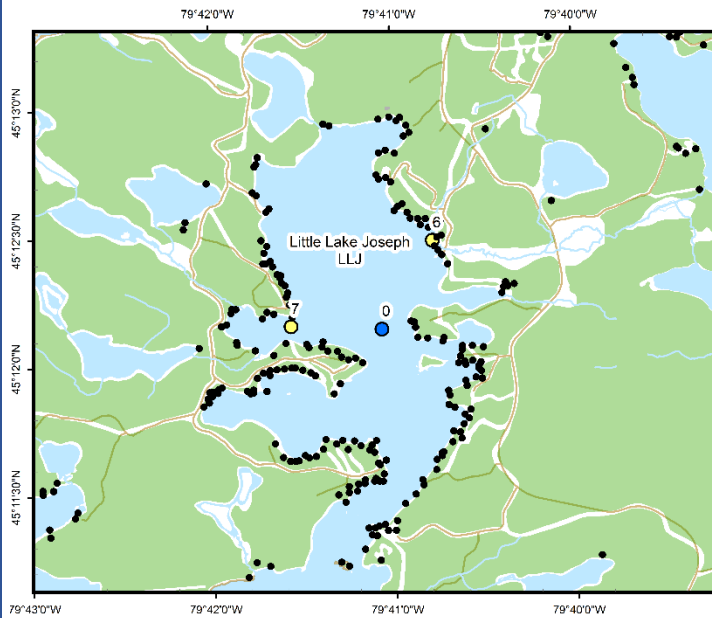


# Little Lake Joseph (LLJ)



### Area Description:

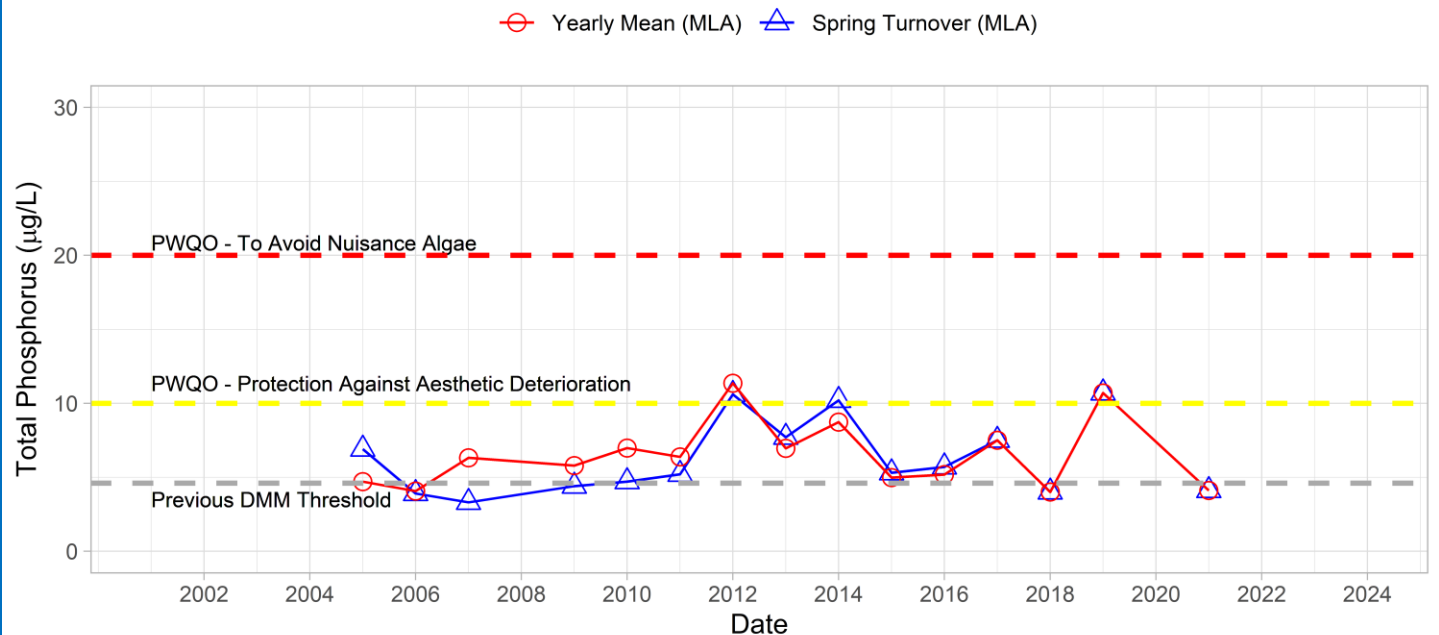
Little Lake Joseph is an isolated embayment of Lake Joseph with an area of 2.8 km<sup>2</sup> with a maximum depth of 40 m. Despite cottage development the shoreline of Little Lake Joseph remains naturalized. The waterbody receives drainage from three small wetlands. Little Lake Joseph is currently classified by the DMM as moderately sensitive. MLA monitoring of Little Lake Joseph began in 2005.

Volunteer Recognition: Dirk Soutendijk and Westley Begg.

### 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		
LLJ-0	4.5	4.1			
LLJ-6		4.9	9.1		
LLJ-7		12.6	8.1		

### Phosphorus at LLJ-0



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



In 2021, the spring total phosphorus concentration at LLJ-0 decreased substantially from a historical high in 2019 of 10.7 µg/L to 4.1 µg/L and was below the historic DMM threshold of 4.6 µg/L. All measured deep-water phosphorus concentrations were below Provincial Water Quality Monitoring Objectives for Protection Against Aesthetic Deterioration (10 µg/L) and Nuisance Algal Growth (20 µg/L). Nearshore monitoring of annual average phosphorus concentrations at LLJ-6 and 7 were similar, however spring phosphorus was markedly higher at LLJ-7 for the second consecutive sampling year (2019 and 2021), though phosphorus concentration declined substantially from historical highs in 2019. This year represents the 6<sup>th</sup> year with sampling from LLJ-6 and 7, both of which show highly variable spring and annual average phosphorus concentrations and warrant ongoing monitoring. Average annual Secchi disk depth (4.5 m) was consistent with previous monitoring (2.5 – 6.5 m). **HESL recommends ongoing sampling to continue to monitor for long-term trends and emerging issues.**