



Skootamatta District Ratepayers Association

2024 Water Quality Testing Overview

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

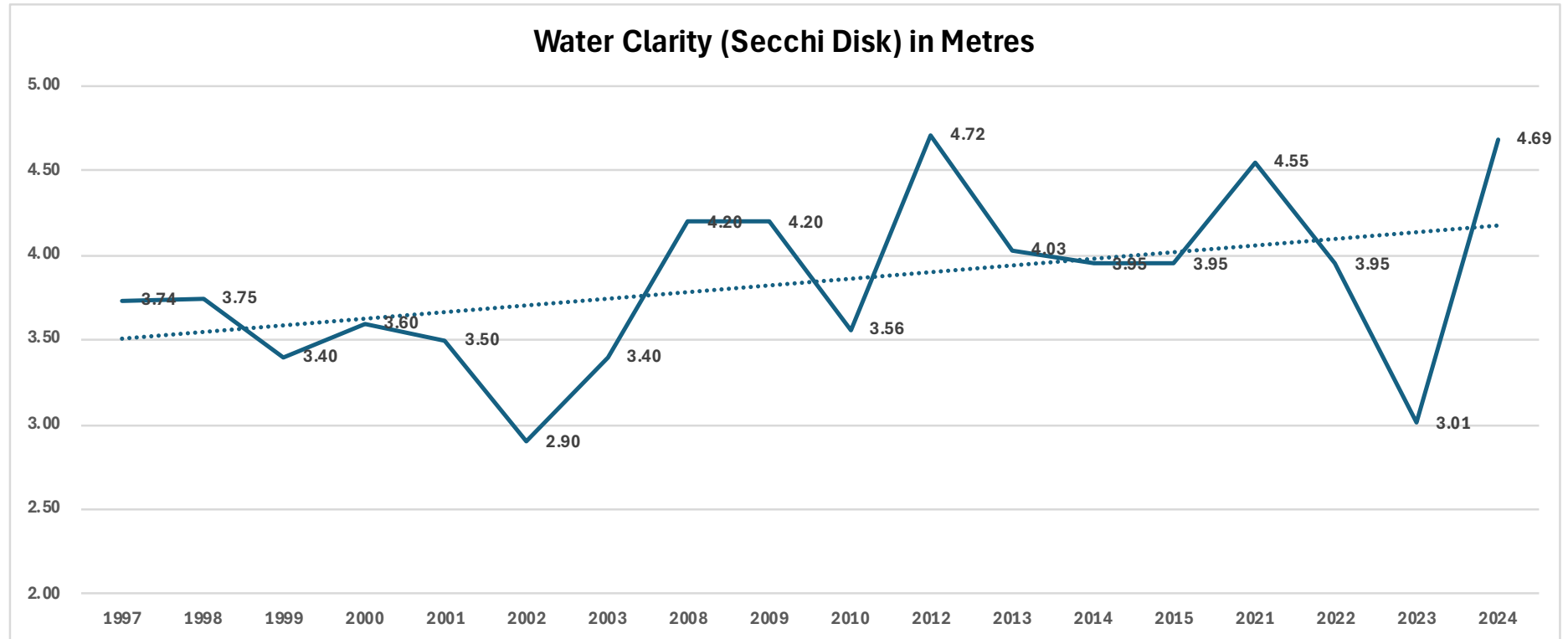
Water Rangers Program	Lake Partners Program	Bi-Annual – SGS Labs
10 locations tested Month (May – Sep/Oct) 2021 - 2024	6 Locations Tested Once – May (adding Jun, Aug, Oct in 2025) 1997 - 2021	10 Locations Tested Once – June 2013 – 2024
Data Collected	Data Collected	Data Collected
Date Weather Past 24 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 Calcium Chloride 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 CaCO3 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 association is currently working to acquire a digital thermometer and a variable depth sampler. Results of this metric will be included over time.

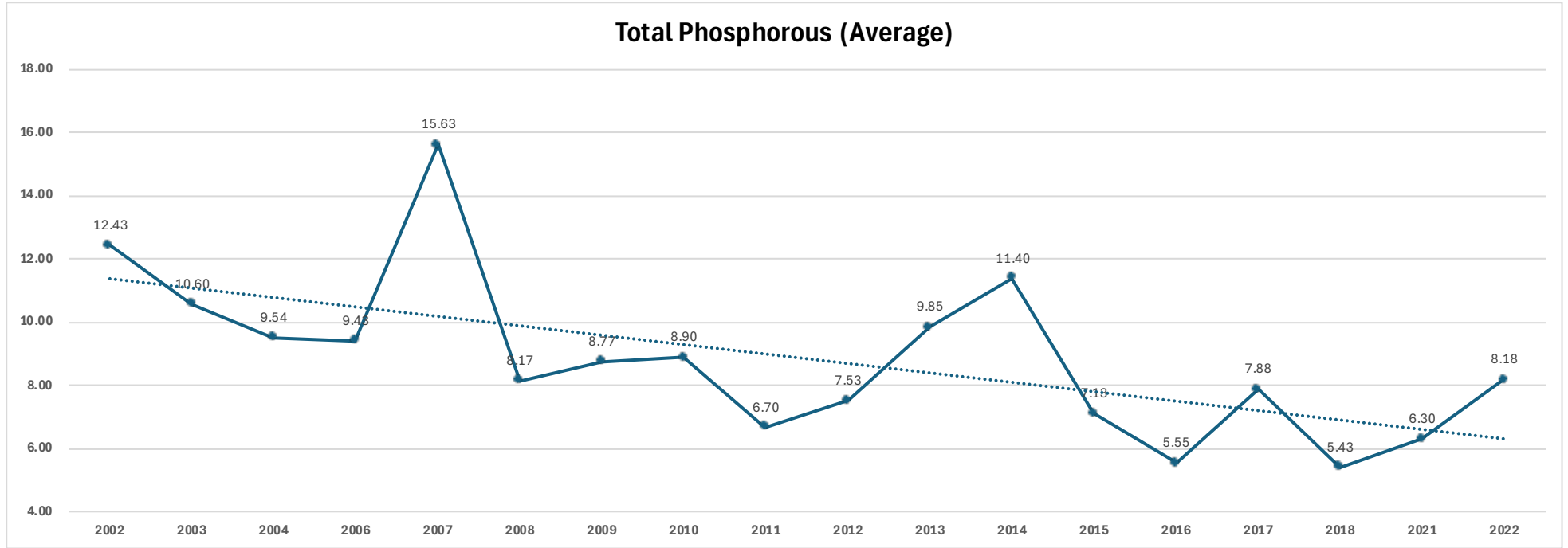
Year	Metres (Average)
1997	3.74
1998	3.75
1999	3.40
2000	3.60
2001	3.50
2002	2.90
2003	3.40
2008	4.20
2009	4.20
2010	3.56
2012	4.72
2013	4.03
2014	3.95
2015	3.95
2021	4.55
2022	3.95
2023	3.01
2024	4.69



Water Clarity - Secchi Depth

Secchi depth measures water clarity by determining how deep light can penetrate the water. 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 clarity has been trending upwards since 2003.

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	7.19
2016	5.55
2017	7.88
2018	5.43
2021	6.30
2022	8.18

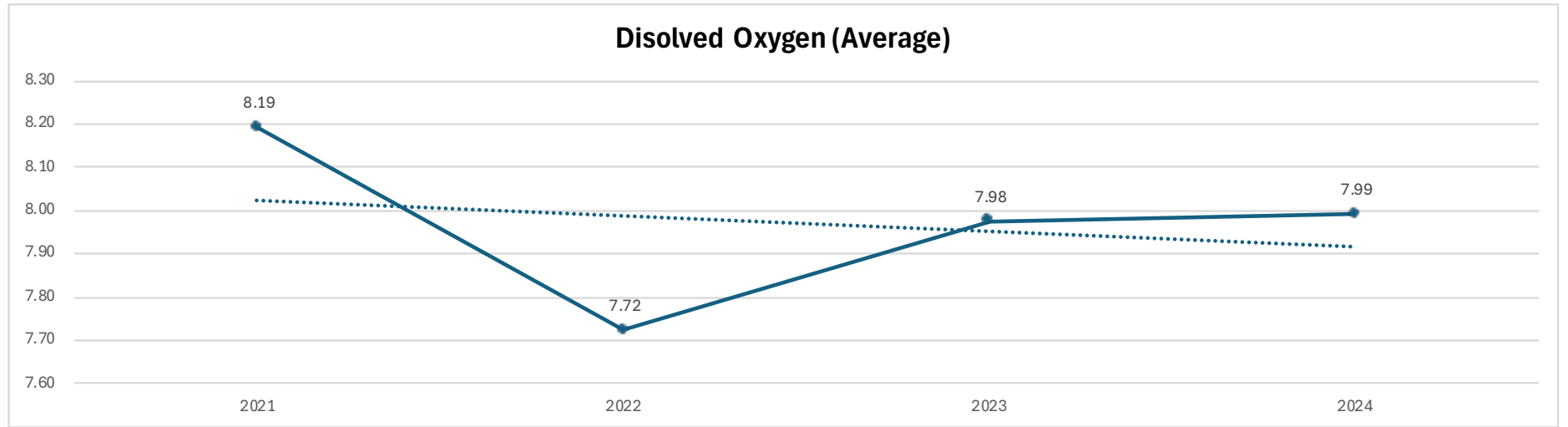


Total Phosphorous (Total)

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.

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



Disolved Oxygen

Excess nutrients can fuel algal blooms and subsequent decay processes. This can create "dead zones" where most aquatic life cannot survive. Fish require dissolved oxygen to 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.