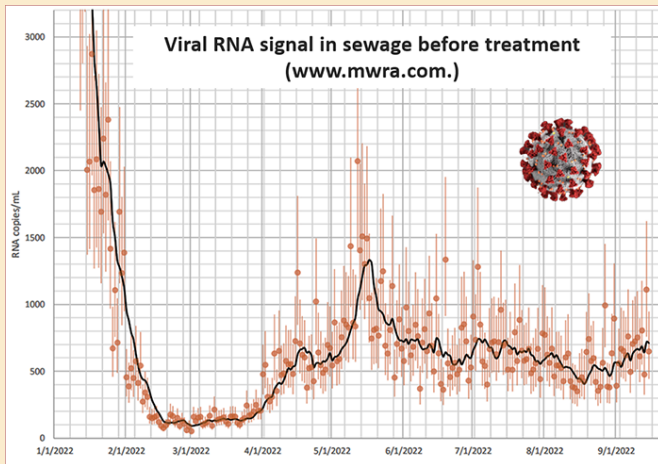
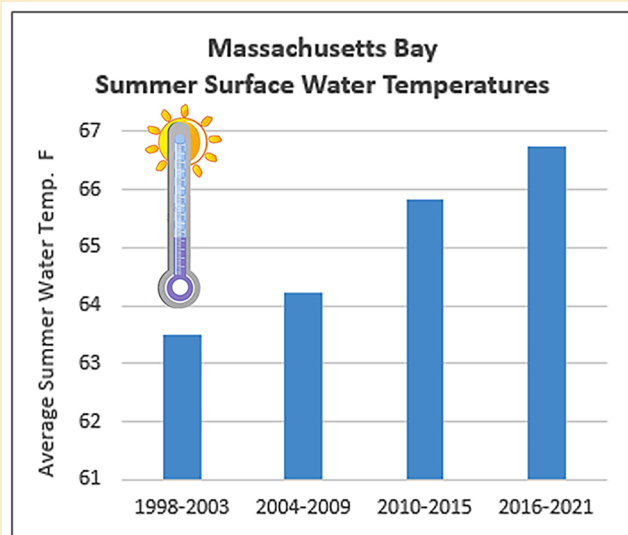


SPECIAL STUDIES

MWRA is part of ongoing studies including:
Measuring and posting regional COVID-19 levels
(currently with Biobot Analytics)



Tracking Climate Change



Following “Forever Chemicals”

MWRA monitors the presence of PFAS (per- and polyfluoroalkyl substances) in wastewater and the environment.

Other topics studied: Marine mammals, harmful algae (red tide), and areas of low dissolved oxygen in Cape Cod Bay.

PUBLIC REPORTING

The discharge permit for the Deer Island Treatment Plant requires MWRA to report monitoring results to the public, including:

- Treatment plant effluent quality
- Ocean health near to, and farther from, the Bay outfall
- Contingency Plan threshold exceedances
- Sewer system maintenance

The latest information on environmental data is available on the Harbor and Bay page at www.mwra.com.

In addition to permit requirements, state regulations require MWRA to notify the public about discharges of untreated or partially treated sewage, including:

- Combined sewer overflows (CSOs)
- Sanitary sewer overflows (SSOs)
- Blending of primary and secondary treated sewage



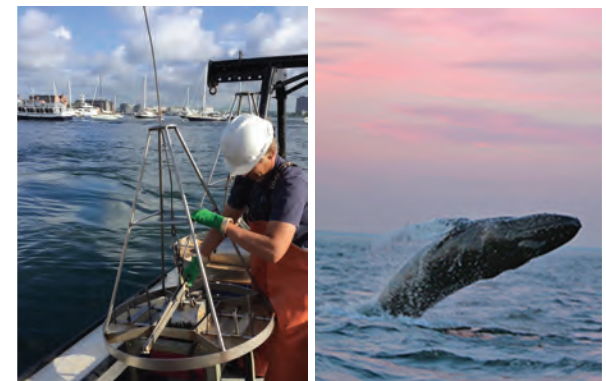
MWRA's Somerville Marginal combined sewer outfall

Subscribe to notifications for CSOs and other topics:
www.mwra.com/follow-us

Learn more about Boston Harbor and Mass. Bay:
<https://www.mwra.com/our-environment>

MWRA's pollution source reduction program:
www.mwra.com/your-sewer-system/toxic-reduction-and-control-trac

Overview of ENVIRONMENTAL MONITORING in Massachusetts Bay and Boston Harbor



BOSTON HARBOR PROJECT

Reduced pollution sources, improved sewage treatment, moved discharges out of the Harbor

1989



Deer Island Treatment Plant discharge was visible in Boston Harbor

2002



Clearer waters at Deer Island after discharge moved to Massachusetts Bay

1985: MWRA takes charge of Greater Boston's water and sewer systems, and the Deer Island Treatment Plant.

1986: Federal District Judge Mazzone orders the building of a new sewage treatment plant, and treatment upgrades to be completed by October 1989.

1988: Floating grease and trash from sewage are landfilled, no longer put in the harbor.

1989: MWRA upgrades pumping and disinfection at Deer Island.

1991: MWRA stops discharging sewage solids (sludge) into the harbor, and starts beneficial re-use as fertilizer pellets.

1992: Baseline monitoring of the harbor and bay begins.

1998: South System flows are sent to Deer Island for treatment, instead of to the old Nut Island Treatment Plant.

2000: The treatment plant discharge is diverted out of Boston Harbor via a 9.5-mile outfall; discharge monitoring begins.

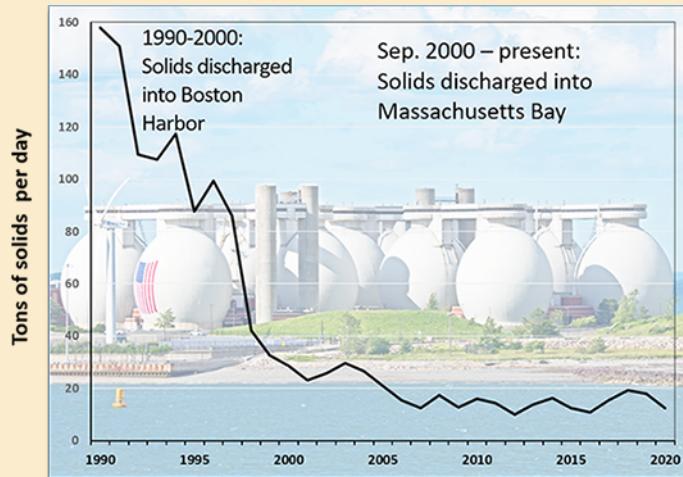
2001: Full secondary treatment is in place at Deer Island, treated and diluted effluent is now sent into Massachusetts Bay.

2020: 20 years after the Deer Island discharge was diverted to Mass. Bay, the harbor is much cleaner with no harm done to the bay.

2021: After spending more than 30 years reducing or eliminating combined sewer overflows, MWRA is working on remaining issues.

SOLIDS AND CONTAMINANTS

Solids in the treatment plant discharge decreased after Boston Harbor Project improvements

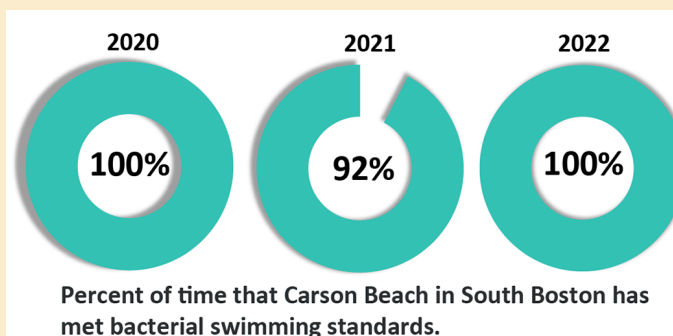


Contaminants in flounder, lobster, and mussels near the outfall have not increased since the Bay discharge began. Areas near the old Harbor outfalls are much cleaner.



HARBOR BEACHES

South Boston beaches are among the cleanest in the nation



More about Harbor beaches at:

<https://www.mwra.com/our-environment/harbor-river-beach-monitoring>

DISCHARGE PERMIT



The Deer Island Treatment Plant has won awards for full compliance with its discharge permit for 15 consecutive years.

The National Pollutant Discharge Elimination System (NPDES) permit for the treatment plant discharge requires MWRA to monitor the effluent for the following:

Bacteria	Flow	Nutrients
Organic Material	pH	Solids
Residual Chlorine	Toxicity to ocean life	Metals

The NPDES permit requires MWRA to monitor Bay areas around the outfall discharge.

There is also a Contingency Plan with thresholds for environmental indicators, such as red tide blooms, or contaminants in fish.

MWRA's source reduction projects have helped reduce household hazardous waste disposal and minimized discharges of heavy metals, including mercury from dental practices.

AMBIENT MONITORING PLAN

Safeguarding Massachusetts Bay

The focus of MWRA's Ambient Monitoring Plan is to answer questions about the effects of wastewater discharge on Massachusetts Bay, such as:

- Are natural/living resources protected?
- Is it safe for swimming?
- Are aesthetics being maintained?
- Is it safe to eat fish and shellfish from the area?



Results published in technical reports going back to 1992 demonstrate that there have been no adverse impacts to Massachusetts Bay.