



### Area Description:

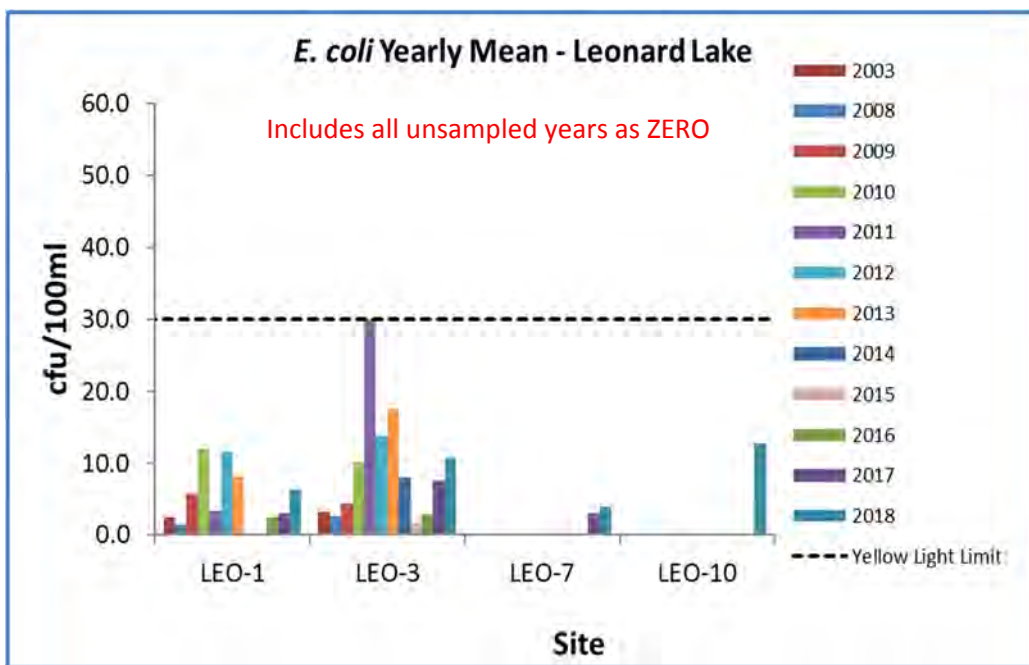
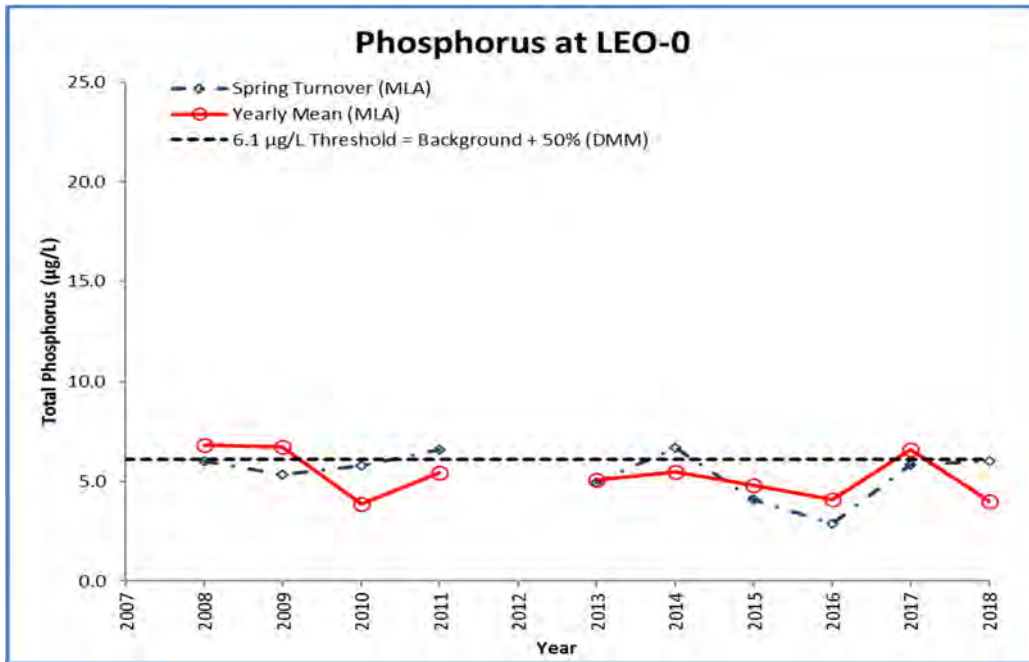
Leonard Lake is a medium sized lake at 1.52 km<sup>2</sup> in size and has a maximum depth of 16 m. This lake is moderately developed with primarily residential properties. Immediate shoreline alteration is limited to 9% but backlot clearing and forest thinning is found in 77% of properties. There is limited inflow and outflow of water on this lake, and few wetlands in the vicinity. Leonard Lake is classified as moderately sensitive and over-threshold by the DMM. Monitoring started in 2008. All stations shown may not be sampled each year.

**Volunteer Recognition: Gordon Roberts, Betty Isbister, Ester Giesbrecht, and Bruce McNeely.**

## Leonard Lake (LEO)

2018 Water Quality Results: (Note: Hatched cell signifies not tested for in 2018)

Station	Mean Secchi Disk (m)	Total Phosphorus (µg/L)		E. coli Yearly Geometric Mean (cfu/100 ml)	Total Coliform Yearly Geometric Mean (cfu/100 ml)
		Spring Turnover	Yearly Mean		
LEO-0	4.3	6.0	4.0		
LEO-1			4.7	6.4	176.9
LEO-3		6.0	5.8	10.6	141.6
LEO-7		3.0		4.0	96.4
LEO-8	4.2	3.0	3.3		
LEO-9	4.1	2.0	3.0		
LEO-10			2.3	12.7	97.6
LEO-11	4.3	5.0	5.3		



## Summary and Recommendations:



Two new nearshore stations were established at LEO-8 and LEO-11 to investigate phosphorus concentrations. The spring phosphorus concentration in 2018 remained below the historic DMM threshold of 6.1 µg/L. The yearly phosphorus mean at LEO-0 was the second lowest recorded to date (3.9 µg/L in 2010). Spring phosphorus levels were not recorded at LEO-1, and those recorded at LEO-3 and LEO-7 are consistent with values obtained previously. Yearly phosphorus means at LEO-1 and LEO-3 are also consistent with data obtained previously, and since only spring phosphorus was obtained at LEO-7, there is no yearly phosphorus mean value to compare with the only other year of sampling (2017). This was the first year for spring phosphorus sampling at LEO-8, LEO-9, LEO-10 and LEO-11. *E. coli* counts were slightly higher than values observed in 2017 and all yearly *E. coli* means at each of the nearshore stations were well below the MLA stoplight limits. Secchi measurements remain stable through sampling years, varying between 3.25 and 6.0. **Beacon recommends that all sampling be continued to monitor long-term trends.**