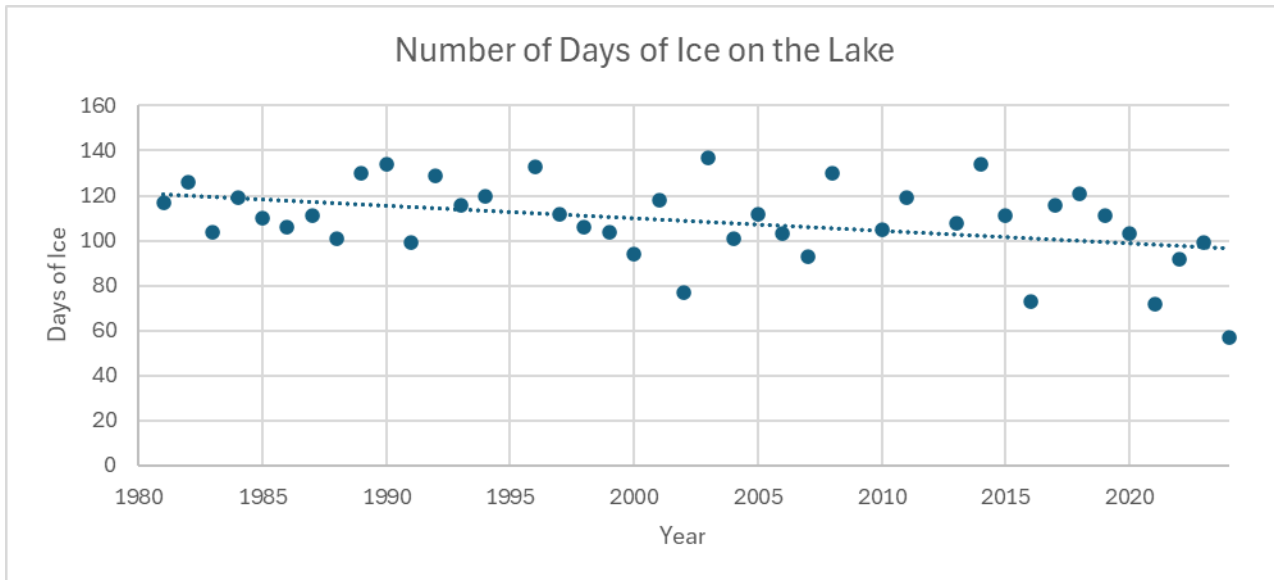


Lake Steward Report – 2024

Otter Lake continues to be a healthy and clean lake.

We are again seeing some effects of climate change here at the lake. The water is warming up more quickly resulting in lower-than-average water levels. This past winter the lake was frozen over for only 90 days. This is much better than the previous year when we had only 57 days of ice, but it is still significantly lower than the overall average of 108.5 days.



	Earliest	Latest
Ice On	November 30, 1990	January 25, 2002
Ice Off	March 14, 2024	April 27, 2018

Results of Water Quality Testing in 2024

The Secchi Disc readings in the chart below clearly indicate the water is still quite clear, although it has that green tinge to it due to the abundant microscopic plant life. This abundant plant life has had a negative effect on the Dissolved Oxygen levels in the lake as you will see in the graphs later in this report. The plant life grows, dies and falls to the bottom, where it decays, using the available oxygen there. The concentration of dissolved oxygen in lakes is affected by temperature and has well-defined seasonal cycles. Cold water can hold more dissolved oxygen than warm water.

Lake Steward Report – 2024 (cont'd)

Water Quality Data - 2024																			
RVCA ID	OLLA ID	Total Coliform (cfu/100 ml)			E. Coli (cfu/100 ml)			Total Kjeldahl nitrogen (µg/l)				Total Phosphorous (µg/l)				Secchi Disk (metres)			
		Jun	Jul	Aug	Jun	Jul	Aug	May	Jul	Aug	Oct	May	Jul	Aug	Oct	May	Jul	Aug	Oct
RVL-26A	OLLA 16																		
RVL-26B	OLLA 09					3	0		300	400									
RVL-26C	OLLA 03					0	2		500	300									
RVL-26D	OLLA 04																		
RVL-26DP1	OLLA 05A							300	300	400	400	6	9	10	4	9.0	6.5	5.0	8.0
RVL-26DP3	OLLA 06							300	400	400	400	8	10	10	6	8.5	6.0	5.0	5.5
RVL-26E	OLLA 12																		
RVL-26F	OLLA 18					0	0		200	400									
RVL-26G	n/a																		
Average					0.83			357.14				7.88				6.69			
Std. Error					1.33			75.59				2.30				1.60			
Water Quality Recommendations					<100			<500				<20							
Oligotrophic								310 - 1160				3 - 18				5.4 - 28			
Mesotrophic								360 - 1400				11 - 96				1.5 - 8.1			
Eutrophic								390 - 6100				16 - 390				0.8 - 7.0			

Total Kjeldahl Nitrogen (TKN) levels were in the acceptable range of between 200 - 500 µg/L, very similar to previous years. As for Total Phosphorous (TP), both of the sites tested had values less than 15 µg/L, below the Provincial Water Quality Objective (PWQO) – Lakes, of less than 20 µg/L.

RVCA performed measurements of water temperature and DO in May, July, August and October at two deep water sites OLLA 5A/RVCA DP1 and OLLA O6/RVCA DP2. The results obtained by RVCA in 2024 are shown in the following graphs.

Note: For more technical information on water quality please go to our website -- <https://otterlake.org/environment/water-observation/>

Lake Steward Report – 2024 (cont'd)

