

HAAS LAKE: 2024 Water Quality Report Card



Quick Facts

Surface Area: 32 acres


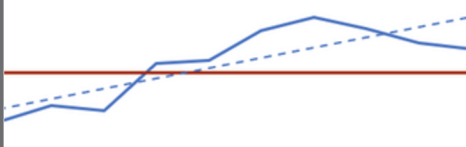


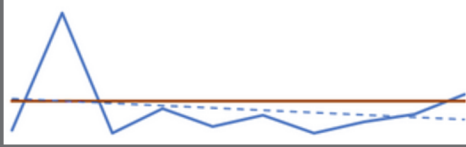


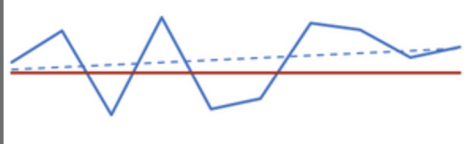

Average Depth: 4 feet

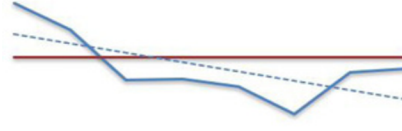
Watershed Area: 3,350 acres

Maximum Depth: 7 feet

Haas Lake is a small residential lake located in the northern portion of the watershed district with fair water quality, and natural shorelines. The lake has a small direct watershed and eventually drains into the Prior Lake Outlet Channel north of Pike Lake. It is a plant-dominated, shallow lake with a floating City of Prior Lake boardwalk along the northwest shore.

**statistically significant

Water Quality Indicator	Risk to Water Quality	Grade (2022-2024)	History (2015-2024)	Trend
 PHOSPHORUS	Phosphorus is needed by plants and animals to survive but can cause algae blooms if there is too much phosphorus available. Sources of high phosphorus include fertilizer, human and animal waste, and soil erosion.	C		 ** Declining
 CHL-A	Chlorophyll-a is a measure of the amount of algae in a lake. Some algae is normal in a healthy lake, but high concentrations threaten aquatic life and can impede on recreation and enjoyment of the lake. Some can even create harmful toxins.	A		 ** Improving
 CLARITY	Water clarity is affected by the abundance of algae and sediment in the water column. It is dependent on factors such as nutrients, temperature, wind, rain, and boat traffic. Low clarity means less sunlight to power photosynthesis in aquatic plants, which help keep the lake healthy.	D		 No Trend

Grading Scale					Graph Explanation	
Excellent	Good	Average	Marginal	Poor		
A All or most samples meet the desired threshold.	B Many samples meet or are near the desired threshold.	C Some samples meet or are near desired threshold.	D Many samples do not meet the desired threshold.	F Most samples do not meet the desired threshold.		
					<p>The solid blue line shows the annual change in water quality over a ten year span. 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>	

HAAS LAKE: Highlight

Haas Lake is a very shallow lake.

The size of a lake and its watershed play a huge part in how a lake “behaves”. Shallow lakes are lakes with depths less than 15 feet. With an average depth of 4 feet, Haas lake is very shallow. This means light can penetrate the entire water column, which allows for dense plant growth throughout the entire lake. While Haas Lake is only home to a few types of plants, they cover nearly 100% of the lake bottom. Most of these plants are Coontail and White Water Lily. While high density of plants can make recreation on the water a major challenge, they also help to keep the water clear and often indicate good water quality.

Shallow lake’s also often have high levels of nutrients, as the low volume to surface area ratio concentrates nutrients in the water. Wind can also stir up nutrients from the lake bottom. While the natural shoreline surrounding Haas Lake provides some “buffer” to runoff, much of the water entering Haas Lake comes from a golf course. This may impact the rising level of phosphorus found in Haas Lake since 2015.

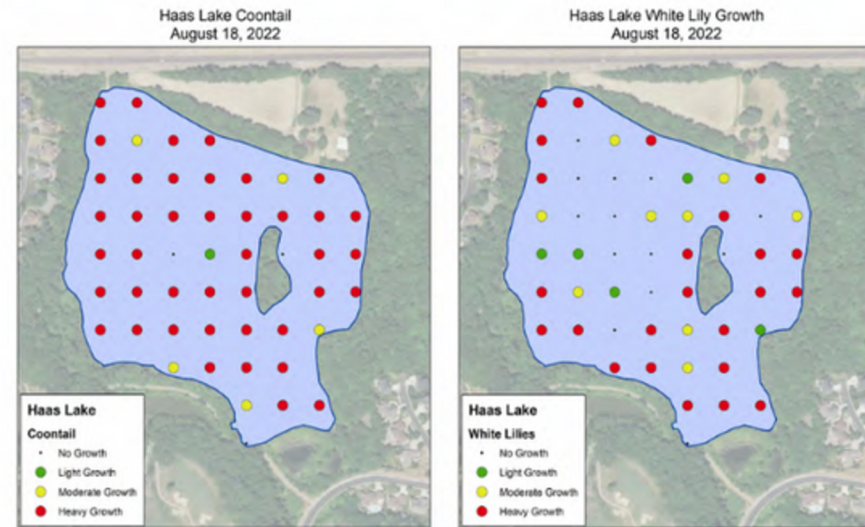


Figure 1. Coontail and white lily growth on August 18, 2022.

What’s the deal with Tier 3 Lakes?

The lakes within Prior Lake’s watershed are categorized into 3 tiers. Haas Lake falls within Tier 3, along with Cates Lake, Jeffers Pond, Rice Lake, Crystal Lake, and Swamp Lake. We have insufficient information on Tier 3 lakes to assess if they meet the state’s water quality standard and none have public access. However, Tier 3 lakes are valued by the residents who live near them, as they provide beautiful scenery and habitat for wildlife, opportunity for recreation, and even flood reduction. At the District, our goal is to better understand the Tier 3 lakes through monitoring. Many Tier 3 lakes, including Haas Lake, are monitored by volunteers through a program called the Community Assisted Monitoring Program, which is managed by the Metropolitan Council.