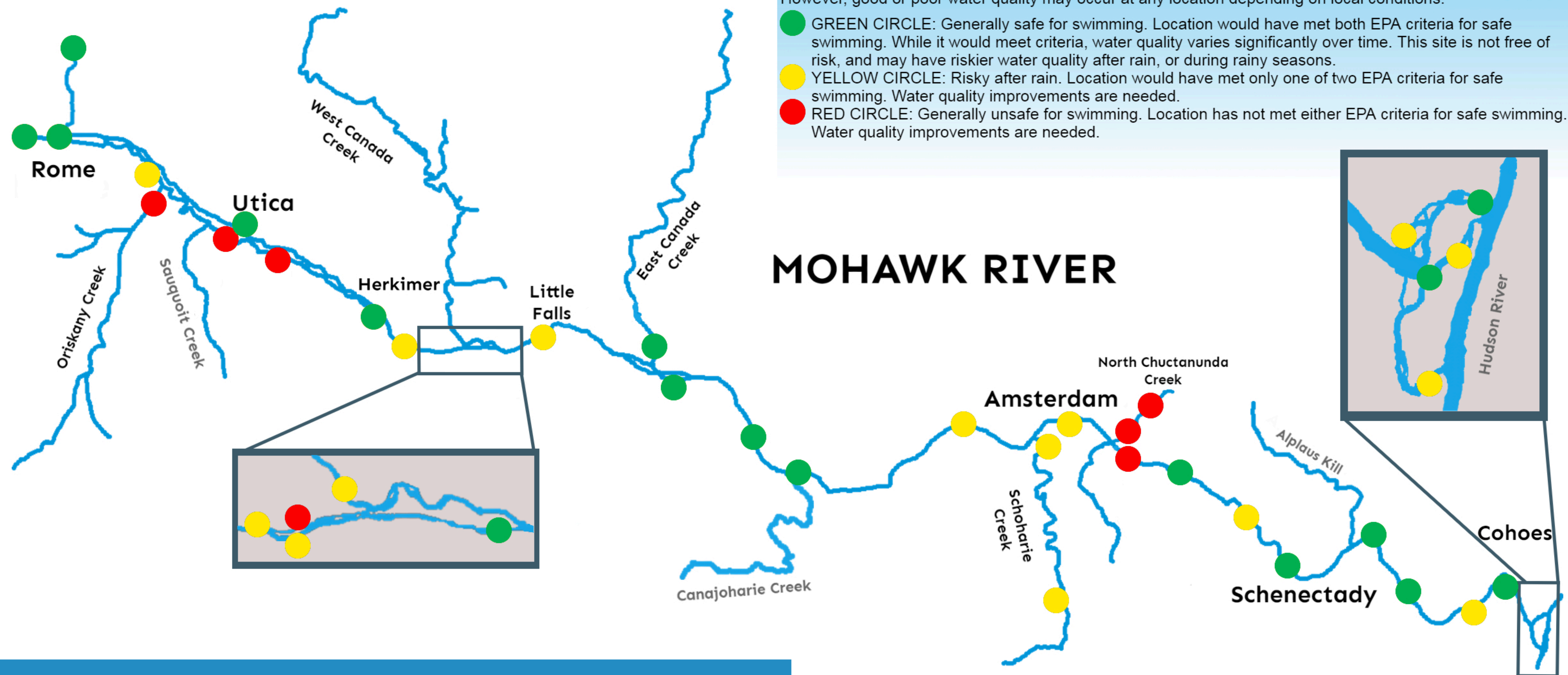


How's the Water?

Key

Sampling locations are color-coded according to analysis of 1,250 samples at 39 locations, each of which sampled between 25-36 times, from 2016-2022 to indicate the likely relative risks associated with swimming. However, good or poor water quality may occur at any location depending on local conditions.

- GREEN CIRCLE: Generally safe for swimming. Location would have met both EPA criteria for safe swimming. While it would meet criteria, water quality varies significantly over time. This site is not free of risk, and may have riskier water quality after rain, or during rainy seasons.
- YELLOW CIRCLE: Risky after rain. Location would have met only one of two EPA criteria for safe swimming. Water quality improvements are needed.
- RED CIRCLE: Generally unsafe for swimming. Location has not met either EPA criteria for safe swimming. Water quality improvements are needed.



People ask, "Where is it safe to swim in the Mohawk River?" Riverkeeper's monitoring program provides data to help inform decisions.

Find all the data, and learn more at riverkeeper.org/water-quality

Good water quality gives us what we want – a Mohawk River safe for recreation, fit for use as a drinking water source, and healthy for wildlife. Water quality is only one way to define the safety of a location for swimming, and these data describe only one important aspect of water quality, fecal contamination. Other pollutants, as well as boating traffic, currents, weather and other factors can make open water swimming unsafe.

How's the water?

Since 2016, Riverkeeper, SUNY Cobleskill, and SUNY Polytechnic Institute have monitored water quality at 39 sites in the Mohawk River and tributaries which stretches from Rome to the Capital District NY. We compare our data to Environmental Protection Agency (EPA) recreational water quality criteria, which are designed to ensure compliance with the Clean Water Act, and protect public health for recreational users. Of the 39 sites sampled, 17 meet EPA safe swimming criteria. Of the 22 that fail, 7 fail both of two EPA criteria, and 15 fail one of the two. If a site fails to meet either criterion, water quality must be improved. Most failures appear to be caused by sewage-related contamination from aging and outdated infrastructure, though stormwater and other sources are also influential.

Is it getting better?

The historic gains in water quality achieved starting a generation ago by New York's Pure Waters Bond Act and the U.S. Clean Water Act had stalled until recent investments by New York State. We still have important progress to make, particularly in preventing contamination from combined sewer overflows (CSOs) and other sewage infrastructure failures. Combined sewers carry both sewage and stormwater in the same pipe, and are designed to overflow after rain. They are present in many old cities, including Utica, Little Falls, Amsterdam, Cohoes and Waterford, where water quality impacts from overflows are evident in the data. To comply with the Clean Water Act, cities are implementing long-term plans to reduce overflows. From 2017 to 2022, \$250.3 million was invested in sewer system studies, repairs or upgrades in the Mohawk River Watershed, with state and federal assistance, based on publicly reported state grant and loan announcements. The need for future investments remains great. As of 2022, communities in the Mohawk River watershed had identified 52 wastewater projects totaling \$349.1 million for which they are seeking state and federal funding assistance.

Sources of bacteria

Source of the fecal indicator bacteria we measure may include:

- combined sewage overflows (CSOs)
- other leaks or overflows from aging sewer pipes, pump stations and wastewater treatment plants;
- illicit connections between sanitary and stormwater sewers;
- failing septic systems;
- urban stormwater;
- runoff from agriculture;
- wildlife;
- contaminated sediment and biofilms

Making choices based on water quality patterns

Even if there is no data for a particular location where one may enter the water, the data show patterns that can guide decisions. These pie charts show the percentage of sites sampled in each category that are

- generally safe, ● risky after rain and ● generally unsafe.



Mohawk River

Based on 866 samples from 27 locations, water quality in the Mohawk River is variable, with the riskiest water quality in stretches affected by combined sewer overflows and urban runoff.



Tributaries

Based on 223 samples from 7 locations in five creeks – Oriskany (1), West Canada (1), East Canada (1), Schoharie (2) and North Chuctanunda (2) – water quality in Mohawk River tributaries varies considerably, with the riskiest water quality in smaller urbanized creeks.



Barge Canal

Based on 161 samples from 5 locations where the barge canal is separated from the Mohawk River, the barge canal is less risky than the river, likely because it is protected from most sewage and stormwater impacts.

About EPA recreational water quality criteria

The abundance of fecal indicator bacteria (FIB) in water correlates to the risk of exposure to pathogens that can cause illness if ingested. The EPA provides four options for measuring Recreational Water Quality in freshwater using either of two FIB, *Escherichia coli* (*E. coli*) or *Enterococcus*. This poster illustrates the least protective of these options, assessing concentrations of *E. coli* (colony forming units per 100 mL of water) against these two criteria:

GEOMETRIC MEAN (GM) of 126: Multiple samples should not exceed this threshold, a weighted average that provides a measure of overall water quality in variable conditions.

STATISTICAL THRESHOLD VALUE (STV) of 410: No more than 10% of samples should exceed the STV, to help prevent exposure to high contamination events. Red dots indicate sites that exceed the GM and STV. Yellow dots indicate sites that exceed only the STV.

What You Can Do

Become a Member

Each sample costs about \$10 in material costs. Become a Riverkeeper member by sponsoring a sample for \$10 or a sampling location for \$120.

Volunteer

Join a community science project to measure water quality, or get involved in another volunteer project.

Take action

Riverkeeper helps individuals send messages to decision makers at strategic moments when your voice will make the most difference.

Visit

riverkeeper.org/get-involved

Riverkeeper protects and restores the Hudson River from source to sea and safeguards drinking water supplies, through advocacy rooted in community partnerships, science and law.

Data presented here were gathered by Riverkeeper, SUNY Polytechnic Institute and SUNY Cobleskill over 7 years with the financial support of primarily from Riverkeeper members, and foundations.

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