Indiana Dunes

National Lakeshore
National Park Service
U.S. Department of the Interior

Lake Michigan Water Quality and You

On any warm day, people can be found swimming, wading, playing in the surf or walking the beaches along the southern shore of Lake Michigan. Generally the water is clean and safe for swimming. However, to ensure public safety, the national lakeshore regularly tests the water for contamination by bacteria. If problems are found, signs advising the public are posted at affected beaches.

What are the health risks?

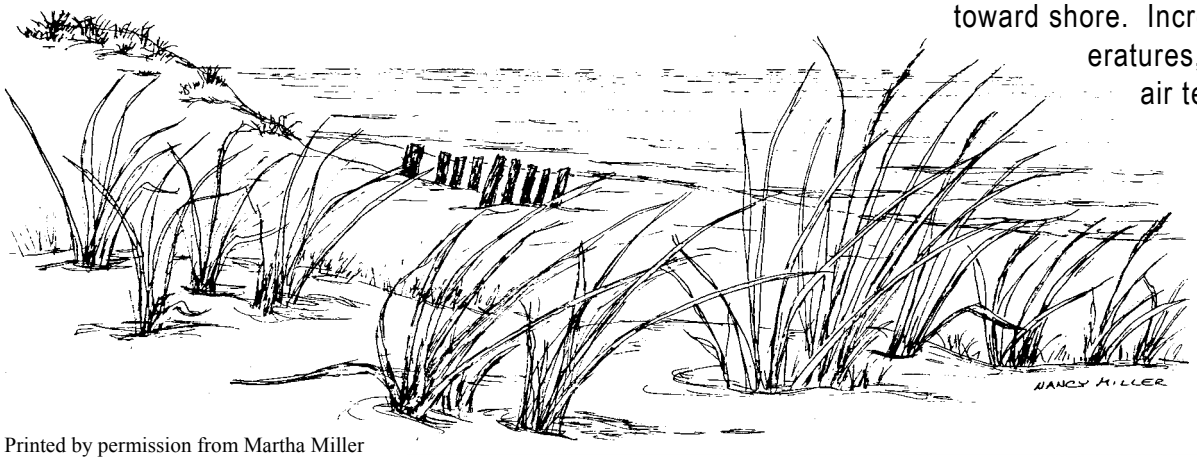
Swimming in contaminated water *can* make you sick. However, because symptoms may not appear until several days after contact, it is often difficult to determine the source. Such symptoms include vomiting, diarrhea, nausea, headaches and fevers. Diseases vary from skin rashes and eye and ear infections, to hepatitis and respiratory infections.

How do these bacteria get in the water?

Lake Michigan can become contaminated by overflows of sewage and industrial waste, residential storm drain runoff, boat discharge, and domestic animal waste. Sewage can come from failing septic systems or releases from sewage treatment plants. Birds, pets and other warm-blooded animals may also cause contamination.

Bacteria levels in Lake Michigan are often higher 24-48 hours after a heavy rainfall. Beaches near drainage ditches such as Kemil Beach and Lake View in the national lakeshore, and Dunes Creek in Indiana Dunes State Park are especially vulnerable. However, during periods of heavy rainfall, any area beach could be affected.

Northwest or northeast winds compound the problem because they blow the contaminated water from these ditches toward shore. Increased water temperatures, due to warming air temperatures, also result in higher bacteria levels.



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How is the water tested?

E. coli (Escherichia coli) is an organism that occurs in all warm-blooded animals. Because it is typically found in water containing harmful viruses and bacteria it is used to test water quality. High levels of *E. coli* indicate possible contamination. Unlike the form of *E. coli* found in meat, this bacteria is generally non-toxic.

The national lakeshore tests *E. coli* levels in area beaches every Thursday morning throughout the summer, using standards set by the Environmental Protection Agency. The maximum allowable standards for swimming beaches are 235 colonies of *E. coli* per 100 ml. of water.

Since *E. coli* must incubate 24 hours, results of Thursday's tests are not available until Friday. If a beach exceeds recommended levels, warnings are posted and the water is resampled. Friday's test results will be announced Saturday morning. Testing is continued daily until the count meets safety standards. Due to budget and staffing limitations, the lakeshore does not normally monitor every day of the week.

How will I know the water's condition?

Warning signs noting high bacteria counts will be posted at all affected beaches. Once an area has been posted, visitors should not swim and should exercise caution in the water. Use of the beach, however, is permitted. A high level of bacteria in one location does not mean that all areas are unsafe. Check with a lifeguard or call the park's main information line at (219) 926-7561, extension 225 for details.

Ultimately, you are responsible for your own well-being. Stay alert to water and weather conditions. Look for signs of poor water quality, such as dark plumes, floating debris (branches, leaves or garbage) and heavy sediment. Avoid swimming in the lake after a downpour of one inch of rain or more.

What can the national lakeshore do to improve water quality?

While the national lakeshore does not have control over urban and industrial runoff, the park can impact wetlands within its boundaries. Both Dunes Creek and Derby Ditch drain portions of the Great Marsh directly into Lake Michigan. Extensive ditching for residential development throughout the marsh has greatly altered its natural water levels.

Indiana Dunes National Lakeshore is in the process of closing these ditches. Hopefully, this will not only restore a beautiful and rare ecosystem, but will decrease runoff and thereby improve water quality.

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