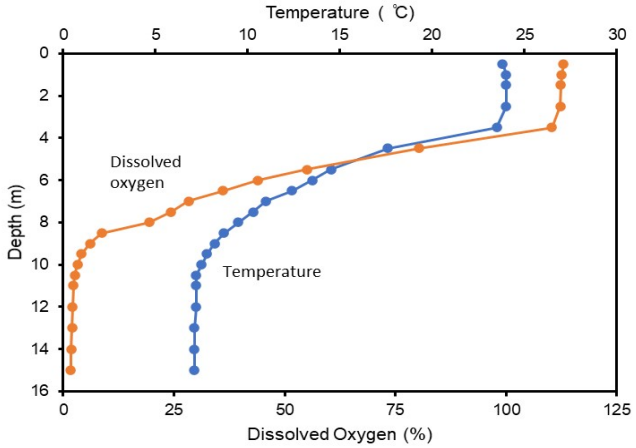
Loon Call Lake

Trent Aquatic Research Program

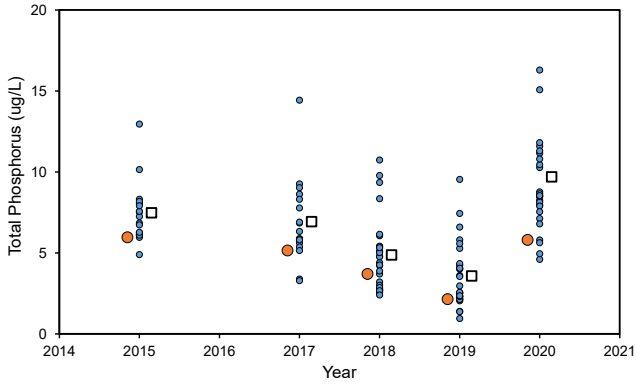
Water Quality Report 2015-2020

This report provides a summary of key water quality parameters for Loon Call Lake measured as part of the long-term research program on the Kawartha region by the Trent Aquatic Research Program (TARP). One aim of this research is to track the health of the region's lakes as a means to identify problems early and to better understand longer term dynamics. So far, lake data has been collected over six years from fifty-two lakes. Due to logistics and financial constraints, not all lakes are sampled for all variables each year but this remains a goal as the program continues to develop. This lake-specific report uses the collected data to provide you information on Loon Call Lake including water clarity, temperature, dissolved oxygen, phosphorus, calcium, and chlorophyll. For more background on these parameters and their meaning, please refer to our short review of water quality basics and limnology (email paulfrost@trentu.ca for a free copy).

To learn more about the Trent Aquatic Research Program and how you can support this work, please visit: https://mycommunity.trentu.ca/tarp



Temperature and Oxygen: On this day of sampling in 2019, temperature was about 24°C at the surface and 7°C at the lake's bottom. Dissolved oxygen was high in surface waters (~112%) of Looncall Lake and very low in the bottom waters (~1%). The supersaturation (>100%) seen in surface waters likely reflects oxygen being released from algae into the water column faster than it can escape to the atmosphere or recent water temperature changes.



Total Phosphorus: Concentrations of total phosphorus in Loon Call Lake are generally quite low and are consistently below the regional average. These low TP values indicate Loon Call Lake has very good water quality and very low external P inputs. The lack of change over the past five years further suggests that there is pattern of phosphorus changing in the lake at this time.

In this graph and the ones to follow, orange dots represent measurements for Loon Call Lake, blue dots denote data from other sampled lakes, and open squares mark the average of the sampled lakes.

This report was produced by the Trent Aquatic Research Program, Trent University, Peterborough, Ontario. Please direct all questions and inquiries about this report to Dr. Paul Frost.
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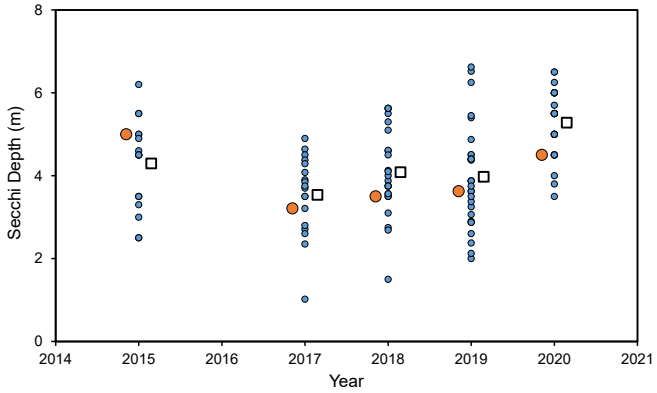
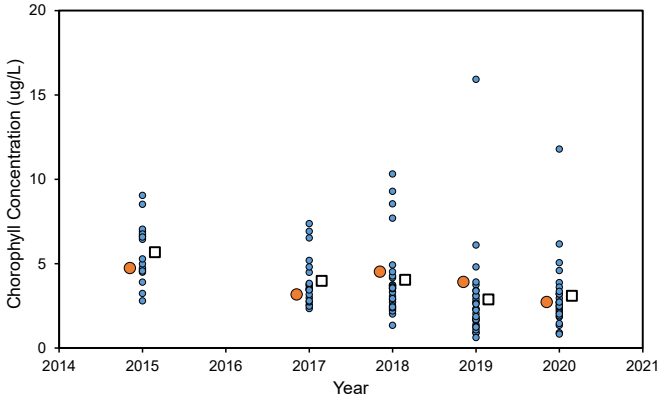
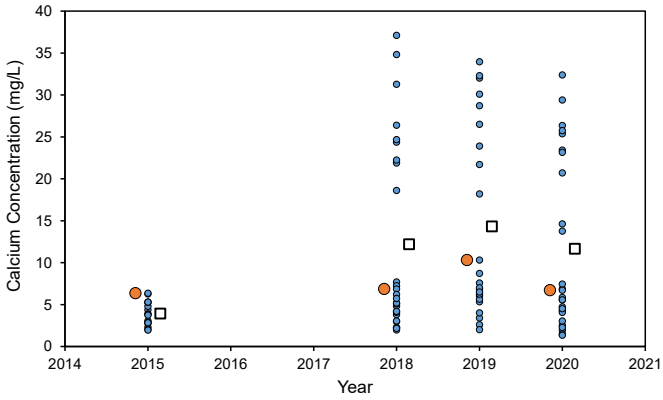


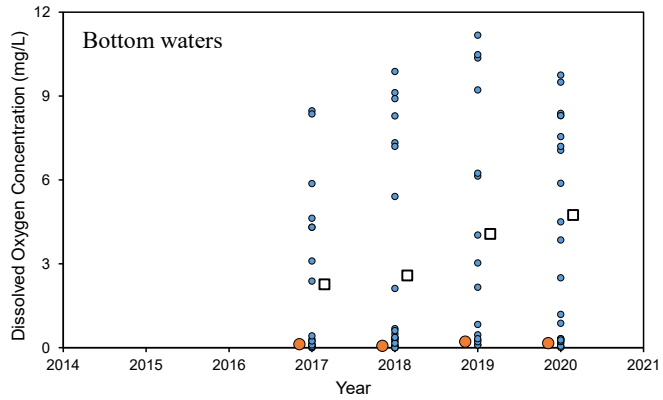
Water Clarity: Secchi depths in Loon Call Lake are generally in the middle of the range observed in other sampled Kawartha region lakes. Over the past four years (2017-2020), Loon Call was slightly less transparent than other lakes in the region. Even so, Loon Call Lake generally exhibits high water clarity, which is generally associated with good water quality.



Chlorophyll: The concentrations of chlorophyll in Loon Call Lake are generally quite low and usually close to the average of our sampled lakes. These low values are expected given the low TP concentrations also observed. Overall, Loon Call Lake has little algal biomass and would be considered to be low productivity. There have been no large changes over the past five years, which is further indication that Loon Call has good and consistent water quality.



Calcium: Concentrations of calcium in Loon Call Lake have been slightly higher than many Kawartha Highlands lakes but much lower than the average of all lakes in our dataset. With Ca concentrations above 5 mg Ca/L, Loon Call has been above the low concentrations that are generally of concern (<3 mg Ca/L). In addition, there is not indication that Ca concentrations are declining or changing substantially in Loon Call Lake.



Dissolved oxygen: The concentrations of dissolved oxygen in water 1 meter off the bottom of Loon Call Lake have been very low with values at or just above 0% for all four years that we have data. Dissolved oxygen at the top of the lake is not shown here, but is always at or above saturation (>100%). The low dissolved oxygen concentrations at the bottom of Loon Call Lake is of concern and additional monitoring is warranted. It is not clear why dissolved oxygen is low in Loon Call or other nearby lakes and is a pattern that needs further study.