

Water Quality Summary – Your Water Body

Parameter	Site 1	Site 2	Target Range	Status
Chlorophyll α	52	60	1-140 mg/m ³	Normal
Total Dissolved Solids	527	700	0-1,000 ppm	Normal
Dissolved Oxygen	5.2	7.4	4.0-12.0 ppm	Normal
Phosphate	80	46	15-100 ppb	Normal
Nitrate	42	22	0-50 ppm	Normal
E. Coli	112	68	<300 CFU/100 mL	Normal

 CRITICAL

 CAUTION

 NORMAL

Discussion

These results show that water body is normal in all aspects according to the findings from the tests. It allows safe use of the water for recreational purposes. It allows has the proper characteristics to support healthy conditions for aquatic plants and animals.

Chlorophyll 'a': A measurement of projected biomass and photosynthesis rate of algae and plants within the waterbody. This measurement translates to a trophic state of the lake, or how active the lake is to produce algae and plants. There are four trophic states: Oligotrophic (< 2.5 mg/m³, very inactive), Mesotrophic (2.6-20 mg/m³, moderately active), Eutrophic (20-56 mg/m³, very active) and Hyper Eutrophic (> 56 mg/m³, extremely active). Many lakes and ponds in urbanized areas are Eutrophic to Hyper Eutrophic, meaning there is continuous production of algae and plants due to constant to excessive nutrient loading.

Total Dissolved Solids: The measurement of the combined content of all inorganic and organic substances contained in a waterbody. Pure water will contain no dissolved solids. Storm water run-off is the primary source of dissolved solids. Drinking water must have reading below 500 ppm. Reading of up to 1,000 ppm are generally considered safe for plants and other aquatic organisms.

Dissolved Oxygen: Measures the amount of microscopic bubbles of oxygen gas in the water column. Just like animals on land, animals underwater require oxygen to breath. Warmer water tends to hold less oxygen so this measurement becomes very important during summer months. Reading below 4 ppm can be fatal.

Phosphate and Nitrate: Essential nutrients for all aquatic life. A lack or excess of these components can lead to a change in the trophic state of a waterbody. Phosphate readings between 15 – 100 ppb are needed to maintain normal aquatic life. Nitrate levels over 50 ppm are considered to be polluted waters and unsafe for consumption.

E. Coli: Are a form of bacteria that live in the intestines and fecal matter of warm blooded organisms. Although the e. coli may not be the agent of disease, high levels of this bacteria indicate the presence of disease-carrying organisms. Per the MDEQ, a single reading over 300 CFU/100 ml or sustained readings over 130 CFU/100ml for 30 days is considered unsafe for swimming.

Secchi Disk: Is a simple tool that is used to determine the water clarity. This is accomplished by lowering the Secchi disk into the water until it disappears from sight and then is raised back until it reappears and the distance is averaged to determine the amount of water that can be seen through. This creates an absolute determination of the water clarity.

Water samples were taken on 8/18/16. Water tests were completed on 8/23/16. This report describes conditions at the time the samples were taken. The quality of the water was tested for the parameters listed above.

Compiled and Certified by: _____ Date: 8/24/2016
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