

# Wall Lake Water Quality Report – 2016

## Professional Lake Management

The Greater Wall Lake Association has water quality measurements from Professional Lake Management (PLM) dating back to 2003.

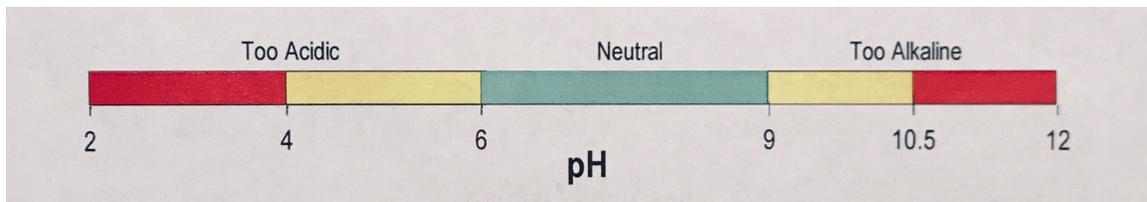
The purpose of this report is to summarize findings of certain results.

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**pH** describes the balance between acids and bases in the water. Neutral values (between 6 and 9) are desirable. Low pH values typically result either from the growth of bog vegetation (such as peat moss), acid precipitation (“Acid rain”), acid runoff, or acid entering a lake from an acid bog, which Wall Lake is particularly vulnerable to.

**4-7-16: pH 8.3, which is slightly basic.**

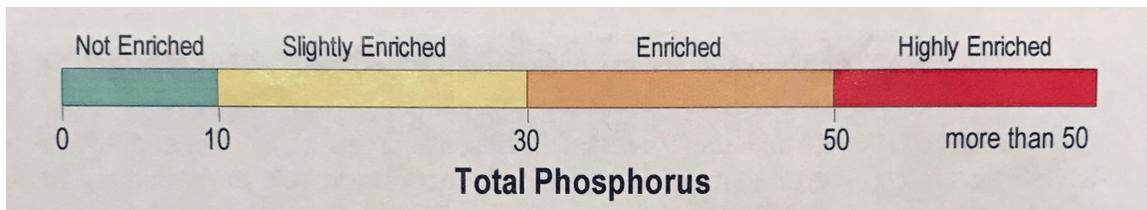
**8-26-16: pH 8.3, which is slightly basic.**



**Total Phosphorous** measures the total (organic and inorganic, dissolved and particulate) amount of phosphorous in the water. Phosphorous is usually the plant nutrient (i.e., fertilizer) that controls the amount of algal growth in lakes. Most Midwestern lakes have more phosphorous and more algae than is desirable, so lower values are generally better.

**4-7-16: 7 ug/L, which is not elevated.**

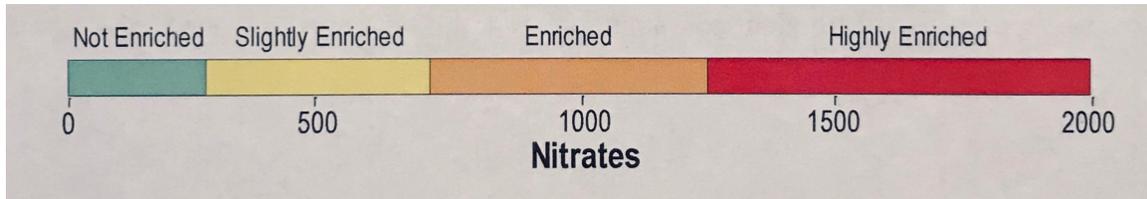
**8-26-16: 7 ug/L, which is not elevated.**



**Nitrates** measures the total inorganic amount of nitrogen in the water. Nitrogen is the plant nutrient (i.e., fertilizer) most likely to control the amount of rooted plant growth in lakes. Most Midwestern lakes have more nitrogen and more rooted plant growth than is desirable, so lower values are generally better.

**4-7-16: 300 ug/L, which is slightly elevated.**

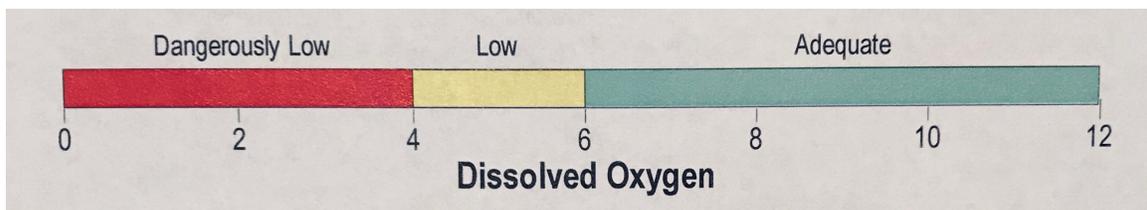
**8-26-16: 230 ug/L, which is not elevated.**



**Dissolved Oxygen** is the measure of the amount of oxygen dissolved in the water. Oxygen is needed by fish and other aquatic organisms to allow them to "breathe" underwater. Plants and other algae produce oxygen by photosynthesis during the day and use oxygen for respiration at night.

**4-7-16: Wall Lake had Dissolved Oxygen from the surface to the deepest testing depth of 30'.**

**8-26-16: Wall Lake had a Dissolved Oxygen maximum of 8.5 mg/L near the surface of the lake, decreasing at greater depths and becoming non-existent at depths below 20'. This lack of oxygen below 20' is a common finding in virtually all inland lakes that PLM samples in Michigan.**



**Secchi Disk Depth** is the measure of water transparency, which is affected by algae and suspended sediments, typically the result of adverse human activity (fertilizer, sewage, runoff) near a lake. Trends are important.

**4-7-16: Secchi Disk Depth 3.7 meters.**

**8-26-16: Secchi Disk Depth 4 meters.**