RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

2021 Update

Duck Lake

Located in Eden Prairie, Duck Lake is one of the district's shallow lakes. Since 2011, it has seen improvement in water quality and has met the Minnesota Pollution Control Agency's clean water standards for several years.

During June through September of each 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's no longer visible. The data indicates the lake's health based on standards set by the Minnesota Pollution Control Agency (MPCA).

Duck 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; data details may be found on the other side of the page.

Total Phosphorus: No significant trend. In 2021, the lake met the MPCA standard with an average total phosphorus level of 0.040 mg/L.

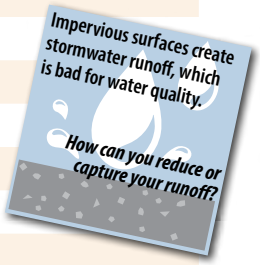
Chlorophyll-a: No significant trend. In 2021, the average reading for chlorophyll-a was 15.2 µg/L.

Water clarity: No significant trend. The lake consistently meets the standard for water clarity. The average reading in 2021 was 1.7 meters.

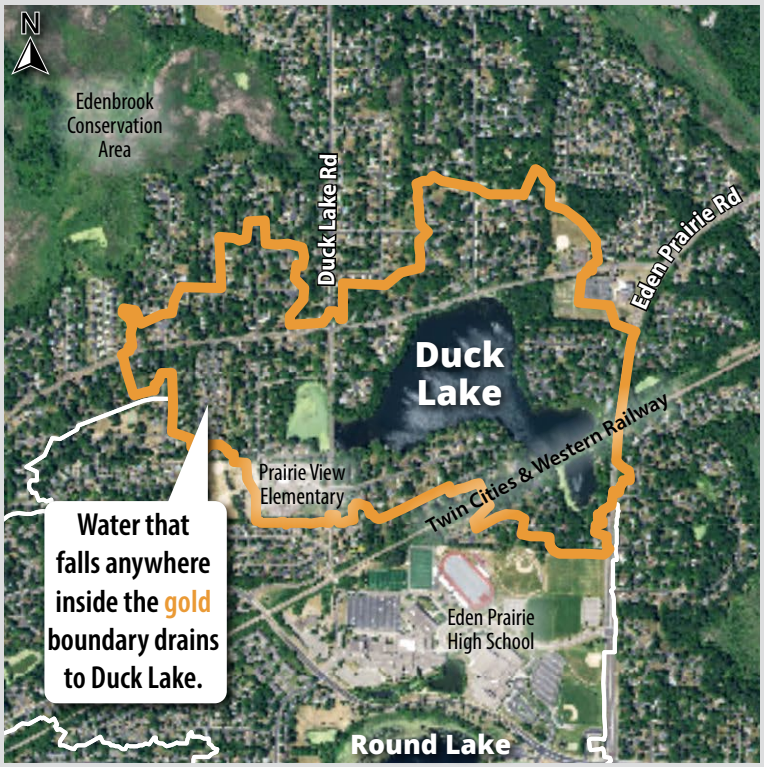
Fish: Over the past few years, Duck Lake has had consecutive winter fish kills due to depleted oxygen levels. This had reduced native fish survival and is considered a natural process for a shallow lake.

Lake & watershed characteristics

Lake size	41 acres
Average lake depth	3.4 feet
Maximum lake depth	8 feet
MPCA lake classification	Shallow lake
Watershed size	233 acres
Impervious surface	20% of watershed
Impairment listing	Not listed
Common fish	Bluegill, Black Crappie, Largemouth Bass, Green Sunfish
Invasive species	Curly-leaf Pondweed, Purple Loosestrife, Eurasian Watermilfoil, Goldfish



Watershed Boundary



Top 3 *things you can do at HOME to protect the LAKE*

Protect storm drains.

Prevent grass clippings, lawn fertilizer and debris from entering storm drains so they don't end up in the lake.

Pick up dog waste.

Did you know that pet waste pollutes water? It's full of nutrients and bacteria. Bag it and toss it in a trash can.

Reduce stormwater runoff.

Reduce the flow of stormwater off your property by installing a rain garden, native planting, or rain barrel.

Duck Lake Water Quality by the Numbers

The graphs below show water quality trends over time with the red line showing the MPCA standard for **shallow lakes**. Over the last decade, **Duck Lake** has typically met the clean water standards set by the MPCA.

Averages

★ = Standard met

Water Quality Parameter	Historical average	2021 average	MPCA standard: Shallow Lakes
Total Phosphorus (mg/L)	0.059 ★	0.040 ★	< 0.06
Chlorophyll-a (µg/L)	15.6 ★	15.2 ★	< 20
Water Clarity (meter)	1.8 ★	1.7 ★	> 1.0

Native Aquatic Plant Diversity

How does **Duck Lake** compare to **other lakes** in the District?

Lake Ann ranks highest at 25 species.

Duck & Round lakes rank lowest at 7 species.

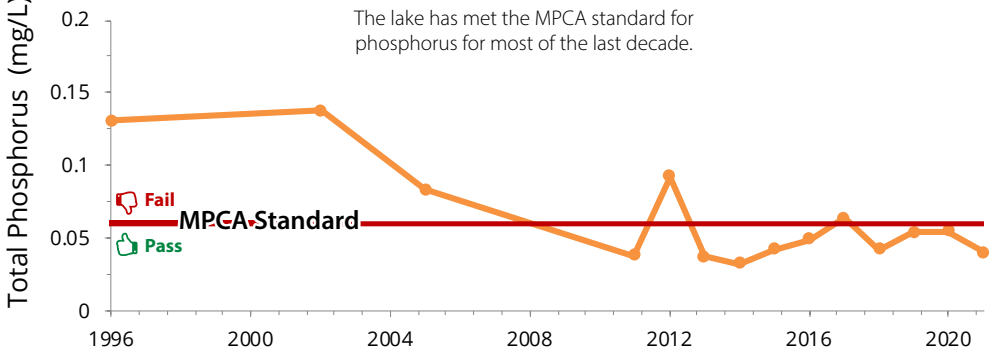
Good 25 20 15 10 5 0 Poor

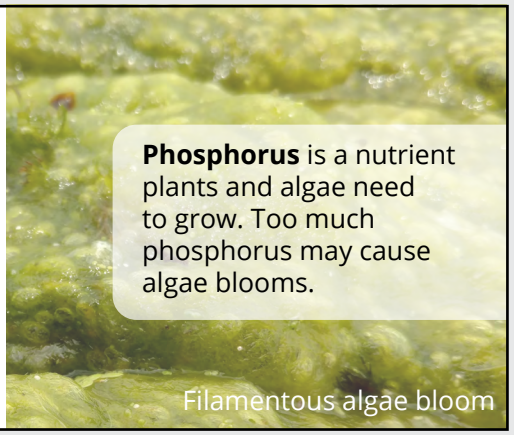
Trends Over Time: 1972-2021

Read the *2021 Water Resources Report* at rpbcwd.org/annualreport

Total Phosphorus

The lake has met the MPCA standard for phosphorus for most of the last decade.



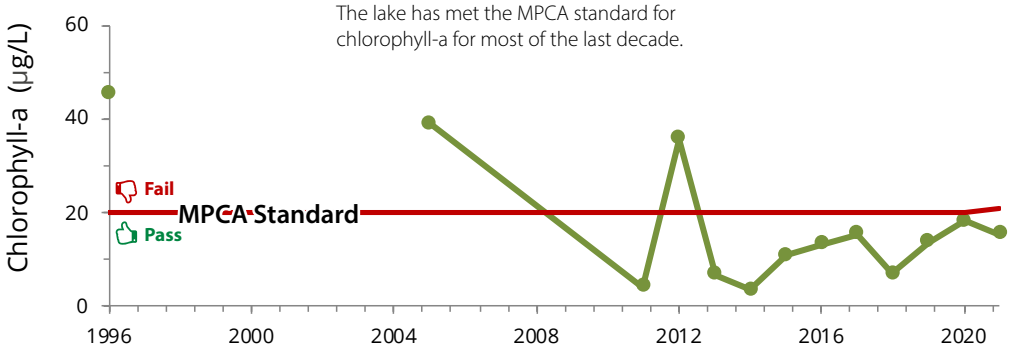


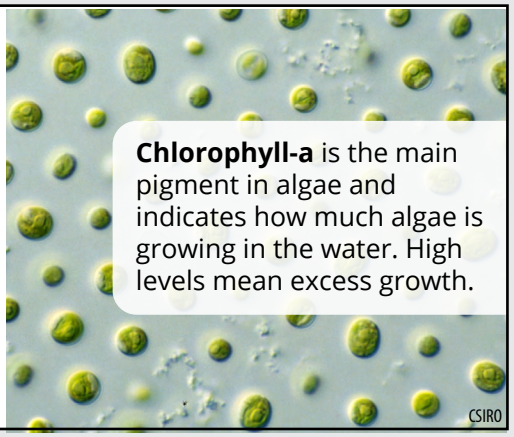
Phosphorus is a nutrient plants and algae need to grow. Too much phosphorus may cause algae blooms.

Filamentous algae bloom

Chlorophyll-a

The lake has met the MPCA standard for chlorophyll-a for most of the last decade.





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

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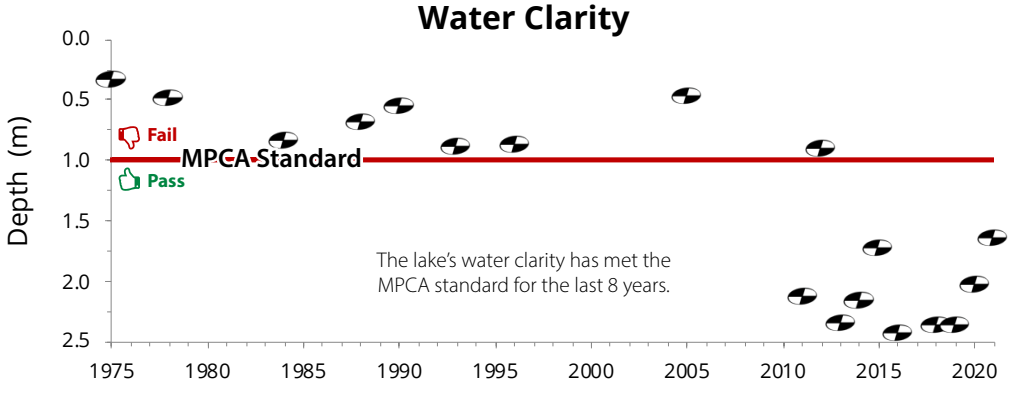
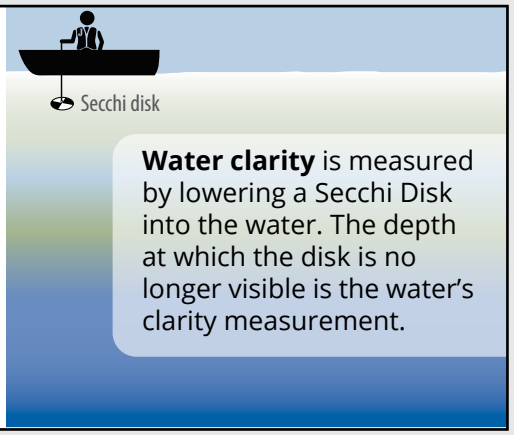
Water Clarity





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.

Grants for Shoreline Restoration

The watershed district offers up to **75% cost share** assistance for restoring your shoreline! Learn more: rpbcwd.org/grants

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

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