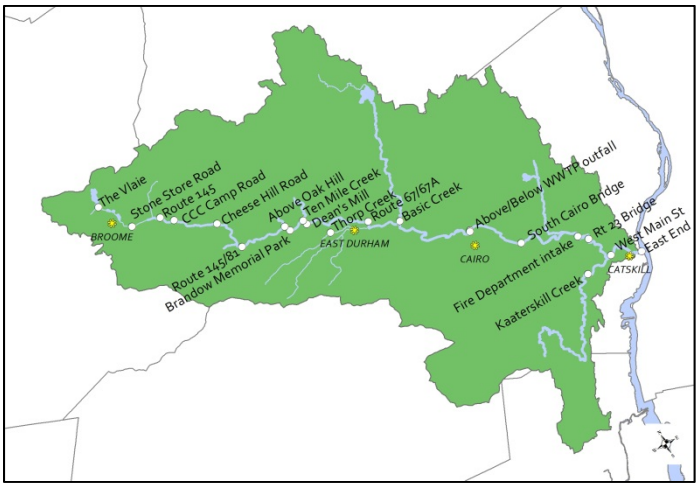
Catskill Creek

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. Community scientists working with Riverkeeper have tested the water in the Catskill Creek since 2011. Sampling was initially limited to the lower watershed (Cairo and downstream), and expanded to the headwaters in 2014. This work was made possible by funders including the NYS Environmental Protection Fund through the Hudson River Estuary Program of NYSDEC 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.

Catskill Creek Watershed Water Quality Snapshot

To date, community scientists have collected 557 routine Entero monitoring samples (once per month from May to October) in the Catskill Creek. Results from the tidal and non-tidal portions of the creek are presented 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.

33% of non-tidal samples exceeded the BAV

EPA GM Threshold	Catskill Non-Tidal GM
30	40

14% of tidal samples exceeded the BAV

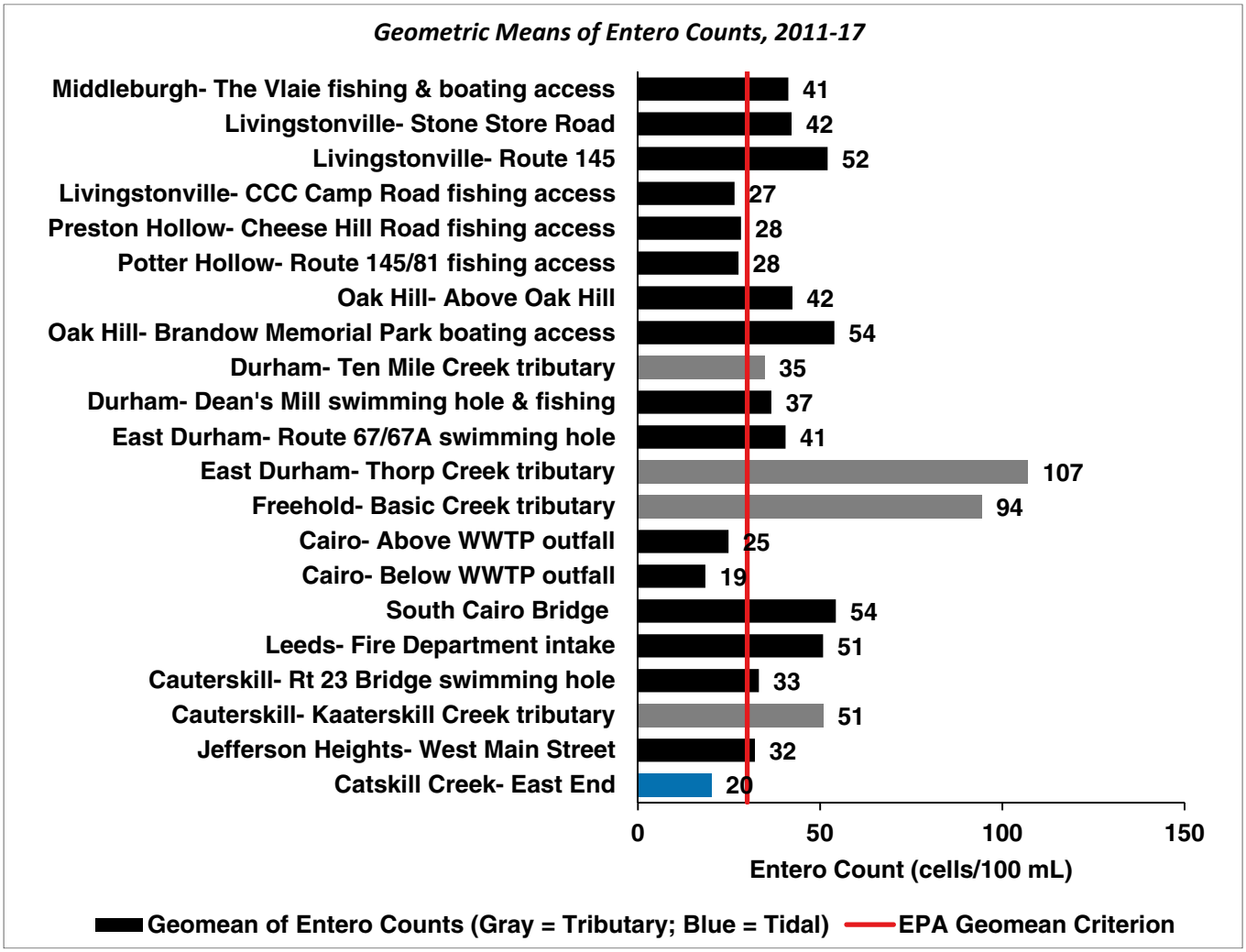
EPA GM Threshold	Catskill Tidal GM
30	20

Catskill Creek Watershed Wastewater Infrastructure Snapshot

The Catskill Creek flows out of the forested Catskill mountains, and reaches the Hudson River Estuary at the Village of Catskill, which has combined sewers. It is the third-largest tributary to the Hudson River.

3 public wastewater treatment facilities	25 miles of pipes	60 average pipe age	$13M estimated needs

How's the Water in the Catskill Creek?



What Can We Do with This Information?

Compared with other places we have sampled, the Catskill Creek Watershed has very good water quality. However, more than one third of samples exceeded the EPA's recommended threshold for beach closure and public notification. The Thorp Creek and Basic Creek subwatersheds clearly emerge as priority areas to investigate fecal contamination. In other areas, septic districts or other septic system management options should be considered to ensure that homeowners can affordably maintain their septic systems. Our results show that Entero counts increase substantially in wet weather (data not shown), so measures to slow and filter stormwater runoff, such as restoring vegetated stream buffers and installing green infrastructure, may also reduce Entero counts.

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