

Final OMSAP Agenda
February 28, 2018
10:00 am to 3:00 pm
EPA New England *Leighton Hall, First Floor*
5 Post Office Square, Boston MA 02109



Public Interest Advisory Committee Meeting to follow

- 10:00-10:10 **Welcome from Alexandra Dapolito Dunn**, EPA Regional Administrator (*invited*)
- 10:10-10:20 **Welcome and introductions**, Dr. Judith Pederson, interim chair, OMSAP
- 10:20-11:45 **Outfall Monitoring**
2016-2017 Results Betsy Reilley, MWRA
2017 Red tide Scott Libby, Battelle
Enterococcus David Wu, MWRA
- 11:45-12:30 **Lunch** (attendees pay for sandwiches to be delivered or bring your own lunch)
- 12:30-1:00 **Discussion on proposed Workshop: Revisiting 25 years of MWRA Monitoring**,
led by Dr. Judith Pederson
- 1:00-1:15 **Update on OMSAP Membership**
- 1:15-2:45 **Boston Harbor Monitoring**
Improvements in eutrophication markers, Dave Taylor (30 min)
Benthic monitoring, Ken Keay (30 min)
Boston Harbor flounder, Ann Pembroke (30 min)
- 2:45-2:50 **Update from PIAC**, Bruce Berman, Save the Harbor/Save the Bay
- 2:50-3:00 **Wrap-up and adjourn**, Dr. Judith Pederson

MWRA Outfall Monitoring Science Advisory Panel Meeting
February 28, 2018
10 am to 3 pm
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*These notes are limited, they were provided by Matthew Liebman, EPA only and not reviewed.
It is recommended that presentations supplement these notes.*

10:00-10:10 Welcome from Alexandra Dapolito Dunn, EPA Regional Administrator (invited)

Alex Dunn, EPA new Regional Administrator welcomed everyone. Her remarks focused on the thinking about this watershed for the future.

Welcome and introductions, Dr. Judith Pederson, interim chair, OMSAP

Judy welcomed everyone.

Outfall Monitoring updates

2016-2017 Results	Betsy Reilley, MWRA
2017 Red tide	Scott Libby, Battelle
Enterococcus	David Wu, MWRA

Betsy Reilley on the 2016 and 2017 results:

After presenting on the results (powerpoints available), she noted that:

Performing annual model runs provides little added value to the program.

After 26 years we should review and potentially revise the monitoring program.

Scott Libby, Battelle on the 2017 Red tide

Forecast and modeling is being transferred from WHOI to NOAA. The Alexandrium conceptual model and cyst bed generally true. Limited bloom fit the predictions. The presence of bloom and winds north of the outfall triggered the rapid response survey. There were some closures on the north shore Cape Ann to NH, including Essex bay. No psp toxicity in Mass Bay, bloom stayed offshore. Primary reason was the winds. There did not appear to be an association between Alexandrium bloom and nitrate levels. No fall cyst survey last fall, but UNH got out there eventually, so there will be an estimate of the cyst bed.

From David Wu, on Enterococcus methods and results.

MWRA is preparing for using enterococcus for swimming, in addition to fecal coliform for shellfishing as indicator bacteria. Even during the adverse event surveys fecal coliform and enterococcus levels were very low.

Discussion on proposed Workshop: Revisiting 25 years of MWRA Monitoring, led by Dr. Judith Pederson

There are new threats out there and we should pull together a one day workshop to address them, with respect to the MWRA outfall monitoring. Let's start next month with a steering committee. Consider OMSAP members. Address climate change threats, microbeads, pharmaceuticals, deeper, more acidic and more turbulent waters.

Betsy mentioned a few components of the monitoring plan that don't provide as much value to the program now. For example, PCB tissue contaminants in shellfish. We want to do the right thing. Does monitoring for flounder lesions provide more value?

Discussion regarding future problems. There will be conditions worsened by climate change. Want a program that provides more value. For example, looking at tissues related to microplastics might make sense.

Prey resources are down. Endocrine disruptors are an issue. We need to hear from NMFS, e.g. Jon Hare from the Woods Hole Northeast Fisheries Science Center.

Update on OMSAP Membership, Matthew Liebman EPA Region 1

We have a list of needs as the charter mentions. For example, we need to find a microbiologist on the committee. Jim Shine will be leaving the board he is a toxicologist and a statistician. Please give recommendations to Judy Pederson at the correct email address.

Boston Harbor Monitoring

Improvements in eutrophication markers, Dave Taylor, MWRA

Benthic monitoring, Ken Keay, MWRA

Boston Harbor flounder, Ann Pembroke, Normandeau

Dave Taylor, MWRA on Eutrophication in Boston Harbor.

Boston Harbor was hypereutrophic. But, nitrogen and phosphorus loadings to BH have declined by 80 to 90 percent. Interestingly, although there is high production in BH, but due to mixing it has low chlorophyll levels. It went from hypertrophic to mesotrophic. Now, eelgrass abundance in north harbor is increasing based on MA DMF scientist Tay Evans acoustic monitoring data.

Ken Keay on benthic monitoring in Boston Harbor.

The "Perfect storm" in the 1990s reset the benthic community and created habitat for *Ampelisca* to invade. The benthic community is staying somewhat stable from year to year, same top 7 species. The number of species is increasing and stabilizing over the years. The Redox potential discontinuity (RPD) layer is increasing, or deepening. *Capitella* was gone early on, haven't been seen in many years.

Ann Pembroke, Normandeau, on flounder monitoring in Boston Harbor.

Ann mentioned that contamination of sediments and disease in winter flounder was one of the driving forces for the Boston Harbor cleanup. As Judge Mazzone said, “The law secures to the people the right to a clean harbor”. There is a statue of him at Deer Island to mark that decision.

Winter flounder like to eat *Ampelisca* and with the decline of *Ampelisca* there is a decline in winter flounder. Contaminants of concern causing tumors are the PAHs PCBs Furans, PCDDs and dioxins etc. The Boston Harbor flounder population appears to spend a lot of time in Boston Harbor so there isn’t that much migration among sites.

Total chlordane was associated with decline in centropolar hydropic vacuolation. The fish continue to inform us about the health of Boston Harbor. The health of the fish has improved, although they miss the *Ampelisca*. Another interesting question is Why do we still have so many females? We are not seeing the blind side ulcer anymore.

Update from PIAC, Bruce Berman, Save the Harbor/Save the Bay

We need to bring in new folks to PIAC. Save the Harbor/Save the Bay will talk to people.

Kelly Coughlin is helping out SHSB. Moving forward with membership

Wrap-up and adjourn, Dr. Judith Pederson

There are a lot of issues that are not MWRA specific, like microbeads, and MWRA can lead, but there is more research that is needed. In the next permit, there needs to be flexibility to answer the right questions, an ability to change the questions. Let’s make use of new technologies.

Attendance:

Name	Affiliation	Category
Judith Pederson	MIT Sea Grant	OMSAP Chair
Robert Kenney	URI	OMSAP
Robert Beardsley	WHOI	OMSAP
Todd Callaghan	CZM	IAAC
Prassede Vella	CZM/Mass Bays	IAAC
Cathy Vakalopoulos	Mass DEP	IAAC
Steve Wolf	US ACE	IAAC
Leann Ostrodka	MWRA Advisory Board	PIAC
Vi Patek	Nahant Swim	PIAC
Bruce Berman	Save the Harbor/Save the Bay	PIAC
Andreae Downs	MWRA Wastewater Advisory Committee	PIAC
Beth Card	MWRA	MWRA

Betsy Reilley	MWRA	MWRA
Carolyn Fiore	MWRA	MWRA
Chris Goodwin	MWRA	MWRA
Dan Codiga	MWRA	MWRA
Dave Taylor	MWRA	MWRA
David Wu	MWRA	MWRA
Doug Hersh	MWRA	MWRA
Fang Yu	MWRA	MWRA
Fred Laskey	MWRA	MWRA
Jianjun Wang	MWRA	MWRA
Ken Keay	MWRA	MWRA
Maret Smolow	MWRA	MWRA
Mike Delaney	MWRA	MWRA
Sally Carroll	MWRA	MWRA
Steve Rhode	MWRA	MWRA
Wendy Leo	MWRA	MWRA
Ellen Weitzler	EPA	EPA
Ian Dombroski	EPA	EPA
Matt Liebman	EPA	EPA
Mel Cote	EPA	EPA
Todd Borci	EPA	EPA
Ellen Baptiste Carpenter	Battelle	
Scott Libby	Battelle	
Paul Keohan	BWSC	
Rachel Borgatti	Friends of Fort Point Channel	
Susy King	Mass DEP	
Ann Pembroke	Normandeau	
Deborah Rutecki	Normandeau	
Anil Gurean	Save the Harbor/Save the Bay	
Emily Bozadjian	Save the Harbor/Save the Bay	
Jules Stuber	Save the Harbor/Save the Bay	
Kayla Hammersley	Save the Harbor/Save the Bay	
Kelly Coughlin	Save the Harbor/Save the Bay	
Melissa Miller	Save the Harbor/Save the Bay	
David Borkman	University of Rhode Island	