

Analysis Information & Definitions

- Temperature:** The water temperature directly affects the amount of oxygen that is able to dissolve into the water. The temperature of surface waters is not indicative of the entire water column.
- Transparency:** The ability of light to penetrate the water column is determined by the amount of dissolved and suspended particles in the water. Although aesthetically desirable, transparent water allows increased light to reach the lake bed and may result in vegetation growth.
- pH:** pH is a measure of acidity or alkalinity. pH is a general measure of lake health and can roughly indicate the range of other measurements such as alkalinity and hardness.
Target Range: 7-10 Standard Units
Maximum Tolerance: 12 Standard Units
- TDS:** Total Dissolved Solids is the amount of all organic and inorganic substances in the water in a molecular or ionized state. Higher values generally indicate richer and more productive water. Lower values usually indicate cleaner and less productive water.
Target Range: 0-1,000 ppm
Maximum Tolerance: 1,500 ppm
- Conductivity:** Conductivity is a measure of the ability of water to conduct electricity. Dissolved ions in the water increase conductivity, thus TDS and Conductivity are closely related.
Target Range: 0-1,500 ppm
Maximum Tolerance: 5,000 ppm
- Dissolved Oxygen:** D.O. is a measure of the amount of oxygen dissolved in the water. This oxygen is available to fish and other animals for respiration. Vegetation generally increases DO, particularly during the day and early evening. Animals and other respiring organisms consume the oxygen, mostly during the day. Oxygen is also added to the lake through wave action, rain, fountains and aerators.
Target Range: 8-10 mg/L
Minimum Tolerance: 5.0 mg/L

- Alkalinity:** Alkalinity refers to the ability of the water to neutralize acids, mainly through the hydrogenation of carbonate ions. This is why the alkalinity is expressed as “ppm as CaCO₃”. However, other basic molecules in the water can also contribute to alkalinity.
Target Range: 0-200 ppm as CaCO₃
Maximum Tolerance: 200 ppm as CaCO₃
- Hardness:** Hardness is very closely related to alkalinity. It is a measure of the dissolved salts and metals in the water, including but not limited to CaCO₃.
Target Range: 0-250 ppm as CaCO₃
Maximum Tolerance: 200 ppm as CaCO₃
- Salinity:** Salinity is the measure of the dissolved salt content of water. Salinity influences the types of organisms that are able to survive in the water. Salinity also affects the chemistry of the water, and including conductivity and potability.
Target Range: 0-500 ppm
Maximum Tolerance: 1,000 ppm
- Phosphates:** Phosphorus is an essential nutrient for plant growth. However, concentrations exceeding 100 ppb can impair the water and results in nuisance vegetation growth. Phosphate is the form of phosphorous that is most readily available to plants and algae.
Target Range: 0-100 ppb
Maximum Tolerance: 1,000 ppb
- Nitrate:** Nitrogen is also essential for plant growth. Nitrate is the predominant form of nitrogen in water. Excessive nitrate concentrations may also result in pollution and increased vegetation.
Target Range: 0-1,000 ppb
Maximum Tolerance: 10,000 ppb (10 ppm)