



Skootamatta District Ratepayers Association
2025 Water Quality Testing Overview

The SDRA participates in two annual water testing programs and biannually completes additional water chemistry testing in even numbered years.

Water Rangers Program	Lake Partners Program	Bi-Annual – SGS Labs
10 locations tested Month (May – Sep/Oct) 2021 - 2024	6 Locations Tested Once – May (adding Jun, Aug, Oct in 2025) 1997 - 2021	10 Locations Tested Once – June 2013 – 2024
Data Collected	Data Collected	Data Collected
Date Weather Past 24 hrs Weather at Testing Time Air Temperature Water Temperature Chlorine (ppm) pH Alkalinity (ppm) Hardness (ppm) Dissolved Oxygen (mg/l) Water Clarity (Secchi (m))	Date Weather Past 24 hrs Weather at Testing Time Watercolor (Yellow/Green), (Brown Orange) Total Phosphorous (May only) Calcium (May only) Chloride (May only) Water Clarity (Secchi Disk) Comments	Total Coliform – cfu/100mL E. Coli – cfu/100mL Chloride – mg/L Total Kjeldahl Nitrogen – as N mg/L Ammonia+Ammonium (N) – as N mg/L Hardness – mg/L as CaCO ₃ Aluminum (total) – mg/L Calcium (total) – mg/L Iron (total) – mg/L Potassium (total) – mg/L Magnesium (total) – mg/L Sodium (total) – mg/L

While all measures matter, the association is beginning to focus on four key measures:

- Water Temperature
- Secchi Depth (water clarity)
- Total Phosphorus
- Dissolved Oxygen

Note: the SDRA Board has purchased a digital Dissolved Oxygen and temperature meter, and a variable depth water sampler, to gather more accurate information, and to assess lake water quality at greater depths.

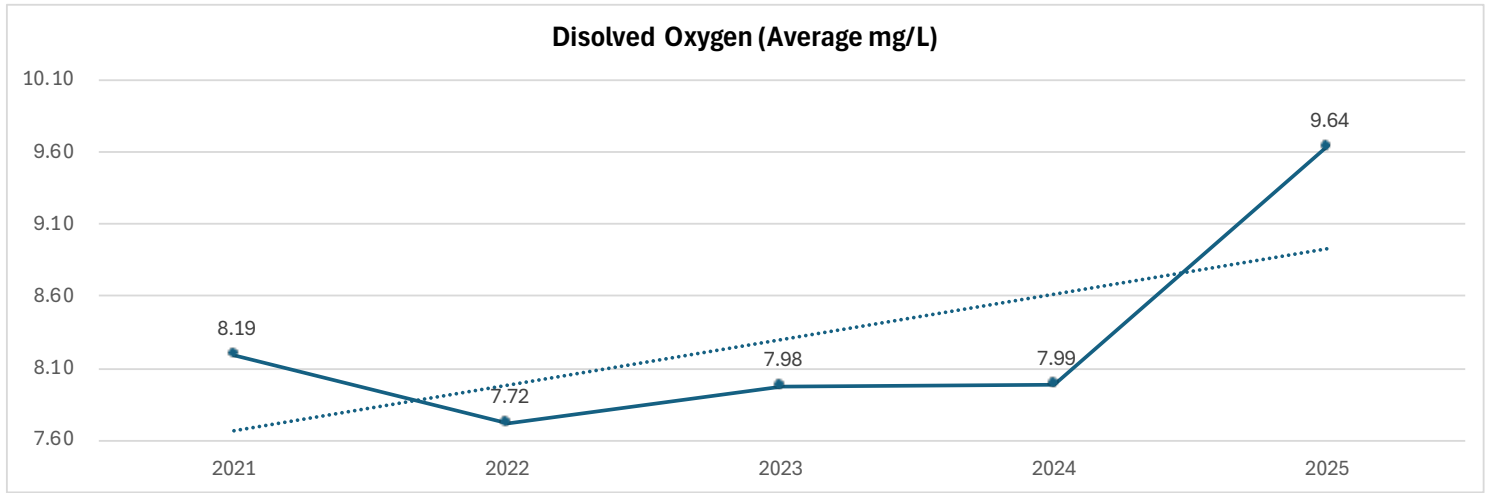
Water Rangers and Lake Partners Program Sites



Blue Pins = Water Rangers and Bi-Annual Program Sites

Green Pins = Lake Partners Program Sites

Year	Disolved Oxygen (Average)
2021	8.19
2022	7.72
2023	7.98
2024	7.99
2025	9.64

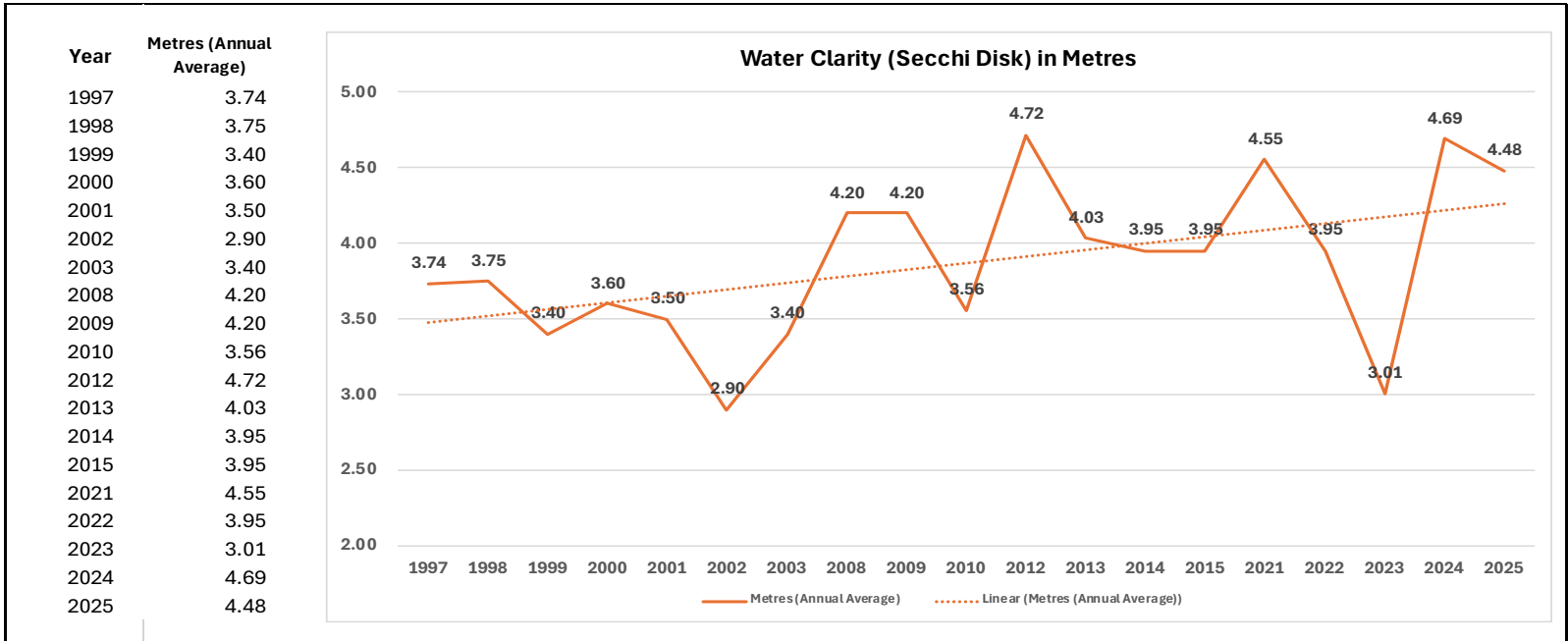


Disolved Oxygen

A healthy range for disolved oxygen for Skootmatta Lake should generally average in the 7 - 14 mg/L range.

Excess nutrients accelerate weed growth and can fuel harmful algae blooms. The decomposition of plants and algae during the fall and winter can result in the decline of dissolved oxygen levels, and can create 'dead zones' where most aquatic life, including invertebrates and fish can not survive. When lakes experience low oxygen levels (hypoxia), particularly in deeper areas, it can lead to fish kills or force species like trout and walleye to migrate to other areas of the lake where conditions are better. This not only reduces the availability of fish for anglers but can also cause shifts in species dominance, favoring fewer desirable fish. Clean, clear water is critical for drinking water and for safe and enjoyable swimming, skiing, and other water sports. Poor water quality and invasive weeds create physical, aesthetic, and health challenges that diminish the recreational opportunities.

Note: Beginning in 2025 the association began using a new digitized Digital Oxygen Meter

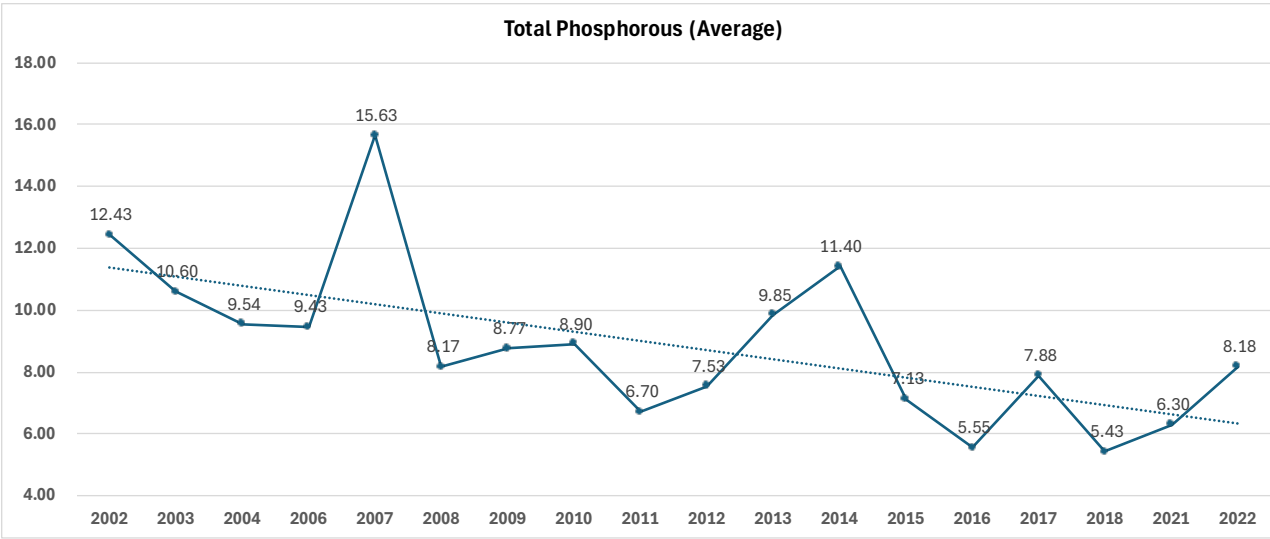


Water Clarity - Secchi Depth

Secchi depth measures water clarity by determining how deep light can penetrate the water. A Secchi disk is 20 cm / 8 inches in diameter, divided into black and white quadrants. It is attached to a measuring tape or marked rope attached to the center of the disk. On a sunny, calm day the disk slowly lowered into the water on the shaded side of the boat. Note the depth where the disk disappears. Slowly raise the disk back up. Note the depth where the disk just becomes visible again. Take the average of the two depths (disappearance and reappearance).

In general, a high Secchi depth (e.g., 4+ meters), indicates clear water with low algae/sediment. Low Secchi depth (e.g., <2 meters) suggests murky water, usually from algae blooms or suspended particles. Poor clarity can imply an overabundance of algae, sediment, or organic matter, which may be caused by nutrient pollution or shoreline erosion. Clear water is crucial for aquatic plants, fish and animals, as it affects photosynthesis and habitat quality. However, the clearer the water, the higher the risk is of accelerating growth of invasive weeds such as EWM. Skootamatta Lake water clarity, like that of many area lakes, has been slowly and steadily increasing since 2004.

Year	Total Phosphorous (Average)
2002	12.43
2003	10.60
2004	9.54
2006	9.43
2007	15.63
2008	8.17
2009	8.77
2010	8.90
2011	6.70
2012	7.53
2013	9.85
2014	11.40
2015	7.13
2016	5.55
2017	7.88
2018	5.43
2021	6.30
2022	8.18



Total Phosphorous (Total)

Total Phosphorus is a nutrient essential for aquatic ecosystems, but too much of it can lead to harmful algal blooms (HABs). These blooms deplete oxygen, harm fish populations, and can result in toxins that are dangerous for humans and wildlife. These blooms can make swimming unsafe, cause skin irritation, respiratory problems, or gastrointestinal illness. Even non-toxic blooms create unsightly green water and foul odors that deter swimmers and visitors. Testing for phosphorus helps identify nutrient overload, often linked to runoff from fertilizers, septic systems, and stormwater.

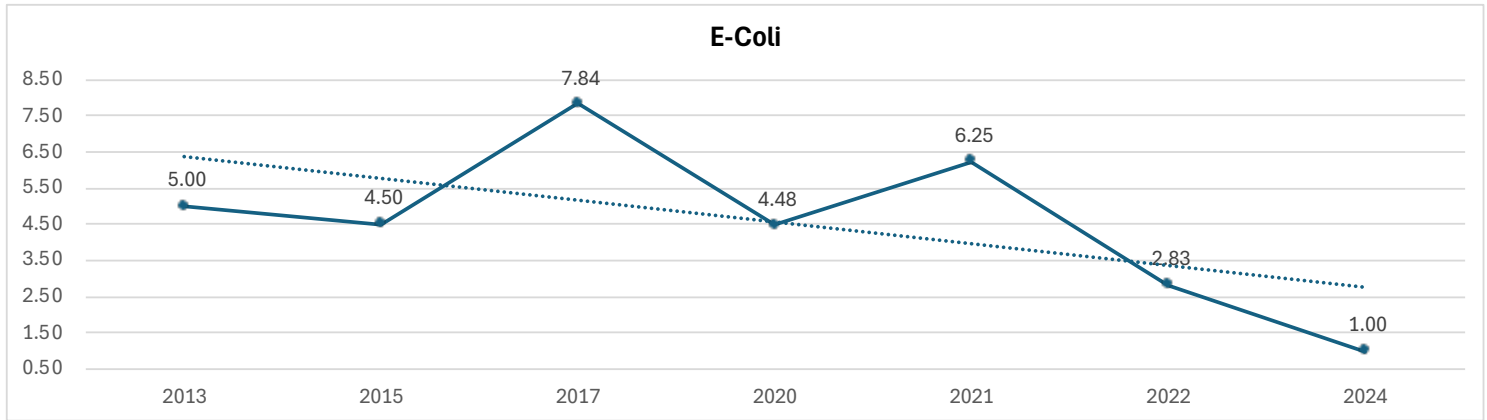
It is important to note, Total Phosphorus is just one measure of phosphorous, there are several others. The board is investigating what other phosphorous measures may be required to offer a more complete picture.

What can we do to maintain phosphorus levels?

Currently the lake is in a healthy range (<10) for the lake type, but it is critical this is maintained.

- Minimize or stop fertilizer use altogether or at the very least use phosphorus-free fertilizers.
- Maintain or upgrade septic systems to prevent leaks into the lake. Ensure your system can handle additional time or number of people that now enjoy the lake. Septic tanks should be pumped every 3-4 years or sooner if renting or hosting larger groups of people.
- Create buffer zones of native vegetation along shorelines to absorb runoff.

Year	E-Coli
2013	5.00
2015	4.50
2017	7.84
2020	4.48
2021	6.25
2022	2.83
2024	1.00



E-Coli

E. Coli is used as an indicator of fecal contamination, which could mean the presence of other dangerous pathogens (like viruses or parasites). Overall levels within Skootamatta are well within the safe range for swimming and water activities. Recreational Water (Swimming, wading) Safe level (Canada/Ontario Health Units) = 200 CFU/100 mL for a single sample.

Any detection of E. Coli in a 100 mL sample indicates fecal contamination and makes the water unsafe to drink.

Note: high e-coli levels are most often detected following heavy rainfall events, but can also be the result of failing septics or improper management of agricultural effluent. These factors can create inconsistencies in yearly results.