

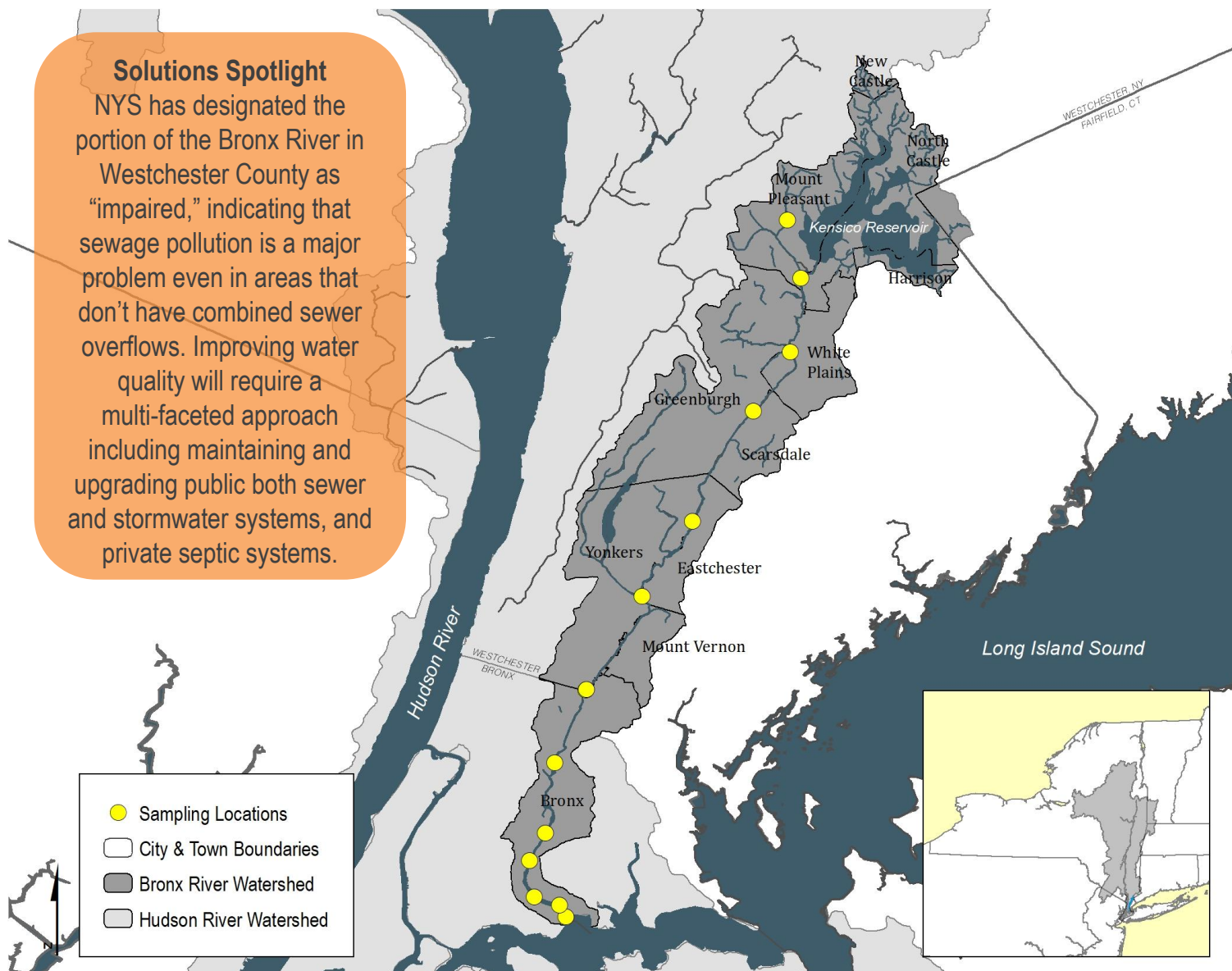
BRONX RIVER

Community Water Quality Monitoring Results

2017-2019

Solutions Spotlight

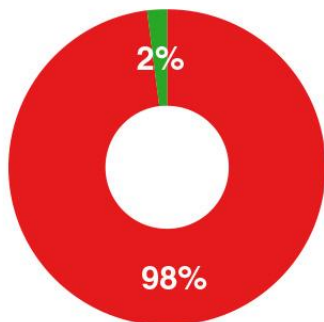
NYS has designated the portion of the Bronx River in Westchester County as “impaired,” indicating that sewage pollution is a major problem even in areas that don’t have combined sewer overflows. Improving water quality will require a multi-faceted approach including maintaining and upgrading public both sewer and stormwater systems, and private septic systems.



What the Data Show

What portion of samples were safe for swimming?

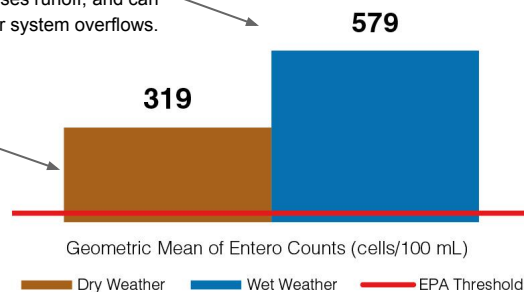
Very few samples collected at non-tidal sites met the EPA guideline for safe swimming. At many of the sampling sites, no sample has yet met the guideline during the duration of this monitoring project.



How high were the bacteria levels?

Bacteria levels are much greater after rainfall, which causes runoff, and can cause wastewater system overflows.

Even in dry weather, levels exceed the safe swimming threshold by more than 10 times.



More: Explore a watershed map, data from each sampling site, year-to-year patterns and other info at riverkeeper.org/water-quality/citizen-data/bronx-river.

Learn about the Bronx River Alliance at bronxriver.org

Community Science

The water quality data presented here are based on an analysis of 318 samples collected since 2017 by community scientists. Samples were collected once or twice per month from May to October and processed by the Sarah Lawrence College Center for the Urban River at Beczak. This work is supported by Patagonia and Westchester Community Foundation. To get involved, contact Christian Murphy at christian.murphy@bronxriver.org.

Why We Measure Bacteria

Fecal indicator bacteria such as *Enterococcus* ("Entero") usually do not make us sick. But because they live in the guts of warm-blooded animals, when these bacteria are present in water, pathogens that can make us sick may also be present.

Sources of fecal bacteria may include sewer overflows and failures, inade-

quate sewage treatment, urban or farm runoff, septic system failures, wildlife and contaminated sediment.

While research continues, the EPA has set thresholds to define if water is safe for swimming based on decades of science relying on measurements of these bacteria. Data are shown in Entero cells per 100 mL.

A Little About the Bronx River

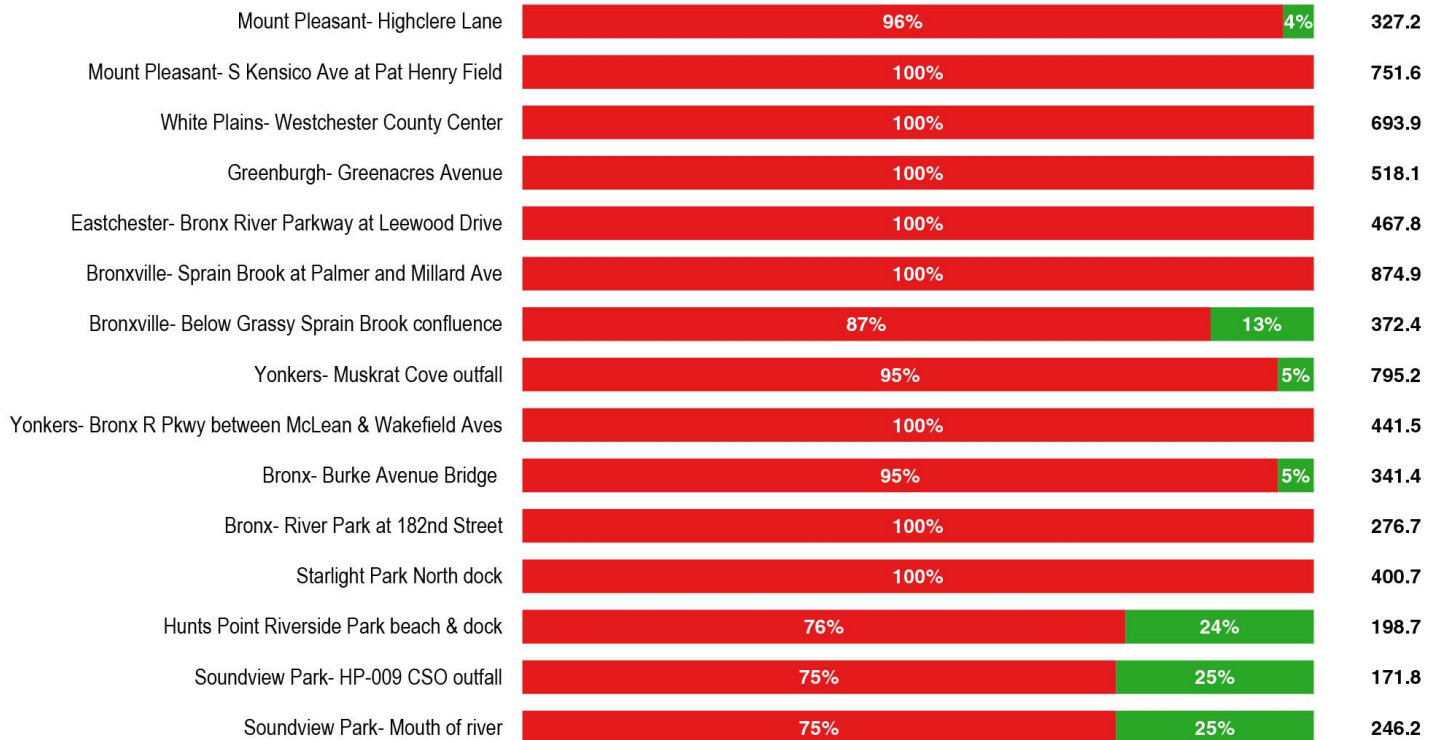
The Bronx River travels 23 miles from suburban Westchester to the Bronx, where it empties into the East River. It is the only major waterway of New York City that is not entirely tidal.

Signs of Progress

Due to the high levels of fecal indicator bacteria in the Bronx River that are not attributable to combined sewer overflows (CSOs), the Bronx River Alliance has partnered with USGS to conduct a microbial source tracking study. This study will help to identify non-CSO sources of fecal indicator bacteria and pathogens in order to develop plans to mitigate them.

What portion of samples at each site were unacceptable for swimming? EPA threshold: single sample should not exceed 60

How high were bacterial levels? EPA threshold: Geometric mean should not exceed 30



■ % of Samples Unacceptable ■ % of Samples Acceptable

*The geometric mean is a weighted long-term average.

