OUTFALL MONITORING SCIENCE ADVISORY PANEL (OMSAP)
OPEN CONFERENCE CALL
Wednesday, October 28, 2009, 1:00 - 3:00 PM

SUMMARY

ATTENDANCE

Members Present: Andy Solow, Woods Hole Oceanographic Institution (chair); Norb Jaworski, retired; Bob Kenney, U. Rhode Island; Judy Pederson, MIT/Sea Grant, Mike Shiaris, U. Mass Boston; Jim Shine, Harvard School of Public Health; and Juanita Urban-Rich, U. Mass Boston.

Audience: Michelle Barden, EPA; Bruce Berman, Save the Harbor/Save the Bay; Ed Bretschneider, Wastewater Advisory Committee; Todd Callaghan, Mass Coastal Zone Management; Amy Costa, Provincetown Center for Coastal Studies; Joe Favaloro, MWRA Advisory Board; Patty Foley, Save the Harbor/Save the Bay; Eugene Gallagher, U Mass Boston; Maury Hall, MWRA; Ben Haskell, Stellwagen National Marine Sanctuary; Pat Hughes, Provincetown Center for Coastal Studies; Carlton Hunt, Battelle; Chris John, MWRA; Ken Keay, MWRA; Kathleen Keohane, MassDEP; Yong Lao, MWRA; Wendy Leo, MWRA; Scott Libby, Battelle; Mike Mickelson, MWRA; Tara Nye, Association to Preserve Cape Cod; Brian Pitt, EPA; Andrea Rex, MWRA; Steve Rhode, MWRA; Dave Taylor, MWRA; and Cathy Vakalopoulos, MassDEP (this is an incomplete list because not everyone announced their presence when entering the conference call).

MEETING SUMMARY

The purpose of this conference call is to continue review of MWRA's proposed revisions to their Ambient Monitoring Plan. Since the August conference call, MWRA revised their initial list of proposed revisions by adding four water quality stations based on comments and discussion with interested parties. The call was open to the public and notification was posted on the OMSAP website as well was sent by email to interested parties.

M. Barden gave a brief permit update. She hopes a draft will go to MassDEP for review in December. NMFS is also involved in the initial review in relation to the Endangered Species Act. A. Rex said that MWRA added four stations to their proposed sampling plan: N21 near the outfall's zone of initial dilution (nutrients only), F29 on the edge of Stellwagen Bank, and F01/F02 in Cape Cod Bay (CCB). The last three stations are farfield stations and would be sampled more often than they are now with the proposed plan because the farfield surveys are being combined with the nearfield surveys. A. Solow asked if there are other stations as close to the outfall as N21. A. Rex replied no and that though N21 was in the original monitoring plan, sampling at this station was discontinued in 2004. She added that the next closest station is N20. J. Shine asked about comparing calculated thresholds at N21 using pre- and post-discharge data. A. Rex said that MWRA is only proposing to monitor nutrients at N21 and there are no caution or warning thresholds for nutrients in the nearfield. M. Barden added that EPA may require MWRA to monitor additional parameters at N21.

A. Rex asked OMSAP how often they thought MWRA should monitor for toxics in the water column since it is so expensive. J. Shine said that the best way to monitor for toxics is to study how they bioconcentrate in mussels. M. Barden did not think that the mussel cages were deployed in the zone of initial dilution. M. Hall said that one of the locations of mussel deployment is located 60m from the diffuser line. B. Berman thinks that 60m should meet EPA's needs. J. Pederson agreed that, especially for organic contaminants, caged mussel studies are more practical.

A. Solow asked for discussion on the revised proposal. A. Rex explained that F01, F02, and F29 would be sampled using another boat under contract or hire. B. Berman thinks that it is important to try to have the two boats sample at the same time. He thinks adding the four stations is a terrific idea and that MWRA has been very responsive.

J. Shine wondered to what extent we would get more false positives and negatives with fewer stations and less nearfield surveys. S. Libby replied that in the case of *Phaeocystis*, there would be more exceedances with the proposed sampling plan because the February survey is not included. This would increase the seasonal average because *Phaeocystis* numbers aren't high in February. But an exceedance like this just means that MWRA has to take a closer look at what is happening. In the case of dissolved oxygen (DO), the lowest measurements are in late October. Since the late October survey is on the proposed list, MWRA should be able to capture the annual DO minimum. W. Leo thinks that there will actually be more exceedances with the proposed plan. J. Shine agreed and noted that the farfield data are not used in the threshold calculations. K. Keay said that the thresholds were designed to give us a heads up that something was different in the nearfield. A. Rex added that the original design of the Ambient Monitoring Plan focused on the nearfield because it was thought that any problems due to the outfall would be seen there. She said that MWRA compared threshold calculations using the current plan and the proposed plan and presented it at OMSAP's June meeting. J. Shine and A. Solow then discussed the statistics involved in threshold calculations. J. Shine thought that when considering these proposed monitoring reductions, the fall was the most critical time. J. Pederson agreed and said that the survey schedule might miss some of the fall bloom. K. Keay said that when MWRA compared the current and proposed monitoring plans in relation to the three years with chlorophyll exceedances, the exceedance predictions matched up pretty well. J. Shine said that he is ok with the proposed revisions since MWRA already compared the Contingency Plan thresholds using data from the current and proposed plans.

OMSAP then discussed questions from EPA's letter dated June 3, 2009 [http://www.mwra.state.ma.us/harbor/pdf/omsap/epa_response_20090603.pdf]. Question A on page 4 asked OMSAP to discuss "whether sufficient monitoring parameters and stations have been maintained to support MWRA's modeling and responsive strategy and to track regional changes in water quality for comparison with changes in the nearfield". A. Solow asked OMSAP if there was any concern that sampling at some of the boundary stations would be discontinued. W. Leo reminded the group of the GoMOOS buoy off of Cape Ann. J. Pederson asked how the modelers felt about it. A. Rex said that their modelers were comfortable with it. S. Libby said that with the move to FVCOM [see December 2008 OMSAP minutes at: http://www.epa.gov/region01/omsap/pdfs/OMSAP200812.pdf], it is now less important to have data from those boundary stations for modeling. And they rely on monitoring from further north

for *Alexandrium* monitoring. Then he added that the farfield would be monitored nine times per year instead of six times per year. A. Rex said that in their proposal, stations were eliminated because of spatial redundancy based on discussions with OMSAP. K. Keohane asked about net tows for floatables. A. Rex said that currently MWRA runs net tows over the outfall which can capture tiny bits of fat.

The group then discussed EPA's questions #2 and #3 on page 6 regarding the proposed reduction of stations in the nearfield. A. Rex said MWRA data have shown that the nearfield is homogenous. J. Pederson asked if the two buoys have nutrient sensors. A. Rex replied no. C. Hunt asked why EPA thinks sampling at N21 for nutrients is better than using effluent data and the dilution model. A. Solow said that it sounds like EPA is also concerned about metals and priority pollutants at N21. He is somewhat comfortable with the idea that the nearfield is homogenous and that not a lot of information would be lost with the reduction of stations. M. Shiaris wondered what information would be lost without station N21. K. Keay said that MWRA addressed this in the response letter dated June 23, 2009 [http://www.mwra.state.ma.us/harbor/pdf/omsap/mwra_response_20090623.pdf]. A. Rex added that MWRA measures *Clostridium* as a way of looking at human impact.

With the addition of the four stations discussed above, OMSAP agreed to recommend that the proposed list of water quality stations and surveys be approved. OMSAP will draft a letter describing their recommendations and send it to EPA and MassDEP.

ADJOURNED

Summary prepared by C. Vakalopoulos.