

# LOWER PRIOR LAKE: 2024 Water Quality Report Card



## Quick Facts

**Surface Area:** 956 acres

**Average Depth:** 13 feet

**Watershed Area:** 18,904 acres

**Maximum Depth:** 56 feet

Lower Prior Lake is the largest and most popular lake in the watershed with two public beaches and a public boat launch. Its large size and good water quality attract people come from all over to boat and swim in its waters. Water only leaves Prior Lake through an outlet structure located in Grainwood Bay. The water then flows northward through the Prior Lake Outlet Channel and to the Minnesota River.

Lower Prior Lake has excellent water quality. This is due in part to a healthy and diverse population of aquatic plants. Over 40% of the lake bed grows aquatic plants including 15 different species of native plants. The District focuses efforts on protecting and preserving the lake's good water quality with projects that reduce phosphorus runoff.

\*\*statistically significant

Water Quality Indicator	Risk to Water Quality	Grade (2022-2024)	10-Year Water Quality Avg (2015-2024)	10-Year Trend
<b>PHOSPHORUS</b>	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.	<b>A</b>		 Improving <b>**</b>
<b>CHL-A</b>	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.	<b>A</b>		 No Trend
<b>CLARITY</b>	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.	<b>A</b>		 No Trend

## Grading Scale

Excellent	Good	Average	Marginal	Poor
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>F</b>
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.

## Graph Explanation

The **solid blue line** shows the annual change in water quality over a ten year span. The lower the line, the healthier the lake.

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.

The **blue dotted-line** is the trend line. A decreasing trend line shows improvement in the health of the lake over time.



