

LAKE STEWARD'S REPORT - 2015

Water quality testing is an important diagnostic tool to help residents of Otter Lake determine the health of the lake. We need early warnings to predict important changes in the lake's ecological process. By systematic testing and monitoring over time, it is possible to evaluate if water quality is improving or declining. By selective testing at strategic sites, water quality indicators can help determine the source or cause of contamination. The ecological and trophic status of a lake is generally determined by the levels of nutrients it contains.

As in previous years OLLA is fortunate to have the assistance of the Rideau Valley Conservation Authority (RVCA) in testing the water quality of Otter Lake. Thanks are due to Sarah MacLeod, and her qualified team of technologists for allowing us to include their data along with ours. Both RVCA and OLLA test at least 3 to 4 times per year at different sites.

The table below shows the results of the water quality testing performed in 2014 by OLLA and RVCA. *E. Coli* levels were low or undetectable at all sites tested except at OLLA 07 in May. Site 07 is close to Barker's Creek, the major inflow into the lake and high *E. Coli* levels at this site are not uncommon since Barker's Creek drains an extensive wetland and farming area west of highway 15. *E. coli* was not detectable when site OLLA 07 was retested in June. Total Kjeldahl Nitrogen levels were generally in the acceptable range of between 200 - 500 µg/L at all sites tested. Phosphorous levels were all between 5 µg/L and 15 µg/L except for a very high reading at site 04 in May which was probably an

Water Quality Test Results - 2014 (OLLA + RVCA)																
RVCA ID	OLLA ID	E. Coli (cfu/100 ml)			Total Kjeldahl nitrogen (µg/l)				Total Phosphorous (µg/l)				Secchi Disk (meters)			
		Jun	Jul	Aug	May	Jul	Aug	Oct	May	Jul	Aug	Oct	May	Jul	Aug	Oct
	OLLA 02															
RVL-26C	OLLA 03		2	2		470	500			14	6					
RVL-26D	OLLA 04	0			290	470			39	11						
RVL-26DP1	OLLA 05A				620		480	400	8		5	10	6.25	4.25	4.75	5.50
	OLLA 05B															
RVL-26DP3	OLLA 06				430	430	470		10	22	6		7.45		5.50	5.25
	OLLA 07	50	0		480	480			13	12						
	OLLA 08															
RVL-26B	OLLA 09		2	2	510	470	460			13	5					
	OLLA10				550				18							
	OLLA 11															
RVL-26E	OLLA 12				340	490			11	10						
	OLLA 13					420				9						
	OLLA 14															
	OLLA 15															
RVL-26A	OLLA 16															
	OLLA 17					560				12						
RVL-26F	OLLA 18		2	2		440	480			13	6					
Average		1.50			476.96				10.11				5.56			
Std. Error		0.35			31.06				0.77				0.39			