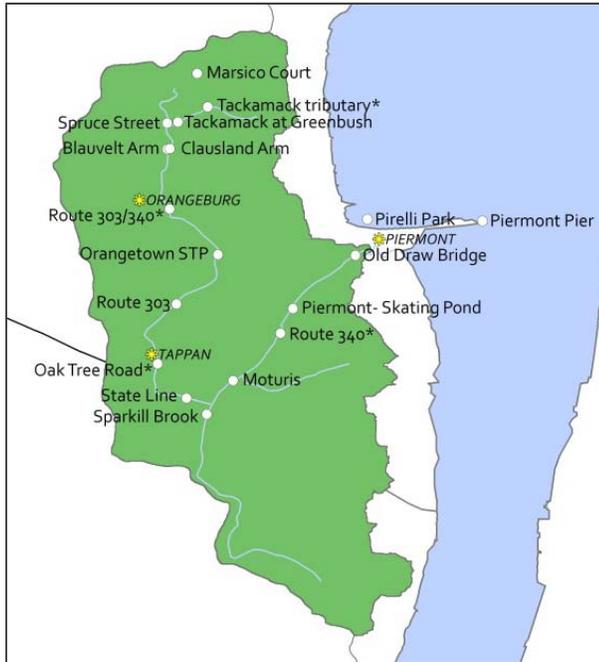


Sparkill Creek

Community Water Quality Monitoring Results, 2011-17

Who Is Testing the Water?



Riverkeeper and our partners have sampled over 450 locations throughout the Hudson River Estuary and its watershed. Riverkeeper and the [Sparkill Creek Watershed Alliance](#) have tested the water in the Sparkill Creek since 2011, and have partnered with the Sarah Lawrence Center for the Urban River at Beczak (CURB) since 2015. This work is made possible by funders including the Environmental Protection Agency Small Urban Grants Program, the NYS Environmental Protection Fund through the Hudson River Estuary Program of NYSDEC, Westchester Community Foundation, and Riverkeeper members.

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.

Sparkill Creek Watershed Water Quality Snapshot

To date, SCWA community scientists have collected 653 routine Entero monitoring samples (once per month from May to October) in the creek and along the nearby Hudson waterfront. Only results from sites within Sparkill Creek are summarized 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	Sparkill GM
30	759

Sparkill Creek Watershed Wastewater Infrastructure Snapshot

There are two wastewater treatment plants in the Sparkill watershed. Both of these plants discharge treated effluent directly into the Hudson River, but the associated collection systems, combined with the Sparkill Watershed's relatively small size, mean that this watershed has an extremely high density of pipes.

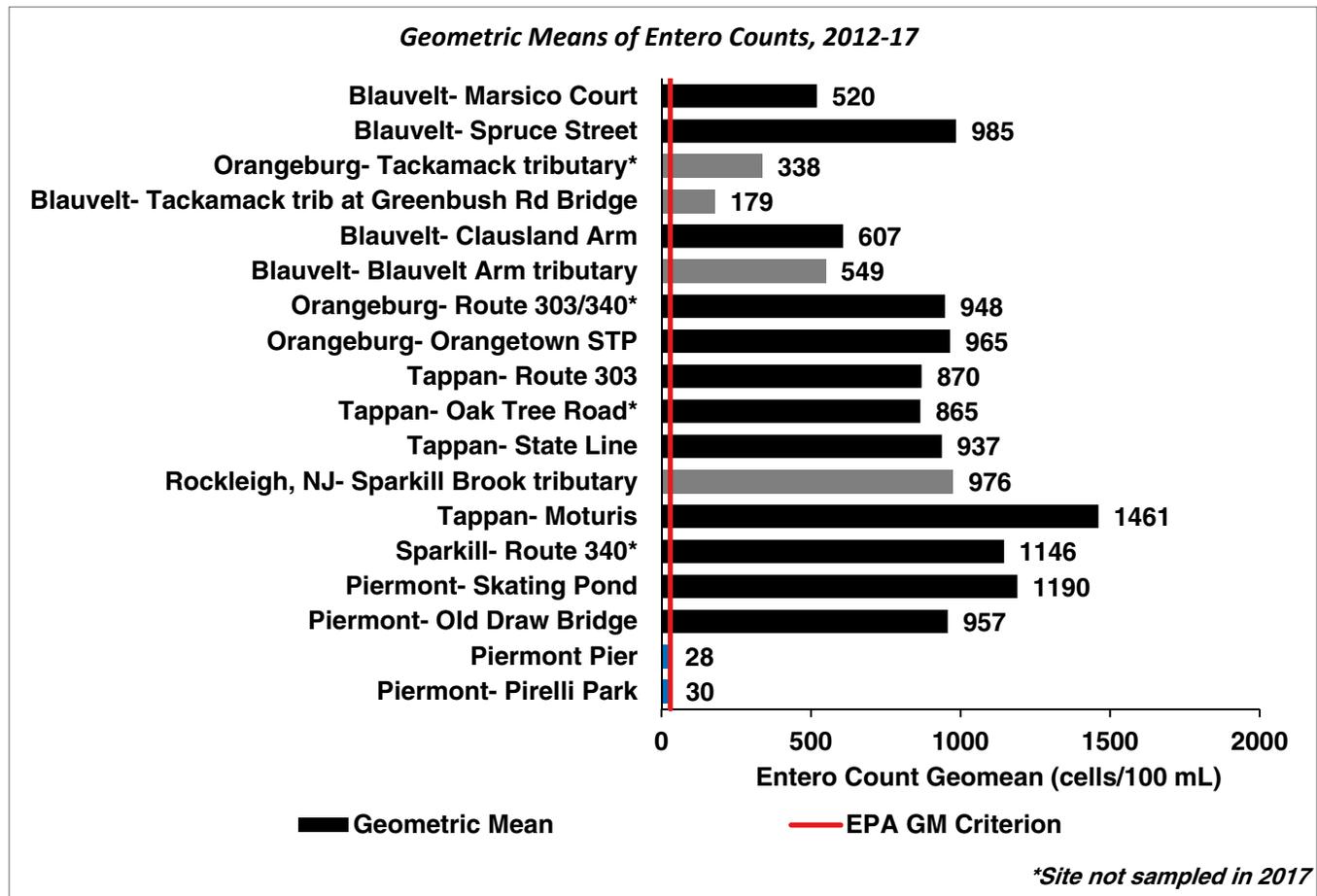
\$44 Million in needs

2 wastewater treatment facilities

319 miles of pipes

63 average pipe age

How's the Water in the Sparkill Creek?



What Can We Do with This Information?

These results show that reducing fecal contamination should be a high priority in the Sparkill Watershed. Entero counts at all Sparkill Creek sampling sites far exceed EPA thresholds. Overall, the Sparkill Watershed has the highest counts of more than a dozen tributaries that Riverkeeper and our partners have sampled.

In 2017, SCWA and Riverkeeper conducted GIS analysis, additional sampling and a stream walk to identify fecal contamination sources. We identified and reported two suspicious discharges to the creek via the stormwater system. Watershed municipalities can utilize the municipal stormwater permit (MS4) program to track and repair such discharges, and should examine whether it is feasible to implement a fee system to improve the MS4 program's efficiency and implementation. Other possible solutions to improve water quality are: repairing wastewater infrastructure to prevent leaks and spills, especially during wet weather; restoring vegetated stream buffers; and installing green infrastructure to reduce stormwater runoff.

To see all the results visit riverkeeper.org/water-quality/citizen-data/sparkill-creek.