

## Mitchell Lake

Located in Eden Prairie, Mitchell Lake is a part of the Purgatory Creek chain of lakes. During high water events it outflows through an overflow pipe to Red Rock Lake.

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).

Mitchell 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:** Concentrations have decreased since monitoring began in 1972. In 2023, the lake's average total phosphorus level of **0.052 mg/L** met the MPCA shallow lake standard (<0.06 mg/L).

**Chlorophyll-a:** No significant trend. In 2023, the average reading was twice the MPCA shallow lake standard (<20 µg/L) at **44.1 µg/L**. 2023 was also higher than 2022 (27.3 µg/L).

**Water clarity:** No significant trend. The lake consistently meets the MPCA shallow lake standard (>1.0 meters). The average reading in 2023 was **1.3 meters**.

**Plants:** In 2023, a plant survey was conducted to track aquatic plant populations. Coontail was dominant (52% of sites). At 15 sites, light growth of Eurasian Watermilfoil was found. An established population of Brittle Naiad (invasive) was discovered in the northeast end of the lake. In late summer, submerged aquatic plants covered about 68 acres (61% of the lake). A total of 13 acres of the lake was treated with herbicide, which reduced Curlyleaf Pondweed abundance to a frequency of occurrence of 1%. A fall turion survey (main reproductive structure of Curlyleaf Pondweed) yielded a relatively low abundance of turions.

### Lake & watershed characteristics

Lake size	124 acres
Average lake depth	5.3 feet
Maximum lake depth	19 feet
MPCA lake classification	Shallow lake
Watershed size	937 acres
Impervious surface	30% of watershed
Impaired Waters listing	Mercury
Common fish	Bluegill, Black Bullhead, Black Crappie, Northern Pike, Pumpkinseed
Invasive species	Curly-leaf Pondweed, Eurasian Watermilfoil, Purple Loosestrife, Brittle Naiad

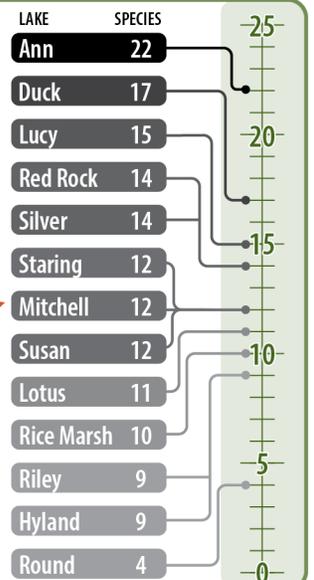


### Watershed Boundary



### Native Aquatic Plant Diversity

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



# Mitchell 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. For the last few years, the City of Eden Prairie has collected water quality data for Mitchell Lake.

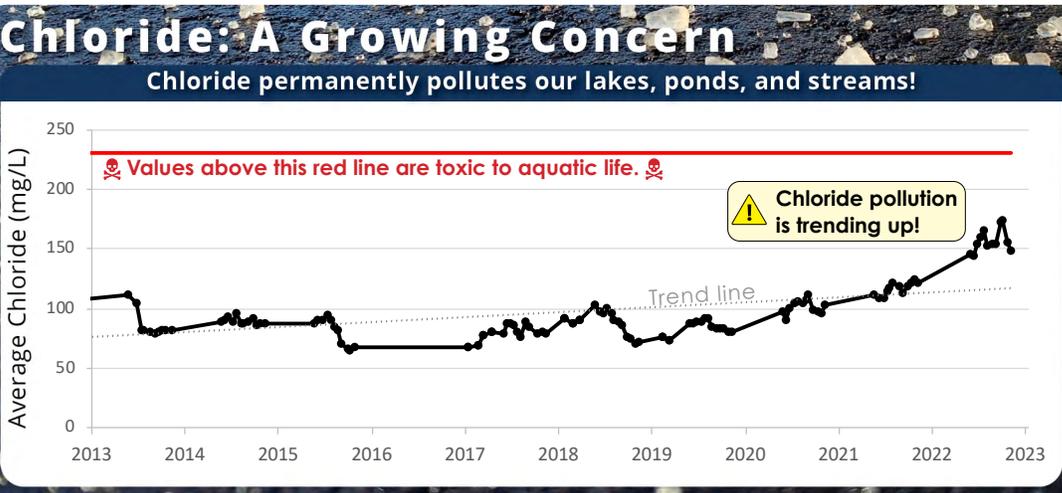
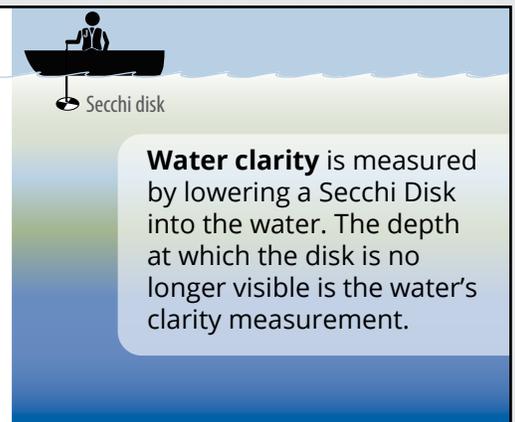
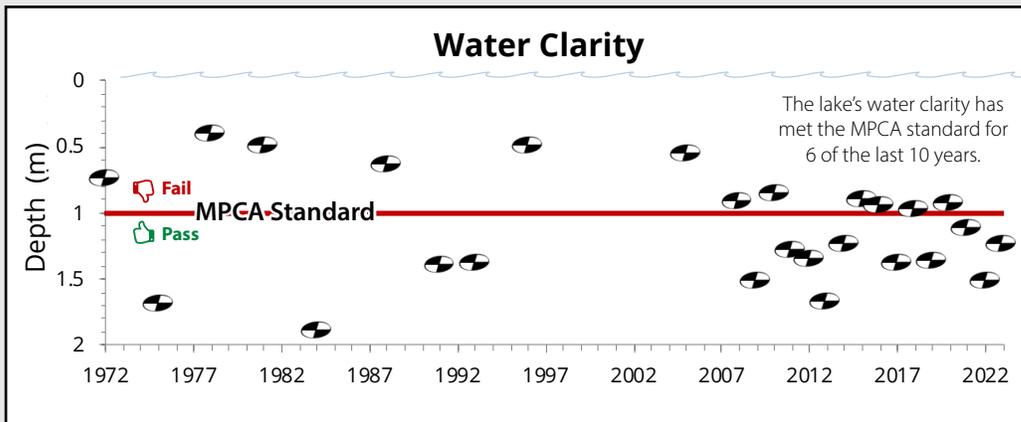
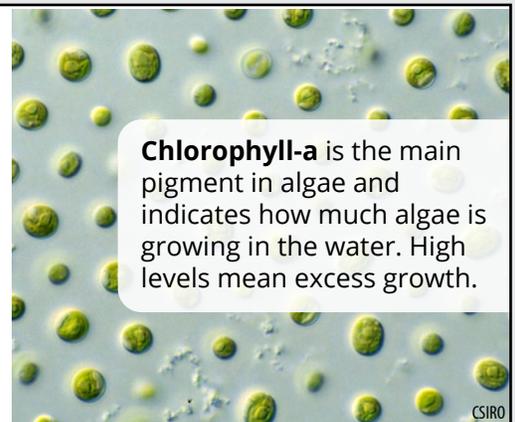
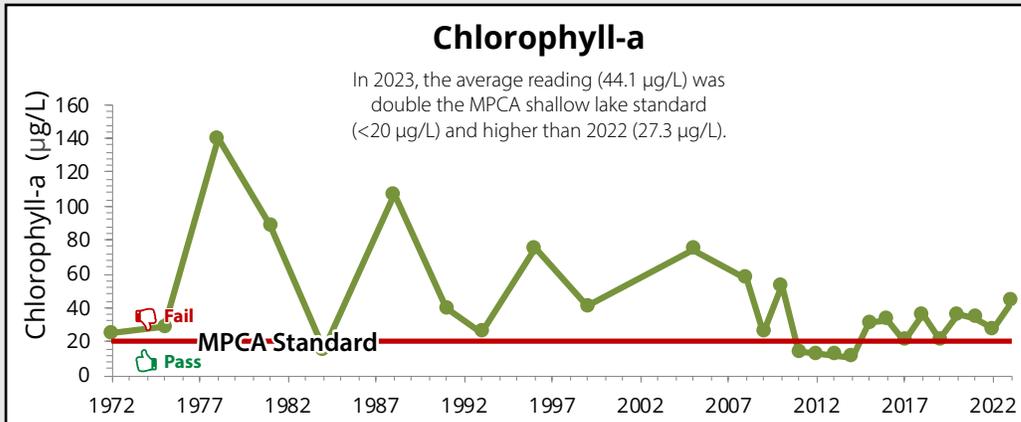
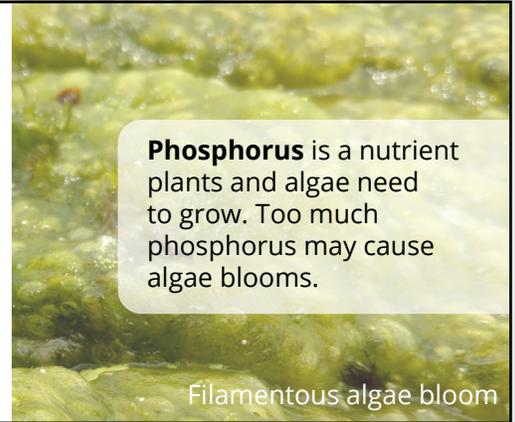
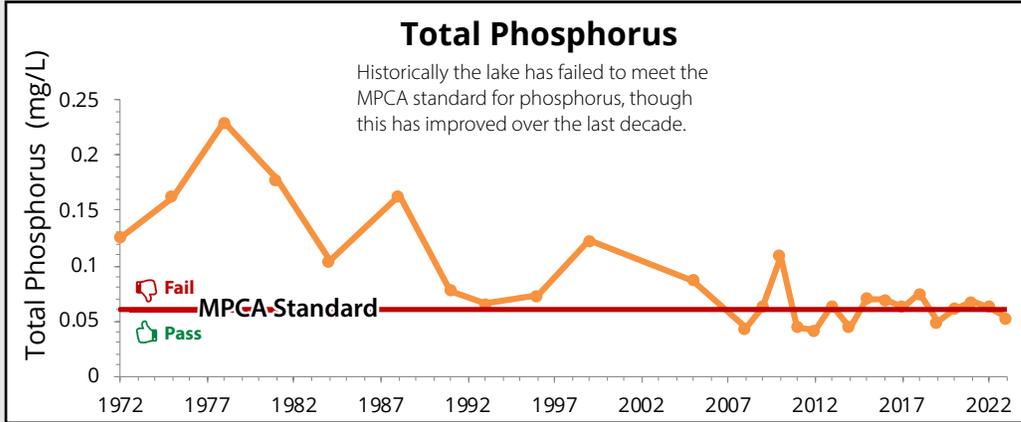


**Water Quality Report Card**

[rpbcwd.org/grades](http://rpbcwd.org/grades)

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## Trends Over Time: 1972-present



### 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](http://rpbcwd.org/salt)