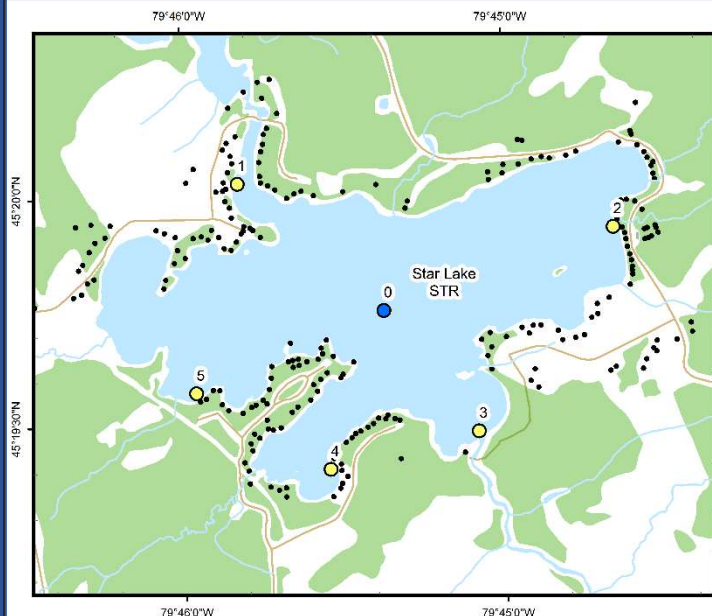




Star Lake (STR)



Area Description:

Star Lake is a moderately developed lake located within the Township of Seguin. The lake has a surface area of 1.58 km² and a maximum depth of 23 m. Shoreline development on Star Lake includes residential properties some of which have extensive clearings and lawns, particularly in the East. There is also a substantial agricultural development immediately adjacent to the lake in the northwest. This lake has several inflow and outflow creeks including a connection with Mutton Lake to the North. MLA monitoring of Star Lake began in 2007

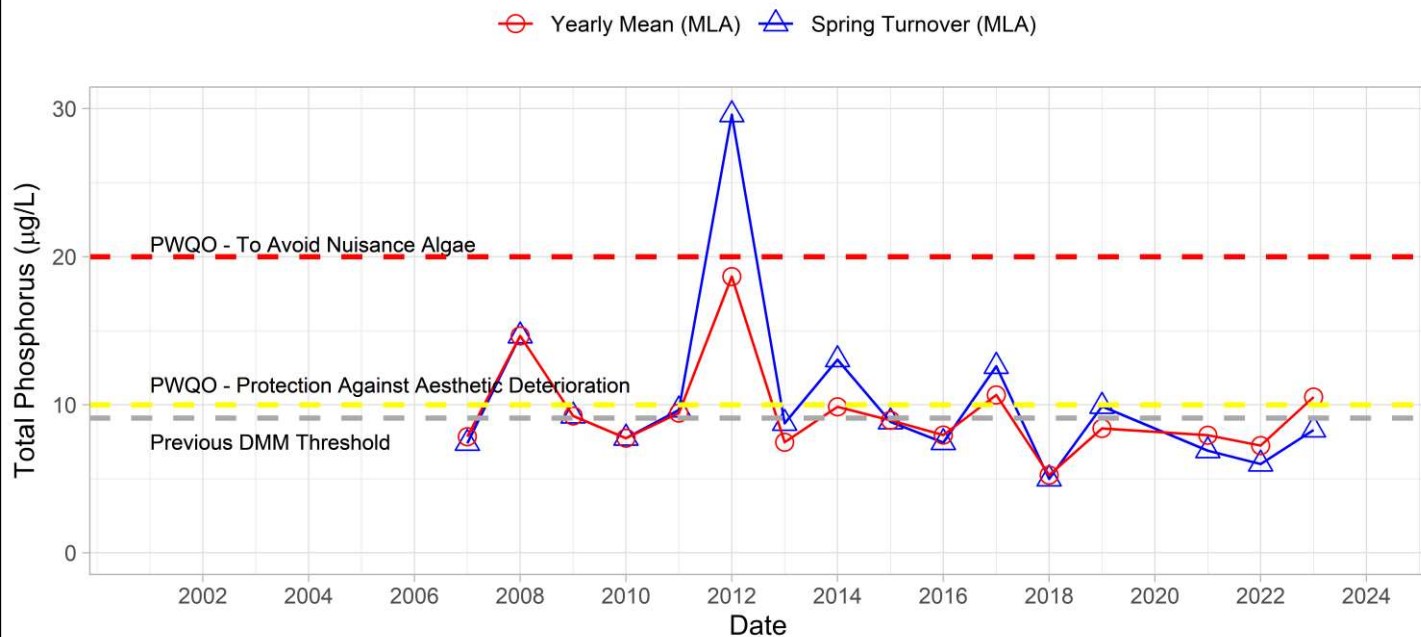
Volunteer Recognition: Karen Gillies, Melaney Kerley, Dawn Sendzik, Kelly Mazza and Jim Kerley.

2023 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		
STR-0	2.5	8.3	10.5		
STR-1				25	108
STR-2				9	49
STR-3				16	103
STR-4				11	133
STR-5				9	81

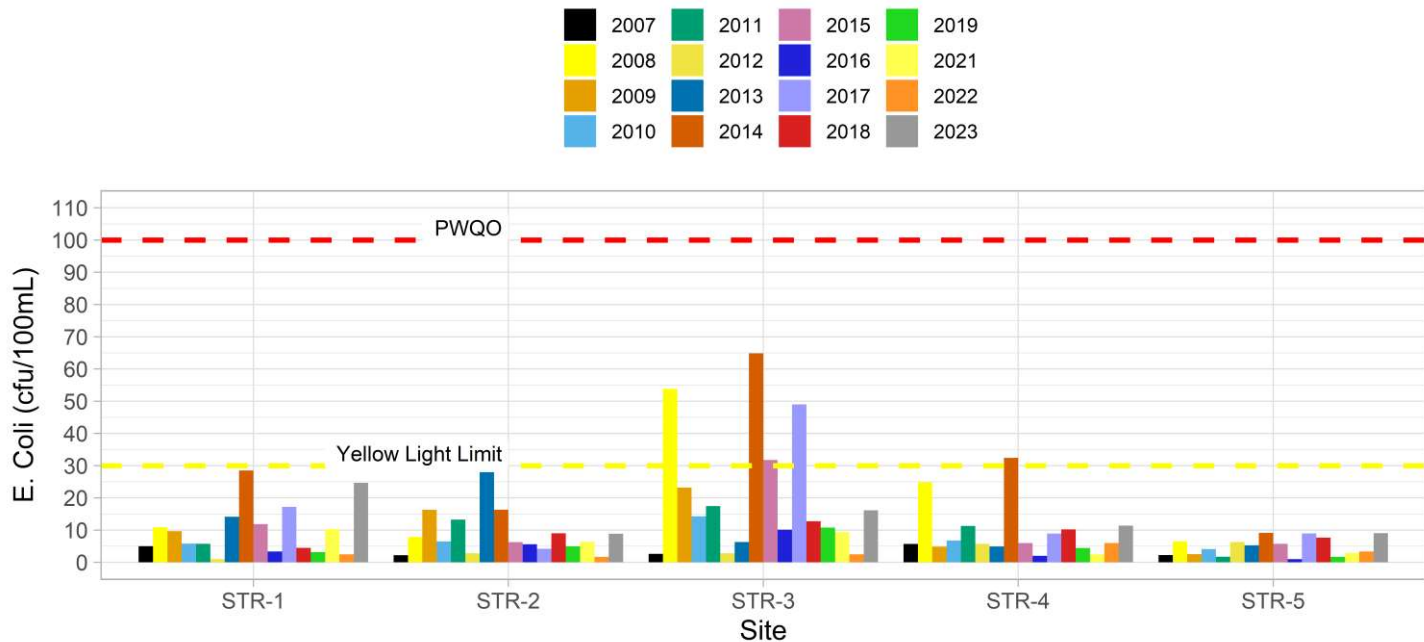


Phosphorus at STR-0



Note: Grubbs test indicates the spring phosphorus concentration collected in 2012 is considered an outlier.

E. Coli Annual Geometric Mean at Star Lake





Hutchinson
Environmental Sciences Ltd.



Spring phosphorus concentrations at the deep-water station (STR-0) were below the historic DMM threshold of 9.1 µg/L and Provincial Water Quality Monitoring Objectives for Protection Against Aesthetic Deterioration (10 µg/L) and Nuisance Algal Growth (20 µg/L). Annual phosphorus concentrations in 2023 were above the historic DMM threshold of 9.1 µg/L and Provincial Water Quality Monitoring Objectives for Protection Against Aesthetic Deterioration (10 µg/L), as a result of elevated concentrations during August sampling. August sampling took place during rough conditions and a heavy rainfall event which likely contributed to elevated phosphorus. *E coli* samples collected in 2023 at all stations were below the MLA stoplight limits. Average annual Secchi disk depth (2.5 m) was consistent with previous monitoring (1.40 - 4.45 m). **HESL recommends ongoing sampling to continue to monitor for long-term trends and emerging issues.**