

PIKE LAKE-EAST: Water Quality Report Card



Quick Facts

Surface Area: 50 acres

Watershed Area: 21,770 acres

Average Depth: 7 feet

Maximum Depth: 9 feet

Water leaving Prior Lake travels down the Prior Lake Outlet Channel, flows north through the western bay of Pike Lake, and empties into the Minnesota River. There are two distinct bays in Pike Lake, the east and west bay. The water quality in each bay is very different. The east bay of Pike Lake borders Pike Lake Road and is relatively stagnant as no water flows through the east bay. The Outlet Channel flows through the west bay which is a big factor in the difference of water quality between the two bays.

Water Quality

Pike Lake-East does not meet state water quality standards and is listed as impaired for nutrients. Average phosphorus concentrations are nearly three times higher than the state water quality standard, chlorophyll-a is over three times the standard, and clarity is about half as clear as the standard. Factors likely affecting the poor water quality include runoff from surrounding land use and an overpopulation of carp. The District is partnering with the Shakopee Mdewakanton Sioux Community to track and remove carp.

Water Quality Indicator	Risk to Water Quality	Grade (2017-2019)	History (2012-2019)	Trend
PHOSPHORUS	Phosphorus is needed by plants and animals to survive, but can cause algae blooms if there is too much phosphorus available. In some cases, algae can produce a toxin which could cause illness or death in animals if ingested. Some sources of high phosphorus are fertilizer, human and animal waste, and soil erosion.	F		 No Trend
CHL-A	Chlorophyll-a is a measurement of the amount of algae in a lake. Some algae can produce dangerous toxins and when algae dies and decomposes it consumes oxygen that would otherwise be used by fish and beneficial organisms. High algal concentrations threaten aquatic life and can impede recreation and enjoyment of the lake.	F		 Improving
CLARITY	Water clarity is affected by the abundance of algae or sediment in the water column. It is dependent on many factors including nutrients, temperature, wind, rain, and boat traffic. Low clarity means less sunlight to power photosynthesis in aquatic plants. These plants are beneficial for wildlife and stabilize the lake bed. Low clarity can also negatively impact a lake user's enjoyment and harm aquatic life.	F		 No Trend

Grading Scale					Graph Explanation	
Excellent	Good	Average	Marginal	Poor		<p>The solid blue line shows the annual change in water quality from 2012-2019. The lower the line, the healthier the lake.</p> <p>The District's goal is for the blue line to be below the red line, which is the water quality standard.</p> <p>The blue dotted-line is the trend line. Decreasing trend line shows improvement in the health of the lake over time.</p>
A	B	C	D			
All or most samples meet the desired threshold.	Many samples meet or are near the desired threshold.	Some samples meet or are near desired threshold.	Many samples do not meet the desired threshold.			
				F		
				Most samples do not meet the desired threshold.		