**OUTFALL MONITORING SCIENCE ADVISORY PANEL (OMSAP) MEETING**
**Thursday, August 11, 2005, 10:00 AM to 2:00 PM, Battelle, Duxbury, MA**

**MINUTES**

## AGENDA TOPICS

- 2005 *Alexandrium* bloom
- Update on mooring enhancements
- Winter flounder lesion update
- Model Evaluation Group
- MWRA permit renewal

## ATTENDANCE

**Members Present:** Norb Jaworski, retired; Bob Kenney, U. Rhode Island; Scott Nixon, U. Rhode Island; Judy Pederson, MIT/Sea Grant (co-chair); Jim Shine, Harvard School of Public Health; Andy Solow (co-chair); and Juanita Urban-Rich, U. Mass Boston.

**Observers:** Don Anderson, WHOI; Michele Barden, EPA; Bruce Berman, Save the Harbor/Save the Bay; Todd Borci, EPA; Peter Borrelli, Center for Coastal Studies; Jeanine Boyle, Battelle; John Brawley, Battelle; Martin Dowgert, USFDA; Paul Dragos, Battelle; Dave Duest, MWRA; Patty Foley, Save the Harbor/Save the Bay; Chris Gagnon, Battelle; Sal Genovese, Safer Waters in Massachusetts; Maury Hall, MWRA; Carlton Hunt, Battelle; Mingshun Jiang, U. Mass Boston; Ken Keay, MWRA; Yong Lao, MWRA; Wendy Leo, MWRA; Scott Libby, Battelle; Mike Mickelson, MWRA; Michael Moore, WHOI; Ann Pembroke, Normandeau; Andrea Rex, MWRA; Jack Schwartz, MADMF; Steve Tucker, Cape Cod Commission/Mass. Bays Program; Cathy Vakalopoulos, MADEP; Gordon Wallace, U. Mass Boston; and Meng Zhou, U. Mass Boston.

## MINUTES

OMSAP approved the September 27, 2004 meeting summary with no amendments.

## 2005 *ALEXANDRIUM* BLOOM

D. Anderson presented preliminary observations and data from the 2005 New England *Alexandrium fundyense* bloom. The MWRA Contingency Plan includes a nearfield *A. fundyense* caution threshold of 100 cells/liter. The threshold was exceeded triggering MWRA notification to regulators and the public and the implementation of their *Alexandrium* Rapid Response Survey Plan. The high numbers of *A. fundyense* in the nearfield were part of an extensive bloom that extended from western Maine to Martha's Vineyard and Buzzards Bay near the Cape Cod Canal. Growth of *A. fundyense* was favored in 2005 due to several factors: (1) high numbers of *A. fundyense* cysts in western Gulf of Maine sediments, (2) heavy winter snowfall and spring rainfall, and (3) two Nor'easter storms in May that helped move the cells into Massachusetts Bay. Agencies and institutions have been working cooperatively to track the extent of the bloom and monitor the toxicity of shellfish beds. In Massachusetts, these include the Woods Hole Oceanographic Institution, Massachusetts Division of Marine Fisheries, MWRA, and the Center for Coastal Studies. Future work includes surveying *A. fundyense* cysts in sediments, modeling bloom development, and additional data and laboratory analyses.

**ACTION:** OMSAP will review MWRA's Rapid Response Survey Plan and J. Pederson will find out if MIT SeaGrant can host a 2005 Red Tide Symposium. [OMSAP has reviewed the Rapid Response Survey Plan and the Symposium was held on April 18, 2006. A summary report will be posted at: http://web.mit.edu/seagrant/].

**UPDATE ON MOORING ENHANCEMENTS**

M. Mickelson presented an update on progress on the augmentation of moorings in Massachusetts Bay with additional instrumentation. The Gulf of Maine Ocean Observing System (GoMOOS) is installing a surface chlorophyll fluorometer on their mooring off of Cape Ann. USGS's long term Buoy LT-A will be taken out of service in February 2006 because the study period for their project will be completed. MWRA will work with MIT SeaGrant to determine what an appropriate replacement would be. There are several problems that need to be addressed: collecting real time data at the Buoy LT-A location has been difficult, ship traffic, corrosion, and fouling. NOAA has requested that their regions identify priorities for platform augmentation. MWRA will work with GoMOOS, Todd Callaghan (MA Coastal Zone Management), and others to coordinate a response to NOAA on monitoring needs in Massachusetts Bay. J. Pederson suggested that OMSAP reconvene the mooring technologies focus group.

**WINTER FLOUNDER LESION UPDATE**

C. Hunt and M. Moore presented the latest information on flounder lesions in Massachusetts Bay. Lesions on winter flounder have been noted in the spring in Massachusetts Bay since 2002. To date, even with additional sampling and laboratory tests, there has been no diagnosis of the cause of the lesions. The lesions almost always appear on the blind (i.e. bottom) side of the flounder and they seem to heal over the course of the summer and fall. The highest numbers of ulcers have been measured in northwestern Massachusetts Bay. MWRA will continue to monitor flounder as part of their Ambient Outfall Monitoring Program. OMSAP convened a flounder lesion focus group that met in March 2005 [for a summary of the meeting, go to: http://www.epa.gov/region01/omsap/pdfs/OMSAP0503-flfgm.pdf].

**ACTION:** OMSAP members agreed that since the flounder biologists have been unable to diagnose the cause of the lesions, and there is no evidence to date that the outfall is causing the lesions, the best thing is for MWRA to do is to continue the same annual flounder monitoring.

**MODEL EVALUATION GROUP**

W. Leo presented background the MEG meeting that is scheduled for September 12, 2005. The Bays Eutrophication Model Evaluation Group has guided the development and evolution of the coupled hydrodynamic (USGS) and water quality (HydroQual) models since 1992. The MEG is currently a subcommittee of OMSAP. These two models are now maintained by U. Mass Boston and MWRA. As part of MWRA's NPDES permit, MWRA is required to update, maintain, and run the models at least once a year. The current MEG members are: Dr. Eric Adams, chair (MIT), Dr. Steve Chapra (Tufts), Dr. Jack Kelly (EPA, Duluth MN), Dr. Pierre Lermusiaux (Harvard), Dr. John Paul (EPA Narragansett RI), Dr. Rich Signell (USGS), and Dr. Huijie Xue (U. Maine).

**ACTION:** OMSAP suggested that the MEG include additional expertise in biological modeling. They also suggested that MEG examine closely what the models are not modeling well. It would also be useful to examine why the models model some parameters very well.

**MWRA PERMIT RENEWAL**

M. Barden gave an update on MWRA's NPDES permit. The permit expired yesterday (August 10, 2005). MWRA has sent in a timely application and their current discharge permit will remain in effect until the new one is in place. Now we have the benefit of having outfall data since it went on-line in September 2000 whereas when the last permit was written, there were no outfall data. EPA is hoping to have a draft

completed in six months to a year, depending on how long EPA's effluent data review takes to complete. During the permitting process, people can contact EPA with concerns and comments. The draft permit will go to public notice and there will be public hearings.

**ACTION:** OMSAP members request a list of EPA's proposed changes to the permit when one becomes available. OMSAP also requests that MWRA provide a list of what they would like to see changed in the permit.

**ADJOURNED**

**MEETING HANDOUTS:**

- Agenda
- September 2004 draft OMSAP meeting summary
- September 2004 draft Public Interest Advisory Committee meeting summary
- March 2005 flounder lesion focus group meeting summary
- EPA and MWRA information briefings

Summary prepared by C. Vakalopoulos. Post-meeting comments are included in [brackets]. All such comments have been inserted for clarification only. They do not, nor are they intended to, suggest that such insertions were part of the live meeting components and have been expressly set-off so as to avoid such inference.