated compounds in resident bivalves in the Bay. The results from this study will be used to inform the larger NOAA survey.
- Developed a pro bono pilot study with AXYS Analytical to evaluate brominated dioxins in harbor seal blubber, sport fish and sediment.
- Coordination of a session at the ACS meeting on Emerging Contaminants.

Activities for the fourth quarter 2009:

- Evaluation and synthesis of alternative flame retardant data and preparation of a manuscript.
- Continue sampling sediment for the pilot study on Sources of PFCs.
- Completion of the 2009 White Paper on Chemicals of Concern.

Next meeting will be scheduled for March 26, 2010 to coincide with the American Chemical Society meetings.

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

E. Causes of Toxicity

The UC-Davis Granite Canyon work under the Causes of Toxicity element (2009) has commenced on the project to:

- Evaluate the use of freshwater test organisms in areas such as the river stations where the salinity is low for the RMP Status and Trends program;
- Focus on developing LC50 thresholds of effects for estuarine test species to aid in comparisons; and
- Develop a collaborative state-wide workgroup and research effort to address causes of persistent moderate toxicity. This effort should begin by convening one or more workgroups in 2009, in collaboration with SCCWRP and the State Water Board, to

investigate and consider methods such as genomics and other sub-lethal markers of contaminant exposure that may be useful in identifying causes of moderate toxicity.

- Further research solid phase toxicity identification and evaluation (TIE) methods.

For more information, please contact Sarah Lowe at Sarahl@sfei.org.

F. 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.

Two benthic workshops to discuss these topics have been held (June 3rd and August 24th). The goals of the workshops were to agree upon the spatial and temporal extent of benthic assemblages in the Estuary and decide upon suitable assessment methods for development of a mesohaline benthic index.

Milestones:

- A standardized dataset of benthic macrofauna data from the San Francisco Estuary was compiled and used for cluster analysis
- After reviewing cluster results, the workgroup agreed upon initial benthic assemblage classification in the Estuary. The initial classification contained nine groups:
 - Groups 1-3 are tidal fresh stations in the Delta with very different species but have similar abiotic ranges
 - Group 4 are mostly located in Suisun Bay
 - Group 5 are from mostly sandy habitats with several unique taxa
 - Groups 6 - 9 represent a gradient of taxa along the estuary salinity gradient
 - The classification was rerun using a cube root, square root and presence/absence values for taxa. In general, there was very little difference using different transformations, demonstrating that the method was robust.
 - After evaluating the effects of including and excluding the monthly DWR sampling, it was determined that monthly sampling did not affect the results so all DWR data was included in the analyses.
 - None of the re-runs identified new classification groups.
- Mesohaline index methods were discussed. The workgroup agreed that a Best Professional Judgment (BPJ) exercise (as was done in SQO Phase I) would provide the best opportunity to identify benthic response gradients in the assemblages, to support mesohaline index development and validation.

Activities for the fourth quarter 2009:

- SCCWRP-SFEI team to evaluate samples for use in BPJ exercise
- Bruce Thompson and Steve Weisberg to identify and recruit BPJ experts

The next benthic workgroup meeting will be held in January 2010. For more information, please contact the benthic workgroup leads, Bruce Thompson, at brucet@sfei.org, Aroon Melwani, at aron@sfei.org, or Sarah Lowe, at Sarahl@sfei.org

G. Status and Trends Sport Fish

Sportfish planning meeting for the 2009 sampling was held on November 5th. A sampling plan has been prepared and approved by the committee. Moss Landing Marine Labs has successfully collected sportfish and samples are being shipped to the labs. The cost of this sampling exercise will be shared with SWAMP.

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

H. Other meetings of interest

LTMS is sponsoring a two-day workshop on green sturgeon, longfin smelt, and dredging operations on December 2nd and 3rd. Information on this workshop and registration can be found at the SFEI web site. www.sfei.org/cb.

For more information, please contact Ben Greenfield at ben@sfei.org.