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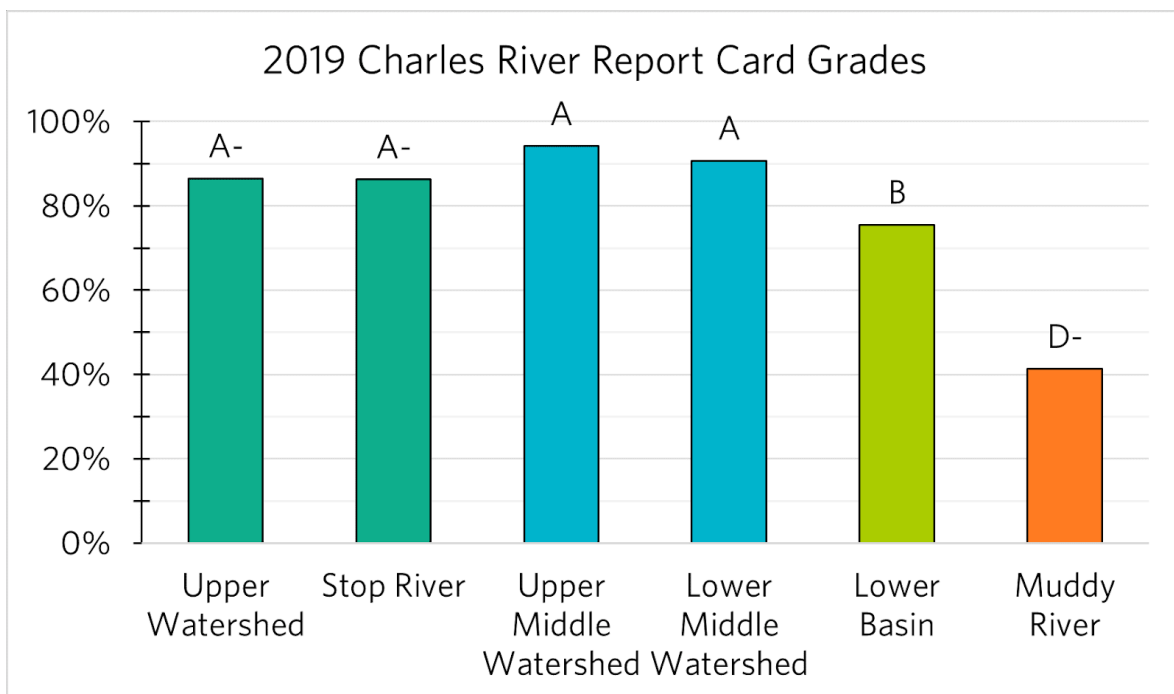
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## Charles River Receives A to D-: New Charles River Grading System Offers Clearer Picture of River Health

BOSTON, MA [December 21, 2020] — In coordination with the Charles River Watershed Association (CRWA), U.S. EPA has developed a new grading system that for the first time is reporting on the entire length of the Charles River, and is also taking more pollutants into account.

Since 1995, U.S. EPA has graded the Lower Charles River Basin—Watertown to Boston—using only *E. coli* data from water samples collected monthly by CRWA volunteers. Starting this year, the grade encompasses all 80 miles of the river and two tributaries, based on data from thirty-nine sampling sites. Grades are being issued for four sections of the Charles River mainstem: the **Upper Watershed** (Hopkinton to Medfield), the **Upper Middle Watershed** (Sherborn to Dedham), the **Lower Middle Watershed** (Newton to Waltham), and the **Lower Basin** (Watertown to Boston). Two tributaries of the Charles have also been graded: the Stop River in Medfield, and the Muddy River in Boston. The Muddy runs from Jamaica Pond, through Olmsted Park's ponds, the Riverway, the Back Bay Fens, under the MassPike to the Charlesgate and then through two old 200-foot pipes under Storrow Drive to its connection into the Charles River. Other tributaries to the Charles were not graded as there is insufficient data on them.



The new grading system demonstrates the variability in water quality in different stretches of the river. Based on 2019 data, grades range from an “A” in the middle reaches of the Charles River (Sherborn to Waltham) to a “D-” in the Muddy River, a tributary in Boston and Brookline. The Upper Watershed received an “A-”. The Lower Basin of the Charles River, the popular reach between Watertown and Boston, received a “B”—remaining steady from the 2018 grade.

Also new this year, in addition to *E. coli* bacteria, the river is also being graded on cyanobacteria (toxic blue-green algae) blooms and combined sewer overflows (CSOs), which are both public health hazards, especially for boaters and anyone who comes into contact with the water.

“CRWA has been measuring water quality since 1995. The new grading system uses our robust dataset to identify trends over time and along the river that allow us, and now the public, to better understand the river system as a whole and identify problem areas,” said Lisa Kumpf, Aquatic Scientist at CRWA. “We were grateful to have the opportunity to work with EPA to expand and modernize the Annual Charles River Grade. We have come a long way with cleaning up the Charles, but as we can see from the new grades, there is still work to be done.”

“While *E. coli* bacteria levels are an important water quality indicator, they do not tell the whole story,” said Emily Norton, Executive Director of CRWA. “People have a right to know about the additional public health risks caused by toxic algae blooms and raw sewage discharges. And knowledge is power! The more people know what is happening to the river, the more motivated they’ll be to support the investments necessary to clean it up.”

“Previous iterations of the report card obscured the very poor water quality in the Muddy River,” said Karen Mauney-Brodek, President of the Emerald Necklace Conservancy. “This highly impacted waterway faces challenges from untreated roadway runoff, urban challenges and aged infrastructure. The Muddy River Restoration Project and its restoration of Charlesgate Park will improve water quality with new shoreline vegetation and even open up this covered section of river, bringing light and air. It is great to have this clear information, it tells us what needs to be done, let’s get to work!”

Grading the river in segments demonstrates that water quality is worse in the Lower Basin than in the rest of the river, due in part to more impermeable surfaces—roads, roofs, parking lots, etc.—and stormwater outfalls that carry pollution from city streets into the water. This is especially apparent in the Muddy River tributary in Boston, which received a “D-” grade. The Upper Watershed has poorer water quality than the Middle Watershed, receiving an “A-” grade compared to “A.” This reflects the land use in these areas: the Upper Watershed including the densely developed 495 corridor, while the Middle Watershed has large expanses of open space and marsh land that acts as a filter, removing pollutants before they enter the river.

“We are pleased that the Charles River Watershed Association continues to use science to pinpoint the remaining challenges in the river,” said MWRA Executive Director Fred Laskey.

“The river has come a long way, but there is much more work to be done, especially in the Lower Basin,” said Sumbul Siddiqui, Mayor of Cambridge. “The City of Cambridge is making significant investments in our stormwater infrastructure that will not only protect Cambridge residents from flooding, we fully expect it to improve water quality in the Charles River as well.”

As the 2018 National Climate Assessment predicted for the Northeast, a changing climate is bringing more extreme precipitation events, drought, and heat. Increases in precipitation mean increased volumes of stormwater runoff and CSOs, while drier, hotter weather combined with the excess

nutrients that stormwater carries into the river cause longer and more severe cyanobacteria blooms. Including CSOs and cyanobacteria in the report card presents a more complete picture of current river conditions and more clearly demonstrates the impacts of our changing climate.

“We have this beautiful resource right here in our backyard,” said Norton. “But the data make it very clear that significant threats to the river still remain. We are far from ‘mission accomplished’ on the Charles River and if we want to protect it, we have to step it up.”

U.S. EPA has taken two important actions recently to reduce stormwater pollution into the Charles River. On December 7, 2020, EPA finalized the revised Municipal Separate Storm Sewer System (MS4) permit, which governs the discharge of stormwater collected in municipal systems into local rivers and streams. CRWA, along with Conservation Law Foundation (CLF), had intervened in the lawsuit over the permit to ensure that stormwater pollution entering the Charles will be significantly reduced over the next two decades. Under the revised permit, cities and towns must take increasing steps to reduce stormwater runoff and the pollution it carries—including nitrogen, phosphorus, bacteria, and other toxins—into storm drains that empty into the Charles River and other water bodies. Additionally, in response to a petition filed by CRWA and CLF, EPA is currently considering requiring large private properties that are significant sources of stormwater pollution to obtain stormwater discharge permits under the Clean Water Act, which would require them to also do their part to reduce stormwater pollution.

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*Charles River Watershed Association uses science, advocacy, urban design and education to promote resilient communities and a healthy river ecosystem. CRWA was formed in 1965 in response to public concern about the declining condition of the Charles River. Since its earliest days of advocacy, CRWA has figured prominently in major clean-up and watershed protection efforts that have dramatically improved the health of the Charles.*