Our goal as a community is to maintain our beautiful lake so that it continues to support a balanced ecosystem. The result of these efforts allows us the opportunity to enjoy the lake for it’s intended recreational uses including boating, swimming, fishing and personal enjoyment.

We do not evaluate Lake Owassa according to drinking water standards.

Monitoring, sampling or testing refers to collecting information to evaluate the condition of our lake. We do this in two ways:

1. “In situ” (on site) = while on the lake from a boat or dock, dipping a probe or other device directly into the lake and getting immediate feedback
2. Lab Analysis = collecting water or sediment into a container that is then sent to a lab for analysis.

**Key Parameters**

**Temperature** patterns influence a lake’s fundamental processes: the depletion of dissolved oxygen, nutrient release and the growth of algae. Temperature determines the type of organisms and fish that may live in a particular lake. Historical data shows that Lake Owassa warms throughout spring and by mid-June is thermally stratified, with warm water on top and cooler water at the bottom. Once stratified there is little mixing. It often remains stratified until late September.

**Dissolved Oxygen (DO)** is measured at 2 foot increments from top to bottom. The major inputs of DO are the atmosphere and the photosynthesis by aquatic plants. When thermal stratification is present, DO levels are reduced or depleted at depths greater than 12 feet. Warmwater fish (largemouth bass, crappies, perch, sunfish, catfish) do best with DO above 5 mg/L. Fish will avoid areas with DO below 3 mg/L. Fish suffer fatalities at DO levels below 2 mg/L.

The amount of **Phosphorus** in the water column is assessed via lab analysis. Phosphorus is the limiting nutrient in lakes and controls aquatic plant and algal growth.

A **Secchi disk** is a round, black and white, 8-inch disk attached to a line that used to estimate water clarity. The secchi is lowered into the lake until it is no longer visible, and the depth is noted.

**Chlorophyll-a** is a pigment that imparts a green color to plants and algae. Algae is a necessary food source for organisms higher up the food chain but too much can lead to Harmful Algae Blooms (HABs).

**Phycocyanin** are blue in color. They are found in a type of blue-green algae called cyanobacteria.

**pH** is a measure of the alkalinity or acidity of water.

The data is analyzed for patterns and relationships among water quality parameters. The information then helps determine management strategies to address any lake problems.