

# SPRING LAKE: Water Quality Report Card



## Quick Facts

**Surface Area:** 587 acres  
**Watershed Area:** 12,430 acres

**Average Depth:** 18 feet  
**Maximum Depth:** 34 feet

Spring Lake is located in the middle of the Prior Lake-Spring Lake Watershed District and receives most of its water from the upper watershed. The main tributaries are County Ditch 13 and the Buck Lake channel. The outlet of Spring Lake flows directly into Upper Prior Lake. It is the second largest lake in the District and a popular lake for boating and fishing.

## Water Quality

Spring Lake has had a reputation for poor water quality in the past. However, since 2013, three Alum Treatments have been applied which have significantly improved water quality and decreased algae blooms. The third alum treatment was applied in 2020 and has improved the results even more, however these results are not included in the graphs below. Because Spring Lake flows directly into Upper Prior Lake, water quality in Upper Prior should also improve. In addition to the alum treatments, the District is focusing efforts on carp removal, flood storage, and projects that reduce nutrients and sediment in the tributaries that flow into Spring Lake.

Water Quality Indicator	Risk to Water Quality	Grade (2017-2019)	History (2010-2019)	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. 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.	<b>B</b>		 Improving
<b>CHL-A</b>	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.	<b>F</b>		 No Trend
<b>CLARITY</b>	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.	<b>F</b>		 No Trend

Grading Scale					Graph Explanation	
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>F</b>		<p>The <b>solid blue line</b> 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 <b>red line</b>, which is the water quality standard and the point at which the waterbody is not considered polluted.</p> <p>The <b>blue dotted-line</b> 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.		