

# ROUND LAKE WATER QUALITY UPDATE

## Water Quality Monitoring

- Water samples are collected at deepest hole monthly from May through Sept.
- Secchi disk used to measure water clarity (how clear the water is).
- Samples tested for Phosphorus (nutrient needed for plant growth) and Chlorophyll-a (plant pigment).
- Samples have been collected on Round Lake for more than 20 years!

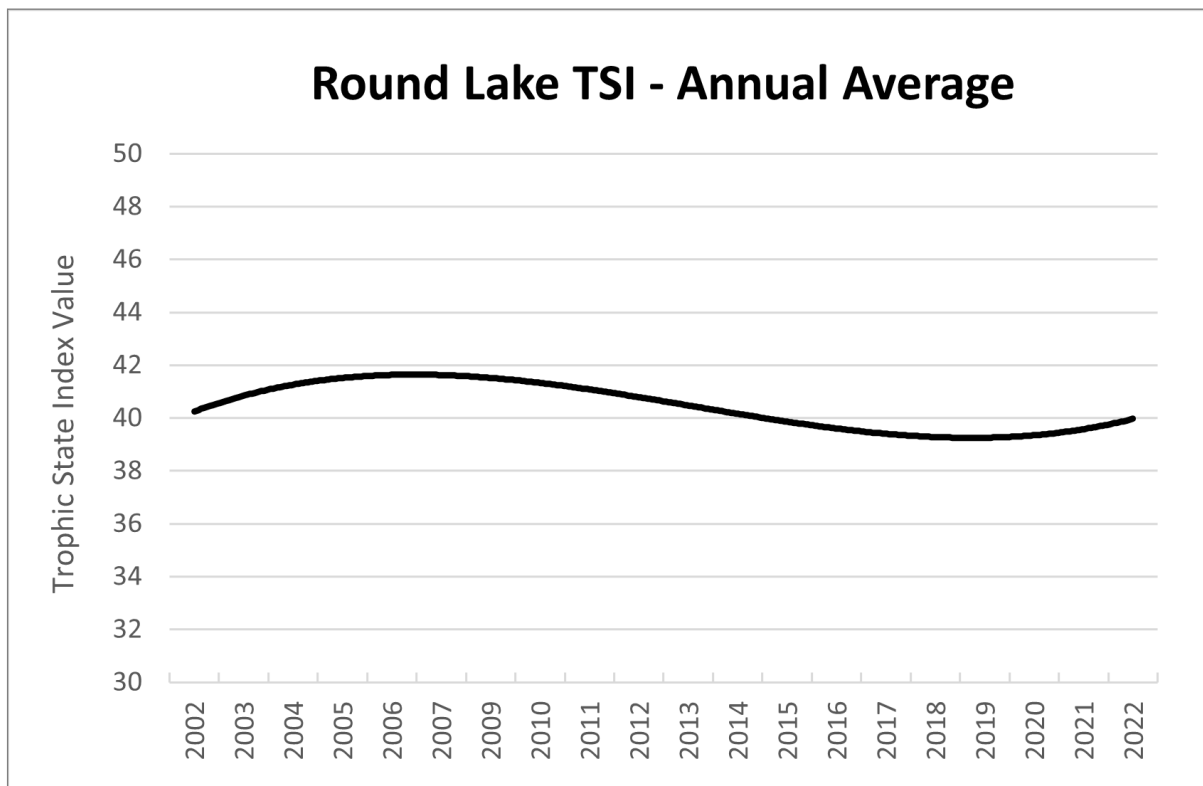
## Round Lake Stats

<b>MN Lake ID:</b>	01-0204-00
<b>Surface Area (acres):</b>	737
<b>Max Depth (ft):</b>	125
<b>Inlets/Outlets:</b>	1/1
<b>Public Accesses:</b>	1
<b>Impairments:</b>	None listed
<b>Aquatic Invasive Species:</b>	Curly Leaf Pondweed Zebra Mussels

## Trophic State Index (TSI)

- TSI Values range from 0-100 and are calculated from water quality samples and Secchi depth.
- TSI is an index of “Lake Productivity” (how much plant/animal life can be supported by the lake).
- Higher TSI values correlate to more plant/algae growth and poor water clarity.

*Phosphorus is the key nutrient needed for plant and algae growth in lakes. An overabundance of phosphorus can lead to algae blooms and a decrease in water quality over time. One of the main sources of phosphorus in Round Lake is runoff from lawns.*

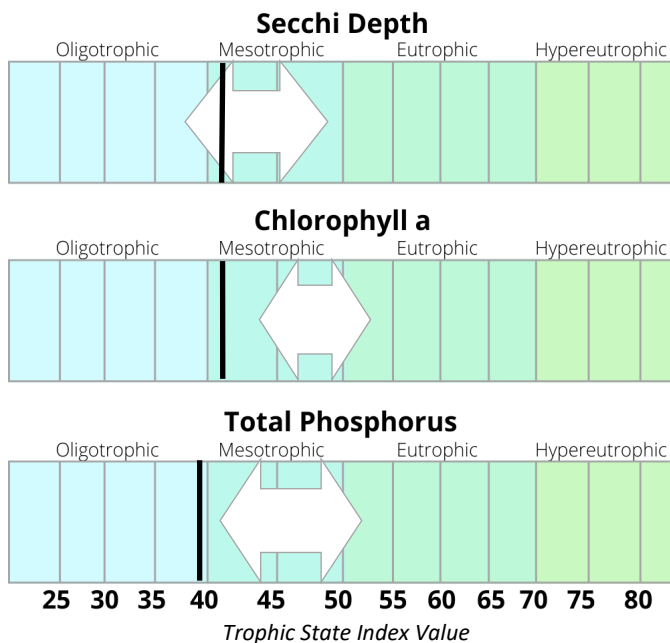


## Water Quality Overview

The figure below shows the expected range for lakes in the Northern Lakes and Forests (NLF) Ecoregion of Minnesota represented by the white arrows. The 20-year historic mean for Round Lake is shown with the black line.

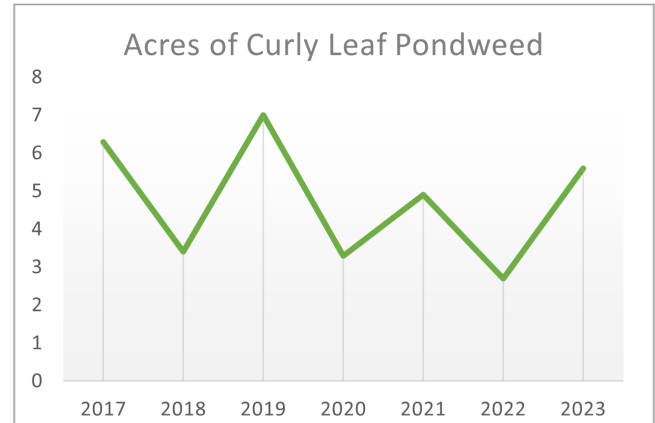
Oligotrophic Lakes are low in nutrients while Hyper-eutrophic Lakes have very high levels of nutrients. Round Lake falls in-between the Oligotrophic and Mesotrophic status meaning it is a clean lake with low nutrient levels.

**Round Lake has very good water quality that has been generally stable over time. Round Lake ranks highly compared to other lakes in the NLF Ecoregion.**



## AIS Status and Risks

- Curly Leaf Pondweed was treated in May of 2020 to keep the growth under control.
- Round Lake is at a high risk for other AIS including Spiny Waterflea and Starry Stonewort (image below).



### Starry Stonewort



## Top Things You Can Do to Protect Round Lake's Water Quality:

1. **Grow a natural plant buffer along the shoreline.** Native plants do the best job of reducing erosion and preventing runoff from reaching the lake.
2. **Keep your lawn slightly taller**—mowing to 2.5-3.5 inches instead of 2 or less will keep your lawn healthier and help reduce the need for fertilizer and slow runoff.
3. **Stop or reduce fertilizer use.** Leave grass clippings on the lawn as natural fertilizer. If you must fertilize do it in late summer/fall and test your soil first.
4. **Make sure your Septic System is functioning properly** and regularly maintained. Systems should be pumped out at least every 3 years and sized properly for the number of bedrooms in the home.