



By Fred McConnell - Lake Steward

Lake Steward's Report

Spring 2022

Water quality testing is underway for 2022, and the milfoil bed markers will be deployed as soon as water levels go down so our markers are not underwater. Higher amounts of rainfall this Spring have kept the lake level higher than usual.

Wollaston State of the Lake Overview

Wollaston Lake, like lakes within the region, is in the process of transition based on the effects of a number of stressors such as climate change, invasive species, shoreline and adjacent development, increased short term rentals, increased angling pressure, and increased pleasure craft traffic (to name a few).

The Wollaston State of the Lake Report (first draft to be presented at the WLHCA 2022 AGM) provides a summary of the most current and relevant environmental information on Wollaston Lake and its watershed. The report is the first step towards preparing a Lake Stewardship Plan, which is an action-oriented document to guide stewardship activities and land use policy for the long-term protection, maintenance, and restoration of the Wollaston Lake environment.

The State of the Lake Report documents and summarizes relevant information on Wollaston



Lake up to December 2021 referencing a broad range of sources of information (see partner list). It compares Wollaston Lake with similar neighbouring lakes on a number of water quality metrics. The report provides an overview of the values and issues that the community wants to address, based on the Love Your Lake survey results. It summarizes key science-based observations, local and social knowledge about a wide range of aspects that contribute to the Lake's character including a history of the area, information on land use, development, water quality, water levels, natural habitats, endangered species, invasive species, wetlands, as well as fish and wildlife.

Partners

The Wollaston Lake Home and Cottage Association (WLHCA) is partnering with a number of environmental expert organizations including the Trent Aquatic Research Program (TARP), Watersheds Canada, The Land Between, the Ontario Ministry of Environment

Conservation and Parks (MECP) and the Ontario Federation of Anglers and Hunters (OFAH) for advice, program information and peer review of aspects of the report. Wollaston Lake is a cold, deep, naturally reproducing Lake Trout Lake deemed "at capacity for further development" by the MECP, as first recognized in the County of Hastings Official Plan 2002. Because Lake Trout is a sensitive species, dating back to before the last ice age, that is adapted to a narrow range of environmental conditions, it is an excellent indicator of the health of fragile aquatic ecosystems. As an "indicator species", it can be thought of as the "canary in the coal mine" as it will be one of the first (but not the only) species to be impacted by changes to its environment brought on by the aforementioned list of stressors.

The following is an example of the type of data presentation and comparisons with similar lakes in the area the report provides:



Total phosphorus ($\mu\text{g/L}$) is an important water quality parameter as phosphorus is a growth-limiting nutrient that supports algal biomass. Values below 10 $\mu\text{g/L}$ are generally associated with good water quality and typically support low algal biomass.

Total Phosphorus (filtered - all in micrograms per litre – $\mu\text{g./L}$)

Date (2021)	Lake Partner Program (MECP)	WLHCA Program				
		Main Lake: Deep spot	Main Lake: Deep spot	Second Lake	Third Lake	Inlet TARP Deep spot
May 27	N/A	2	2	3	7	
June 22	N/A	4	18	12	8	
July 19	N/A	20	19	12	8	
Sept 7	N/A	10	8	10	9	8.18 (Aug.)
Sept 27	N/A	5	4	44	17	
2021 Average	8.3 (2019)	8.2	10.2	13.2	9.8	8.18
Historical average: 1997 to 2016**	6.7					



Lake	Average*	2020	2021
Anstruther	4.78	4.60	5.65
Beaver	6.51	7.97	7.32
Big Cedar	6.43	11.16	5.64
Bottle	9.26	11.60	10.52
Catchacoma	5.53	8.78	5.43
Chandos	7.34	10.28	9.83
Crab	6.94		7.92
Crystal	7.60	8.49	10.42
Eels	5.82	8.66	8.39
Gold	6.05	11.30	5.89
Jack	5.31	7.12	6.12
Kasshabog	5.49	10.45	6.79
Long	6.85	15.07	6.89
Loon Call	5.23	5.80	8.62
Loucks	4.62	4.95	2.05
Lower Stoney	14.68	25.71	15.10
Mississauga	5.83	8.49	6.57
North Rathbun	10.58	16.29	10.23
Pencil	7.06	6.79	7.33
Picard	6.23	7.89	6.17
Raccoon	5.12	8.14	5.53
Rathbun	7.63	11.81	5.50
Salmon	5.89	8.54	5.95
Upper Stoney	8.09	10.80	8.59
Wollaston	6.7		8.18

Total Phosphorous Comparison (TARP data ug/L)

**The average was calculated using all of the data we have for each lake between the years of 2015-2021 which for most lakes is 4 or 5 sampling years. Wollaston historical average is 1997 to 2016 of Lake Partner sampling data.*

Process

During the Lake Planning Process, two key documents are produced: a Report on the State of Wollaston Lake and the Wollaston Lake Stewardship Plan. The State of the Lake Report is the technical document summarizing the known information about the various environmental and social characteristics of the lake and its watershed. Its purpose is to provide and confirm key observations about various aspects of the lake in order to provide recommendations based on science and consensus, that are to be considered by the Wollaston Lake Community and included in the Lake Stewardship Plan. The Plan is a stewardship document intended to guide actions towards the protection and management of the environmental characteristics important to the health of the lake. The target community for both documents is defined as anyone who works, lives, or plays within the Wollaston Lake watershed, and



includes all agencies responsible for the management of land, water, wildlife, fish and other resources, not limited to:

- Permanent and seasonal residential shoreline and watershed property owners;
- Commercial operators, owners and users (e.g. resorts, camps, rental cottages, marinas);
- Day users (e.g. anglers, boaters, tourists); and
- Interest groups, government and non-government agencies with an interest in the state of the lake.

Additional Community Outreach

New for the 2022 water quality testing season, the WLHCA is reaching out to initiate water quality testing at additional points of the Wollaston Lake watershed as well as adjacent lakes within Wollaston Township. With our assistance Urbach, Finnigan, Ragged, Casteroil lakes and Deer River headwaters (Wollaston Lake watershed) have been enrolled in the Ministry of Environment Conservation and Parks (MECP) Lake Partner Program. One sample on each lake will be completed

early in the summer and will be used to inform water quality testing planning for the 2023 season.

