

Minutes
December 8, 2017

The Wastewater Advisory Committee to the MWRA met at MAPC, 60 Temple Pl., Boston

Attendees/Contributors:

WAC: Craig Allen (chair), Adriana Cillo, Karen Golmer, Martin Pillsbury, Mary Adelstein, Philip Ashcroft, Stephen Greene, Taber Keally

Guests: Wendy Leo, David Wu, Maret Smolow, Betsy Reilley, Sally Carroll (MWRA), Kerry Snider (NePRWA), George Atallah (Triumvirate)

Staff: Andreae Downs (WAC)

FUTURE MEETING DATES/TOPICS

NEXT: **Friday, February 2,** 10:30 am, CSO Post-Construction Monitoring and Performance Assessment, MAPC, 60 Temple Pl., Boston, MA

VOTES: Approved: November Minutes, Letter on the Business Plan

Chairman's Report:

Beth Miller, who joined WAC in 2011, has resigned. The MWRA Board voted Philp Ashcroft in to WAC. George Atallah is interested in becoming a member. Stephen Greene noted how important it is for WAC to have a member representing industry.

MWRA Updates: CSO assessment is off to a great start. Public meetings will be scheduled over the next 3 years. The Alewife Brook Pump Station project continues—installed pumps and pipes to divert flow around the station. New staff—for energy and green energy, consolidated a few positions and now have Mike McDonald and Courtney Fairbrother working with Denise Breiteneicher. Beth Card has been hired from DEP to work on permitting and policy around the water redundancy project. May be a separate group formed to manage the water redundancy project, given its size, duration and complexity. There's a new Regional EPA administrator.

Valve work on Deer Island is complete. “Clever Engineering and Hard Work.” WAC members suggested that MWRA should tell the story of how well the operation worked and how important it was—with pictures. Because it went well, with no problems, there's no news story. MWRA has to tell the story itself.

P. Ashcroft asked why weren't MWRA engineers confident that the isolation gates (96") would work. Had they been exercised? Was there deferred maintenance? D. Wu: the gates predate MWRA, and although they may have been rehabbed during the Boston Harbor Project construction, no one knew if they could provide sufficient isolation. W Leo referred WAC to an article in the NEWEA journal by Ethan Wenger et al. for more information on this project and the challenges: “20-year valve replacement at the Deer Island Treatment Plant” (page 24: http://www.newea.org/wp-content/uploads/2015/07/NEWEA-Journal_Sum17.pdf)

ED report: Besides written report (attached), Andreae joined Mass Rivers for its annual meeting Dec. 6th. Former EPA Administrator Gina McCarthy spoke and noted that while the current administration clearly intends to roll back rules on the Waters of the US and Clean Power Plan, they had not met any of the three requirements to do so (questions of science, of process or of public opposition).

WAC members praised ENQUAL for the new brochure highlighting water quality changes in the Harbor. Sally Carroll put together. Betsy Reilley welcomed ideas for future brochures.

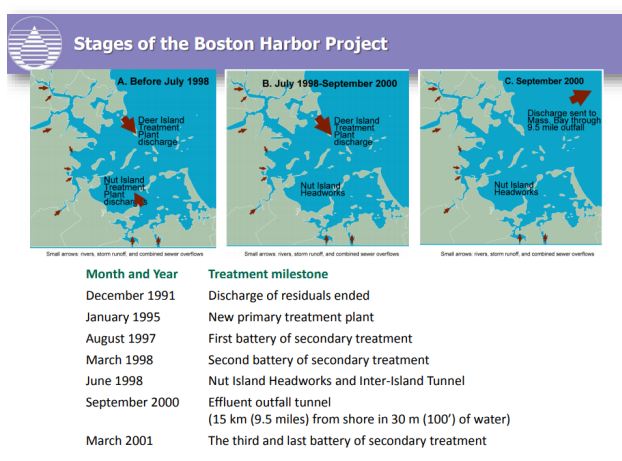
Discussion of draft Business Plan letter; T. Keally pointed to the ENQUAL brochure as a possible milestone that could become one on a series on what the MWRA does well. Future brochures could include how the MWRA delivers water & sewer services economically—the Authority is still seen outside the catchment area as a gold-plated service (the Cape Cod Water Trust is explicitly NOT to be “another MWRA” but something more “modest” and “affordable”). MWRA could show locally the benefits of its services. M Pillsbury: even in the MWRA area, people see the bills come in but not the benefits. It’s a case that MWRA could make easily. But when everything works the way it should, it doesn’t make headlines—it’s invisible.

PRESENTATIONS & DISCUSSION:

Wendy Leo & Betsy Reilley
How EPA issues a NPDES permit.

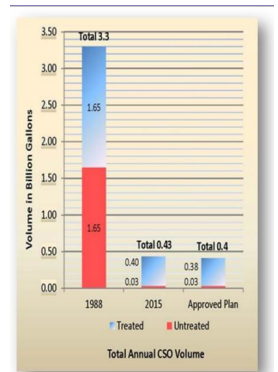
2000—last Deer Island permit. Permits are designed to have a 5-year cycle, but the original permit continues in force (administratively continued), but cannot be modified. Reapplication was submitted in 2005 as required.

History of the harbor project: Two old, failing sewage treatment plants that discharged near the shore—ended 1991. Regular overflows upstream into rivers, lack of capacity and pumping, lots of combined sewer overflows (CSOs). Contaminated sediments, disease in flounder, high bacteria, phytoplankton, nutrients.



Siting of the outfall was of concern.

CSOs brought under better control with improved pumping and several construction projects—including targeted separation of sewers. →





Process/timeline

- Timeline
 - – Permit application, at least 6 months before permit expires ← *Deer Island is here*
 - Draft permit and Fact Sheet
 - <https://www.epa.gov/npdes-permits/massachusetts-draft-individual-npdes-permits>
 - **30 day** comment period
 - Final permit
 - Appeals (anything not appealed goes into effect)
 - Effective date (~60 days from signature)
- Fact Sheet, Draft permit, comments, responses = the administrative record
- Appeals
 - Within 30 days of receipt
 - Can only appeal provisions on which you commented,
OR if there is something added to final that wasn't in the draft
 - Only organizations which commented can appeal
 - Appeals to EPA's Environmental Appeals Board

New permits can be more stringent. Changes in the numerical pollution limits must be connected to water quality issues.

Clinton has a more stringent phosphorus limit in its new permit. On the other hand, it is less stringent on copper because the standards changed. Usually, however, use a “no backsliding” rule.

Occasionally a draft permit will be re-issued based on comments. Comments on the new changes are allowed. Important to comment on anything you might be worried about. You can only appeal items upon which you have commented, or anything newly included in the final which was not in the draft.

EPA has suggested that the best comments are based on lots of data, and are as detailed as possible.

Because 30 days is a very short response time, MWRA keeps its data up to date.

Fact sheet issued with the draft permit, but is never revised. Errors and corrections are addressed in the response to comments—frustrating for those who are researching others' permits.

For a perspective on the timeline, MWRA submitted a permit application for both Deer Island and Clinton in 2005. Got a draft permit for Clinton in 2010, a revised draft permit in 2013 and it finally went into effect this spring in 2017.

Content of Deer Island Permit:



2000 DITP permit requirements – the usual suspects

- Numerical limits for conventional pollutants, bacteria, chlorine, pH, whole-effluent toxicity
- “Report only” for metals, organic contaminants, types of nitrogen
- Permit limits for CSO treatment facilities
- CSO “Nine Minimum Controls”
- Pretreatment program
- Operations & Maintenance best management practices e.g. backup power
- Management of biosolids



2000 DITP permit special permit provisions

- Ambient monitoring requirement, with plan attached to the permit
- “Contingency Plan” to allow for rapid response in case unexpected adverse impacts occurred from relocating outfall
- Outfall Monitoring Science Advisory Panel
- Permit limit for dry-day flow
- Infiltration/Inflow Task Force and regional I/I plan
- Water conservation requirements
- Web reporting and repository library

One requirement that may be relaxed under the new permit is the requirement to have several libraries available, including one “in Boston” for print materials related to the permit.

M Adelstein: so MWRA is not particularly burdened dealing with this permit. Are you better off not having to deal with a new permit?

B Reilley: Adjusting to a new permit and all its complex requirements would be an adjustment. Right now it all works and we always meet the compliance deadlines. Even the changes in Clinton, small as they are, mean MWRA has to be very careful to meet new requirements and deadlines.

T Keally: is it possible that being able to manually operate any automated systems that could fail might be written into the next permit?

W Leo: I think that’s covered in the state sewer regulations.

B Reilley: we do have a program to train & test staff in how to run systems manually. Some are extremely difficult to run manually—especially things like the ozone generators at the water treatment plant.

DI is currently doing very well—winning awards for 10 years of permit compliance. Much lower levels of metals and other contaminants than projections.

Current permit has a dilution factor, because of the outfall being so far from



Some highlights of other recent NPDES permits in MA, NH

- Co-permittees
- No dilution for bacteria
- Seasonal limits for bacteria
- Nitrogen limits
 - especially if discharging into tributary of Narragansett Bay or Long Island Sound
- Weekly load limits for TSS and BOD
- Ambient monitoring (rare, limited, focused on a single pollutant)
- Disinfection problems – rapid reporting
- CSO reporting
- Blending (“bypass”)

the

shore. If it does not continue, that would be a concern.

Nitrogen limits are mostly for sensitive areas; not anticipated for Mass Bay.

Some new permits are allowing “blending,” which would be welcome. DI was designed for blending because of the occasional high flows. Currently under an administrative order.

Future potential issues→

If these come in the new draft permit, MWRA would probably comment on them.

MWRA is close to its nitrogen threshold now, but has years of data showing that it has had no effect on the water quality of the bay.

Other possible emerging issues: viruses, personal care products, micro plastics, but there is currently no regulatory framework to regulate these.



Potential issues for future permit

- Nitrogen
- Co-permittees
- Dilution for bacteria
- *Enterococcus* limit
- CSO reporting
- Blending
- Loading limits
- Ambient monitoring
- Contingency Plan

WAC Director's report

MWRA Board 10/18

Financial update: Surplus of \$7.8m, partly lower interest rates (\$2m), partly LIBOR settlement (\$4.8m). Costs for capital and local water pipes are also under budget.

Had a settlement with Lancaster, which has 900 sewer customers. The cost of the Clinton WWTP upgrades and rehabilitation are coming in. Clinton's flow is also down because of dry weather. Halfway through their fiscal year, they are already looking at a difference between rates and what they owe MWRA of \$111K. MWRA agreed to smooth the rate increase to make it easier for Lancaster to pay.

TRAC report: more violations from Significant Industrial Users this year. Mostly low level violations. \$185K in penalties assessed. They are also facing new issues from micro-breweries and pot shops (edible pot items are often cooked & oils are used to extract THC). New dental mercury requirements mean that now 1,100 dentists report to MWRA. Looking to increase the annual fee this year as no longer in a recession. Would like to recover 50-60% of costs. AB would like an inflation factor in the TRAC fee cost recovery is more predictable.

DI Outfall Monitoring Overview: continue to see improvements in the ambient waters. Platinum 10 award for effluent quality. Was a red tide in the Bay, which never made it to the Harbor. Not linked to the plant. Changes in the water are regional. DI nitrogen levels are rising, may reach 100% of permit level in 2020. The expected results of this would be low dissolved oxygen (DO) and high algae levels, but not seeing that. Right Whale numbers are returning. Sediments keep getting cleaner and cleaner. Fewer flounder liver lesions; no flounder tumors since 2004. This year MWRA is working to get the word out—new pamphlet, may include in water bills; symposia, conferences, speeches and participation in groups and research.

CSO Post Construction Assessment will be done with AECOM. Measuring water quality and mandated maximum volumes.

Chelsea pump station had a change order because they found PCBs and mercury in the soil, which need to be shipped out of state.

Water Infrastructure Finance Alliance 11/9

Discussion about pending legislation and what the alliance could support.

Sen. Eldridge's bill SB423 has some objections (addition to rates), but WAC might want to look at.

Sen. Cyr's bill the WIFA is supporting—it puts an additional tax on air BnB stays, creates a Trust ("NOT a new MWRA for the Cape") but allocates the additional funds only for water/sewer infrastructure. A letter has since gone out.

Support also for S2116, Sen. Pacheco's climate change adaptation bill.

Some interest in Rep. Dykema's bill, H2117 to establish funding for municipal water & sewer infrastructure.

For further explanation of the bills, please see the attached sheets from InfoTrac.

Also noted the new 5 year bond was coming up, and the committee makeup in bonding, ways & means, etc. had changed since 2014.

MWRA Board 11/15

Orange Notebook: Quabbin rainfall has been lower than 10 year average. First time in two years more rain has fallen in the core communities than in the watersheds. Community usage is lower as a result.

Security: Malware has been targeting water treatment SCADA systems since roughly 2005. More collecting information on SCADA rather than trying to bring down the systems. In contracting out MIS, MWRA is being cautious, since the contracting firms and their subcontractors are "juicy" targets for countries looking to interfere in systems. Soliciting more bids means releasing more information to more contractors—a risk. Every 2 years, MWRA conducts a national security drill. Since news of Kaspersky being implicated in leaks to other countries, MWRA has done a comprehensive review of cybersecurity. It has replaced 90% of its Kaspersky virus and security systems with MacAfee.

Replacement of the electric cable under the Harbor (HEEC) is on schedule.

Advisory Board 11/16

Retirements: Pam Heidell. John Carroll is retiring from Norwood, but remaining on the Advisory Board and MWRA board.

The presentation on the state of the outfall was shared with the AB. Betsy Reilley mentioned that bay and harbor monitoring will be useful in NPDES negotiations.

Alexandra Dunn has been appointed EPA Region 1 Administrator.

11/29 MassDEP Watershed Planning Workshop

This meeting was a reflection of what stakeholders had told MassDEP was most important in surface water assessment, protection and restoration.

Doug Fine announced that in 2018, DEP would be forming a water quality advisory committee that would meet quarterly to share goals and information—part of a process for regular feedback.

DEP will start to upload and make water quality data available on its website.

A sense of the water quality monitoring gap—The DEP has classified 2,380 segments of rivers impaired, but has a TMDL only for 730 of them. Bacteria and nutrients are the most common pollutant issues.

Besides TMDLs, DEP is interested in pollution management plans—Mystic River Watershed is piloting one with donations from the casino, EPA grants, and collaboration with municipalities and DEP.