

CATES LAKE: Water Quality Report Card



Quick Facts

Surface Area: 30 acres

Ordinary High Water Level: 930.4'

Average Depth: 3 feet

Maximum Depth: 11 feet

Cates Lake flows to the Credit River watershed, which makes it the only lake within the Prior Lake-Spring Lake Watershed District's political boundary that does not lie within the hydrologic boundaries. All other lakes in the District flow to Prior Lake or the Prior Lake Outlet Channel. Cates Lake is located just south of Highway 13 in the middle of a residential neighborhood, and it is home to a wide range of wildlife including loons and otters!

Water Quality

Of all the lakes in the District, Cates Lake has some of the best water quality with very clear water, little algae, and low phosphorus levels. Although the dotted average trend line appears to show decreasing water quality, our statistical tests indicate that water quality in Cates' Lake is not significantly changing. Water quality indicators have historically remained below the state water quality standard. Diverse and abundant plant life protects water quality and creates great habitat for wildlife. Invasive aquatic plants, such as curlyleaf pondweed and Eurasian water milfoil, are both present in small amounts; however, the rare and endangered American lotus plant has also been observed throughout Cates lake! Goldfish were also recently discovered in Cates lake in 2020.

**statistically significant

Water Quality Indicator	Risk to Water Quality	Grade (2019-2021)	10-Year Water Quality Avg (2008-2013 & 2017-2021)	10-Year 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.	A	no data	** 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 it 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.	A	no data	** No Trend
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.	A	no data	** No Trend

Grading Scale					Graph Explanation	
A	B	C	D	F		<p>The solid blue line shows the annual change in water quality from 2010-2019. 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 and the point at which the waterbody is not considered polluted.</p> <p>The blue dotted-line is the trend line. A decreasing trend line shows improvement in the health of the lake over time.</p>
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.	Most samples do not meet the desired threshold.		