

Water quality at Wisconsin beaches rated 8th worst in nation

The water quality at Wisconsin beaches has been rated the eighth worst in the nation, based on the percentage of water samples taken in 2013 in which bacterial counts exceeded the standards of the U.S. Environmental Protection Agency.

Wisconsin placed 23rd out of 30 coastal and Great Lakes states, according to [a report released Wednesday](#) by the [Natural Resources Defense Council](#).



Fourteen percent of Wisconsin's water samples failed to meet the EPA's standards for safe beach water.

Nationwide, 10% of the samples taken at the nearly 3,500 beaches studied in the report exceeded the EPA's standards.

This year's report used a new, more stringent standard set by the EPA, known as the Beach Action Value, of 190 E. coli bacteria colony-forming units per 100 milliliters of water in a single sample.

The previous threshold was 235 E. coli units.

The Great Lakes region was the worst-performing region in the country, with a failure rate of 13%. Great Lakes beaches tend to have problems with water quality in part because they are a more isolated system without the water circulation of coastal beaches — conditions that allow pollutants to stagnate near beach areas.

Milwaukee's South Shore Beach was designated as one of 17 "repeat

offender" beaches that have experienced chronic water quality problems for the past five years.

The water samples at these beaches failed to meet the standards more than 25% of the time.

One of the most common causes of beach closures, the council reports, is polluted storm-water runoff, which can include chemicals, animal and human waste, bacteria and viruses.

Sewage overflows, which occur when wastewater treatment plants are overwhelmed by heavy rains and release untreated sewage to waterways, are another significant water-quality issue.

"It really is all of our urban slobber flowing untreated into local waterways," said Steve Fleischli, director of the water program at the National Resources Defense Council.

Viruses and bacteria in polluted water can cause illness in swimmers. Polluted water is most dangerous to the elderly and small children, who may have weaker immune systems.



Experts recommend that beachgoers avoid swimming during or after rainstorms, and refrain from dunking their heads in the water. Swimmers should pay attention to [beach advisories](#) and should not swim when an advisory is posted at a beach.

Milwaukee still uses the old EPA standard to set beach closure and alert thresholds. This means that if the level of E. coli is above 235 units per 100 milliliters of water, an advisory is issued, and if the level is above 1,000, the beach is closed.

However, the city is "very interested" in adopting the new standards,

said Paul Biedrzycki, director of disease control and environmental health with the City of Milwaukee Health Department.

"It is a standard that's more protective of public health," he said.

Milwaukee beaches have more stringent testing procedures than beaches in the rest of the state. Through a partnership with the [University of Wisconsin-Milwaukee's Zilber School of Public Health](#), the three public beaches — Bradford, McKinley and South Shore — are tested six times a week from Memorial Day through Labor Day.

Such high-frequency testing can lead to more beach closures and play a role in the NRDC's rankings.

"Frequency of surveillance is really directly associated with the probability of exceeding thresholds," Biedrzycki said.

Beach advisories in Milwaukee have been particularly frequent this season, due to the heavy rain in recent weeks. Bradford Beach, for example, had an advisory or a closure on 31% of the days so far this season, compared to 18% last year.

McKinley and South Shore have also seen more closures than usual.

By monitoring variation in bacterial counts throughout the day, and variables such as wind speed and direction, pH and temperature, the Milwaukee Health Department is working to improve measurements and better determine when closures are necessary, Biedrzycki said.

The Health Department is also pioneering a new test called qPCR, which can provide more accurate and rapid results.

"It's not an exact science now, but thanks to the partnership and the work we're doing here in the Health Department, I think we're leaders in this regard," Biedrzycki said.