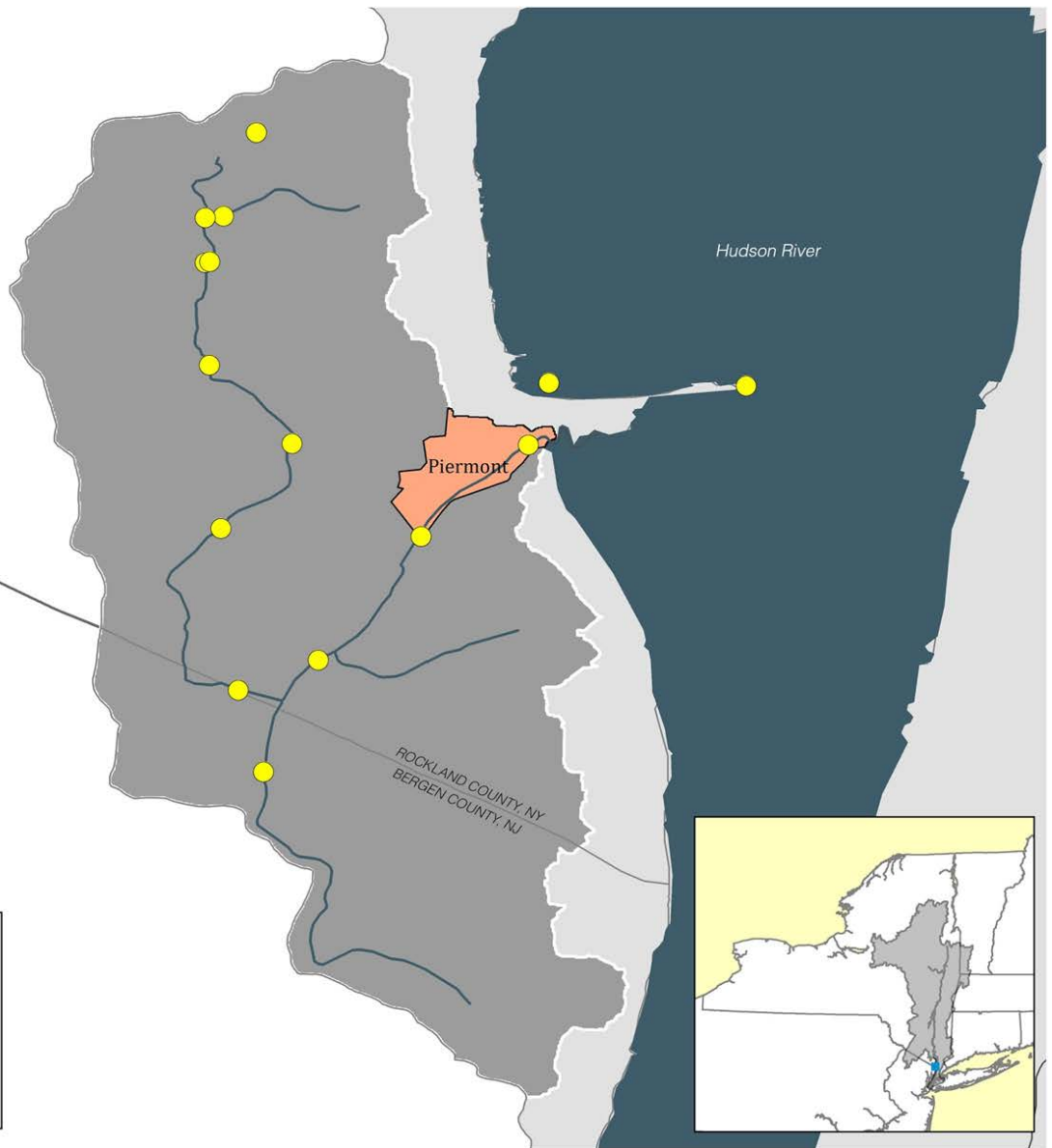# SPARKILL CREEK
Community Water Quality Monitoring Results   2011-2018

Hudson River

Solutions Spotlight
There are over 300 miles of sewer line in the Sparkill Creek watershed, with an average age of 65. Maintaining and upgrading sewer and stormwater collection systems is a high priority.
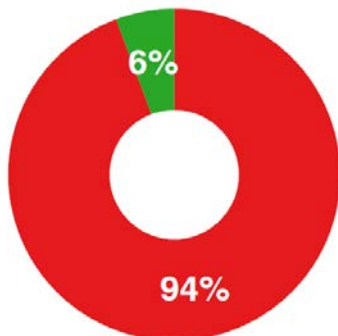
Piermont

ROCKLAND COUNTY, NY
BERGEN COUNTY, NJ

Legend
- Sampling Locations
- Village Boundaries
- Sparkill Creek Watershed
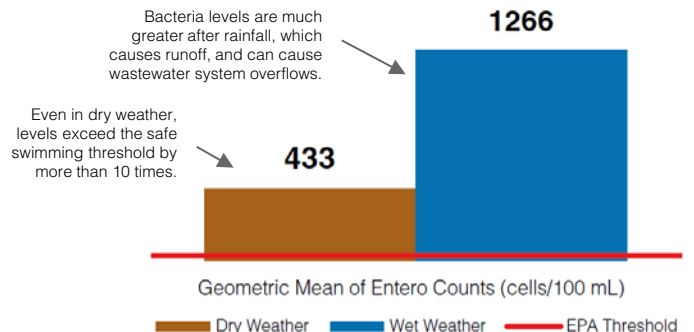- Hudson River Watershed

N

What the Data Show

What portion of samples were safe for swimming?

Only a small fraction of samples collected at non-tidal sites met the EPA guideline for safe swimming.

6%

94%

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.

1266

433

Geometric Mean of Entero Counts (cells/100 mL)

Dry Weather   Wet Weather   EPA Threshold

More: Explore a watershed map, data from each sampling site, year-to-year patterns and other info at riverkeeper.org/water-quality/citizen-data/sparkill-creek.
Learn about the Sparkill Creek Watershed Alliance at www.sparkillcreek.org/.

Community Science

The water quality data presented here are based on an analysis of 643 samples collected since 2011 by Sparkill Creek Watershed Alliance. Samples are collected monthly (May to October) and processed by the Sarah Lawrence College Center for the Urban River at Beczak. To get involved, contact Sebastian Pillitteri at spillitteri@riverkeeper.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.
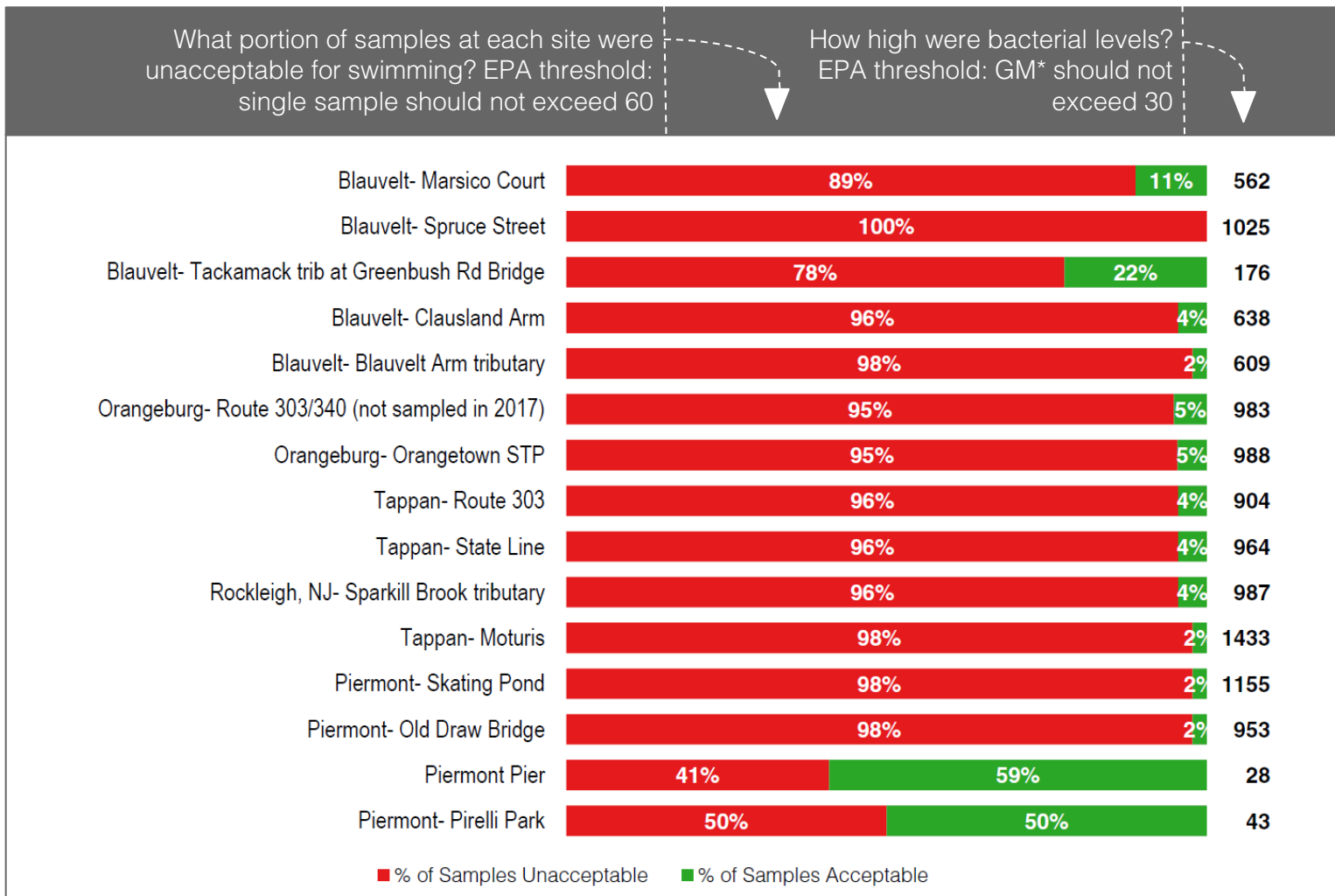
Sources of fecal bacteria may include sewer overflows and failures, inade-quate sewage treatment, urban or farm runoff, septic system failures, wildlife and contaminated sediment.

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.

About the Sparkill Creek

After flowing through neighborhoods and commercial and industrial areas in New York and New Jersey, the Sparkill Creek feeds Piermont Marsh, one of the four wetlands that make up the Hudson River National Estuarine Research Reserve.

Signs of Progress

A citizens group, the Sparkill Creek Watershed Alliance, has been testing stormwater outfalls and surveying their drainage areas to track down pollution sources. The group has discovered a buried stream that now flows through the stormwater system, and an illegal discharge from a food processing facility.

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: GM* should not exceed 30

Site	% Unacceptable	% Acceptable	GM
Blauvelt- Marsico Court	89%	11%	562
Blauvelt- Spruce Street	100%		1025
Blauvelt- Tackamack trib at Greenbush Rd Bridge	78%	22%	176
Blauvelt- Clausland Arm	96%	4%	638
Blauvelt- Blauvelt Arm tributary	98%	2%	609
Orangeburg- Route 303/340 (not sampled in 2017)	95%	5%	983
Orangeburg- Orangetown STP	95%	5%	988
Tappan- Route 303	96%	4%	904
Tappan- State Line	96%	4%	964
Rockleigh, NJ- Sparkill Brook tributary	96%	4%	987
Tappan- Moturis	98%	2%	1433
Piermont- Skating Pond	98%	2%	1155
Piermont- Old Draw Bridge	98%	2%	953
Piermont Pier	41%	59%	28
Piermont- Pirelli Park	50%	50%	43

■ % of Samples Unacceptable   ■ % of Samples Acceptable

*The geometric mean (GM) is a weighted average of all samples.

SARAH LAWRENCE COLLEGE CENTER FOR THE URBAN RIVER AT BECZAK

SPARKILL CREEK WATERSHED ALLIANCE

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