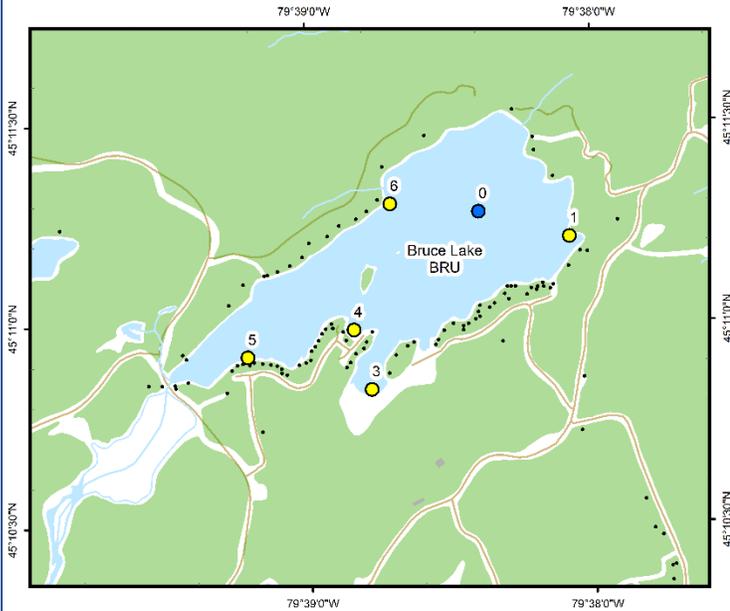




Bruce Lake (BRU)



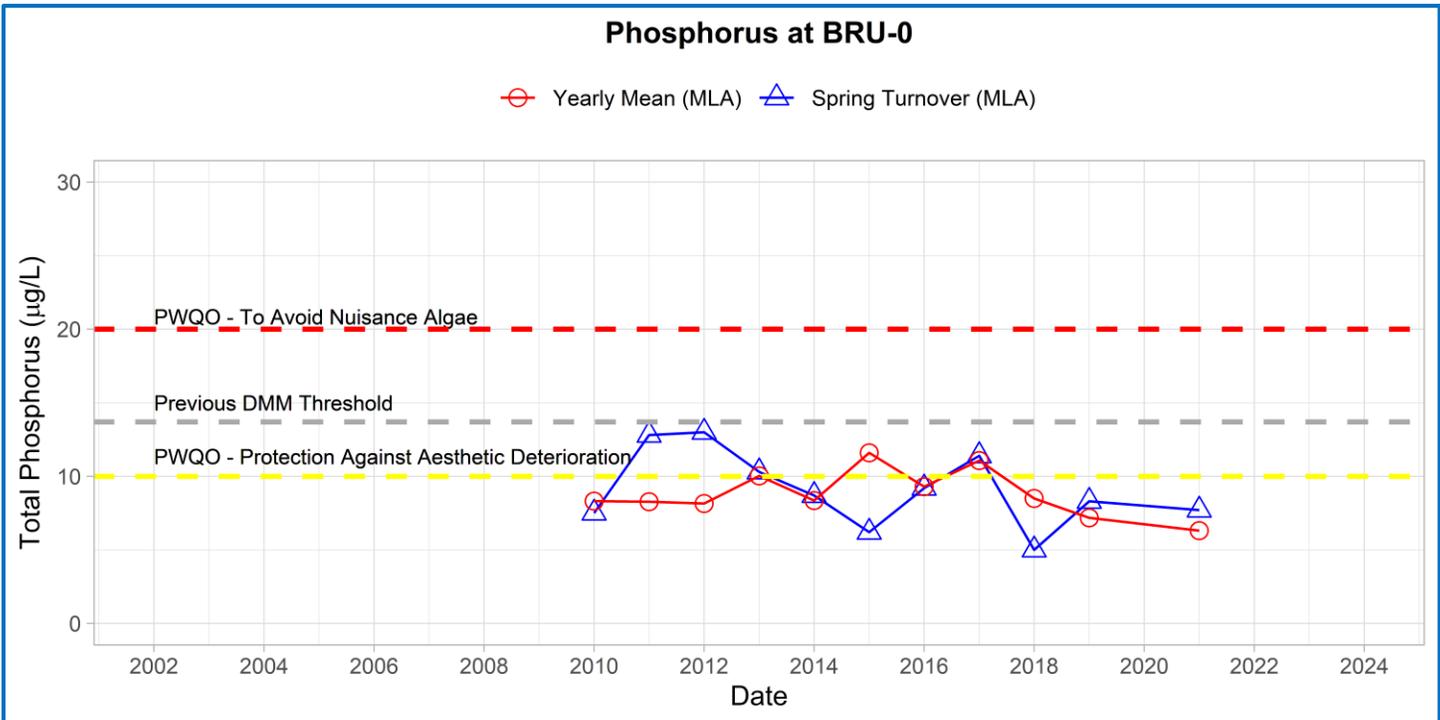
Area Description:

Bruce Lake is a small (surface area = 0.98 km²) lake with a maximum depth of 6 m, located east of Highway 632, between Lake Joseph and Lake Rosseau. Based on DMM data ~7% of the catchment area for this lake is comprised of wetlands. Moderate development on the lake includes a golf course located immediately to the south. Bruce Lake is currently listed as vulnerable by the District of Muskoka following an algae bloom in 2020.

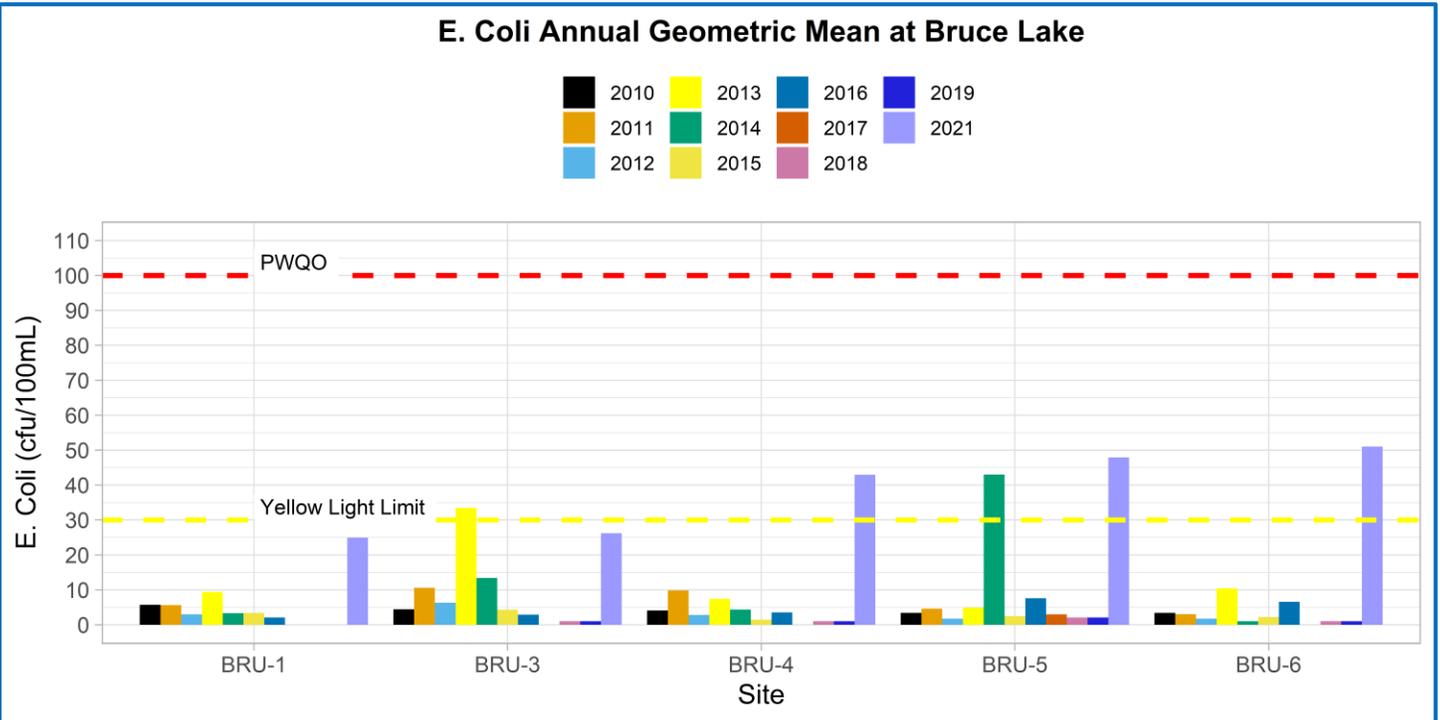
Volunteer Recognition: Andrew Coppola, John Harvey, Paul Hutchinson.

2021 Water Quality Results:

	Mean Secchi Disk (m)	Total Phosphorus (µg/L)		E. coli Yearly Geometric Mean (cfu/100mL)	Total Coliforms Yearly Geometric Mean (cfu/100 mL)
		Spring Turnover	Yearly Mean		
BRU-0	3.55	7.7	6.3		
BRU-1			6.8	25	74
BRU-3		9.9	6.7	26	67
BRU-4		6.6	6.2	43	114
BRU-5		10.1	6.4	48	119
BRU-6		7.1	5.6	51	156



Note: Grubbs test indicates data collected in 2012 are considered an outlier



In 2021, annual average and spring phosphorus concentrations at the deep-water station (BRU-0) were below the historic DMM threshold of 13.7 µg/L and Provincial Water Quality Monitoring Objectives for Protection Against Aesthetic Deterioration (10 µg/L) and Nuisance Algal Growth (20 µg/L). Nearshore monitoring of annual and spring phosphorus concentrations at BRU-3, 4, 5 and 6 were within the range of variability of previous monitoring. *E. coli* samples at all stations, except BRU-3 were above the yellow light trigger established by the MLA. Re-tests were not performed for samples over 50 cfu/100mL following the field protocol, follow-up bacteria sampling in 2022 is recommended to inform the 2021 results. Average annual Secchi disk depth (3.55 m) was consistent with previous



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monitoring (2.4 and 6.5 m). A harmful algae bloom was reported on Bruce Lake in 2020 resulting in a yellow light being assigned to this lake in 2021. **HESL recommends ongoing sampling to continue to confirm 2021 E. coli results and monitor for long-term trends and emerging issues.**