

Lotus Lake

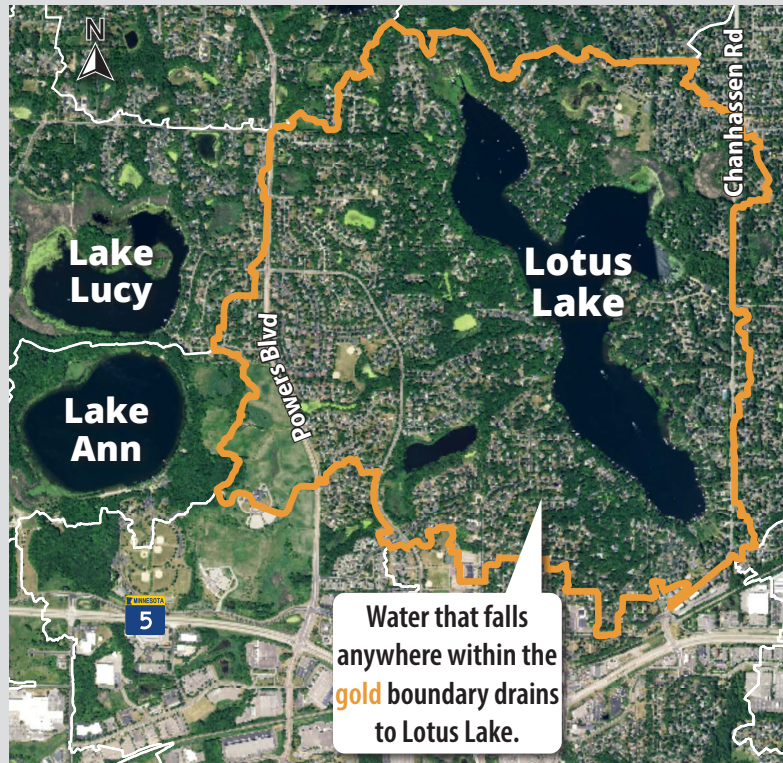
Located in eastern Chanhassen, Lotus Lake is one of three headwaters of Purgatory Creek. Water flows out of Lotus into the south fork of Purgatory Creek, which eventually meets up with the two other forks of the creek.

From June to September every 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.



Watershed Boundary



Lotus Lake Water Quality Snapshot			
Parameter	Deep lake standard	2024 average	Note
Total Phosphorus	Less than 0.04 mg/L	0.045 mg/L	Lake didn't meet standard in 2024 but previously had met standard since alum treatment in 2018. 2nd alum treatment in fall 2024 is expected to reduce available TP.
Chlorophyll-a	Less than 14 µg/L	30.3 µg/L	Lake has <u>not</u> met the standard since monitoring began in 1972.
Water Clarity	Greater than 1.4 meters	1.7 meters	Lake has consistently met standard since 2013 except in 2020.

Water quality trends shown on the back page.



Carp update: Staff continue to monitor Common Carp, an invasive species that harms water quality by destroying aquatic vegetation and stirring up lake bottom sediments. Carp biomass in 2024 was 19 kg/ha, well below the desired 100 kg/ha threshold.



Plant update: Because Eurasian Watermilfoil (EWM) had become a dominant species, a whole-lake treatment was applied in 2024 to control this invasive plant. Post-treatment survey indicated no presence of EWM and that native White Water Lily and native Yellow Water Lily had become the most common aquatic plants.

Lake & watershed characteristics

Lake size	248 acres
Average lake depth	10.1 feet
Maximum lake depth	31 feet
MPCA lake classification	Deep lake
Watershed size	1,408 acres
Impervious surface	16% of watershed
Impaired Waters listing	Mercury, nutrients, fish
Common fish	Bluegill, Yellow Bullhead, Walleye, Black Crappie, Largemouth Bass
Invasive species	Eurasian Watermilfoil, Common Carp, Curly-leaf Pondweed, Brittle Naiad, Zebra mussel

Native Aquatic Plant Diversity

How does Lotus Lake compare to other lakes in the District in number of native plant species?



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, except for Chlorophyll-a. The graphs below show water quality trends over time with the red line representing the MPCA standard for deep lakes.

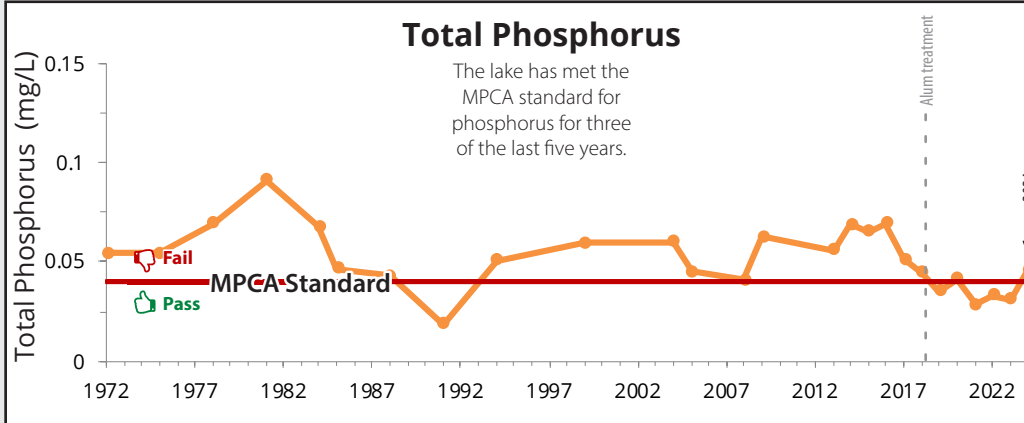
2024

Water Quality Report Card

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rpbcwd.org/grades

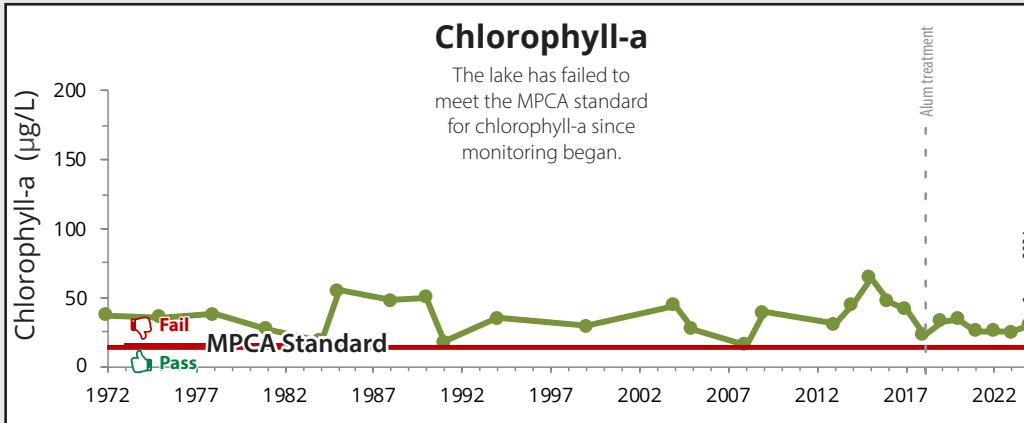
Trends Over Time: 1972-present



Lotus Lake received alum treatments in 2018 & fall 2024. Alum limits the availability of phosphorus in lakes to control algae growth & improve water clarity.

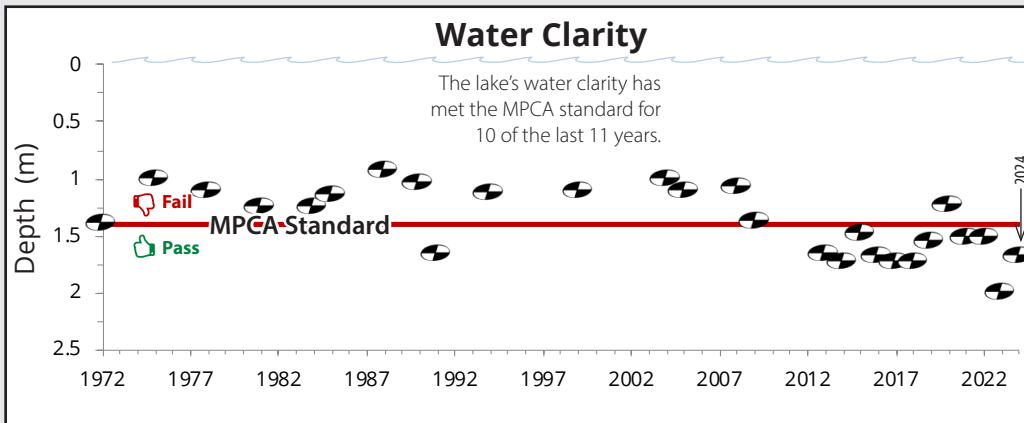
Phosphorus is a nutrient plants and algae need to grow. Too much phosphorus may cause algae blooms.

Filamentous algae bloom



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

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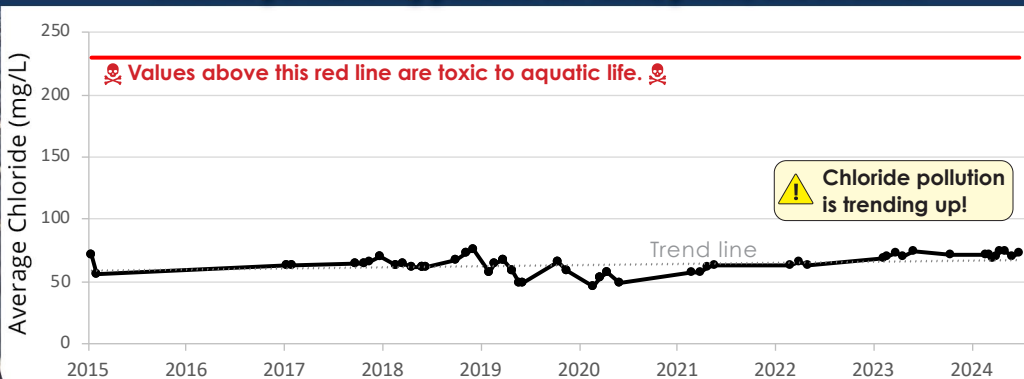


Secchi disk

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.

Chloride: A Growing Concern

Chloride permanently pollutes our lakes, ponds, and streams!



What can I use instead of winter de-icers?

All affordable & effective residential de-icing products contain chloride, even those labeled as "eco-friendly" or "pet safe."

Focus instead on reducing build up of ice on your property:

- Shovel early & often
- Prevent ice formation, avoid driving or walking on snow
- Pile snow where it won't melt & refreeze on walkways

ONE TEASPOON of SALT POLLUTES 5 GALLONS of WATER FOREVER

Learn more rpbcwd.org/salt