

I want to buy a house on an inland lake, how can I find out the quality of the water?

Several agencies, associations, and watershed groups collect water quality information to measure varying aspects of bacterial contamination, nutrient enrichment, and toxic pollution. Often the data collected are used for a particular study and are not presented in a format easily understood by the lay person. Therefore, the most useful answer to this question may be found with answers to the following sub-questions. The inquirer can then consider the information, as compared to the uses they plan to make of the lake.

Bacterial: "Is the 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 Escherichia 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 www.deq.state.mi.us/beach/.

Nutrient: "Does the water smell bad or look dirty?"

Odor and appearance issues are often related to the presence of algae that multiplies rapidly in waters that is nutrient enriched. Algae are simple plants that grow in many forms. Thick layers of algae, called blooms, may form when nutrients are added to the water in amounts in excess of naturally occurring nutrients. 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 because during algae decomposition, oxygen is removed from the water and may cause fish to die. Blooms of algae can give the 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, is different from other algae. Lakes with large numbers of blue-green algae usually appear blue-green in color; but some of these blooms can appear reddish, brownish or even black. Blue-green algae blooms most often occur in late summer. A few species of blue-green algae are toxic and can poison animals that drink water containing these organisms.

If you live on a lake with algae blooms, try to help reduce the amount of nutrients entering the lake. Practices such as leaving a natural area along the lakeshore and getting your soil tested before fertilizing your lawn can help reduce nutrient inputs to the lake. Other tips can be found in the publication called "Your Lake and You" or "Practical Tips for the Home and Yard to Protect Water Quality." You can obtain these documents through the DEQ Environmental Assistance

Center at 800-662-9278. For soil sampling kits, contact your county Michigan State University Extension Office. A list of local extension services can be found at web1.msue.msu.edu/home/directory.html, or a local office can be found in a telephone book.

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 lake associations is available at www.mlswa.org or you can ask lakefront owners if they have an organized lake association. For more information on Michigan's volunteer monitoring program for inland lakes, visit www.michigan.gov/deqwater, select "Water Quality Monitoring," and then "Inland Lakes Monitoring." This page contains information about the Cooperative Lakes Monitoring Program (CLMP). You may also contact the Michigan Lake and Stream Associations, Inc. (phone: 989-257-3583, Email: pbonnell@mlsua.org) which assists the DEQ in administering the CLMP.

Some organizations strive to improve water quality within various watersheds. Most of these organizations collect water quality data and summarize their findings for the public. If you would like to see if a watershed group exists for a lake (or river), visit the U.S. Environmental Protection Agency's watershed organization listing at www.epa.gov/adopt/network.html. You can also contact the DEQ Environmental Assistance Center at 800-662-9278, or you can call any DEQ district office and ask for Water Bureau Nonpoint Source Program staff.

Toxic: "Can I eat the fish?"

The main exposure of toxic chemicals to humans from water is through fish tissue, where long-lasting chemicals build up. Therefore, fish consumption advisories are excellent indicators of toxic pollution in natural water bodies.

It is important to know about chemicals in fish. Long-lasting chemicals such as mercury build up in the human body over time, so follow the consumption advisory recommendations found in the Michigan Department of Community Health's (MDCH) Fish Advisory to avoid fish that contain unacceptable levels. Women of childbearing age and children under 15 should pay special attention because unborn children and young children are especially sensitive to chemicals that build up over time.

Fish advisories for Michigan waters can be found at www.michigan.gov/mdch. From this page, select "Statistics and Reports" then select "Published Reports and Surveys," or you can call the MDCH at 800-648-6942 to ask about lakes in Michigan that have advisories or have been monitored but do not have advisories.