MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

How is the water in my inland lake?

Whether you live on an inland lake, are looking at moving to one, or have a favorite lake that you often visit, you probably have questions about its water quality. Although several agencies, associations, and watershed groups collect water quality information measuring things like bacterial contamination, nutrient enrichment, and toxic pollution, it may not be presented in a format that's easily accessible. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has developed this brochure to provide common sources of water quality information of your inland lake.

Is my lake safe for swimming?

Your local health department (usually county or "district" level) gathers information related to health aspects of water pollution for public and semi-public beaches. They issue swimming advisories and track reported diseases associated with water pathogens such as *E. coli*, swimmers itch, and giardia. Some county health departments provide citizens with information and resources to do their own beach monitoring.

A list of local health departments with phone numbers, along with beach monitoring data, can be found online through the State of Michigan's Beach Monitoring System found at https://mienviro.michigan.gov/ncore/external/home.

Does my lake have problems with algae?

If there are odor and appearance issues with your lake, it is often related to the presence of algae that multiplies rapidly. Algae are simple organisms that grow in many forms. Thick layers of algae, called blooms, may form when nutrients are added to the water. Fertilizers, pet waste, improperly functioning septic tanks, grass clippings, leaves, and other yard wastes are sources of nutrients. Increased algae populations sometimes upset the natural balance of life in water due to algae decomposition, which causes oxygen to be removed from the water and may kill fish. Blooms of algae can give water an unpleasant taste or odor, reduce clarity, and color the water body a vivid green, brown, yellow, or red.

One type of algae, called blue-green algae or cyanobacteria, is different from other algae. Some species of blue-green algae produce algal toxins that can affect people and animals that come into contact with the water or drink water containing these toxins. Reports of potential blue-green algae blooms can be reported to algaebloom@michigan.gov or by calling the EGLE Environmental Assistance Center at 800-662-9278. The Michigan Department of Health and Human Services (MDHHS) has an online map, available at michigan.gov/habsmap, that is updated weekly May-October with verified bloom reports collected by EGLE and other agencies.

To learn if a lake has problems with nutrient pollution, observe the lake during the summer months or ask lakefront owners about their observations of aquatic plants and algae. Lake associations may have water quality surveys, reports, or could be involved in volunteer water quality monitoring programs. A list of Michigan lake associations is available at mymlsa.org or you can ask lakefront owners if they have an organized lake association. Many lakes also participate in the Michigan Clean Water Corps (MiCorps) Cooperative Lakes Monitoring Program (CLMP). This program is a statewide volunteer monitoring program, where water quality data such as water clarity, nutrients, and chlorophyll (a measurement of algae growth) is taken in inland lakes. Individual lake reports are available summarizing this data.

Additional water quality information can be found in USEPA's How's My Waterway application. You can also contact the EGLE Environmental Assistance Center at 800-662-9278 or call any EGLE District Office and ask for Water Resources Division Nonpoint Source Staff.

Can I eat the fish I catch?

The main exposure of toxic chemicals to humans from lake water is through fish tissue, where long-lasting chemicals such as mercury build up and then are stored in the human body over time. Fish consumption advisories are excellent indicators of toxic pollution in natural waterbodies.

The Michigan Department of Health and Human Services' (MDHHS) Fish Advisories can help you avoid eating fish that contain unacceptable levels of toxic chemicals. Women of childbearing age and children under 15 should pay special attention because unborn children and young children are especially sensitive to chemicals.

Fish advisories for Michigan waters can be found at Michigan.gov/EatSafeFish or you can call the MDHHS at 800-648-6942 to ask about lakes in Michigan that have advisories or have been monitored but do not have advisories.

What can I do to improve the water quality of my lake?

If you live on an inland lake, it's important to help reduce the amount of nutrients entering it. Practices such as leaving a natural area along the lakeshore and getting your soil tested before fertilizing your lawn can help reduce nutrient inputs. If you live along the lake and have a septic tank, keep it properly operating and maintained. Other tips can be found in publications such as "Practical Tips for the Home and Yard to Protect Water Quality" or on EGLE's shoreline protection website, which explains the importance of lake shorelines to the entire lake ecosystem and provides many examples of shoreline improvements that residents can implement on their property.

Significant development on inland lakes and in surrounding wetlands can impact water quality by reducing fish and wildlife habitat, increasing soil erosion, and reducing nature's ability to filter pollutants from runoff. If you are planning to develop or have a construction project on a property surrounding an inland lake, use low impact methods and techniques that promote natural shorelines and can learn more information through Michigan's Natural Shoreline Partnership. In addition, your project in wetlands or an inland lake may need a permit from EGLE. Please visit EGLE's Land and Water Interface Permitting FAQ page for more information or contact permitting staff in your local EGLE District Office directly.