RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

2024 Update

Lake Susan

Located in Chanhassen, Lake Susan is a part of the Riley Creek Chain of Lakes. It is the third lake that Riley Creek flows through as it makes its way to the Minnesota River.

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 Susan is classified as a "Shallow Lake" by the MPCA. To be considered healthy, the lake must meet standards set for shallow lakes. This includes low average phosphorus and chlorophyll-a levels and average water clarity of 1.0 meter (3.3 feet) or greater.

Lake Susan Water Quality Snapshot

Parameter	Shallow lake standard	2024 average	Note
Total Phosphorus	Less than 0.06 mg/L	0.076 mg/L	No significant trend. In 2024, average phosphorus increased, and the lake did not meet the standard.
Chlorophyll-a	Less than 20 µg/L	49.1 µg/L	No significant trend. In 2024, average chlorophyll-a was twice the standard.
Water Clarity	Greater than 1.0 meters	1.3 meters	No significant trend. In 2024, the average reading improved to meet the standard.

Water quality trends shown on back of page.

Carp update: Small mesh trap nets were set to assess Common Carp reproduction. Carp are invasive and harm water quality by destroying aquatic vegetation and stirring up lake bottom sediments. In 2024, no young-of-the-year carp were captured meaning little to no recruitment occurred.

Plant update: A spring 2024 survey showed little Curly-leaf Pondweed presence so an herbicide treatment did not occur. A late summer point intercept survey did not capture the presence of Eurasian Watermilfoil or Brittle Naiad (though it's been observed). Native Coontail and White Water Lily were the dominant aquatic plant species in 2024.

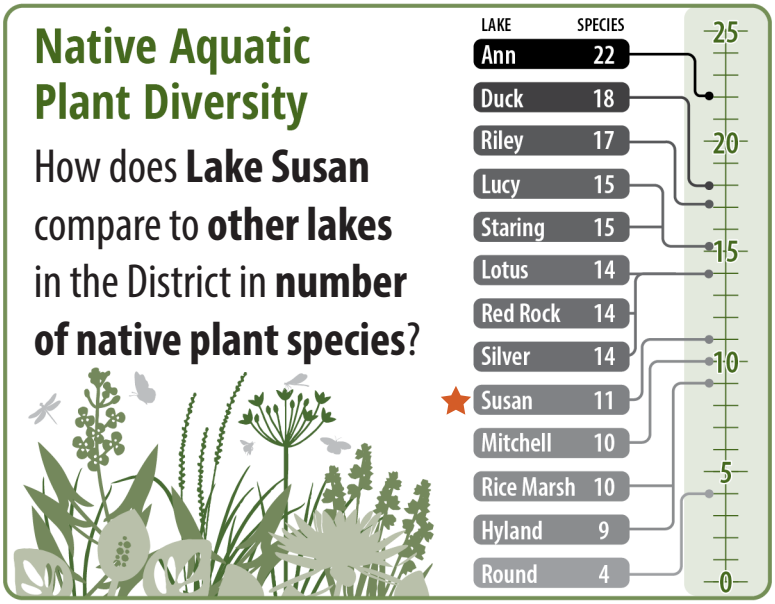
Lake & watershed characteristics

Lake size	88 acres
Average lake depth	10 feet
Maximum lake depth	17 feet
MPCA lake classification	Shallow lake
Watershed size	1,231 acres
Impervious surface	27% of watershed
Impaired Waters listing	Mercury & nutrients
Common fish	Bluegill, Black Crappie, Northern Pike, Black Bullhead, Yellow Bullhead
Invasive species	Curly-leaf Pondweed, Eurasian Watermilfoil, Common Carp, Brittle Naiad

Watershed Boundary

Native Aquatic Plant Diversity

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



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Lake Susan 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. In 2024, Lake Susan failed to meet two clean water standards set by the MPCA.**

2024 Water Quality Report Card

rpbcwd.org/grades

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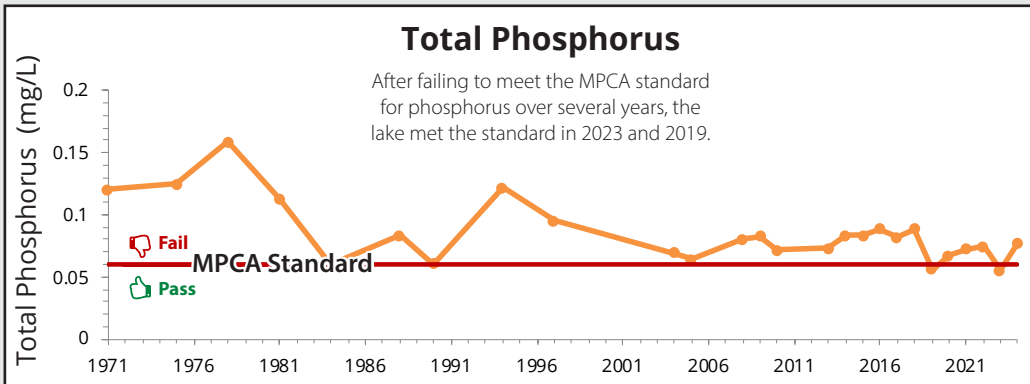
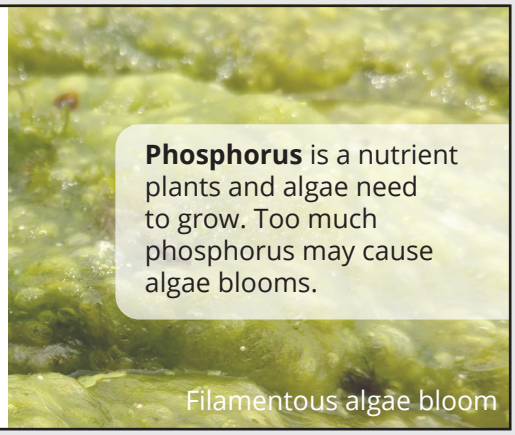
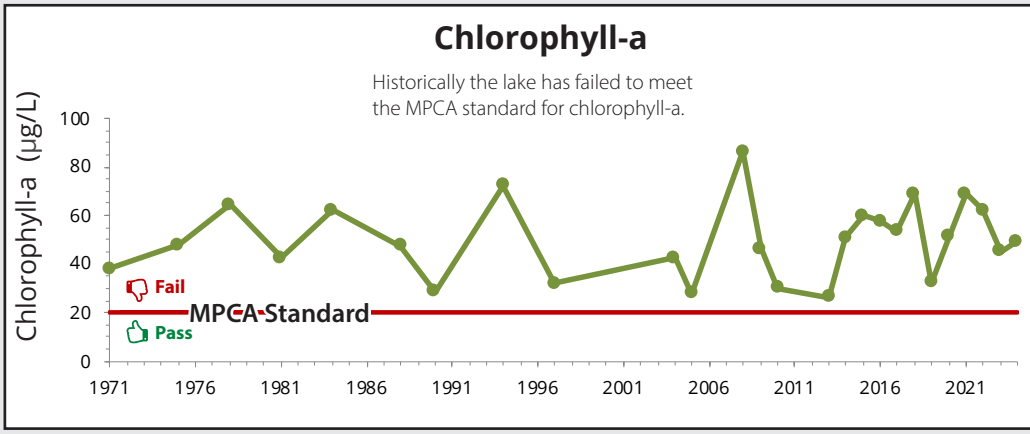
Trends Over Time: 1972-present

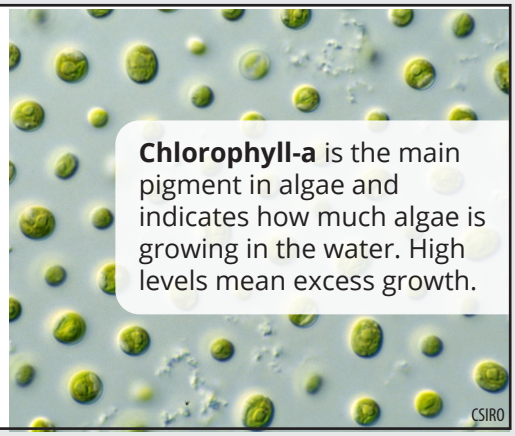
Total Phosphorus



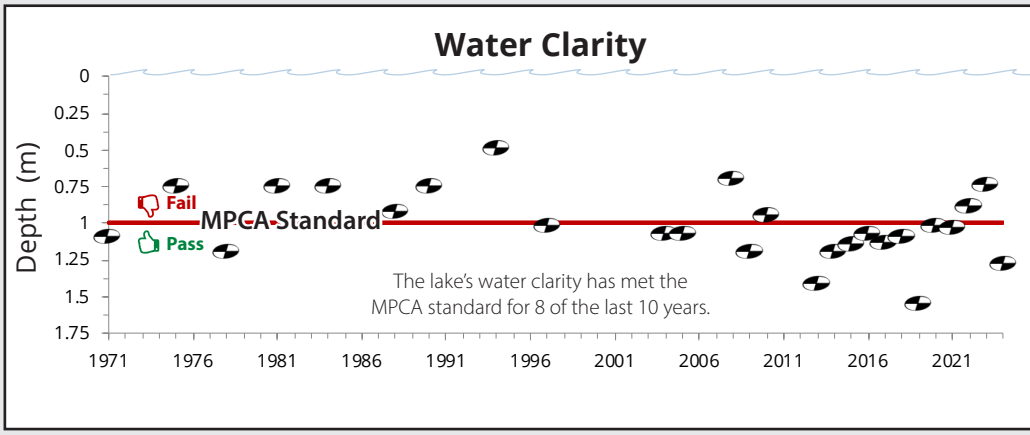


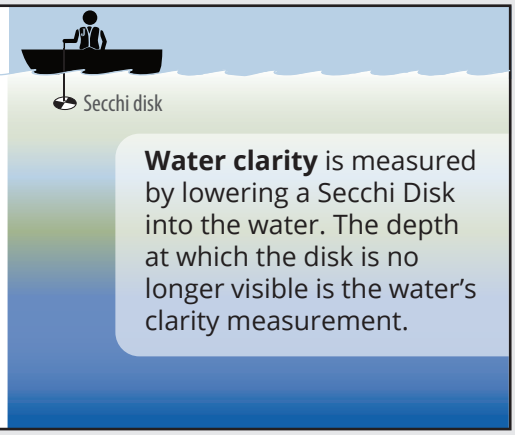
Chlorophyll-a





Water Clarity





Chloride: A Growing Concern

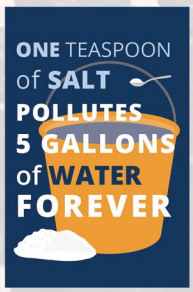
Chloride permanently pollutes our lakes, ponds, and streams!

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**



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