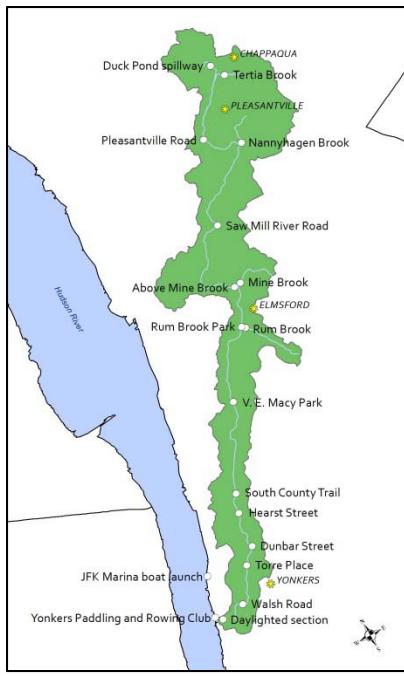


Saw Mill River, 2015-17

Community Water Quality Monitoring Results

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. In 2015, Riverkeeper and The Sarah Lawrence Center for the Urban River at Bczak (CURB) began testing the Saw Mill River. The project built on monitoring started in 2011 by the Yonkers Paddling and Rowing Club (YPRC) in partnership with the New York City Water Trail Association and The River Project, which was modeled on Riverkeeper's ongoing monitoring projects. It also built on a comprehensive study done by Groundwork Hudson Valley from 2008-12. 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 ("Enteroto") is a type of bacteria that lives in the guts of humans and other animals. The Enteroto 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 Enteroto 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 Enteroto 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.

Saw Mill Watershed Water Quality Snapshot

To date, Saw Mill Watershed community scientists have collected 752 routine Enteroto monitoring samples (twice per month from July to October in 2016, and May to October thereafter) in the creek and along the nearby Hudson waterfront. Results from the two 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.

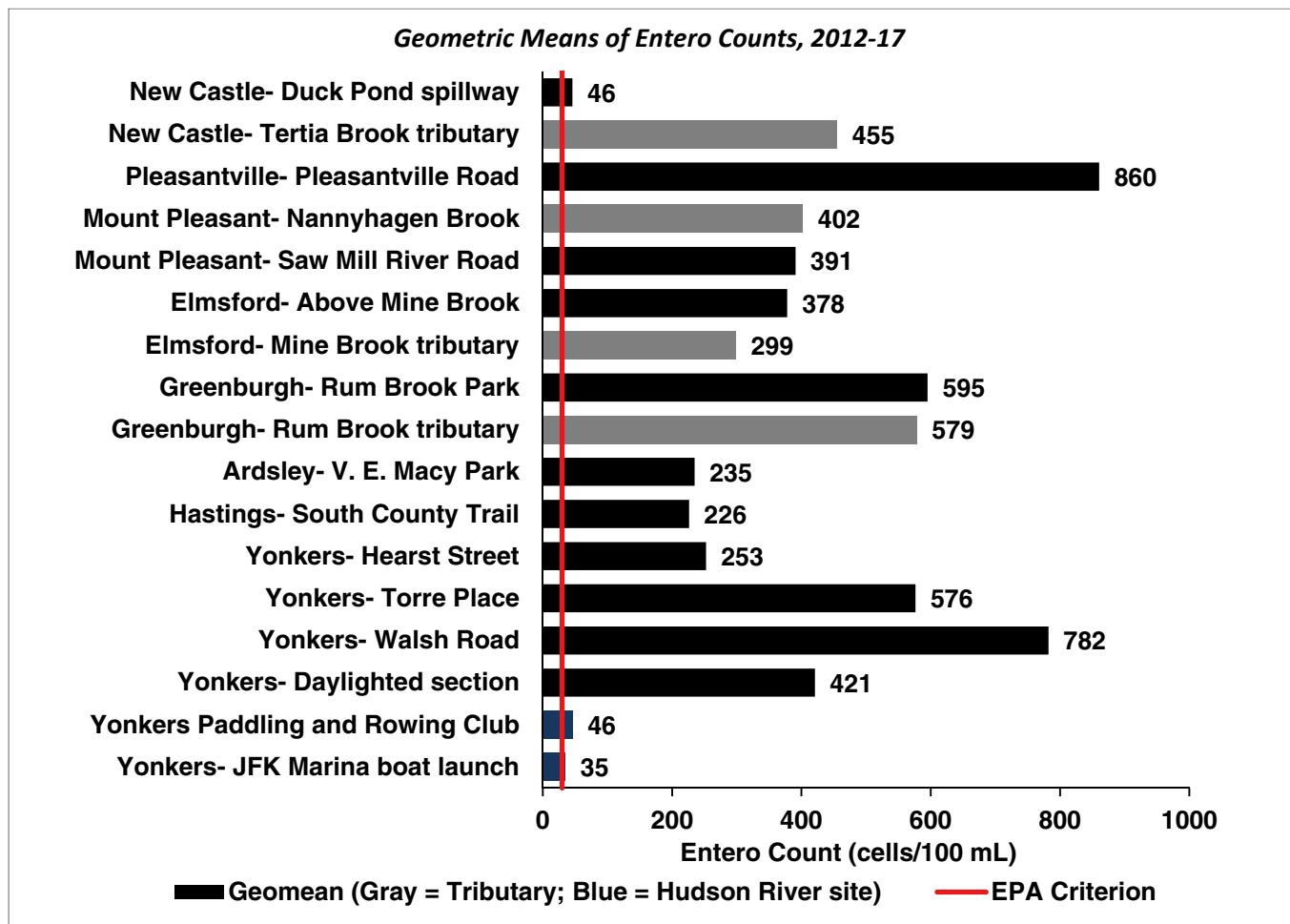
	EPA GM Threshold	Saw Mill GM
89% of Saw Mill samples exceeded the BAV	30	372
	EPA GM Threshold	Hudson River GM
45% of Hudson River samples exceeded the BAV	30	40

Saw Mill Watershed Wastewater Infrastructure Snapshot

The Saw Mill River flows through New York City suburbs and reaches the Hudson River at the City of Yonkers, the fourth most populous city in New York State. The Yonkers Joint Wastewater Treatment Plant, located near the mouth of the Saw Mill River, serves half a million people in 22 municipalities. Trunk lines for this collection system run parallel to parts of the Saw Mill River. This WWTP's treated water accounts for nearly 35% of the average daily effluent discharge to the Hudson River Estuary upstream of New York City. The Yonkers WWTP system also includes 10 combined sewer overflows that discharge untreated sewage to the Hudson during rain.

\$141M needs	1 public wastewater treatment facility	25 miles of pipes	60 years pipe age
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How's the Water in the Saw Mill River?



What Can We Do with This Information?

Enteric counts at most Saw Mill River sampling sites are ten times higher than the EPA threshold, or more. Water quality varies along the river, and sites in the Hudson near the Saw Mill's mouth are close to the EPA threshold, showing that the river is a source of contamination to the Hudson. Possible solutions to improve water quality are: upgrading wastewater infrastructure to eliminate combined sewer overflows; vigorously implementing the municipal stormwater (MS4) program to track down and eliminate sewage discharges from storm water pipes; and installing green infrastructure to reduce stormwater runoff.

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