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With Leaders and Community Partners, Three Boston Watershed Associations Announce Annual EPA Water Quality Report Card Grades

Medford, MA - Today, the **Mystic River Watershed Association**, **Charles River Watershed Association**, and **Neponset River Watershed Association** announced their 2023 Water Quality Report Card Grades in collaboration with the **U.S. Environmental Protection Agency (EPA)**. Partners, local leaders, and community members from across the region joined them, celebrating the work that has been done to measure and improve water quality and highlighting the challenges our rivers still face.

Boston's rivers—like many urban rivers around the country—are cleaner today than in the last century thanks to the Clean Water Act. The report card grades, which range from A+ to F reflect this progress while demonstrating that there is more work to be done to fully realize a vision of swimmable, boatable, and fishable waters in Greater Boston.

THE EPA REPORT CARD GRADES

Since 1995, 2006, and 2021, respectively, the U.S. EPA has issued Report Card grades for the Charles River, Mystic River, and Neponset River, all of which flow into Boston Harbor. Beginning in 2021, grades for the Charles, Mystic, and Neponset have been reported together at a joint announcement with state and local partners.

The report card grades are represented by maps offering waterbody by waterbody reporting based on how frequently waterbodies meet bacteria standards for swimming and boating. The grades are calculated using a three-year rolling average, allowing for a more

complete and accurate assessment of recent water quality that addresses weather variability from year to year. These grades exclusively report recreational health—for a full picture of river health, a myriad of factors need to be considered, like nutrient pollution, biodiversity of aquatic life, river flow, temperature, and more. You can find the three report cards in the sections below.

“Everyone should be able to safely swim or boat in the waters of these major urban rivers of Boston, and we will continue to work steadfastly with our watershed partners and their invaluable citizen scientists that provide the necessary data sampling to pinpoint areas of concern,” said **EPA New England Regional Administrator David W. Cash**. “Today’s report card of water quality in these communities underscores that when communities, governments at all levels, and organizations come together, we can solve long-standing environmental and equity challenges to create healthier rivers.”

COMMUNITY SCIENCE

Each year, Charles River, Mystic River, and Neponset River Watershed Associations rely on the dedicated efforts of dozens of community science volunteers to collect water quality samples all year round. These samples are sent for analysis to the Massachusetts Water Resources Authority (MWRA). Those results are reported to EPA and announced as letter grades to help the public better understand the recreational health of the three rivers that flow into Boston Harbor.

“The impacts of climate change on water quality require a collective effort to shape a cleaner, healthier future for Massachusetts,” said **MassDEP Commissioner Bonnie Heiple**. “Involving our communities in this joint vision deepens our appreciation for these three rivers as essential resources that connect us all.”

“MWRA is proud to be here today to celebrate the critical efforts that have dramatically improved the health of these rivers,” said **Fred Laskey, MWRA’s Executive Director**. “Collaboration with our environmental partners has had a tremendous impact on water quality across the region, but there is still more work to do to address the impacts of climate change.”

WATER QUALITY CHALLENGES AND THE IMPACT OF CLIMATE CHANGE

Over the past few decades, much progress has been made toward improving water quality in Greater Boston's rivers and streams. However, the challenges of maintaining water quality standards are ever-increasing. Our changing climate has brought more extreme weather, periods of drought, heavier storms, and extreme heat, which slow the improvements we have made. Overall, report card grades held fairly steady this year with slight improvements in the Neponset and slight declines in the Charles and Mystic from 2022-2023.

2023 was a particularly wet year. Last summer, heavy rains and flash floods caused tens of millions of dollars of damage across the state, perhaps most dramatically in Leominster, where floodwater swept out roads and destroyed buildings. Heavier rainfall patterns also exacerbate pollution in our waterways. Rain, or "stormwater," sweeps pollutants like oil, gasoline, pet waste, and trash off of roads, roofs, and other impervious surfaces directly into rivers, lakes, and streams. Stormwater also carries nutrients like the phosphorus found in decomposing leaves and fertilizers, which can lead to poor habitats for fish and other wildlife as well as blooms of toxic cyanobacteria that are dangerous for people and pets.

Heavy rain can also overwhelm underground pipe networks, introducing sewage pollution into our rivers and streams. All of the mechanisms by which sewage is introduced into stormwater increase when it rains. In particular, high precipitation often triggers Combined Sewer Overflows (CSOs), which are present in the Mystic and the Charles. CSOs are the result of mid-19th century water infrastructure built with a connected sewer and storm drain system. During very wet weather, especially when a lot of water falls in a very short period of time, the amount of water coming through the system is more than the pipes can handle, so it is designed to overflow, sending both the stormwater and the sewage into rivers and streams. CSOs, like other sources of pollution, have a disproportionate effect on low-income, minority, and linguistically isolated communities.

Even in water bodies with high grades, heavy rain still leads to pollution and hazardous conditions, closing beaches and interrupting recreational opportunities on the water. Tracking water quality every year helps us better understand the impact that our changing climate has on the health of our rivers and streams and the communities around them, and it underscores that we cannot take the health of our rivers for granted.

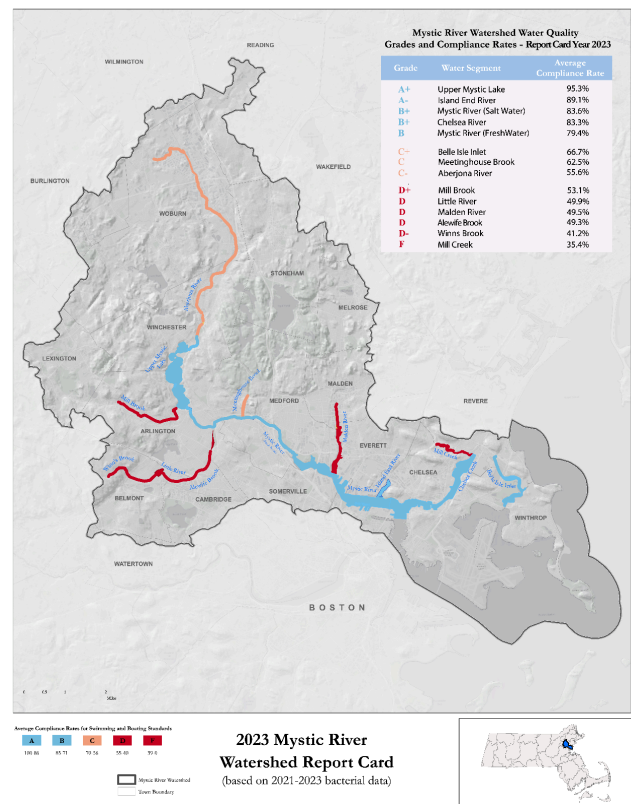
A SHARED VISION FOR CLEANER WATERWAYS

Rivers, lakes, and streams connect the greater Boston area. The Neponset River watershed reaches as far south as Foxboro, the Charles River watershed reaches southwest to Franklin and Milford, and the Mystic River watershed extends northwest as far as Reading and Wilmington - all drain into Boston Harbor. The Mystic River Watershed Association, Charles River Watershed Association, and Neponset River Watershed Association share a vision for clean and healthy waterways that serve as public resources for healthy and resilient communities across the region. Improvements to water quality are important for healthy ecosystems and for protecting public health, especially those most exposed to health threats like sewage and cyanobacteria. They are also crucial as we continue to invest in our waterways and their shorelines as shared resources where people can swim, paddle, and sail or bike, walk, and spend quality time.

MYSTIC RIVER WATERSHED

In the Mystic River watershed, water quality grades range across the spectrum from A+ to F. The Upper Mystic Lake continues to boast the best water quality in the watershed with an A+ grade. The main stem of the Mystic River received a B in its freshwater portion and a B+ in its saltwater portion, with Island End River receiving an A- and Chelsea Creek receiving a B+. Grades in the A and B range indicate water bodies that pass swimming and boating standards the majority of the time.

Other tributaries of the Mystic received low overall grades, among them the Aberjona River, the Malden River, and Alewife Brook. Low grades are often linked to persistent sewage pollution whether through illicit connections, cross-contamination between sewer and stormwater pipes, or sewer



overflows. Alewife Brook in particular regularly receives the highest volume of untreated Combined Sewer Overflows in all of greater Boston. All told, over 200 million gallons of combined sewage were discharged into the Mystic River watershed in 2023 during at least 99 separate CSO discharges. The Alewife Brook alone received over 26 million gallons of untreated CSOs.

“The Mystic River Watershed Association has a 20+ year history of working with volunteers to measure and record water quality data,” says **MyRWA Watershed Field Scientist Jennifer Delgado**. “They are out in the field all year round, braving Boston traffic, fog and rain, bitter cold, and summer heat, collecting samples. They have paved the way for MyRWA to become a reliable and trusted scientific organization, and we would not know what we know about our watershed without their hard work.”

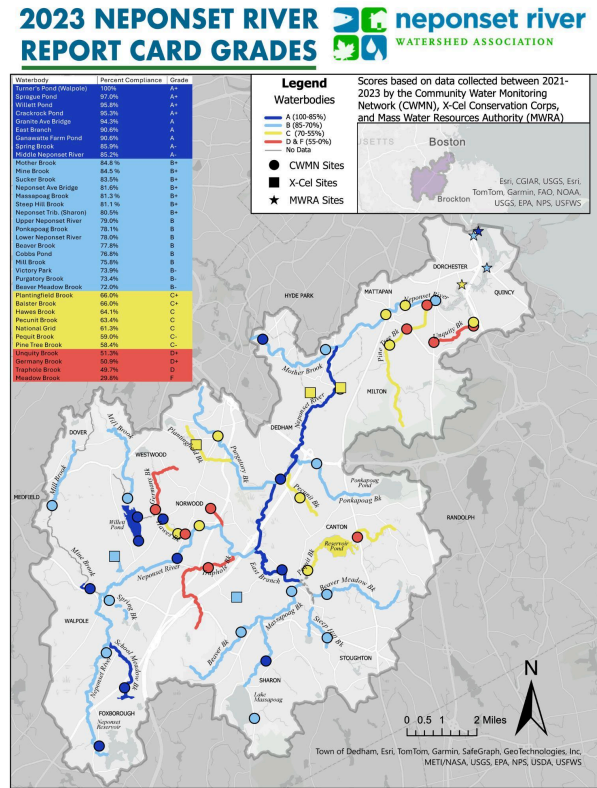
“Cities change rivers,” says **MyRWA Watershed Scientist Andy Hrycyna**. “Every rainstorm brings untreated wastewater to rivers, streams, and lakes, posing threats to the ecosystems and to our public health. The report card helps us see the impact of our built environment on our waterways and highlights the water bodies that are most affected. It’s a snapshot, and, we hope, a call to action.”

“Our report cards show that water pollution still happens, despite all the advances greater Boston has made over the years,” says **MyRWA Executive Director Patrick Herron**. “What will it take to fix it? It will take residents demanding that laws like the Clean Water Act fulfill their promise. It will take government action. And most of all it will take large scale investment in infrastructure at the local level. We look forward to working with all our partners—federal, state, and local—to get the job done.”

NEPONSET RIVER WATERSHED

In the Neponset River watershed, overall grades ranged from 100% at Turner’s Pond (Walpole) to 29.8% in Meadow Brook (Norwood), with a slight overall improvement compared to the last two years. As with previous years, all monitored ponds within the watershed earned “A” ratings, with the exception of Cobbs Pond (Walpole), which earned a “B” grade. Similarly, the mainstem of the Neponset earned grades within the “A” to “B” range, indicating most of the places where residents actually choose to recreate remain safe to do so most of the year.

Much wider variation was seen in the Neponset tributaries, with continued low scores in some of the tributaries that flow through highly urbanized systems, such as Unquity and Pine Tree Brooks in Milton and Traphole, Germany, and Meadow Brooks in Norwood. Higher scores were seen at tributaries in drainages with less impervious surface cover and more conservation land, such as Spring Brook in Walpole, Mine Brook in Medfield, and Steep Hill Brook in Stoughton. Low scores in the Neponset watershed are particularly driven by wet weather events, showing that bacteria concentrations are primarily raised by untreated stormwater runoff rather than illicit sewer connections.



“We’re pleased to see the Neponset ponds and mainstem areas continue to score well for recreational use. However, the mainstems are fed directly by tributaries that are suffering the effects of untreated stormwater runoff, which carries pet and wildlife waste along with other sources of pollution. While the Neponset does not face the same CSO issues as the Charles and Mystic, these grades do demonstrate that regional improvements in stormwater management need to be implemented. Rain gardens, bioswales, and infiltration trenches can filter out pollutants before they enter our water bodies and make the rest of the watershed safe to enjoy for swimming and boating,” says **Sean McCanty, River Restoration Director at NepRWA.**

CHARLES RIVER WATERSHED

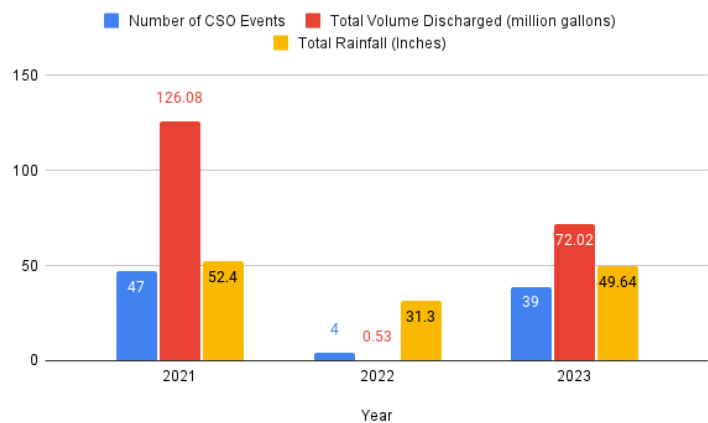
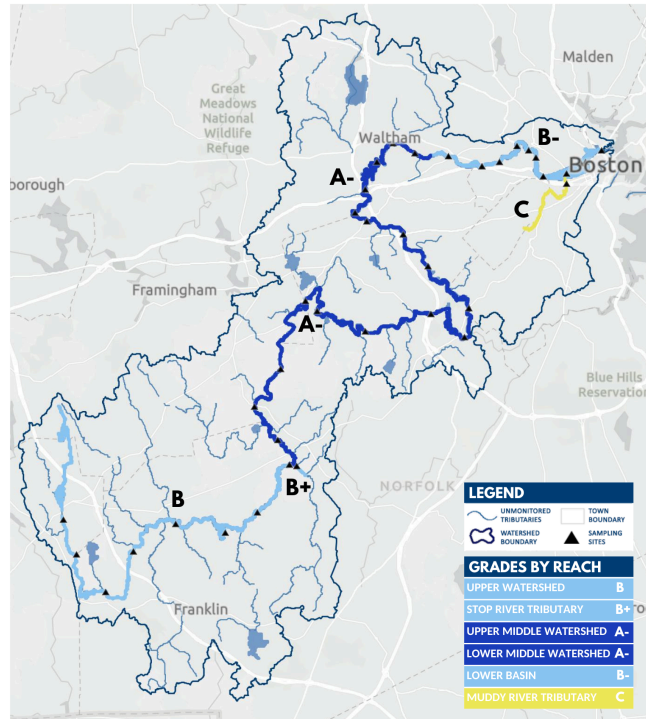
In the Charles River, grades ranged from A- in the upper and lower middle watersheds, B’s in the headwaters and Lower Basin, and a C in the Muddy River, following trends observed across recent years. More urbanized, paved areas consistently see lower grades due to stormwater pollution while greener, more forested areas of the watershed are safe for swimming on most days.

While the grades show vast improvements from 1995, progress has largely stalled. Increased precipitation, drought, and heat from climate change make combined-sewer overflows, and stormwater pollution inhibiting safe recreation. In 2023, due to nearly fifty inches of precipitation, thirty-nine known CSO events discharged more than 72 million gallons of sewage into the Charles.

Two areas saw grades decrease slightly in 2023 as a result-- the lower middle watershed decreased from an A in 2022 to an A-, and similar trends are seen in the Lower Basin. Many areas, including the Upper Watershed, Stop River tributary in Medfield, Lower Middle Watershed, and Muddy River tributary maintained the same grades as last year. As a result of stormwater pollution and combined sewer overflows, no stretch of the Charles received an improved grade from last year.

“What these grades show is that progress has stalled. We don’t accept that and we don’t think the public should either. The Clean Water Act promised fishable, swimmable rivers by 1983. US EPA’s Clean Charles Initiative promised a swimmable Charles by 2005. Promises have been made but not kept. Cities and towns must reduce the amount of polluted stormwater runoff they are discharging, and Cambridge, Boston, Somerville and the MWRA have to end sewage releases. We can achieve a swimmable Charles in all its segments but we need the public to help us bring more pressure on decision-makers to

2023 CHARLES RIVER REPORT CARD GRADES



make the necessary investments.” said **Emily Norton, Executive Director at Charles River Watershed Association.**

“As climate change brings more extreme weather, such as intense rains and hot spells, we need to be ready to protect our water resources by implementing practices like green stormwater infrastructure and water conservation policies that will safeguard water quality no matter the weather,” said **Marielena Lima, River Science Program Manager at Charles River Watershed Association.**