

## Lotus Lake

*Located in eastern Chanhassen, Lotus Lake is one of three headwaters of Purgatory Creek. Water flows out of Lotus into the south fork of Purgatory Creek, which eventually meets up with the two other forks of the creek.*

During June through September of each year, District staff visit the lake every two weeks to collect water samples and take readings. Samples are sent to a laboratory to be tested for nutrients and other compounds. Staff also measure water clarity by lowering a Secchi disk into the water and measuring how deep it goes before it is no longer visible. The data indicates the lake's health based on standards set by the Minnesota Pollution Control Agency (MPCA).

Lotus Lake is classified as a "Deep Lake" by the MPCA. To be considered healthy, the lake must have very low average phosphorus and chlorophyll-a levels and average water clarity of 1.4 meters (4.6 feet) or greater. See summary below. Additional details are located on the next page.



**Total Phosphorus:** Since the alum treatment in 2018, the lake has consistently met the standard. In 2022, the average level was 0.033 mg/L.



**Chlorophyll-a:** The lake has never met the standard. In 2022, the average chlorophyll-a reading was 25.4 µg/L.



**Water clarity:** Since 2013, the lake has consistently met the standard for water clarity except for one year. The average reading in 2022 was 1.5 meters.

**Fish:** As part of the District's Common Carp management plan, Lotus Lake had trap nets deployed to assess carp reproduction. No young-of-year carp were captured signaling no to very little recruitment occurred in 2022.



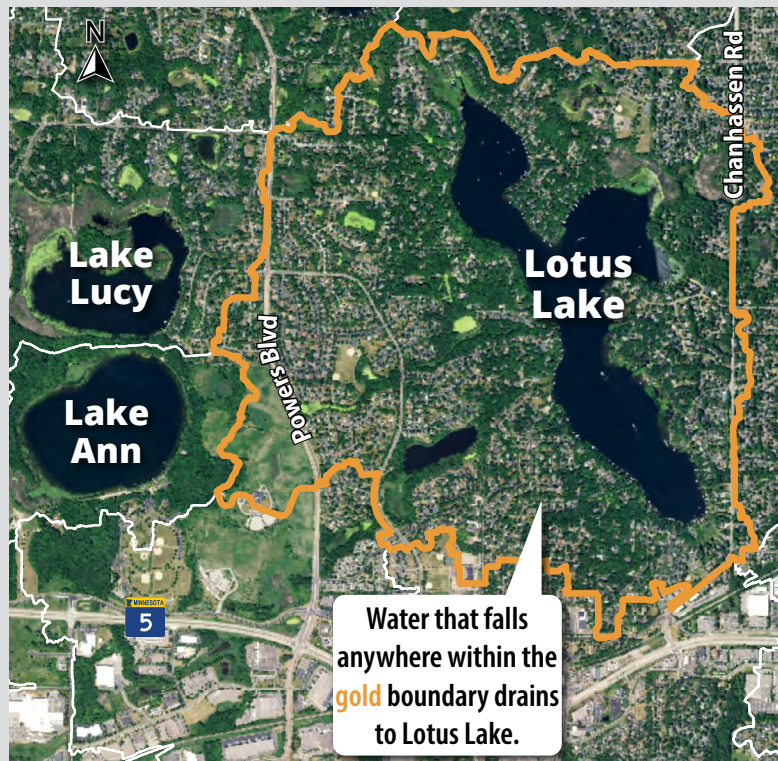
**Plants:** Eurasian Watermilfoil and Curly-leaf Pondweed were targeted with Diquat herbicide in spring 2022. A late summer plant survey indicated that near-shoreline vegetation has declined since the 2017 and 2019 surveys. Coontail was the most common native plant species, while Eurasian watermilfoil has been steadily increasing since 2017.

### Lake & watershed characteristics

Lake size	248 acres
Average lake depth	16 feet
Maximum lake depth	31 feet
MPCA lake classification	Deep lake
Watershed size	1,408 acres
Impervious surface	16% of watershed
Impairment listing	Mercury, nutrients, fish
Common fish	Bluegill, Yellow Bullhead, Walleye, Black Crappie
Invasive species	Eurasian Watermilfoil, Common Carp, Curly-leaf Pondweed, Brittle Naiad



### Watershed Boundary



### Top 3 things you can do at HOME to protect the LAKE



#### Protect storm drains.

Prevent grass clippings, lawn fertilizer and debris from entering storm drains so they don't end up in the lake.



#### Pick up dog waste.

Did you know that pet waste pollutes water? It's full of nutrients and bacteria. Bag it and toss it in a trash can.



#### Reduce stormwater runoff.

Reduce the flow of stormwater off your property by installing a rain garden, native planting, or rain barrel.

# Lotus Lake Water Quality by the Numbers

For the last few years, Lotus Lake has consistently met the clean water standards set by the MPCA. The graphs below show water quality trends over time with the red line showing the MPCA standard for deep lakes.

## Averages

★ = Standard met

Water Quality Parameter	Historical Average	2022 Average	MPCA Standard: Deep Lakes
Total Phosphorus (mg/L)	0.050	0.033 ★	< 0.040
Chlorophyll-a (µg/L)	34.3	25.4	< 14.0
Water Clarity (meter)	1.4 ★	1.5 ★	≥ 1.4

## Native Aquatic Plant Diversity

How does Lotus Lake compare to other lakes in the District?



Lake Ann ranks highest at 25 species.

11 species

Hyland & Round lakes rank lowest at 4 species.

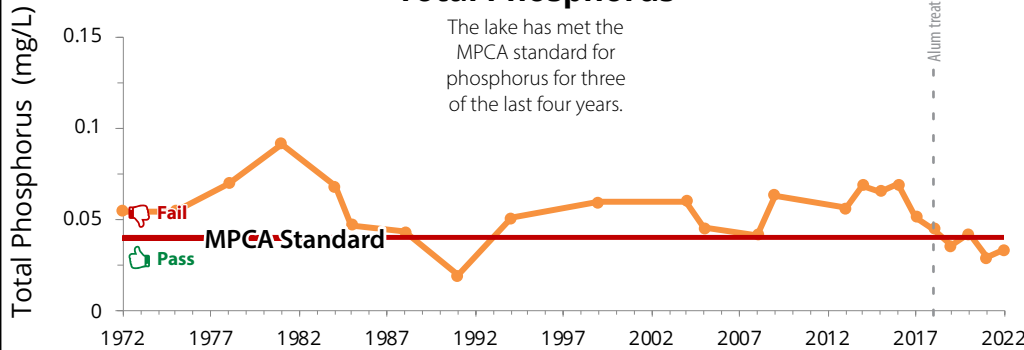


## Trends Over Time: 1972-present

Read the [Water Resources Report](http://rpbcd.org/annualreport) at [rpbcd.org/annualreport](http://rpbcd.org/annualreport)

### Total Phosphorus

The lake has met the MPCA standard for phosphorus for three of the last four years.



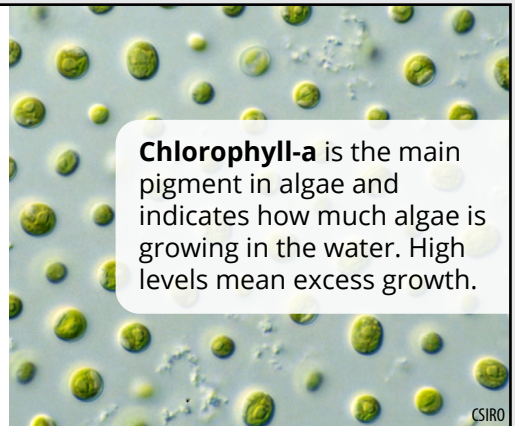
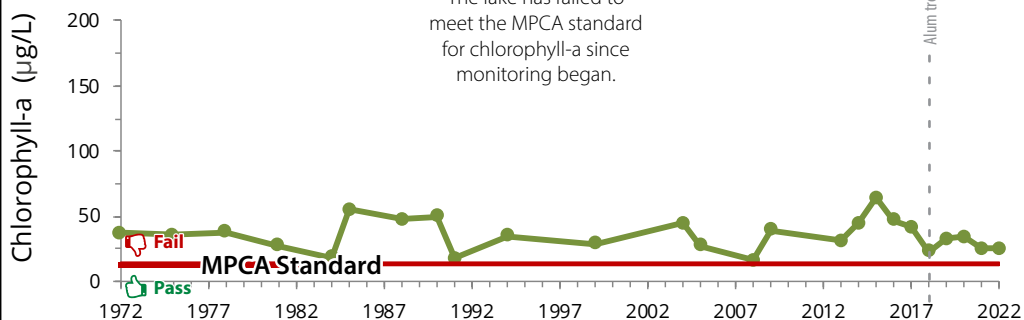
Lotus Lake received an alum treatment in 2018. Alum limits the availability of phosphorus in lakes to control algae growth & improve water clarity.

**Phosphorus** is a nutrient plants and algae need to grow. Too much phosphorus may cause algae blooms.

Filamentous algae bloom

### Chlorophyll-a

The lake has failed to meet the MPCA standard for chlorophyll-a since monitoring began.

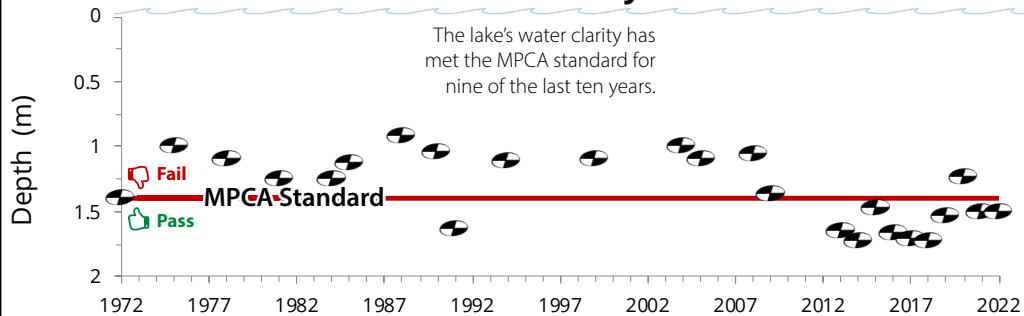


**Chlorophyll-a** is the main pigment in algae and indicates how much algae is growing in the water. High levels mean excess growth.

CSIRO

### Water Clarity

The lake's water clarity has met the MPCA standard for nine of the last ten years.



Secchi disk

**Water clarity** is measured by lowering a Secchi Disk into the water. The depth at which the disk is no longer visible is the water's clarity measurement.



## Grants for Shoreline Restoration

The watershed district offers up to **75% cost share** assistance for restoring your shoreline! Learn more: [rpbcd.org/grants](http://rpbcd.org/grants)



## Contact us

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