

## Silver Lake

Located in Shorewood, Silver Lake sits at the edge of the watershed district. It is the only lake in the District with a native wild rice population, a rarity in metro area lakes!

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).

Silver 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.

- P** **Total Phosphorus:** No significant trend. In 2023, the lake met the MPCA shallow lake standard (<0.06 mg/L) with an average total phosphorus level of **0.063 mg/L**.
- Chlorophyll-a:** No significant trend. In 2023, the average reading for chlorophyll-a was **19.1 µg/L**, which met the MPCA standard for shallow lakes (<20 µg/L).
- Water clarity:** Since 2017, the lake has consistently met the MPCA shallow lake standard for water clarity (>1.0 meters). This is likely linked to reduced water levels that occurred after the outlet was cleared and the increased fish winterkill frequency. The average reading in 2023 was **1.7 meters**.
- Plants:** An aquatic plant survey was conducted in 2023. Submersed Coontail (94% frequency of occurrence) and floating White Waterlily (50% frequency of occurrence) are the dominant vegetation in the lake. Since the 2013 survey, the number of species has increased from 10 species to 16 in 2020 and 14 in 2023. Most plant species have increased in abundance and density due to increased water clarity. This includes Northern Wild Rice which has increased from 5% in 2013 and 1% in 2020 to 13% in 2023.



### Watershed Boundary

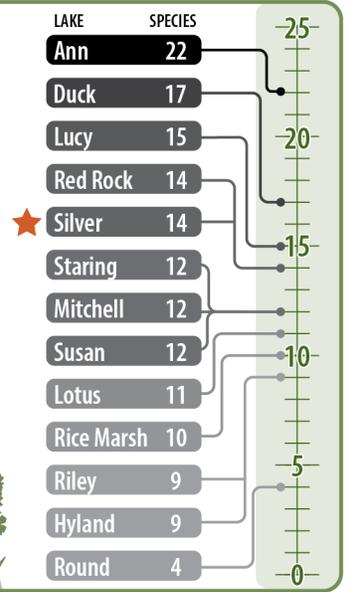


### Lake & watershed characteristics

Lake size	71 acres
Average lake depth	5 feet
Maximum lake depth	14 feet
MPCA lake classification	Shallow lake
Watershed size	391 acres
Impervious surface	14% of watershed
Impairment listing	Nutrients
Common fish	Black Bullhead, Fathead Minnow, Central Mudminnow
Invasive species	Curly-leaf Pondweed, Purple Loosestrife

### Native Aquatic Plant Diversity

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



# Silver Lake Water Quality by the Numbers

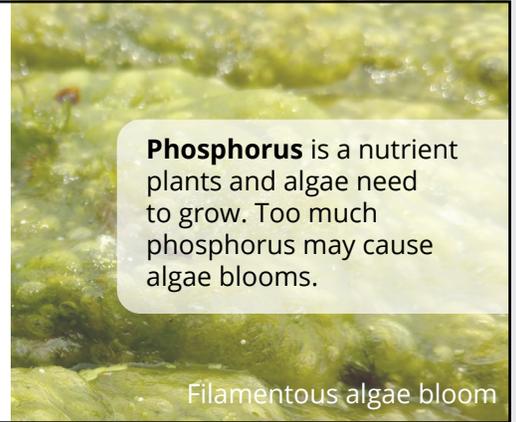
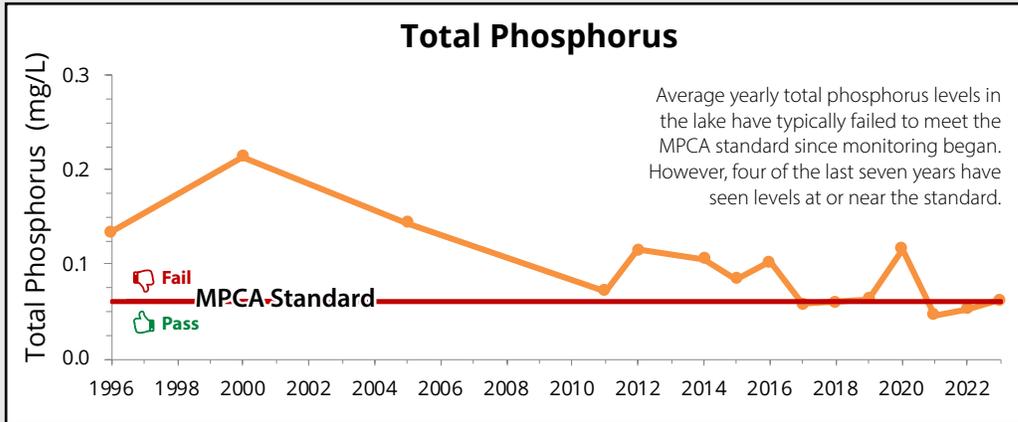
The graphs below show water quality trends over time with the red line representing the MPCA standard for shallow lakes.

**Water Quality Report Card**

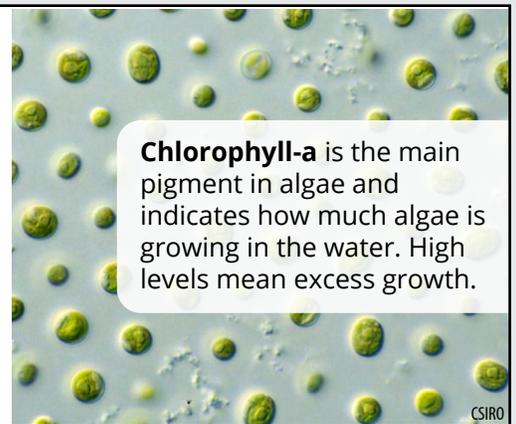
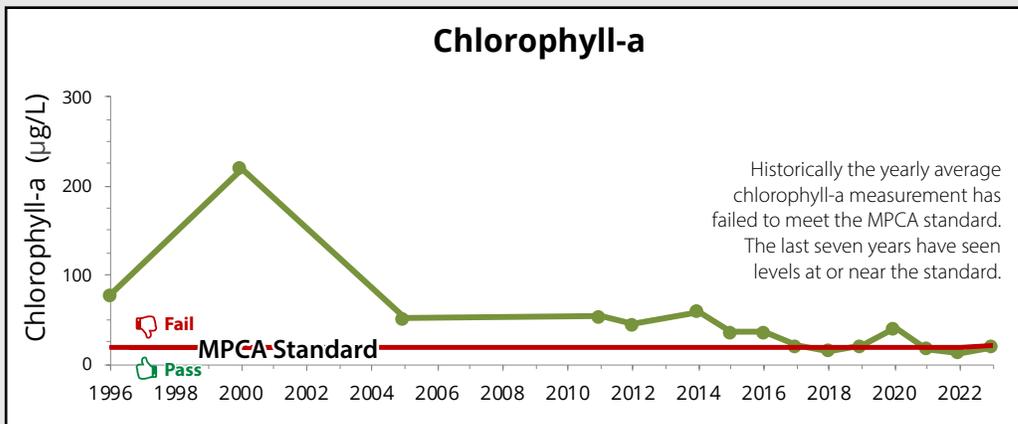
[rpbcwd.org/grades](http://rpbcwd.org/grades)



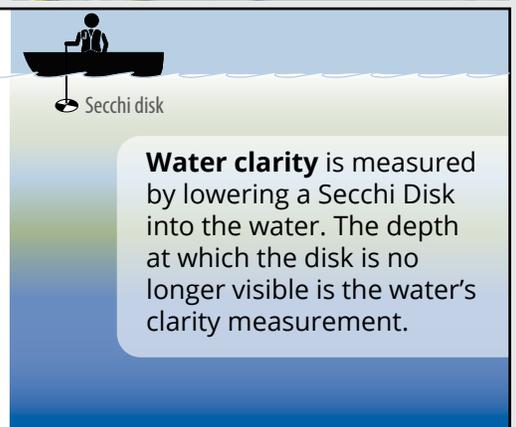
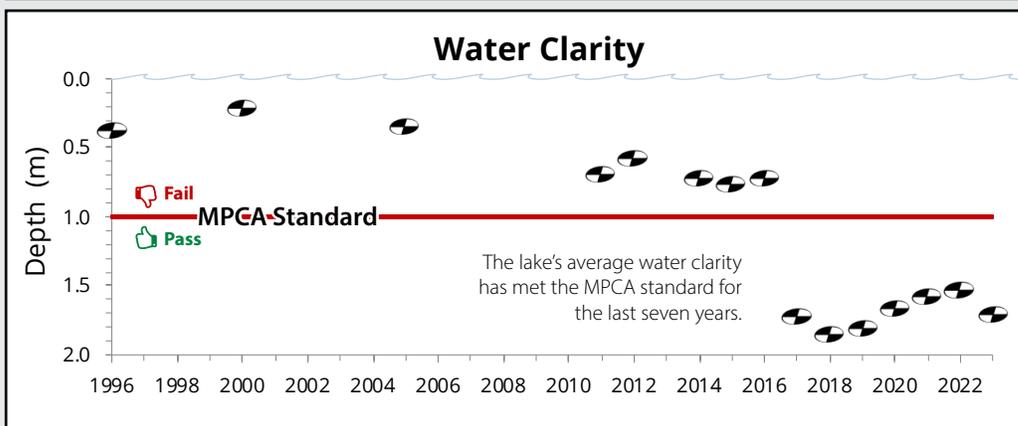
## Trends Over Time: 1972-present



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



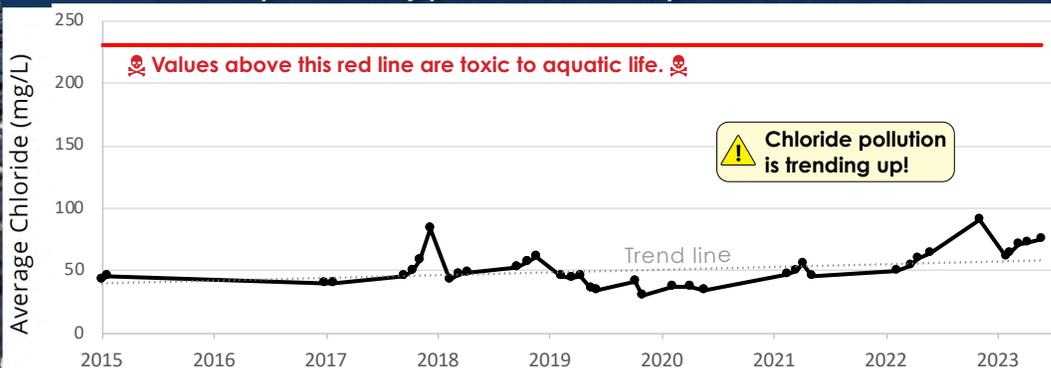
**Chlorophyll-a** is the main pigment in algae and indicates how much algae is growing in the water. High levels mean excess growth.



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