

# 2023 Update

# Hyland Lake

Located in Bloomington, Hyland Lake is surrounded by Hyland Lake Park Reserve, a Three Rivers Park District facility. Visitors can paddle the lake in the summer, hike nearby trails, and ski in the winter.

During June through September of each year, Three Rivers Park 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).

Hyland Lake is classified as a "Shallow 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 1.0 meter (3.3 feet) or greater. See summary below. Additional details are located on the next page.



**Total Phosphorus**: A second dose of aluminum sulfate (alum) was applied in 2022 by Three Rivers Park District. Alum reduces algae growth by trapping phosphorus, an algae food source, in lake sediments. In 2023, the lake met the MPCA standard (<0.06 mg/L) with an average total phosphorus level of **0.040 mg/L**. The lake has consistently met the standard since the first alum dose in 2019.



**Chlorophyll-a:** In 2023, the average reading for chlorophyll-a was **11.6 µg/L**, which met the MPCA shallow lake standard (<20 µg/L). Levels have dropped since the alum treatment.



**Water clarity:** Since the first alum treatment, the lake has met the MPCA shallow lake standard (>1.0 meters) for the last four years. The average reading in 2023 was **1.3 meters**.



**Plants:** For the third consecutive year, the herbicide Fluridone was used to treat Curly-leaf Pondweed immediately after ice-off. In 2023, the number of native species increased to 9 species from a previous high of 6 species in 2019 and 2020. The combined herbicide treatments and aluminum sulfate application by Three Rivers Park District has allowed plants to expand to 50% of the littoral area.

### Lake & watershed characteristics

Lake size	84 acres
Average lake depth	7.5 feet
Maximum lake depth	12 feet
MPCA lake classification	Shallow lake
Watershed size	922 acres
Impervious surface	17% of watershed
Impaired Waters listing	Nutrients
Common fish	Bluegill, Black Crappie, Walleye, Black Bullhead, Largemouth Bass
Invasive species	Curly-leaf Pondweed



#### Watershed Boundary





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# Hyland Lake Water Quality by the Numbers

The graphs below show water quality trends over time with the red line representing the MPCA standard for **shallow lakes**. Three Rivers Park District provides most of the water quality and plant survey data for Hyland Lake.



## Water Quality Report Card

rpbcwd.org/grades

#### Trends Over Time: 1972-present Hyland Lake received alum treatments in 2019 & 2022. **Total Phosphorus** Alum limits the availability of phosphorus in lakes otal Phosphorus (mg/L) Historically the lake has failed to meet the to control algae growth & improve water clarity. MPCA standard for phosphorus, though 0.2 this has improved the last few years. Phosphorus is a nutrient 0.15 plants and algae need to grow. Too much 0.1 phosphorus may cause algae blooms. MPCA-Standard 0.05 Pass 0 Filamentous algae bloom 1971 1976 1981 1986 1991 1996 2001 2006 2011 2016 2021 Chlorophyll-a Historically the lake has failed to meet the Chlorophyll-a (µg/L) 200 120 120 20 20 MPCA standard for chlorophyll-a but yearly averages have improved the last few years. Chlorophyll-a is the main pigment in algae and indicates how much algae is growing in the water. High levels mean excess growth. 💭 Fail MPCA Standard 0 1971 1976 1981 1986 1991 1996 2001 2006 2011 2016 2021 CSIRC Water Clarity 0 0.5 Depth (m) Water clarity is measured MPCA-Standard by lowering a Secchi Disk Pass into the water. The depth 1.5 at which the disk is no 2 The lake's water clarity has 🧲 longer visible is the water's met the MPCA standard 2.5 clarity measurement. for the last 5 years. 3 1976 1981 1986 1991 1996 2001 2006 2011 2016 2021 1971

## Chloride: A Growing Concern

Chloride permanently pollutes lakes, ponds, & streams!

Using excess winter salt does not equal greater safety. It does mean higher cost for you and more water pollution.





#### 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."



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

ONE TEASPOON OF SALT POLLUTES 5 GALLONS OF WATER FOREVER

Learn more rpbcwd.org/salt