



Water Quality

We have continued to expand our Water Quality Program in order to address the concerns of our clients. With new issues and concerns about water quality in Michigan, many waterfront residents benefit from having their water periodically tested. We create an easy to understand profile of water characteristics. This profile allows residents to learn about *E. coli* levels, nutrient concentrations, and many other areas of concern.

We recommend testing the water **twice** during the year at **three sampling sites**. This will allow you to learn more about your lake during spring turnover and the summer months.

Please contact us if you would like to start this program and we will amend your contract.

What is it?

Our Water Quality Lab has expanded with new staff and state-of-the-art equipment. We are now capable of testing your water for over 100 parameters. The testing program for your waterbody includes normal water chemistry measurements, dissolved oxygen, nutrient concentrations, and *E. coli* counts. We can also test for major pollutants, such as Chromium, Cyanides, Lead, and Mercury.

We are also able to test the bottom sediments of your waterbody for a wide variety of substances.

How does it work?

A trained LakePro technician will visit your waterbody and perform field tests at the appropriate location. The technician will also collect water and soil samples to be analyzed at our testing facility. The samples will be properly preserved on site, then taken to the lab for testing by our staff biologist.



Water Quality Summary
Testing Date: 7/6/2010

Your Waterbody
Michigan County

Water Quality Test Results:

	North End	South End
Temperature:	56.5 °F	58.5 °F
Transparency:	5'4"	5'8"
pH:	8.68	8.64
TDS:	282 ppm	280 ppm
Conductivity:	395 µS	392 µS
Dissolved Oxygen:	8.7 mg/L	8.5 mg/L
Alkalinity:	172.5 ppm	165.0 ppm
Hardness:	178.5 ppm	180.0 ppm
Salinity:	181 ppm	184 ppm
Phosphates:	120.0 ppb	105.0 ppb
Nitrates:	550.0 ppb	612.0 ppb
Fecal Coliforms:	None Detected	None Detected

These results show that the water at Your Waterbody is healthy and suitable to support natural wildlife. As there are no signs of pollution, the water is safe for recreational uses, such as fishing. Although the pond is safe for swimming, it is not recommended based on the low clarity of the water and the physical design and materials of the basin.

The Dissolved Oxygen is at adequate levels. When the pond is frozen, very little dissolved oxygen is produced. Once the ice melts, wind and wave action, along with plant production, begin to restore the dissolved oxygen content of the water. These results show that already there is enough oxygen in the water to support healthy fish populations. Also, the fountains, once installed, will increase the dissolved oxygen even further.

The Total Dissolved Solids, Conductivity, Alkalinity, Hardness and Salinity concentrations remain normal for a freshwater pond. In the spring, runoff from the roads usually carries large amounts of snow salt. However, the salt content of the pond remains at a safe level.

The concentrations of Nitrates remain at low levels. The Phosphate concentrations are elevated, but not dangerous. A higher concentration of phosphates may result in algal blooms in the summer. Green algae (Chlorophyta spp.) thrive in water with high phosphate levels. Fertilizers with high phosphorus content, if used, should be reconsidered. The phosphate concentration should be monitored in the future to watch for any further increases.

Fecal Coliforms (E. coli) were not found in the water samples. Non-Fecal Coliforms were measured at 15 CFU/100 mL. These bacteria are naturally occurring, essential to natural processes, and not harmful to organisms that use the water.

Water samples were taken on 7/4/2010 at 9:00 AM. Water tests were completed on 7/5/2010 at 8:00 AM. This report describes conditions at the time the samples were taken. The quality of the water was tested only to the parameters listed above.

Completed and Certified by: *Peter Filipanick* Date: 7/6/2010
Reviewed and Approved by: *Paul Dominick* Date: 7/6/2010

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You will receive an easy-to-read report which organizes all of the data, graphs, and information. The report includes an explanation of the results and recommendations regarding any areas of concern that you may want to monitor in your waterbody.

Benefits of Testing:

A testing program allows you to gain a better understanding of the overall health of your waterbody. The report will create a profile that allows you to compare your waterbody to averages for Michigan lakes and ponds. You can also compare annual data, alerting you to any alarming changes in your water body's profile.

You can monitor the nutrient levels in the water that regulate plant and algae growth. If nutrients are above critical levels, an informed decision to take action is possible. You will determine with certainty the presence of anything that may pose a threat to people, pets, fish, and birds that use your waterbody. All of our testing programs include *E. coli* counts and may be expanded to include testing for major pollutants.

"Fact-based decisions prevent costly mistakes from being made and lead to the most effective course of action."