

Minutes
March 4, 2016

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

Attendees/Contributors:

WAC: Taber Keally (chair), Craig Allen, Stephen Greene (by phone), Jim Pappas, Martin Pillsbury (MAPC), Zhanna Davidovitz

Guests: Dolores Randolph (BWSC), Sean Navin, Wendy Leo, Nadine Smoske, David Kubiak, Maret Smolow, David Wu, Michael Hornbrook, Katie Ronan (MWRA), Belinda Stansbury (Practical Applications), John Reinhardt (MyRWA)

Staff: Andreae Downs (WAC)

FUTURE MEETING DATES/TOPICS

NEXT: TUESDAY, April 12, 2016, 10:30 a.m., MWRA Budgets—Kathy Soni and Tom Durkin; and Update on possible State control of wastewater permits (now with EPA)—Mike Hornbrook

VOTES:

- February minutes approved
- Comment letter on molybdenum limits to Water Resources approved

Direction given to WAC director to:

1. Work with WSCAC director to research & draft a joint comment letter on the historic & actual level of DEP funding.

CHAIRMAN'S REPORTS:

Milton approved a stormwater utility which covers all non-town owned property. This allows the town to collect from the many non-profit institutions in town who do not pay property taxes. The charges for institutional and commercial properties will be based on square footage of the lot. The goal is to lessen the amount of storm-water entering the sewers though it will likely only serve to improve the quality of the stormwater.

MAPC is holding stormwater workshops.

Newton has tripled its residential rate from \$25-75/year, and is working on a non-residential rate based on impervious surface.

EXECUTIVE DIRECTOR'S REPORTS:

Re: Phosphorus in biosolids and P regulation in agriculture: NEBRA is working with the Department of Agriculture to refine the regulations, perhaps by limiting upper limits on P to that which is water soluble, and thus likely to leach into runoff. Recommend waiting to comment until the two entities have finished that work. (Phosphorus is a pollutant in fresh water, and of concern. MWRA's biosolids contain Phosphorus, but this is not water soluble, since it is bound to organic material in the sludge).

Re: Codigestion (Mike H): Looking for alternative funding sources for barging food waste to Deer Island for co-digestion. New RFI had no interest. Members suggested places to look: Mass Clean Energy Center; Seaport Economic Commission—to fund piers, but not barge.

The other issue is finding enough food waste material even under the organics ban.

MWRA REPORTS:

Nut Island Fire: Cleaning up quickly and restoring odor control asap. No effect on the wastewater part of the headworks. No odor complaints yet. Hoping to get carbon filters up before warm weather.

Valve replacements at Winthrop Terminal are proceeding. This work can be done with only partial system shutdowns & work during the day. Night time shut downs will be coming when the North Main Pump Station starts valve replacement.

Also working to replace return sludge valves in the secondary battery. Will be done during dry weather because requires shut-down of one of the secondary batteries.

New interactive web page/map to show SSOs when they happen.

Planning is starting on full redundancy for water supply to the Boston Metro area. Will be a huge expense.

PRESENTATIONS & DISCUSSION:

Dave Kubiak and Nadine Smoske: **Combined Sewer Overflow** Program report-with Wendy Leo

2015 is the final year of annual CSO reports, which have been issued for 20 years.

The Alewife wetland mitigates the impacts of stormwater removed from the previously combined Cambridge sewer system by providing detention and natural treatment prior to the flows entering Little River and Alewife Brook

30 year look back at CSO removal efforts. Seen a reduction in CSOs--and a reduction in water quality degradation --every year since MWRA assumed responsibility for area-wide CSO control in 1987. Much of that was from improved pumping at Deer Island.

Long-Term CSO Control Plan Accomplishments

✓ **CSO reduction and water quality improvement every year since 1987.**



- Many outfalls closed by the communities in the late 1980's
- Elimination of dry weather overflows by 1990
- Completion of Deer Island transport upgrades by 1992
- >100 CSO system optimization measures 1993-97
- Construction of 35 CSO projects 1996-2015



✓ **181 CSO-related federal court milestones to date.**

- Completion of the last construction project in the Boston Harbor Case in December 2015.

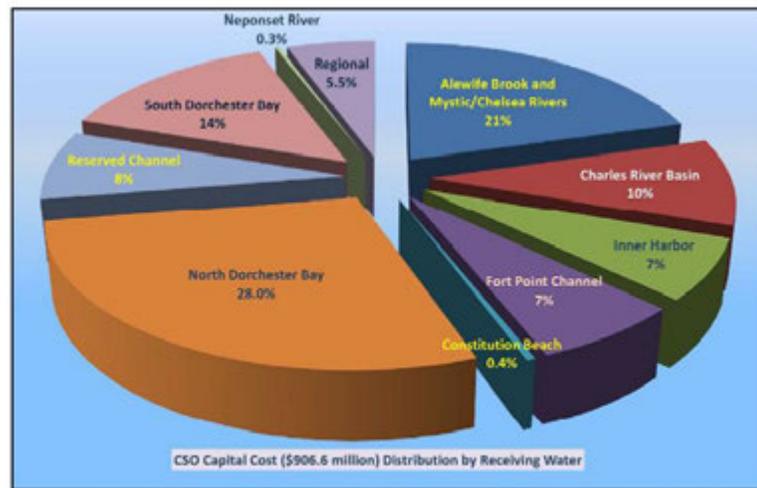


MWRA and the CSO communities completed 35 projects in 20 years. New CSO programs in other communities get more time—in some case 40 years, starting, in many cases, with green infrastructure.

Here's where the money went:



CSO Cost by Receiving Water – Total \$906.6 Million



Does not include the >\$200M investment in the Deer Island transport system by the early 1990's, which greatly reduced CSO discharge, especially benefiting the Charles River.

"Regional" includes area-wide planning and system optimization measures.

"Lower Charles River" includes the Back Bay Fens.

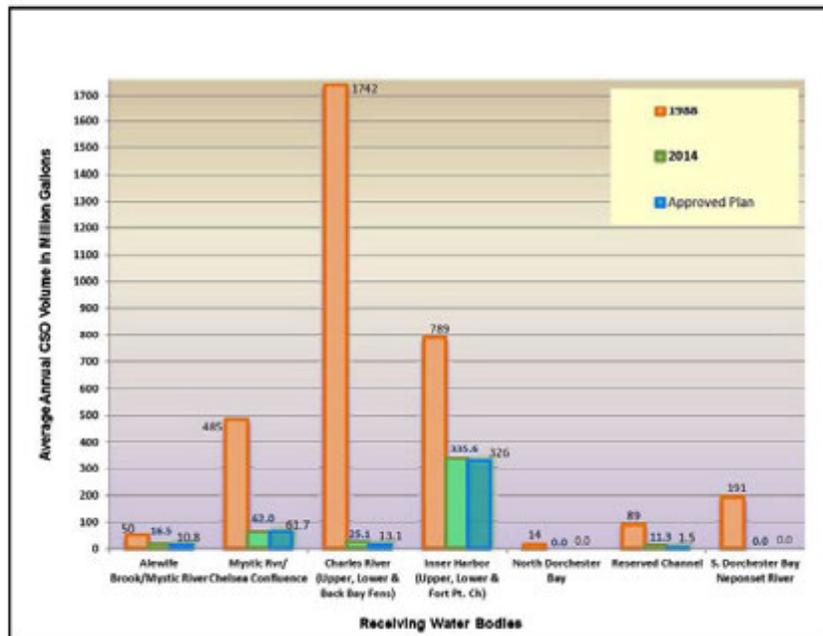
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The cost for the beaches is higher because of the need to eliminate CSOs altogether—there's a diminishing rate of return – and higher cost - as you get toward elimination.

Systems that overflowed to the Charles River had a more direct hydraulic connection to Deer Island than the Mystic, and therefore benefited most from early investment at Deer Island. In the Alewife/Upper Mystic, stormwater may be making for slightly more dirty samples.



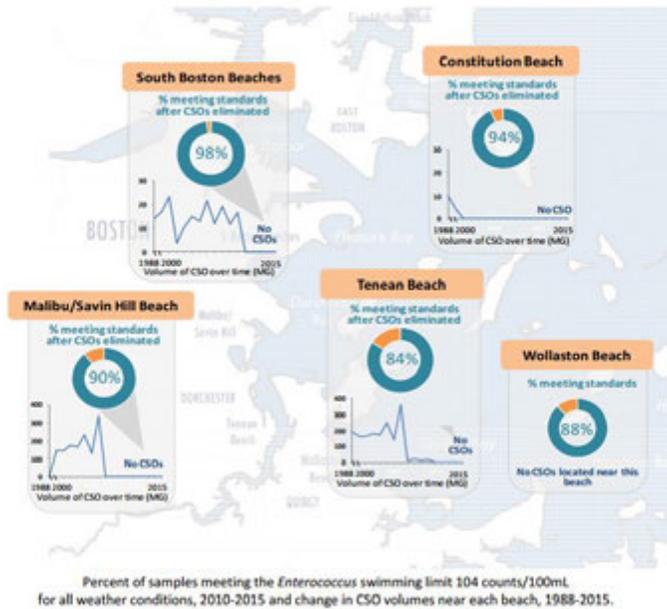
CSO Reduction by Receiving Water



Wendy Leo pointed out on water quality slides that, for instance, the Neponset River had a number of days where its waters had too many bacteria to meet swimming standards, and yet that river has no CSO outfalls. The Neponset shows how stormwater rather than CSOs are responsible for water quality impairment.



Current Water Quality at Boston Harbor Beaches: Compliance with Swimming Standards



Wollaston Beach, for instance, gets no CSO pollution. Yet it has days of elevated bacterial counts. The South Boston beaches have the fewest closures, indicating the cleanest beaches—this is because MWRA hasn't just eliminated CSOs, it also captures separate stormwater in its North Dorchester Bay Tunnel.

These are the cleanest urban beaches in America, according to Save the Harbor/Save the Bay, with 98% of possible swimming days available. An interesting study might look at other sources of remaining microbial pollution.

MWRA will continue receiving water quality testing to compare before and after all the CSO work in the three rivers, harbor and bay. Most already are seeing greatly improved water quality.

In some light rain conditions, more pollution is detected—why?

- When sewers are separated, polluted stormwater that might have gone to the treatment plant is now going into the rivers
- While the number of inches may be few, we are getting more intense rains—they may pick up more contaminants.
- In many cases, the increased amounts aren't significant and may fall under a margin of error.

With the new stormwater permit for small municipalities, communities will be required to increase their efforts to investigate for illicit connections. In the future we should see improvements that aren't yet reflected in MWRA's numbers, particularly in dry weather.

There remain \$15.6 million in CSO spending:

- \$10m to finish Cambridge work in surface restoration, sidewalks and pavement, green infrastructure in the CAM004 sewer separation area.
- \$4m for Boston closing out the Reserved Channel work and for Dorchester inflow removal (following completion of South Dorchester Bay sewer separation several years ago).

Then there's another \$2m for a 3-year CSO performance assessment through 2020. That assessment starts in 2018, in compliance with the court schedule.



Highlights

With completion of the CSO Control Plan:

- **All Boston Harbor Cleanup projects are complete and providing environmental benefit.**
- **181 of 184 CSO related court milestones are achieved.**
- **39 of 84 CSO outfalls are closed or have 25-year storm control.**
- **CSOs to sensitive use areas – beaches and shellfish beds – are eliminated (25-year storm control in South Boston).**
- **CSO discharge volume is reduced from 3.3 billion gallons in 1988 to 0.4 billion gallons (88% reduction).**
- **93% of remaining discharge volume is treated at MWRA's four CSO facilities.**

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The EPA guidance for the performance assessment—MWRA expects to implement a supplemental flow and overflow metering program to support modeling to verify that they have reduced CSO discharge volume to 0.4 billion gallons or less in a *typical rainfall year*. 2014 numbers were already very close to this. (The last two years have been close to typical). Model includes rainfall intensity as well as total rainfall volume, using 15-minute data from rain gauges throughout the CSO area.

LETTERS:

Letter on Molybdenum level limits in Residuals—this is substantially the same as the earlier comment letter to DEP.

Joint letter on DEP Funding: Andreae & Lexi are still researching this and hope to get it to the committees at the April meeting. WSCAC has suggested adding a note about Delegation of NPDES.

Mike H: The delegation discussions have included detailed analysis of staff requirements, what they'd be doing, budgets and assessment fees. The working group includes environmental groups and POTWs.