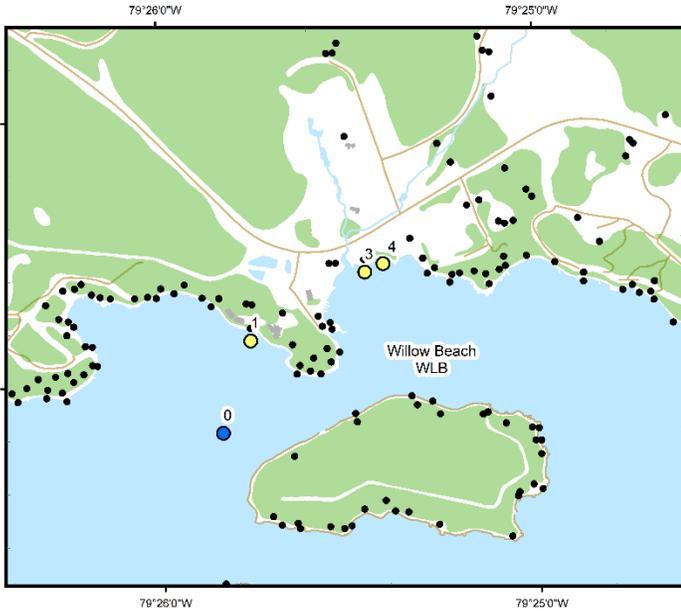


# Willow Beach (WLB)



## Area Description:

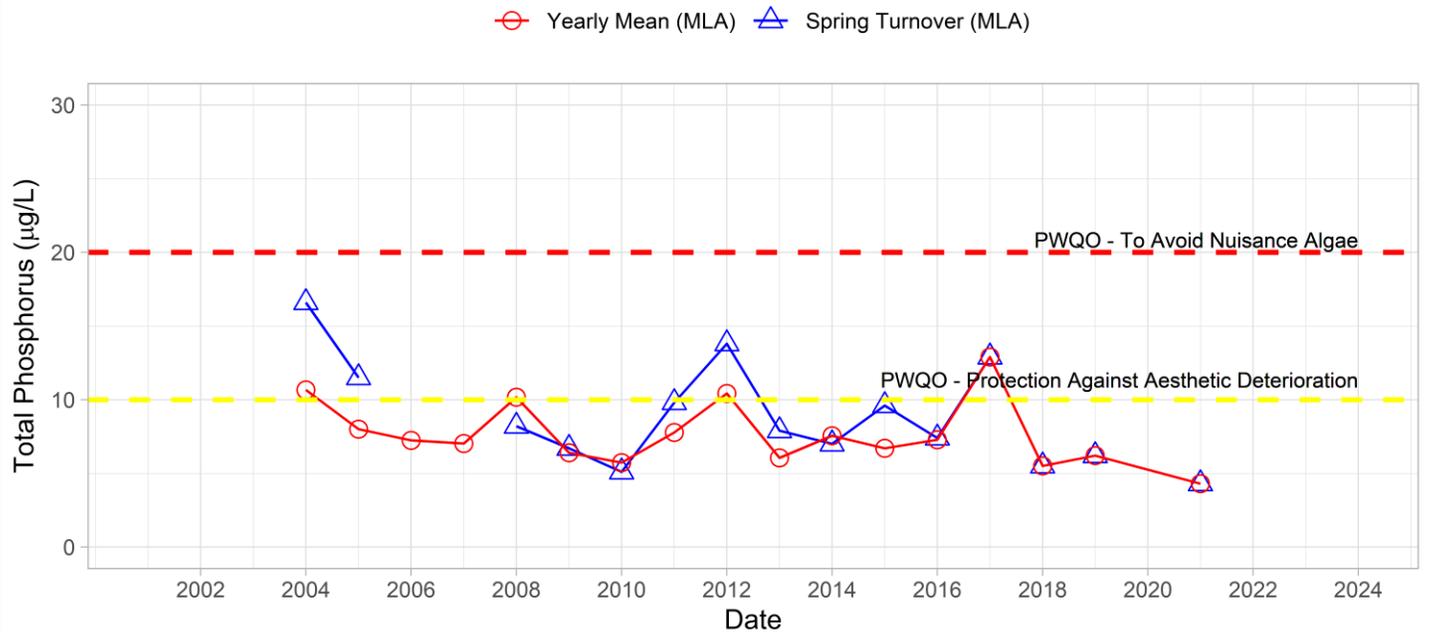
Willow Beach is a highly developed section of shoreline in east central Lake Muskoka, west of Boyd Bay. The Willow Beach shoreline includes a newly redeveloped resort complex, a wetland with a creek flowing through a nine-hole golf course and several larger properties with substantial shoreline alteration and limited retained forest cover. Highway 118 also runs in close proximity to the shoreline along much of the Willow Beach area. MLA monitoring at Willow Beach began in 2004.

Volunteer Recognition: Murray Walker, Emila Brittain, Tom & Pam Poole, Louise Cragg.

## 2021 Water Quality Results:

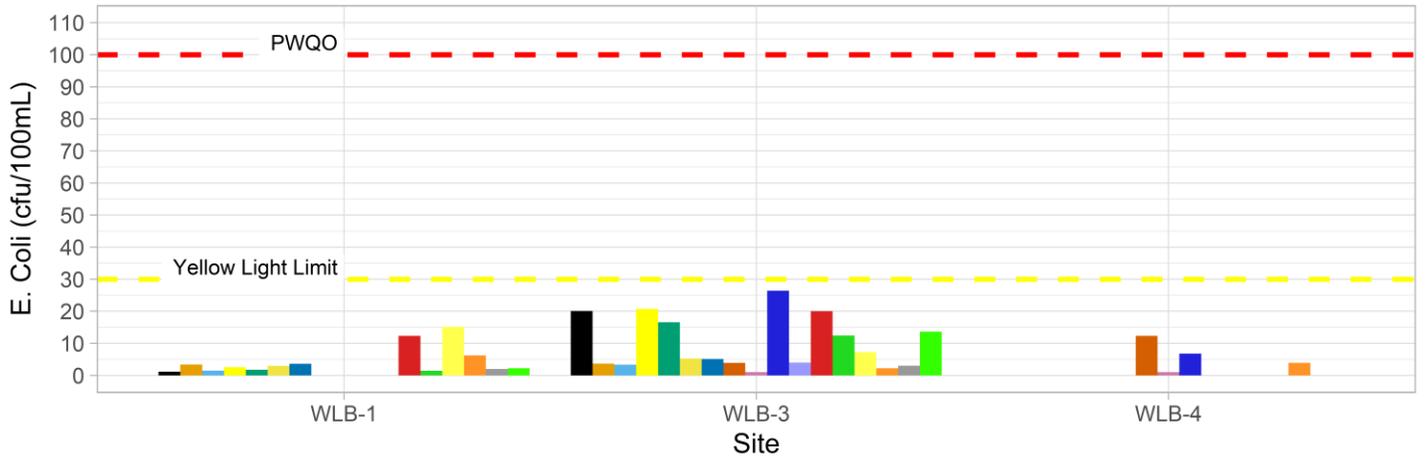
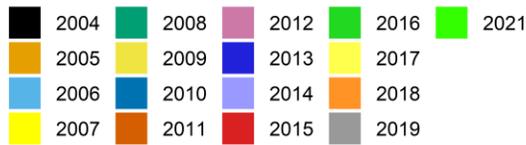
	Mean Secchi Disk (m)	Total Phosphorus ( $\mu\text{g/L}$ )		E. coli Yearly Geometric Mean (cfu/100mL)	Total Coliforms Yearly Geometric Mean (cfu/100 mL)
		Spring Turnover	Yearly Mean		
WLB-0	2.48	4.3			
WLB-1		7.3	6.5		
WLB-3		19.2	14.7	14	272
WLB-4		9.0	8.3	2	67

## Phosphorus at WLB-0

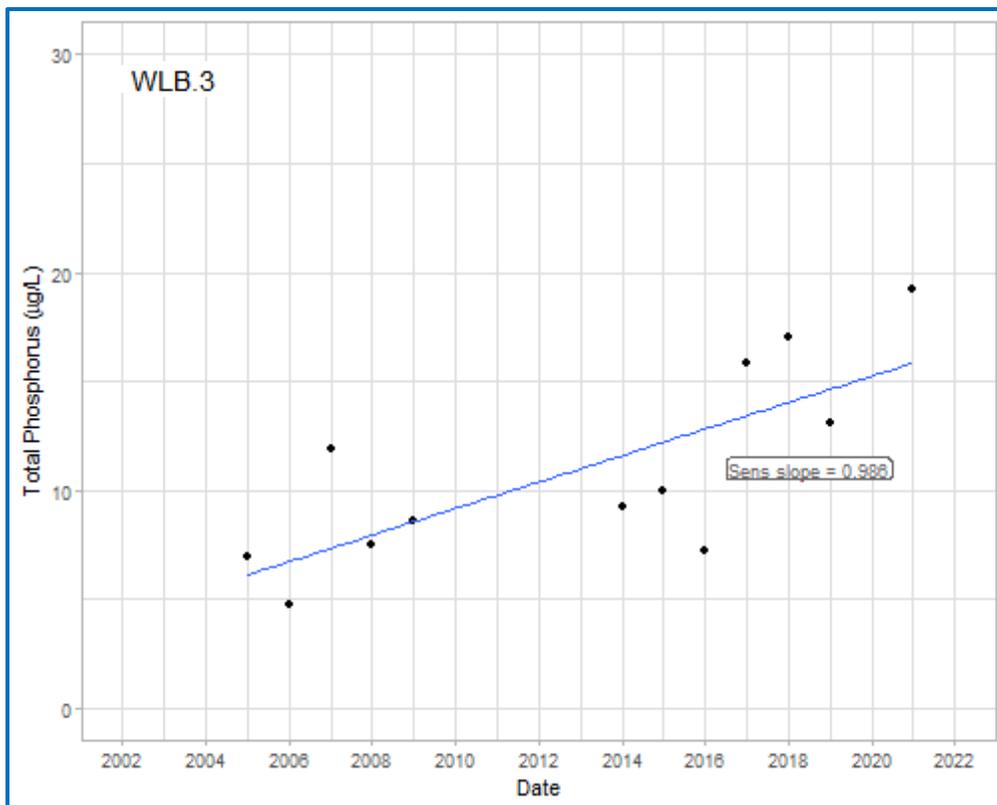


Note: Grubbs test indicates no outliers in Spring or Annual Total Phosphorus data.

### E. Coli Annual Geometric Mean at Willow Beach



The spring phosphorus concentration at the deep-water station (WLB-0) in 2021 was below Provincial Water Quality Monitoring Objectives for Protection Against Aesthetic Deterioration (10 µg/L) and Nuisance Algal Growth (20 µg/L). Nearshore monitoring of spring phosphorus concentrations at WLB-1 and 4 were within the range of variability of previous monitoring data collected since 2004 and 2013 respectively. The spring overturn phosphorus concentration at WLB-3 was the highest recorded at the station since monitoring began in 2005. Assessment of trends in total phosphorus concentrations indicate a significant increasing trend in spring total phosphorus concentrations at WLB-3, however this trend is not currently observed in annual average phosphorus concentrations. The WLB-3 station is located in a heavily developed area adjacent to a resort and near the inflow of a creek which drains a golf course and agricultural lands. Sampling of this creek in the future may provide information on the phosphorus load



arriving from the watershed and support discussions with the District on potential mitigation options to reduce the concentrations of phosphorus entering the lake at this site. Average annual Secchi disk depth (2.48 m) was consistent with previous monitoring (0.84 – 6.5 m). The *E. coli* counts at WLB-3, and WLB-4 were below the MLA stoplight limits in 2021. **HESL recommends ongoing sampling to continue to monitor phosphorus concentrations in the nearshore and update data on long-term trends.**