Clear Lake Water Tests 2019

Year	Site	Sample Date	Phosphorus Concentration (ug/l)	Total Coliforms (cfu's per 100 ml)	Ecoli (cfu's per 100 ml)	Secchi Depth (metres)	Water Temp.
2019	CLR-0	27 May	6.0			4.55	14.5
	CLR-2	Spring Turnover	4.6				15
	CLR-4	readings	no samples at Site 4 this year				
	CLR-5		4.5				15
	CLR-7		bacteria testing only at Site 7				15
2019	CLR-0	23 Jun	6.4			6.55	21
	CLR-2		7.1	25	0		21
	CLR-5		5.1	49	0		21
	CLR-7		bacteria testing only at Site 7	19	0		21
2019	CLR-0	28 Jul	3.8			7.25	26
	CLR-2		4.1	83	0		26
	CLR-5		4.4	55	3		26
	CLR-7		bacteria testing only at Site 7	69	3		26
2019	CLR-0	25 Aug	3.0			6.55	24
	CLR-2		3.0	49	0		24
	CLR-5		3.4	55	0		23
	CLR-7		bacteria testing only at Site 7	76	25		25
NOTE *			* Ice went out late - Apr. 28/19				
			Water levels very high in the spring				
2019 Annual	CLR-0	Average	* 4.8			6.2	21.4
2019 Annual	CLR-2	Average	4.7	52.3	0.0		21.5
2019 Annual	CLR-5	Average	4.4	53.0	1.0		21.3
2019 Annual	CLR-7	Average		54.7	9.3		21.8
2019 Annual	**All Sites**	**Average All Sites**	**4.6**	**53.3**	**3.4**	**6.23**	**21.5**
			*** over threshold (4.79)**				

Phosphorus samples at CLR-0 are taken at secchi depth. Phosphorus samples at all other sites are taken near surface

Site Location	
CLR-0	Middle of lake (deep water test)
CLR-2	NW end of lake (Big Bay/Resort area)
CLR-4	Camp Pine Crest end of lake
CLR-5	Little Bay area (Ridge Rd./Little Bay Rd)
CLR-7	Clear Lake Rd. (near 1104-1106 area)

	Coliform	E. Coli
Ontario Standard	< 1,000 counts/100 ml	< 200 counts/100 ml
MLA Standard	< 300 counts/100 ml	< 50 counts/100 ml

* Phosphorus Threshold is 4.79 ug/l as per District of Muskoka Official Plan

CFU stands for colony forming unit

PHOSPHORUS SOURCES

Up to 75% occurs naturally, remainder is human influence ie. detergents, fertilizers, phosphorus leaching from septics

TOTAL COLIFORM BACTERIA

Total coliform bacteria are a group of bacteria found in high numbers in both human and animal intestinal wastes and therefore are found in water that has been contaminated with fecal material. Unfortunately, bacteria with the biochemical characteristics of total coliforms are also found in non-contaminated water. Thus, in the absence of fecal coliforms, the presence of total coliforms may indicate older fecal contamination or the presence of decaying organic matter. Although the total coliform bacteria group is a less reliable indicator of sewage contamination, because of its superior survival characteristics, it is preferred as an indicator of treatment adequacy in drinking water supply systems **For Drinking water coliform count must be 0.**

FECAL COLIFORMS (E. COLI)

Fecal coliform bacteria are a subset of the total coliform bacterial group and also are found in human and animal intestinal wastes. However, they are a more precise indicator of the presence of sewage contamination than total coliforms. The fecal coliform bacteria group includes the genera Escherichia and, to a lesser extent, Klebsiella and Enterobacter. **For Drinking water E. Coli count must be 0.**