



Massachusetts Water Resources Authority  
Charlestown Navy Yard  
100 First Avenue  
Boston, MA 02129

### What Not To Flush

Products that might seem safe to flush down the toilet, such as personal care wipes, dental floss and paper towels, don't dissolve quickly – or at all – in water. If a scrap of undissolved material gets caught on a nick, bend or bump inside a pipe, it can trigger a growth of buildup that could cause a sewer backup in your home or neighborhood.

Please make sure to dispose of personal care products, cleaning supplies and other household wastewater properly: in the trash can, in the recycling bin or at your local household waste disposal site.



### Cease The Grease

Fats, cooking oils and grease are not water-soluble. They coat household pipes and public sewer mains, causing nasty clogs. To dispose of household fats, oils and grease, carefully pour them into an empty metal can. Let it cool, then throw it in the trash.

### How you can help keep Boston Harbor clean

#### Don't Dump Into Catch Basins

While catch basins prevent many pollutants from entering a storm drain pipe, some pollutants such as motor oil and pet waste can enter a drain and flow directly into our waterways or the harbor. These pollutants can seriously harm aquatic life and degrade water quality and could result in beach closures and restricted use of rivers and the harbor.



### Dear Customer,

Every June, you receive a detailed report on your drinking water. We thought we should also tell you something about your sewer system and the health of Boston Harbor and its tributary rivers.

Since its creation in 1984, MWRA has completed several large-scale projects including the state-of-the-art sewage treatment plant on Deer Island that treats an average of 350 million gallons of wastewater each day from 43 communities in greater Boston. The sludge that used to pour daily into Boston Harbor is now recycled into commercial fertilizer, and nearly all of the overflows of raw sewage that used to spill into rivers or onto local beaches during heavy rains are now sent to the sewer system or receive treatment.

Now healthy, Boston Harbor has attracted people and economic development back to the waterfront. Boston now boasts the cleanest urban beaches in the country, and swimming in the Charles River is close to becoming a reality. And our Board of Directors and staff are committed to keeping it this way: we have a nationally recognized maintenance program in place to protect these investments to ensure that we never again ignore this critical infrastructure.

We hope you find this information interesting. For more information on this or any of MWRA's programs, please visit our website at [www.mwra.com](http://www.mwra.com) or contact us.

Sincerely,

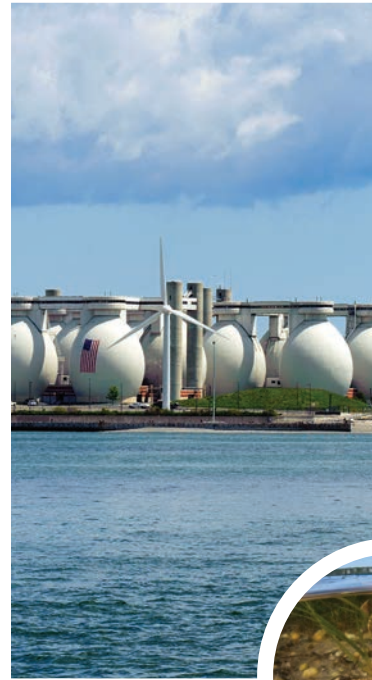
Frederick A. Laskey  
Executive Director

MWRA is governed by an 11-member Board of Directors who are appointed by the Governor or directly or indirectly by elected officials in MWRA customer communities. The current members are:

Matthew A. Beaton, Chair	Secretary, Executive Office of Energy & Environmental Affairs
John J. Carroll, Vice Chair	General Manager, Norwood (Retired)
Andrew M. Pappastergion, Sec.	Commissioner, Brookline Department of Public Works
Austin F. Blackmon	Chief of Environment, Energy and Open Space, Boston
Kevin L. Cotter	Business Manager, Plumbers and Gasfitters Local 12 (Retired)
Paul E. Flanagan	Fire Chief and Director of Emergency Management, Winthrop
Joseph C. Foti	Deputy Administrator and Chief of Operations, MassDOT Highway Div.
Brian Peña	Commissioner, Lawrence Water and Sewer Department
Henry F. Vitale	Executive Director, Boston Water and Sewer Commission
John J. Walsh	Retired Engineer and Community Activist, Quincy
Jennifer L. Wolowicz	Assistant Town Administrator, South Hadley

The MWRA Advisory Board represents the interests of the cities and towns in the MWRA service area.

# HOW CLEAN IS Boston Harbor?



Massachusetts Water Resources Authority



**For Over One Hundred Years**, the disposal of the daily waste of Boston and its surrounding communities received only limited treatment before being dumped right into Boston Harbor. It was only 30 years ago that the Harbor was known as the "dirtiest harbor in America." Today, it's the sparkling centerpiece of the city. The Boston Harbor Clean-up is widely recognized as one of the nation's greatest environmental achievements.



The federal court order that drove the clean-up of Boston Harbor called not only for the construction of new wastewater treatment facilities at Deer Island, but the control of combined sewer overflows (CSOs) – old pipe networks that dumped both sewage

and stormwater into the Charles, Mystic and Neponset rivers and onto beaches to prevent flooding into streets and basements.

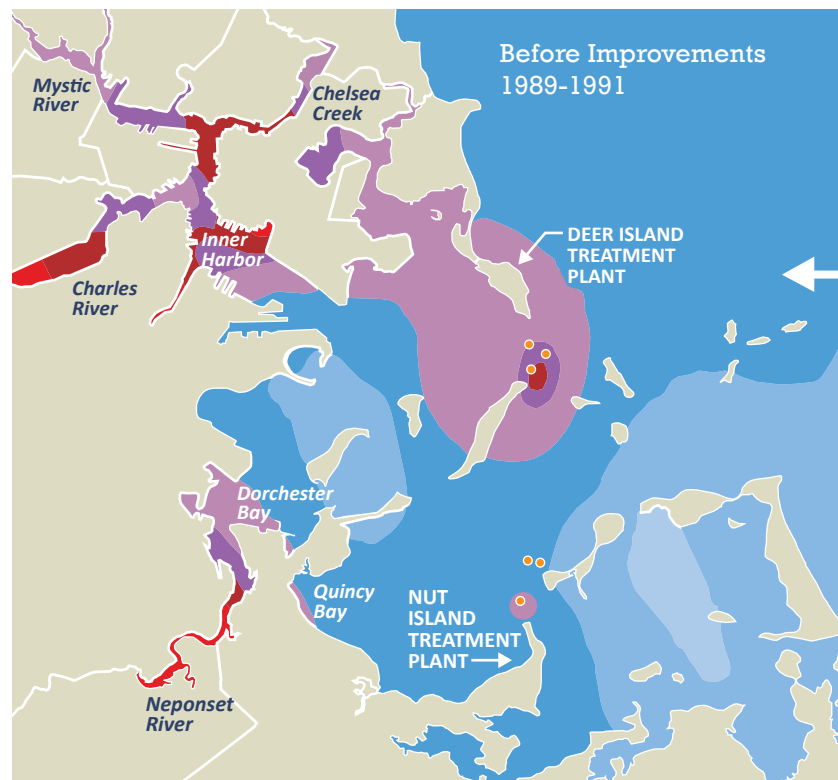
Completed in 2015, the program included 35 separate projects in Boston, Brookline, Cambridge, Chelsea and Somerville. Over 100 miles of new sewers and storm drains were installed. Major

projects included a storage tunnel in South Boston that captures discharges that used to cause beach closures, and an innovative stormwater wetland in Cambridge that includes plant and wildlife habitats and natural flood control. It not only improves water quality in the Alewife Brook, but also provides a new and unique recreational and educational open space.

CSO discharges have decreased by over 2.7 billion gallons a year and 93% of the remaining discharges are treated before being released. In 2020, MWRA must submit to the federal court the results of a three-year performance assessment to demonstrate the program's success.



# HOW CLEAN IS Boston Harbor?



## BOSTON HARBOR BACTERIA: THE LIGHTER THE BLUE, THE BETTER

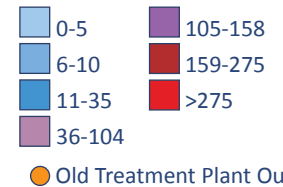
MWRA measures *Enterococcus*, a bacteria associated with human and animal waste, at more than 60 sampling locations. The data are used to estimate values for areas not sampled.

### Enterococcus Bacteria In Wet Weather Before Improvements

Sewage effluent and solids were discharged daily into Boston Harbor through outfalls near the Deer Island and Nut Island treatment plants.

#### LEGEND

Geometric mean (number of bacteria, colonies per 100 ml sample). Lighter blue shading indicates lower bacteria counts.

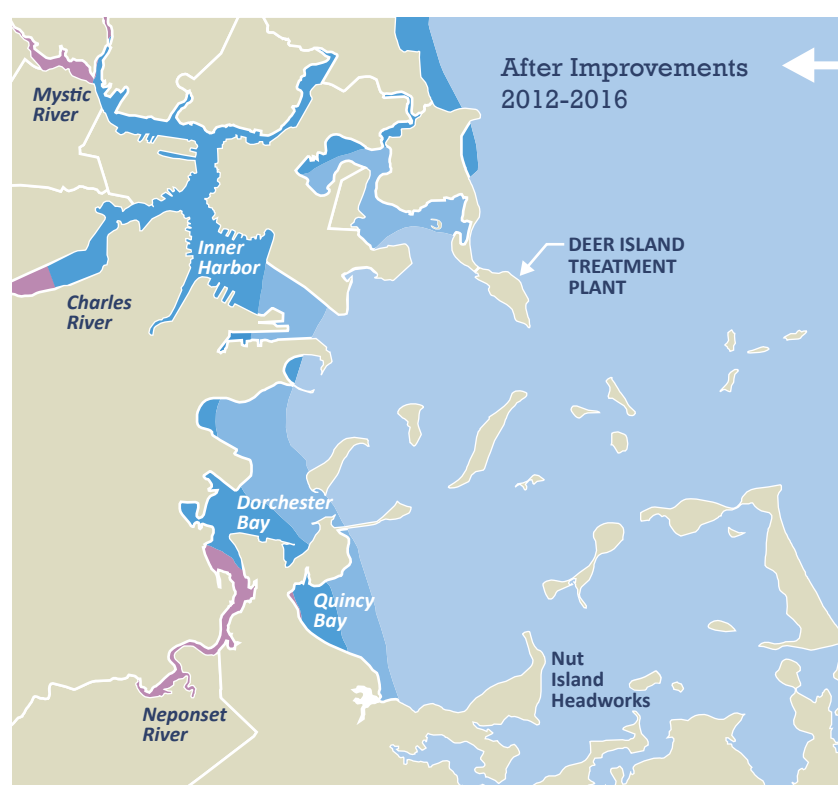


MWRA has been monitoring water quality in Boston Harbor and its tributary rivers since 1989. Collecting data before the new treatment facilities were constructed has helped to measure the effects of the new facilities and identify changes in water quality over time.

MWRA monitors water quality at more than 50 locations in Boston Harbor. Measurements are also made in the Charles, Mystic, and Neponset rivers. The data is irrefutable - the beaches and ecosystem of Boston Harbor have rebounded and the economic impact to the city's waterfront has been remarkable.

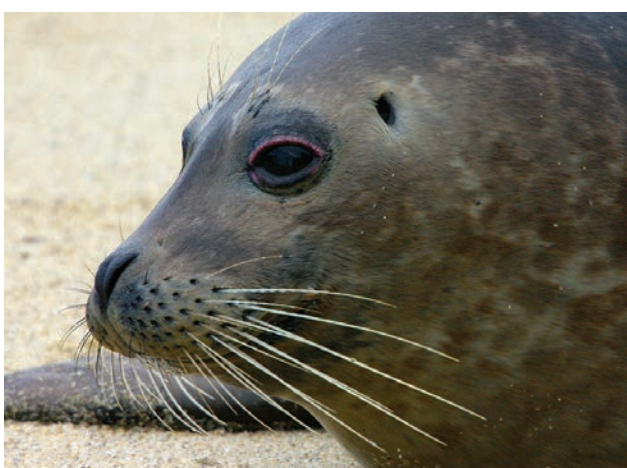


More than 300 technical reports and more than 1,000 scientific papers on the subjects of Boston Harbor and Massachusetts Bay document environmental conditions and changes since the treatment facilities were brought on-line.



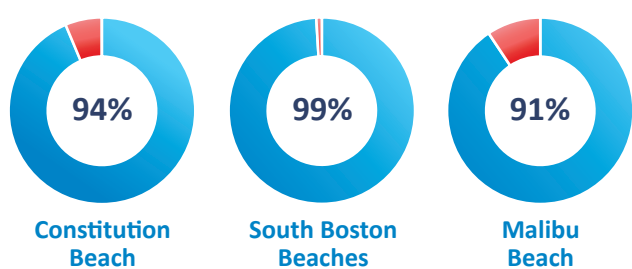
### Enterococcus Bacteria In Wet Weather After MWRA Upgraded Treatment and Equipment

The Nut Island Treatment Plant was replaced by a headworks, which screens sewage before sending it to Deer Island. Once treated, Deer Island effluent is discharged through a 9.5-mile deep rock outfall to Massachusetts Bay.



MWRA's efforts to eliminate wet-weather discharges of sewage and stormwater have resulted in the cleanest urban beaches in the country.

Percent of samples meeting the saltwater swimming standard for *Enterococcus* at Harbor Beaches 2012-2016:



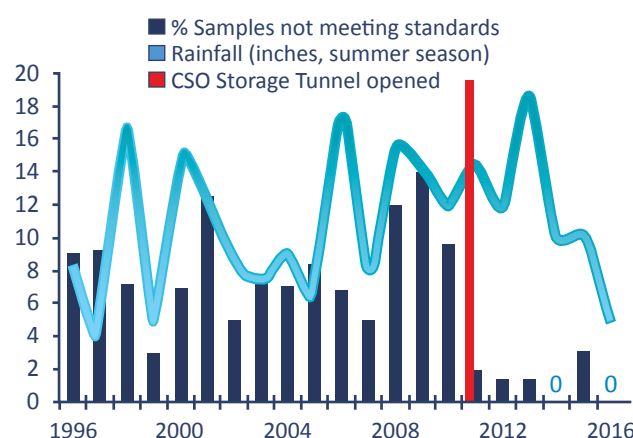
South Boston beaches have met swimming standards 99% of the time in the last 5 years. Today, any high bacteria counts are mainly from stormwater runoff, which often contains animal waste and other sources of bacteria.



### Swimmable Beaches After MWRA Improvements

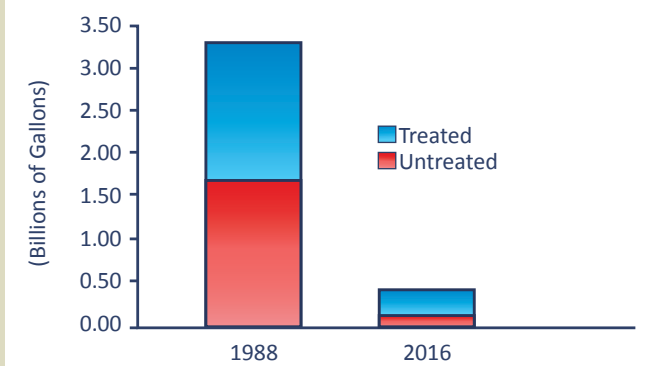
Overall bacterial water quality is better today at Boston Harbor's beaches, due in large part to MWRA projects including the Boston Harbor Project, and the Combined Sewer Overflow (CSO) Long-Term Control Plan.

Carson Beach bacteria levels have dropped since 2011:



### Reduction In Annual CSO Volume

Combined sewer overflows into Boston Harbor and its tributary rivers have been reduced by over 3 billion gallons, with 93% of the remaining flows receiving treatment.



### Protecting Massachusetts Bay

Even though Deer Island's discharge was moved from Boston Harbor to Massachusetts Bay, bacteria remain at safe levels for recreation and shellfishing at monitoring stations near the outfall and closer to the coast.

