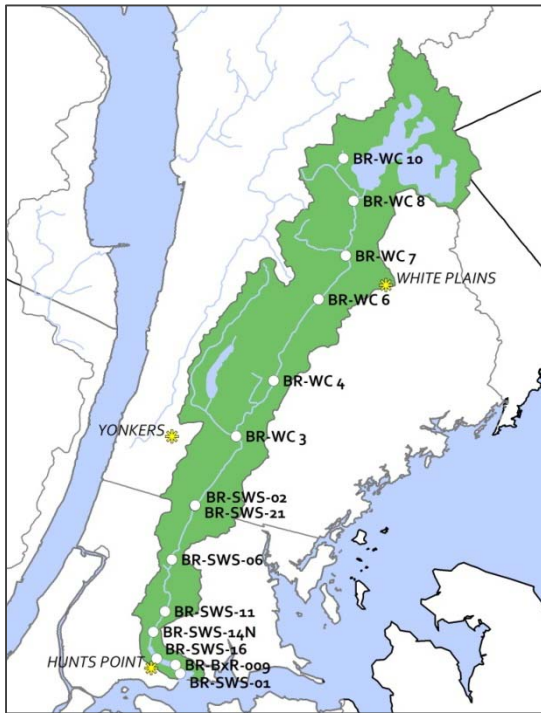


Community Water Quality Monitoring Results

Bronx River, 2017

Who Is Testing the Water?



Riverkeeper began testing the Hudson River for fecal contamination in 2006, and began partnering with community groups to sample the Hudson’s tributaries soon after. The Bronx River Alliance began monitoring the river within the Bronx in 2014, and then in 2017 partnered with Sarah Lawrence College Center for the Urban River at Beczak (CURB) and Riverkeeper to test the entire Bronx River from source to mouth. The project built on monitoring started in 2013 by the New York City Water Trail Association and The River Project in partnership with Rocking the Boat. This work is made possible by funders including the NYS Environmental Protection Fund through the Hudson River Estuary Program of NYSDEC, the Westchester Community Foundation and the EPA Urban Waters Small Grant Program.

Why Test for Fecal Contamination?

People should be able to get into the water for swimming, boating, playing and wading, and they need to know if it is safe to do so. If untreated waste is present in the water, there is a greater chance that pathogens may be present, and a greater chance that contact with the water will make us sick. Sources of

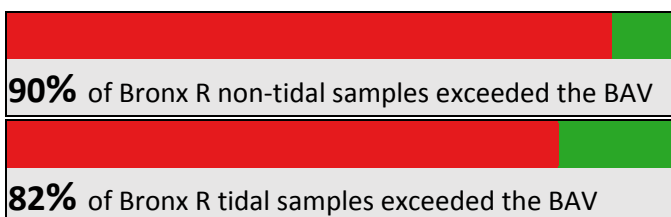
fecal contamination may include combined sewer overflows, sewage infrastructure failures, inadequate sewage treatment, urban runoff, septic system failures, agricultural runoff, and wildlife.

What Is *Enterococcus*?

Enterococcus (“Entero”) is a type of bacteria that lives in the guts of humans and other animals. The Entero commonly found in the environment usually does not make people sick. It is an indicator of fecal contamination, similar to coliforms and *E. coli*. To reduce risk of illness from exposure to fecal contamination, the EPA’s Recreational Water Quality Criteria include three thresholds for the concentration of Entero in water that should not be exceeded. Two thresholds are presented here: the Beach Action Value (BAV), a threshold for each sample of water; and the Geometric Mean (GM), a threshold for the weighted average of many samples. Both are measured in Entero cells per 100 mL of water. Single samples should not exceed the BAV of 60 and the geometric mean (“average”) of samples should not exceed the GM of 30.

Bronx River Watershed Water Quality Snapshot

In 2017 a total of 70 samples were collected monthly (May-Oct) by Bronx River Alliance, Rocking the Boat, and local residents, and processed by CURB. Results from the tidal and non-tidal areas are summarized separately below. Our study is designed to learn about broad trends. The data can help inform choices about recreation, but cannot predict future water quality at any particular time and place.

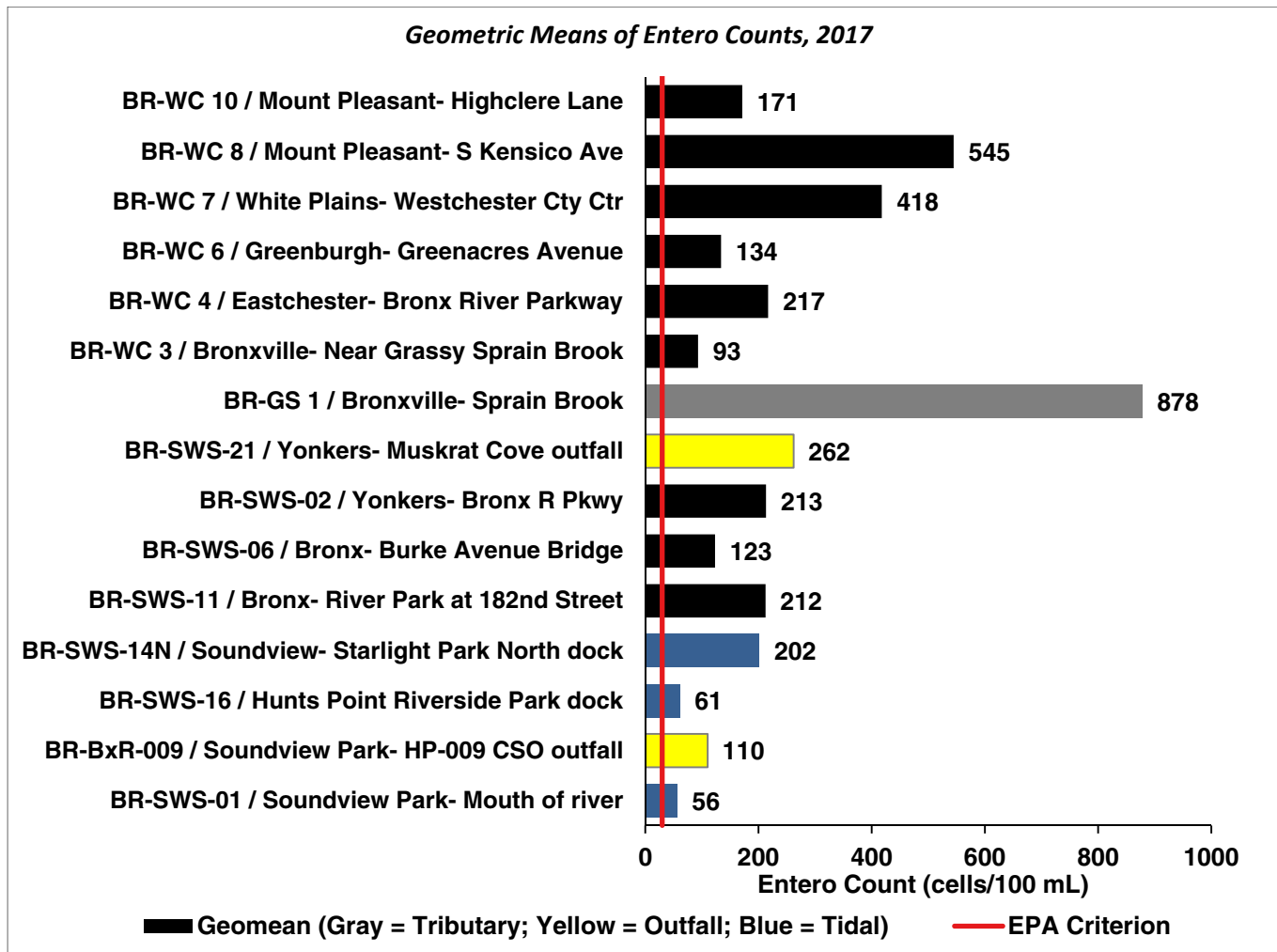


EPA GM Threshold	Bronx R Non-tidal GM
30	240
EPA GM Threshold	Bronx R Tidal GM
30	103

Bronx River Watershed Wastewater Infrastructure Snapshot

Much of the Bronx River watershed in the Bronx is served by a combined sewer system, and there are five combined sewer overflow (CSO) outfalls that discharge untreated sewage into the Bronx River during rain. In the Westchester portion of the watershed, much of the wastewater is conveyed to the Yonkers Joint Wastewater Treatment Plant, also a combined system, with CSOs that discharge into the Hudson River.

How's the Water in the Bronx River?



What Can We Do with This Information?

The Bronx River's overall level of contamination is lower than several of the region's other urban rivers and streams, although the frequency of contamination is high. In the Bronx River, Entero counts tended to be highest upstream. The highest counts were observed at South Kensico Avenue and in the Sprain Brook. Counts in the tidal Bronx River were much lower, which may be due to dilution and tidal flushing. Entero counts can vary substantially year to year, and continued monitoring will help us better understand patterns and trends in this watershed.

Possible solutions to improve water quality are: wastewater infrastructure upgrades to eliminate combined sewer overflows; vigorous implementation of the municipal stormwater (MS4) program to track down and eliminate sewage discharges from storm water pipes; and green infrastructure to reduce stormwater runoff.

To see all the results visit riverkeeper.org/water-quality/citizen-data/bronx-river.