



# Advisory Board Meeting

Thursday, November 16, 2017  
11:30 AM

Boston Water and Sewer Commission  
980 Harrison Avenue  
Boston, MA 02119

**Attendees (Voting Members)**

Michael Rademacher	Arlington	Moe Handel	MAPC
John Sullivan	Boston	Cassandra Koutalis	Medford
Jay Hersey	Brookline	Chris Seariac	Needham
Lou Mammolette	Chelsea	Lou Taverna	Newton
J. R. Greene	Gubernatorial Appointee	Jeff Zager	Reading
Ralph Pecora	Lexington	John DeAmicis	Stoneham
James Finnegan	Lynnfield	William Shaughnessy	Wellesley
Amy McHugh	Marblehead		

**Other Attendees**

Michael Hornbrook	MWRA	Joshua Das	MWRA
Fred Laskey	MWRA	Andreae Downs	WAC
Pam Heidell	MWRA	Eric Sherman	Wakefield
Kathy Soni	MWRA	Joseph Favaloro	AB Staff
Matt Horan	MWRA	Matthew Romero	AB Staff
Louise Miller	MWRA	James Guidod	AB Staff
Betsy Reilley	MWRA	Lenna Ostrodka	AB Staff
Ken Keay	MWRA	Cornelia Potter	AB Staff

**NOVEMBER 16, 2017  
BOSTON WATER AND SEWER COMMISSION  
980 HARRISON AVENUE  
BOSTON, MASSACHUSETTS 02119  
11:30 A.M.**

**Draft Minutes**

The Chairman called the meeting to order at 11:50 a.m.

**A. APPROVAL OF ADVISORY BOARD MEETING MINUTES FOR SEPTEMBER 21, 2017**

A motion was made and seconded to approve the minutes of the meeting of the Advisory Board for September 21, 2017. The motion carried.

**B. REPORT OF THE EXECUTIVE DIRECTOR**

Mr. Favaloro opened his remarks with acknowledgement of several members of the MWRA staff who are planning to retire and with particular appreciation for Pamela Heidell with whom he has been working on several important agenda items especially issues having to do with system expansion. She knew the regulations and requirements that were needed

in pursuing successful outcomes of these efforts. He presented her with a bouquet of flowers as a statement of the Advisory Board's appreciation of her efforts.

He also spoke of John Carroll, who is retiring from his role as Town Manager of Norwood and will be recognized at an event in Norwood that evening. He will be continuing as a representative of the Advisory Board on the Authority's Board of Directors.

## **C. PRESENTATIONS**

### **State of the Harbor: A Good Story Keeps Getting Better**

Betsy Reilley, Director of Environment Quality at the MWRA, opened the presentation first with an introduction of Ken Keay, Senior Program Manager, also with the Department of Environmental Quality (since 1992 when the program began). The environmental quality and monitoring program began in the early 1990s, and has included the submittal of a regular report, required as part of the NPDES permit, that demonstrates that the effluent was not (adversely) impacting Massachusetts Bay. The program has demonstrated that not only has the effluent not had an adverse impact but also monitoring in Boston Harbor shows the improvements over time to the Harbor. The information that is collected is also going to be very helpful to MWRA as negotiations with EPA for a future NPDES permit for the Deer Island Treatment Plant. The permit the agency is operating under now was issued in 2000 and expired in 2005; it has been administratively continued since that time, for, now, twelve years. A new permit will eventually be issued and the data will be needed from this program to be able to successfully negotiate more favorable terms in a new permit.

An important part of the permit is related to the data collected in monitoring effluent from the Deer Island Treatment Plant. The National Association of the Clean Water Agencies (NACWA) has an award that is issued to wastewater treatment plants that are in compliance with their NPDES permit. Deer Island has been awarded the Platinum 10 award, which refers to ten years of continuous compliance with the permit.

For 2016 (it takes about a year to process the data) reports about flounder health show that the flounder are very healthy (as compared to the incidence of liver tumors at the start of the Harbor Cleanup Project). The Plan has Contingency Plan thresholds that were based on data collected before the outfall went on line. It enables people to compare once the outfall went online, whether data reflected worse conditions or better conditions as compared to the baseline data. Sometimes such measurements for algal blooms were believed to be caused by the outfall effect, but the Authority was successfully able to show the Outfall Monitoring Science Advisory Panel (that is also part of the permit) that the outfall was not a contributor to the algal bloom. This threshold was removed from the permit, as was a threshold test relating to benthic diversity (where diversity has in fact increased). The Authority is working with OMSAP to remove more of those thresholds.

Ms. Reilley noted that 2016 was a very dry year (there was a drought) and there was very little blending. Over 99% of the water received full primary and secondary treatment. Regarding solids, in 1990 the agency discharged nearly 160 tons of solids per day in the effluent. There have been dramatic reductions in total solids being released in the effluent and the amount is now less than 10% of what had been released in the earlier period. Similar results are being reported for other parameters, such as BOD and metals; many of the contaminants have seen dramatic reductions. One parameter has not reduced, nitrogen, which is naturally present in the sewage but not over the threshold limit.

Ken Keay noted that water quality monitoring and environmental quality results during 2016 are very similar to what was seen since the outfall went online in 2000. There is no evidence of an adverse outfall impact, and dissolved oxygen levels in the bottom waters stayed at healthy levels all year. In 2016, that was important because of the drought. The waters in Massachusetts Bay stayed saltier and warmer than usual, which could have been conducive to dissolved oxygen being

lower than might be seen in a normal year. There was a very minor algal bloom in 2016 which required additional sampling but did not result in extensive closures along the South Shore and there was no indication of an outfall impact.

As part of the monitoring program, MWRA contracts with the Provincetown Center for Coastal Studies to conduct portions of the monitoring in Cape Cod Bay. In addition, the Center continues a long-term study of right whales in Cape Cod Bay. In 2016, right whales were relatively abundant in March and April in Cape Cod Bay; the previous year the winter of 2014-2015 was extremely cold. Parts of Cape Cod Bay froze over and the right whales showed up much later than normal, fewer showed up and they left earlier than normal. In 2016, the presence of the whales in Cape Cod Bay was more normal relative to the last ten years.

In contrast to not seeing any degradation in the offshore waters, with the outfall moved offshore, in Boston Harbor itself, we are seeing dramatic water quality improvements as a result of the Boston Harbor Project. According to a map depicting bacterial pollution in sewage (as measured by enterococcus levels), water quality of the Boston Harbor has improved, correlating with the completion of CSO projects and improvements to Deer Island. Areas highlighted on the maps meet the swimming standard for enterococcus. In recent years, the number of water quality exceedances are much lower and much less severe than at the start of the program.

Another area for measurement is sediment quality in Boston Harbor and Massachusetts Bay, which is a good way of looking at the long-term history or contamination or pollution of the environment. Core samples and images provide ample evidence of biological activity at these sites, which represents substantial improvements.

One of the big concerns when the offshore outfall was being planned was would moving the discharge offshore clean up Boston Harbor at the expense of Massachusetts Bay? What we have seen over the last decade is that the oxygenation of the sediments has been increasing.

Mr. Keay also elaborated on the improvements to flounder health. Improvements have been recorded over the last 20-25 years. He also described public outreach efforts, including presentations at symposia and other events, industry and environmental science conferences, the Coastal and Environmental Research Federation, watershed associations, school groups and universities, and, more recently, the completion of a brochure updating the environmental monitoring showcasing some of the bacterial monitoring results.

In conclusion, twenty-five years of environmental monitoring confirms that Massachusetts Bay is healthy and that the outfall is not having a negative impact on the Bay. Staff also showed a video of a riser (at the end of the outfall tunnel) out in Massachusetts Bay: the video showed riser #2 (in the vicinity of the nearfield of the outfall). The film showed a winter flounder, sea anemones, and a field of barnacles covering the riser cap (consistent with a healthy environment at the points of discharge). In response to a question regarding increased nitrogen levels, staff noted that nitrogen is a nutrient, and is on EPA's list of concerns (on a broader geographical front such as the Great Lakes area) but the question is an artifact of concern in the way that threshold limits were set, based on population assumed for 2020. But the real thing to look for is eutrophication and whether it is having an impact on the environment or whether it is within the capacity of the environment to absorb it without having any adverse impact. Researchers are so far seeing that there are no adverse impacts. Furthermore, to do anything about that would be huge because it is a tertiary treatment process and space is limited at Deer Island. There may be other ways to address the question. Related questions include what are the right parameters and what of the issues that should be addressed. The chairman also asked, as John Carroll might say, is there a date certain when we can stop? The MWRA staff said, "No, because it is part of the permit. "

A new permit would be the mechanism for addressing the thresholds that govern the reporting process.

Mr. Favaloro added that he had been informed that a new Region I Administrator has been appointed to the Environmental Protection Agency: Alexandra Dunn. She has been involved and active with NACWA and other organizations, and is scheduled to start in the next month or so.

### **2017 Annual Water and Sewer Retail Rate Survey**

James Guidod, of the Advisory Board staff, opened his presentation on the Annual Water and Sewer Retail Rate Survey. He noted that the survey is an analysis of the average wholesale rates for the MWRA and the average retail rate charge as well. For the wholesale assessments, the reporting is on a fiscal year basis. The survey provides data on the MWRA communities, other communities in Massachusetts, and a selection of national communities as well. For the last fiscal year, the MWRA wholesale rate increase was 3.34% as compared to 3.19% this year, somewhat lower than the previous year.

For the calendar year, the retail increase was 3.66% in 2016, while this year it was 2.20%. The charges are based on using 61,000 gallons as well as 90,000 gallons (used in the Advisory Board's survey to standardize the communities). This level is much lower than the previous year.

Going back to 2007 as to what the difference was, the difference was \$486 or 45% as compared to last year's rate increase of 52%. So, there is a much lower trend with this retail rate increase even though it is an increase. Among MWRA water service communities, the average increase is \$596, using the 90,000 gallon standard, or a 1.9% increase. Regarding communities that receive sewer services from the MWRA increases are just over \$1,000, a first for sewer communities; it represents a 2.19% increase and is lower than the trend last year.

The average combined rate for all MWRA water and sewer communities is just over \$1,500 which is a 2.20% increase. Comparing to the combined rate increases since 1994, this is the lowest retail rate increase since that date. Also noted were the fluctuations in the community rate increases over time. The report also addressed data from the "core" communities. These number just about 20 communities and together represent 81.5% of the MWRA flow share. Focusing on just these communities, the average retail rate increase was 1% (as compared to the 2.20% average combined rate).

Looking at residential use (previously referred to as "DEP data," and more recently, integrated with the "LSF" data or local, state and federal data), estimated community usage per household based on the community's population is presented in terms of cost. Another comparison is with other, national cities. What is changing is that Boston and the MWRA no longer have the highest rates in the country, and may even not be in the top ten anymore (at least as compared to the communities examined for the survey). Access to expanded data is improving; staff described recently development in the ability to access and analyze data which, in turn, will enable additional information to be reported in future rate surveys. The Rate Survey will be thirty years old next year. This year's survey will be published as an online document before the end of the year. There will also be a flash drive with the electronic copy available. Staff are tracking stormwater data with information available separately on the website; future rate surveys will include stormwater data.

### **D. COMMITTEE REPORTS**

Mr. Favaloro reported that the Executive Committee will be holding a "retreat" (in the MWRA building) in December. The agenda will include issues such as rate increases, retail rates, wholesale rates, permitting, primacy, and other topics.

Joshua Das from the MWRA gave a brief update on the lead and copper sampling program. The MWRA, as a system, has been under the "action level" for 22 rounds, with 96% of the samples taken being below the action level. However, there has been a slight uptick in the 90<sup>th</sup> percentile in the last few rounds. It is not known if this is statistically significant, although the number of samples that have changed this year has been quite substantial – a quarter of the samples taken were

different from last year. (He noted that DEP is taking a much closer look at the sampling plans as compared to last year. In addition, there were 120 new locations this year.) Also, the UV 254 – a measurement of organic matter in the water -- was higher this year because of the wet spring. Analysis is being done because increases in the UV 254 means that the lead levels increase.

The lead service line program has continued. He reported on progress in Quincy, Newton, Marlborough, Winchester, Revere, Somerville, and Winthrop. The school lead testing program continues; over 32,000 samples were collected in 320 schools in 36 different communities. All schools that have had an elevated level have done some remediation. DEP is recommending that all schools in a community be tested every three years. MWRA's lab still has capacity for additional testing.

Mr. Favaloro also reported on plans for a climate change workshop to be sponsored by the Advisory Board. Staff has been working with many different individuals and organizations and are now looking at a June timeline; incorporating it into the June Advisory Board meeting is an approach under consideration.

He also reported that staff is working with representatives at the State House regarding infrastructure-related funding and debt service assistance. And staff continues to meet with communities regarding system expansion to broaden the MWRA system and gain more customers, allowing the costs to be spread over a larger base.

**E. ADJOURNMENT**

A MOTION WAS MADE TO ADJOURN THE MEETING AT 1:03 p.m. It was seconded and passed by unanimous vote. The next meeting of the full Advisory Board will be in January 2018.

Respectfully submitted,

Michael W. Rademacher, Secretary