

Lake Riley

At 297 acres and average depth of 23 ft, Lake Riley is the largest lake in the Watershed District. It is located on the boundary of Chanhassen and Eden Prairie and is a popular summer recreation spot.

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).

Lake Riley 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.

Lake Riley Water Quality Snapshot

Parameter	Deep lake standard	2024 average	Note
Total Phosphorus	Less than 0.04 mg/L	0.023 mg/L	Since its first alum treatment in 2016, the lake has consistently met the standard.
Chlorophyll-a	Less than 14 µg/L	13.8 µg/L	Since its first alum treatment in 2016, the lake has consistently met the standard. The 2024 chlorophyll-a average crept close to the standard.
Water Clarity	Greater than 1.4 meters	2.8 meters	The lake has consistently met the clarity standard since 2014.

Water quality trends shown on back of 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. In 2024, small mesh trap netting yielded no young-of-the-year carp, which means carp reproduction is low to non-existent.



Plant update: In 2024 a treatment was applied to control Curly-leaf Pondweed. A survey in late summer identified 19 species, 13 of which were native. In 2024 Eurasian Watermilfoil frequency increased to 17% from 3% (2023). Coontail and Star Grass, both native, were the most abundant species in 2024.

Lake & watershed characteristics

Lake size	297 acres
Average lake depth	23 feet
Maximum lake depth	49 feet
MPCA lake classification	Deep lake
Watershed size	1,776 acres
Impervious surface	18% of watershed
Impaired Waters listing	Mercury, fish, nutrients
Common fish	Bluegill, Northern Pike, Yellow Perch, Yellow Bullhead, Black Crappie
Invasive species	Curly-leaf Pondweed, Eurasian Watermilfoil, Zebra Mussels

Great news!

Because Lake Riley's 10-year water quality averages meet deep lake standards, the District is requesting that the MPCA removes it from the Impaired Waters List for nutrients.



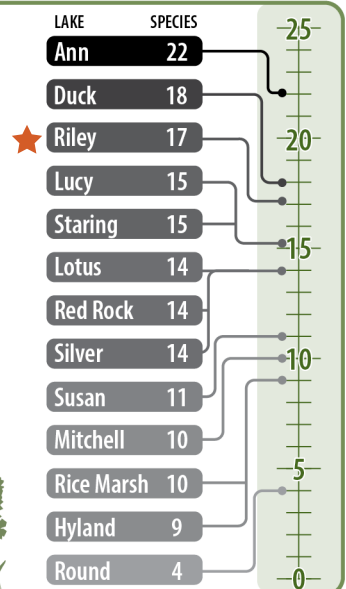
Watershed Boundary



Water that falls anywhere within the gold boundary drains to Lake Riley.

Native Aquatic Plant Diversity

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



Lake Riley Water Quality by the Numbers

2024

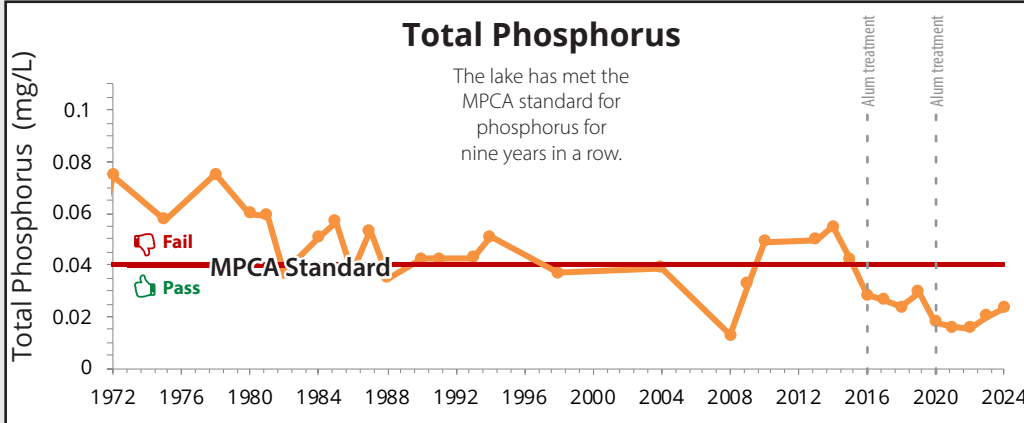
Water Quality Report Card

B

rpbcwd.org/grades

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

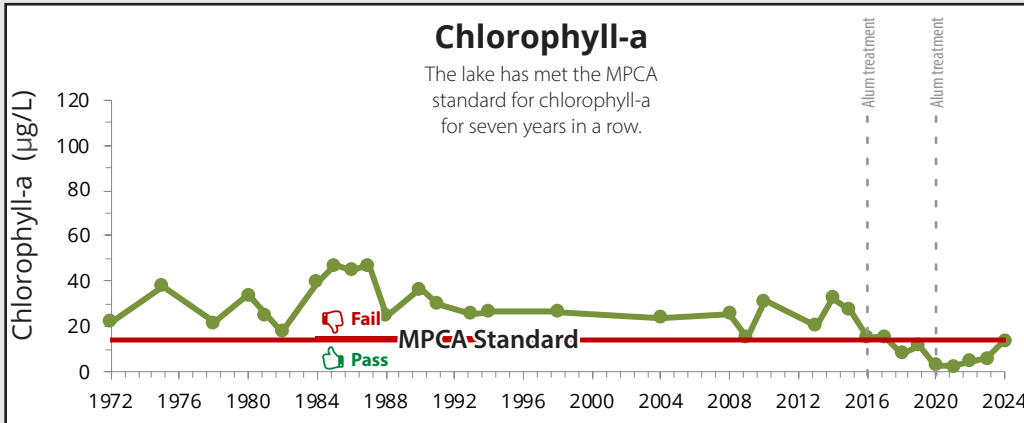
Trends Over Time: 1972-present



Riley Lake received an alum treatment in 2016 and 2020. Alum limits the availability of phosphorus in lakes to control algae growth & improve water clarity.

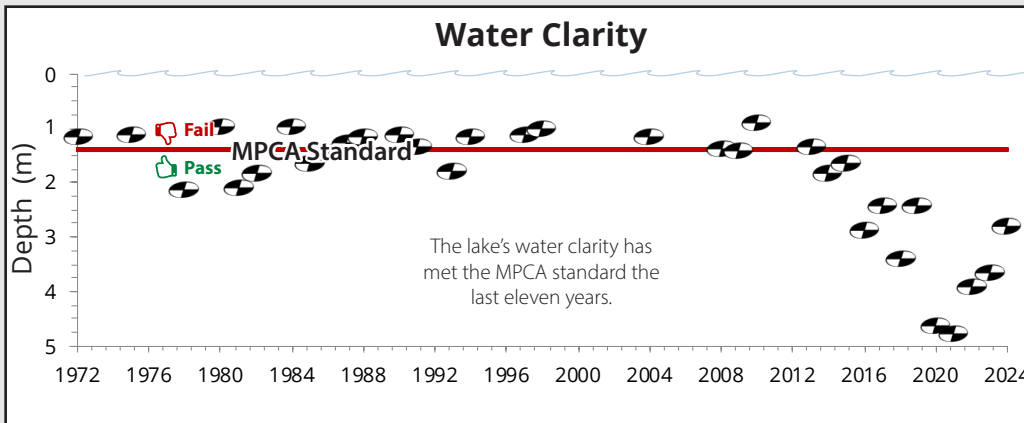
Phosphorus is a nutrient plants and algae need to grow. Too much phosphorus may cause algae blooms.

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.

CSIRO

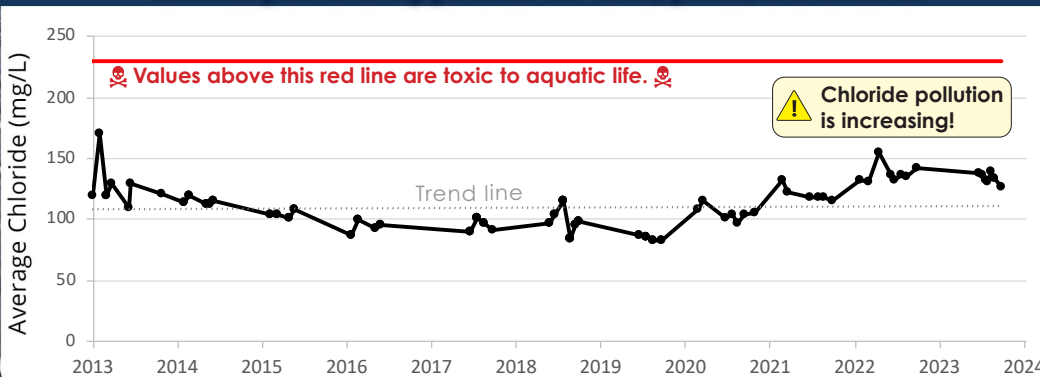


Secchi disk

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