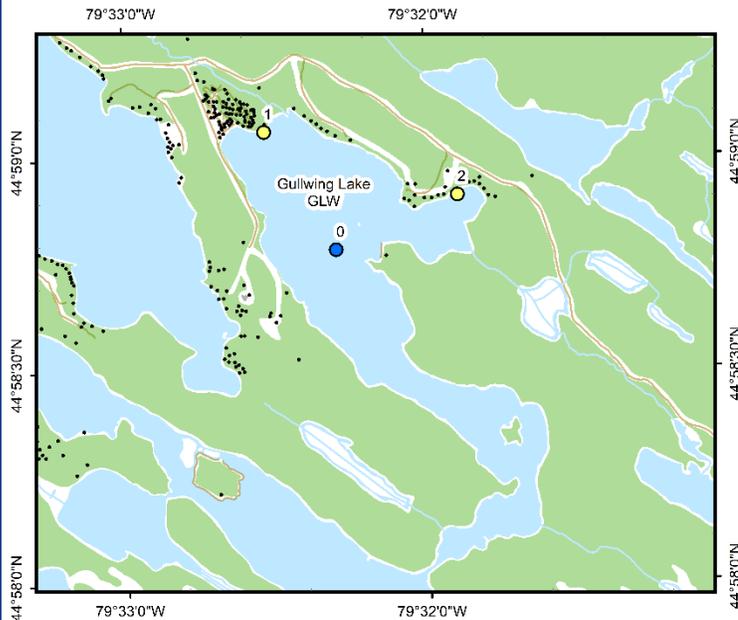


Gullwing Lake (GLW)



Area Description:

Gullwing Lake is located just south of Torrence and has an area of 0.84km² and a maximum depth of 9 m. The watershed area of Gullwing Lake is 5.71 km² includes Crown Land (25%), shoreline residential and a seasonal vacation park located in the northwest. Gullwing Lake is currently listed as moderate sensitivity by the DMM. MLA monitoring of Gullwing Lake began in 2016.

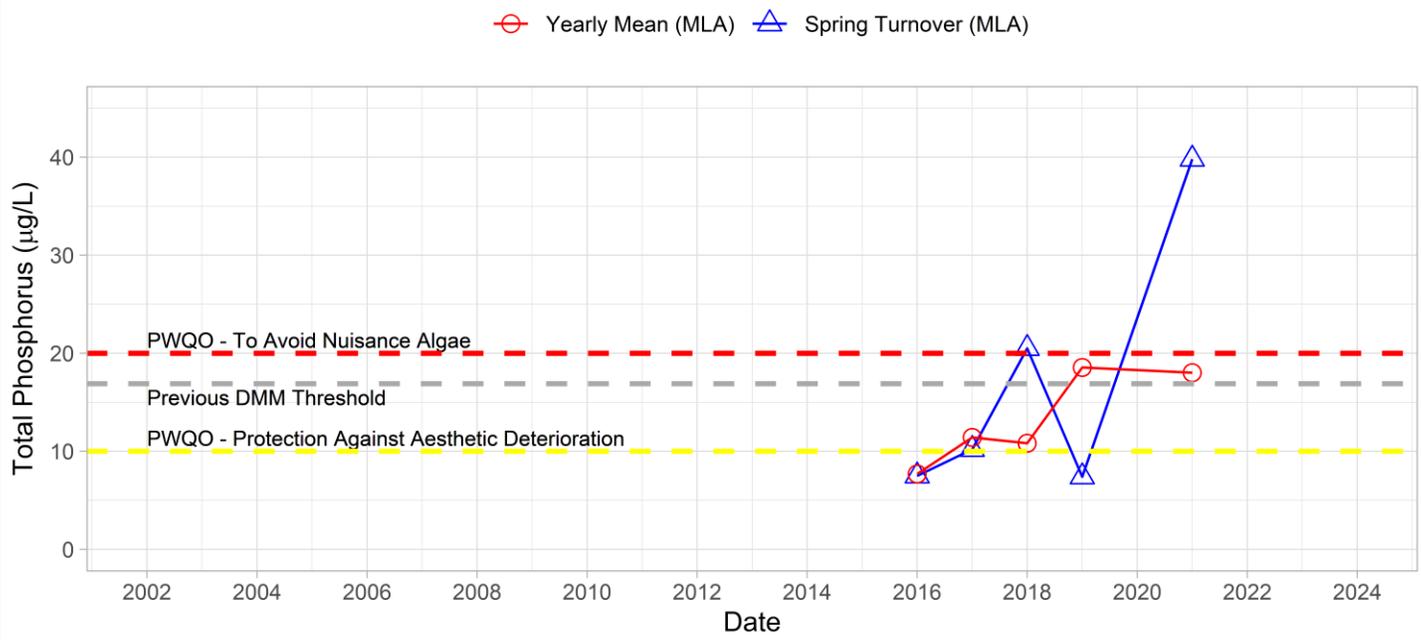
Volunteer Recognition: **Kellie Dobson, Kim Enns, Donna DiLello, and Jim Dobson.**

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		
GLW-0	2.2	39.8*	18.0 (10.8)*		
GLW-1		12.3	10.7	11	82
GLW-2		19.7	13.0	11	66

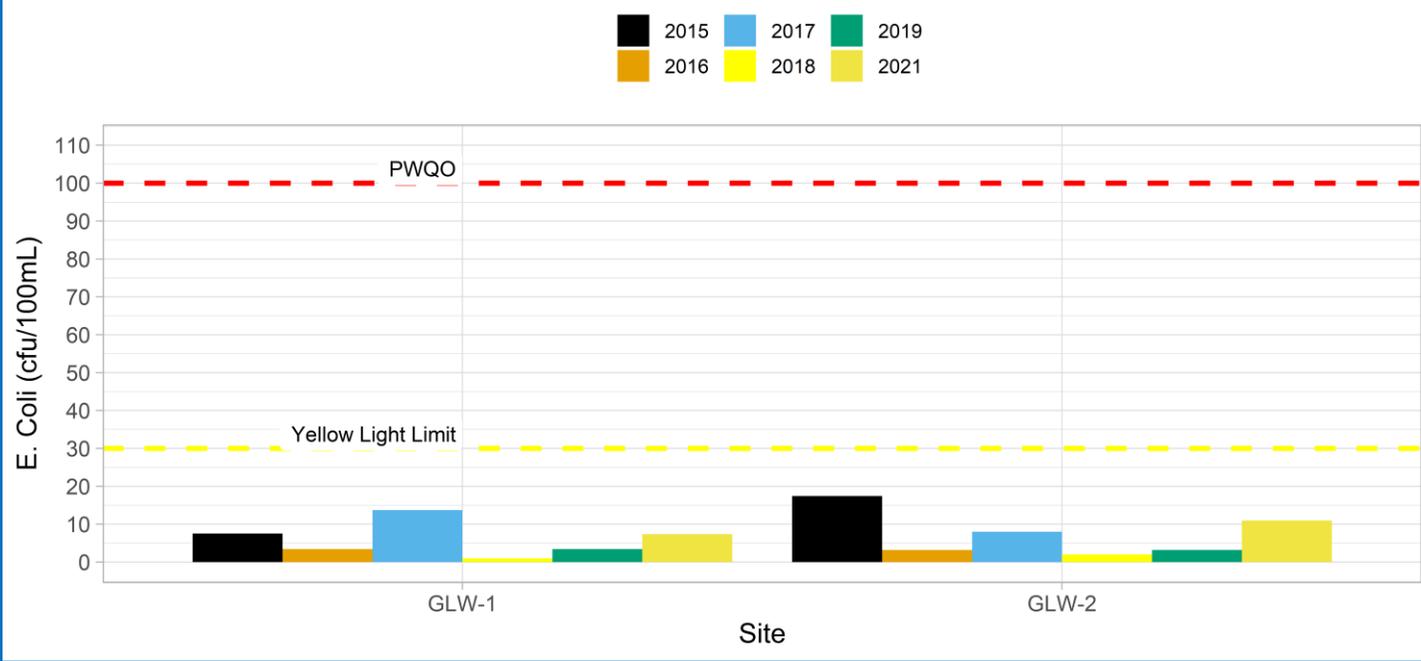
Note: *Spring total phosphorus in 2021 at GLW-0 was not identified as an outlier, however given the anomalously high value we have presented the annual average both with and without this datum.

Phosphorus at GLW-0



Note: Grubbs test indicates data collected no outliers in the spring or annual average phosphorus data.

E. Coli Annual Geometric Mean at Gullwing Lake





In 2021, annual average and spring phosphorus concentrations at the deep-water station (GLW-0) were above the historic DMM threshold of 16.89 µg/L and Provincial Water Quality Monitoring Objectives for Protection Against Aesthetic Deterioration (10 µg/L). Annual average phosphorus concentrations were below the guideline for prevention of Nuisance Algal Growth (20 µg/L), but the spring value was above this level as well. Concentrations of phosphorus in spring seem anomalously high, despite not being identified as an outlier in the data set. Nearshore monitoring of annual and spring phosphorus concentrations at GLW-1 and 2 were within the range of variability of previous monitoring. *E. coli* counts at all stations were below the yellow light trigger established by the MLA. Average annual Secchi disk depth (2.2 m) was consistent with previous monitoring (1.5 – 3.15 m). Based on a three-year average concentration above Provincial and DMM guidelines (20 µg/L) we have changed Gullwing Lake to a yellow light. **HESL**

recommends ongoing sampling to continue to monitor for long-term trends and provide additional data to support the anomalous value from 2021.