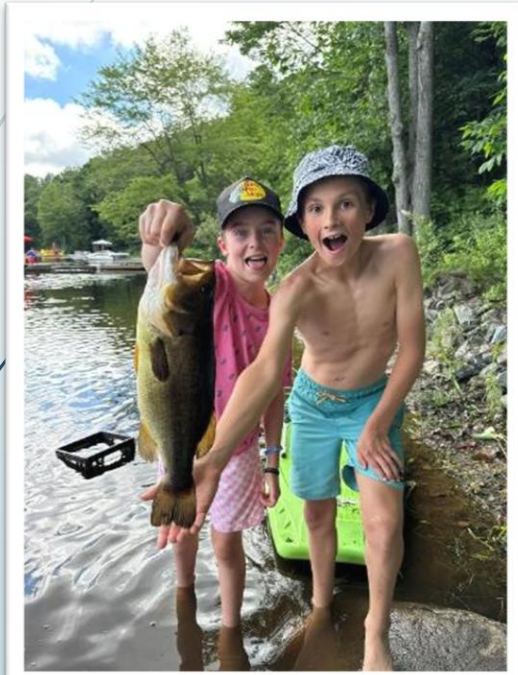


2026 Environment Report



**Kevin Trimble
Chair, Environment
Committee**

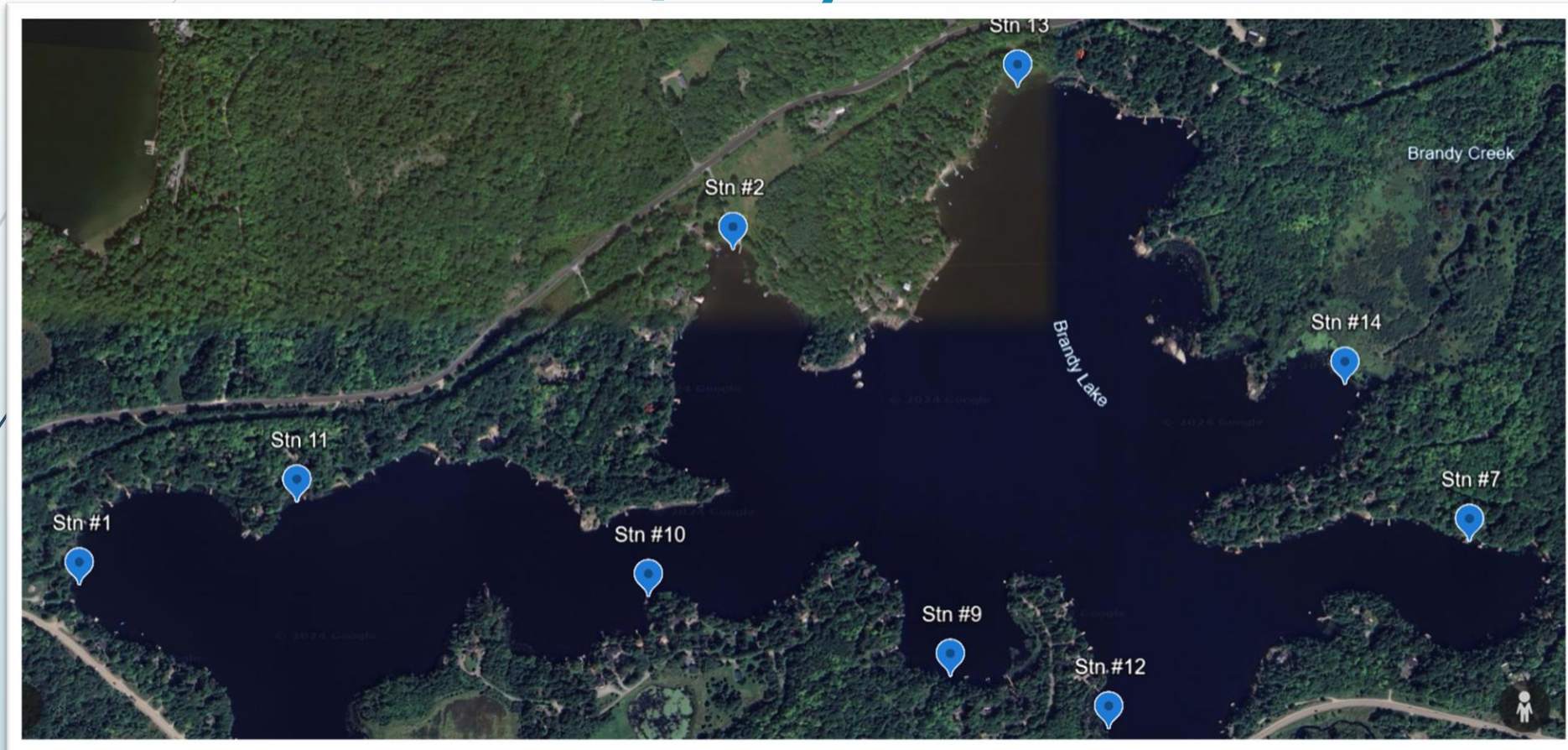




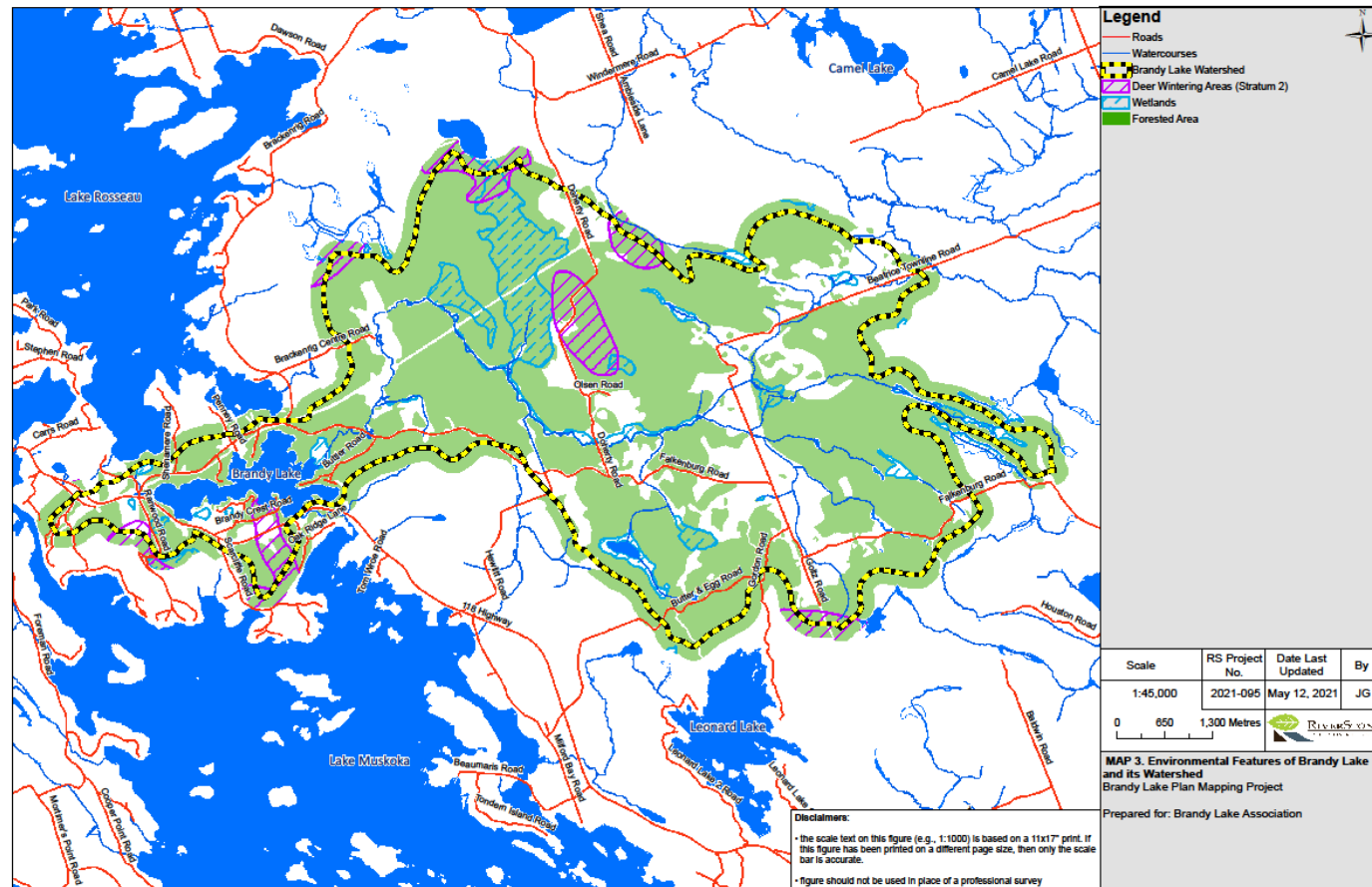
WQ Programs & Crew

- MLA Bacteria – 9 stations sampled 3 times (+analysis)
 - Derek Stevens; Paige Stevens; Kevin Trimble
- LPP Phosphorus 2 stations monthly (+MLA spring P)
 - Kevin Trimble
- DMM water quality + benthic sampling (D.&P. Stevens assist)
- MWC Algae – 2 stations bi-weekly (+analysis)
 - Derek Stevens; Moreen Miller; Paige Stevens; Kevin Trimble
- BLA Water Level & precipitation
 - Kevin Trimble;
- **2026 BLA WQ at 3 stations upstream on Brandy Creek**

Water Quality Stations



Watershed and Tributaries





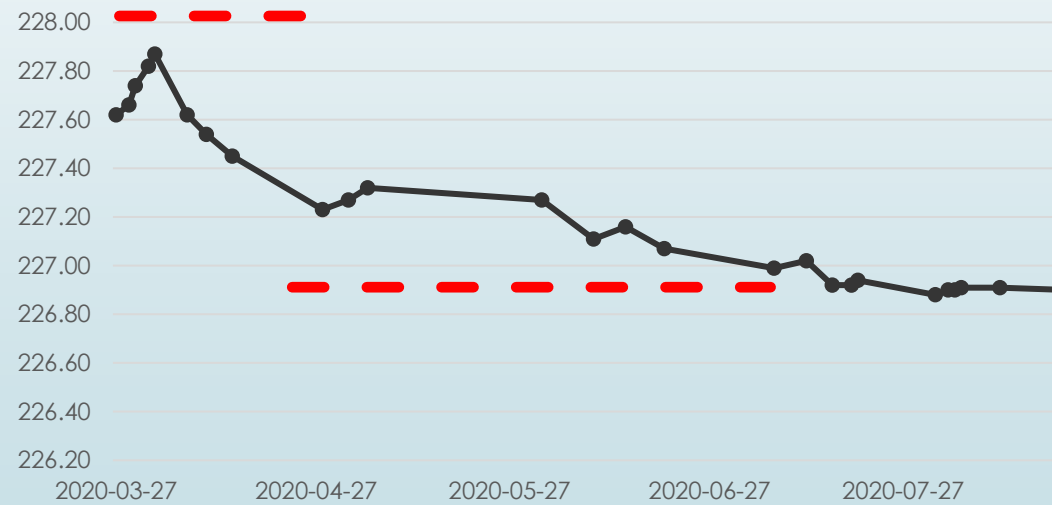
Rainfall 2020 to 2025

	1991-2020	2020	2021	2022	2023	2024	2025	2026
April	79.1 mm	73.3mm m	72.1mm	88.3	172.3 mm	199.6 mm	86.7	173.6
May	92.7	68.3	14.1	76.5	58.8	66.6	99.6	51.4
June	86.1	100.9	135.9	57.0	123.5	146.2	75.7	145.3
July	99.5	81.8	136.2	58.8	140.2	82.5	36.6	
August	81.6	129.4	88.2	128.9	102.8	91.6	108.3	
September	101.7	79.7	148.7	111.4	73.2	70.4	49.2	



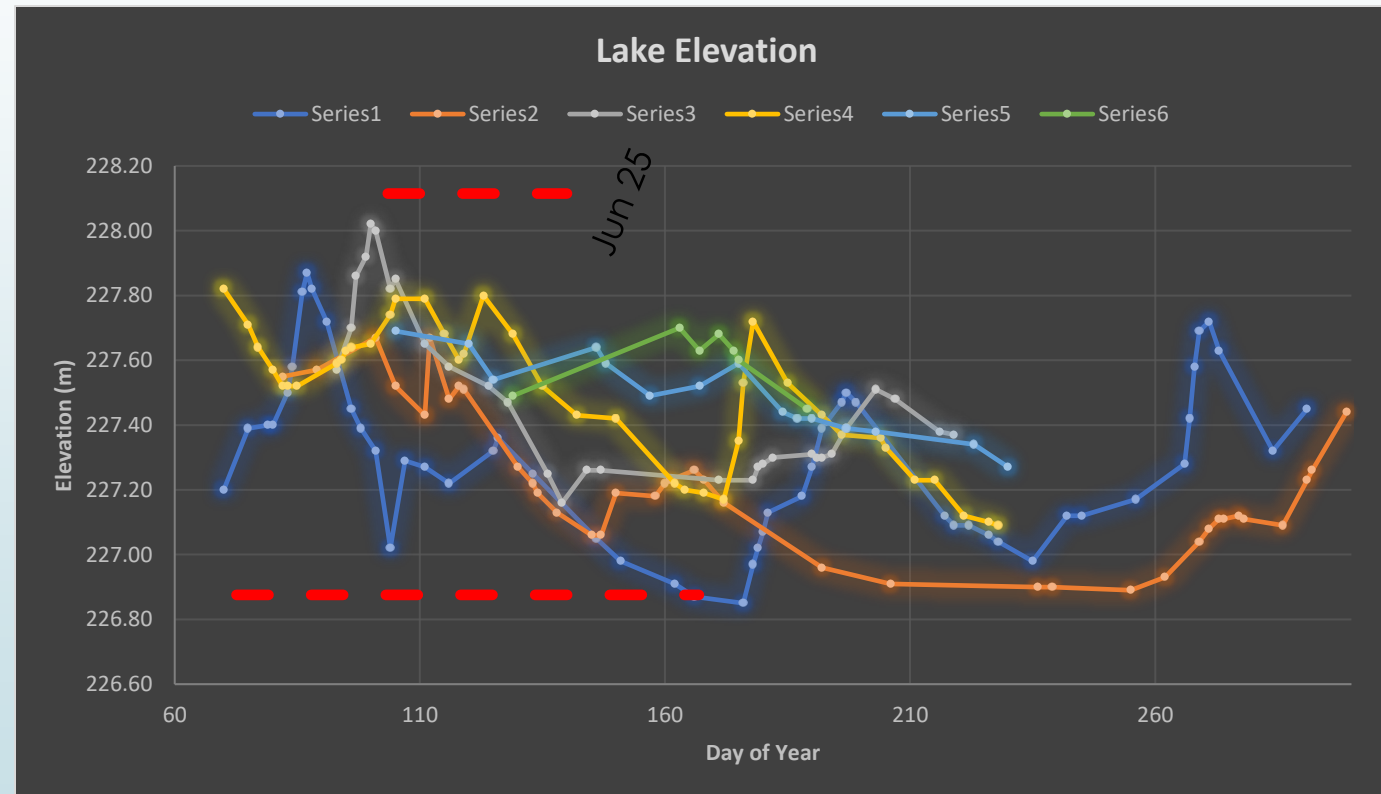
2020 water levels

Water Level Elevation (m asl)



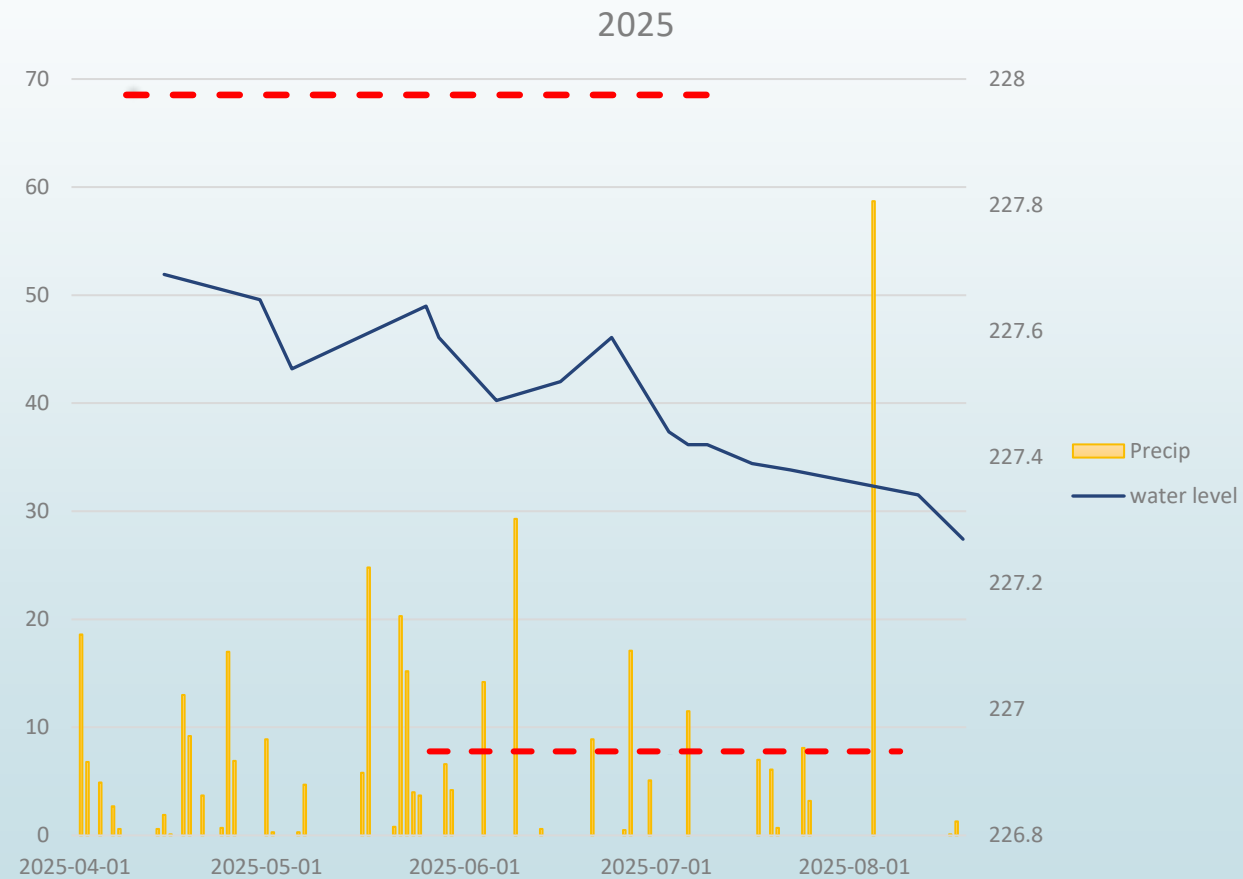


2021-2026 water levels



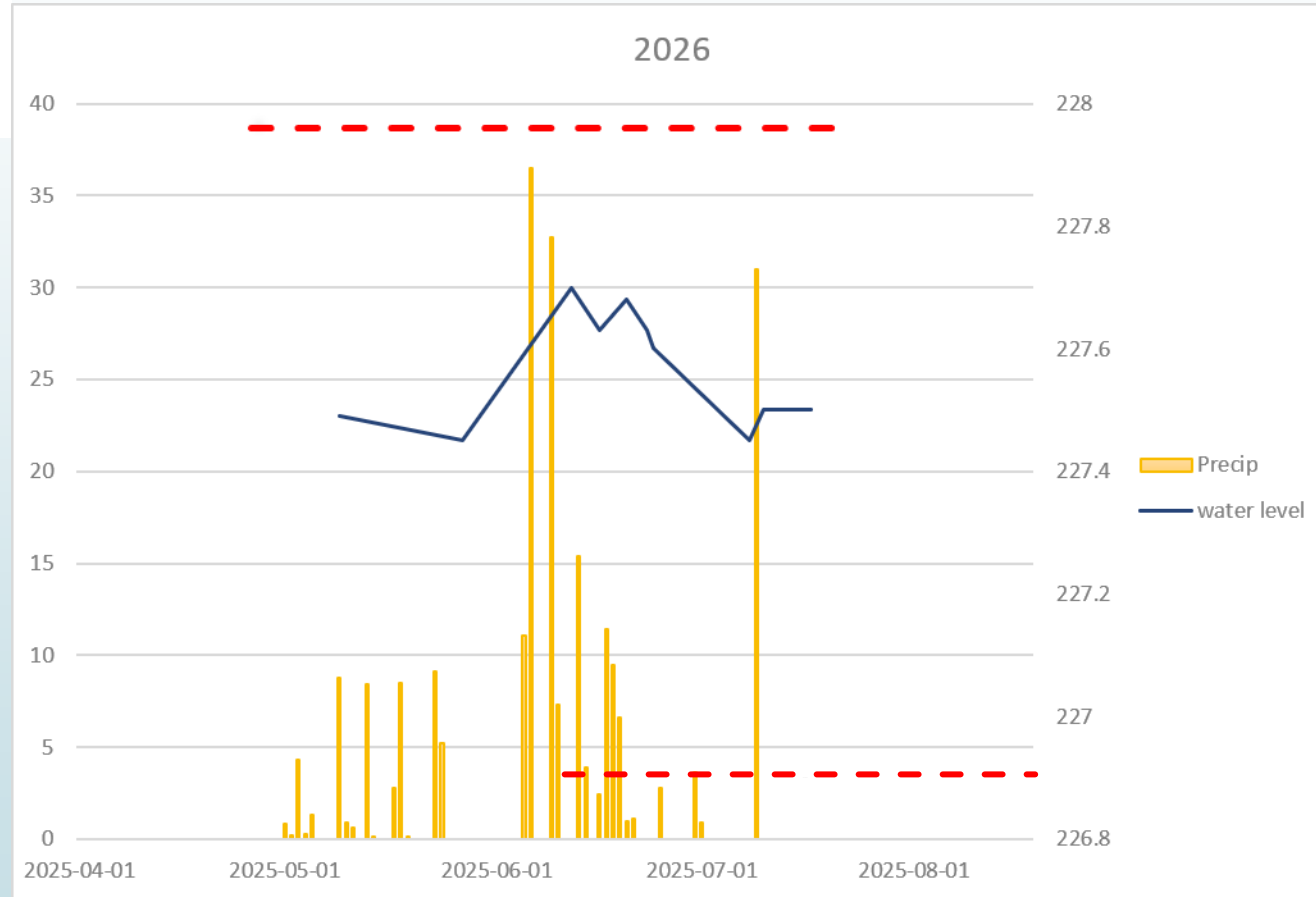


2025 Rainfall and Water Levels





2026 Rainfall and Water Levels





Algae Monitoring Program 2024 Final Report

JULY 2025



**Muskoka
Watershed
Council**

ALGAE SUB-COMMITTEE



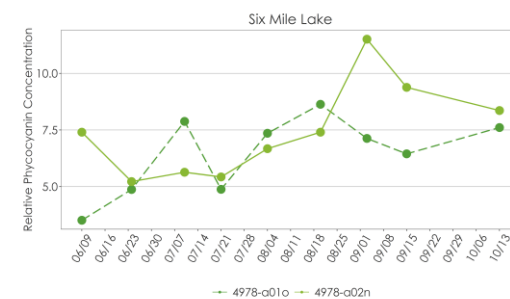
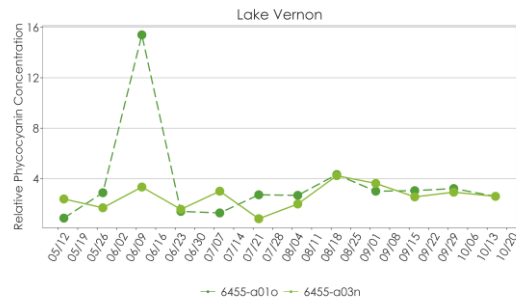
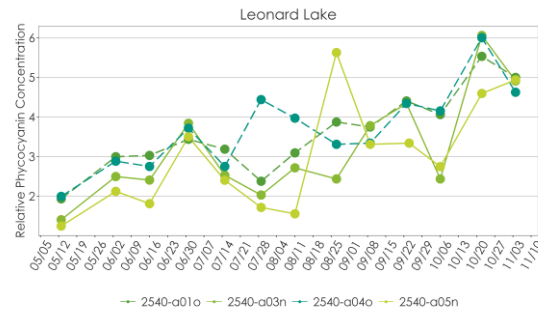
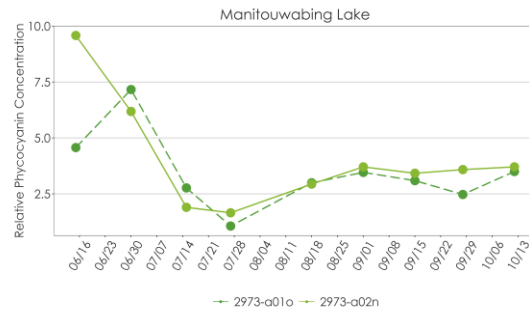
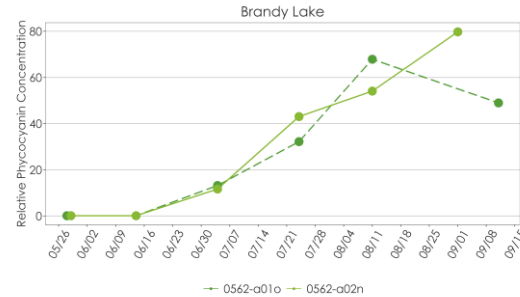
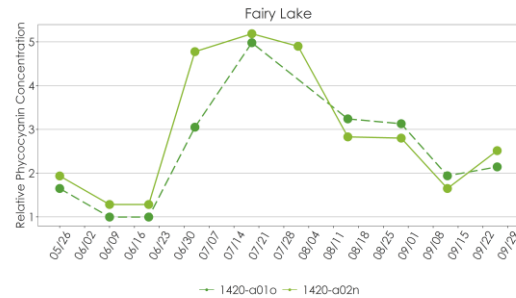
Blue-Green Algae

What the BLA does

- We monitor blue-green algae and other WQ metrics
- **(monitoring can't be used to identify blooms)**
- We interact with the local research community
- We communicate with members
- We interact with government (TML, SMDHU, MECP)
- **We are not** involved in advisories
- **We do not** manage blooms (**nobody does**)
- **We do not** report a bloom or advise others to do so

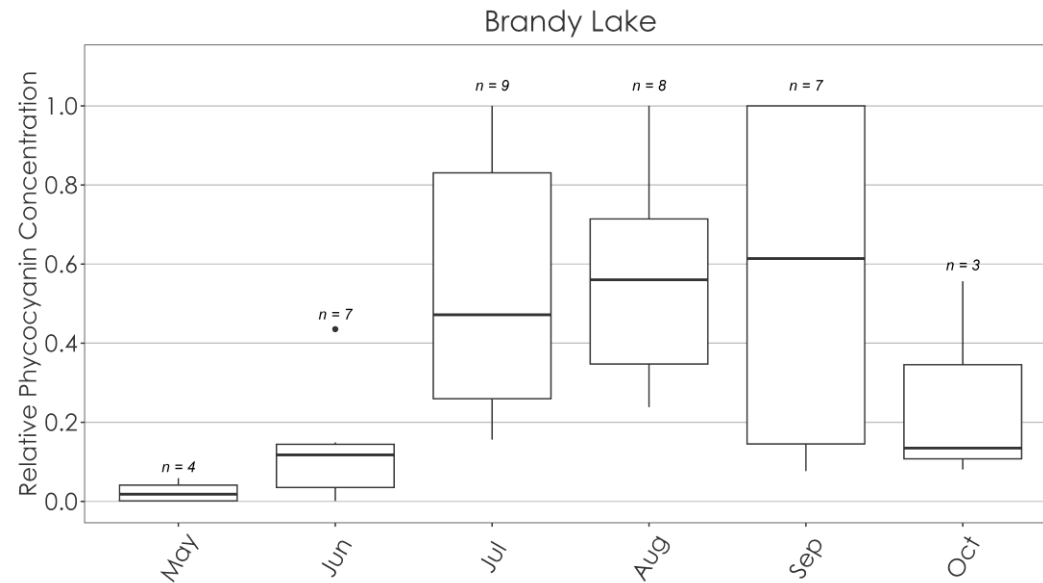
Early-mid season peak

Late season peak



- Phycocanin data for six of our lakes in 2025
- Lots of seasonal variation
 - Timing of PC peaks vary depending on the lake

Long-term results - Phycocyanin

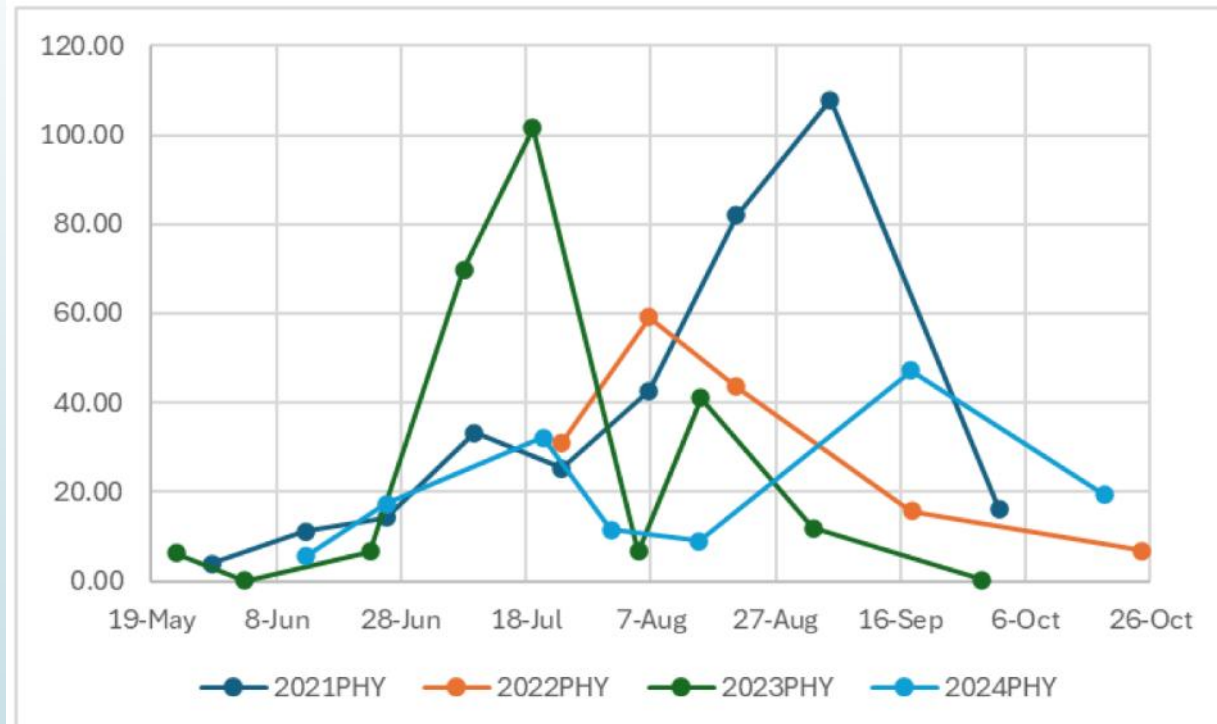


- Relative Phycocyanin data averaged for the past 5 years
- PC tends to peak in the fall
 - More data is needed for September -> early November



MWC 2021-24 Algae Monitoring

Brandy Lake





Blue-Green Algae in Brandy Lake

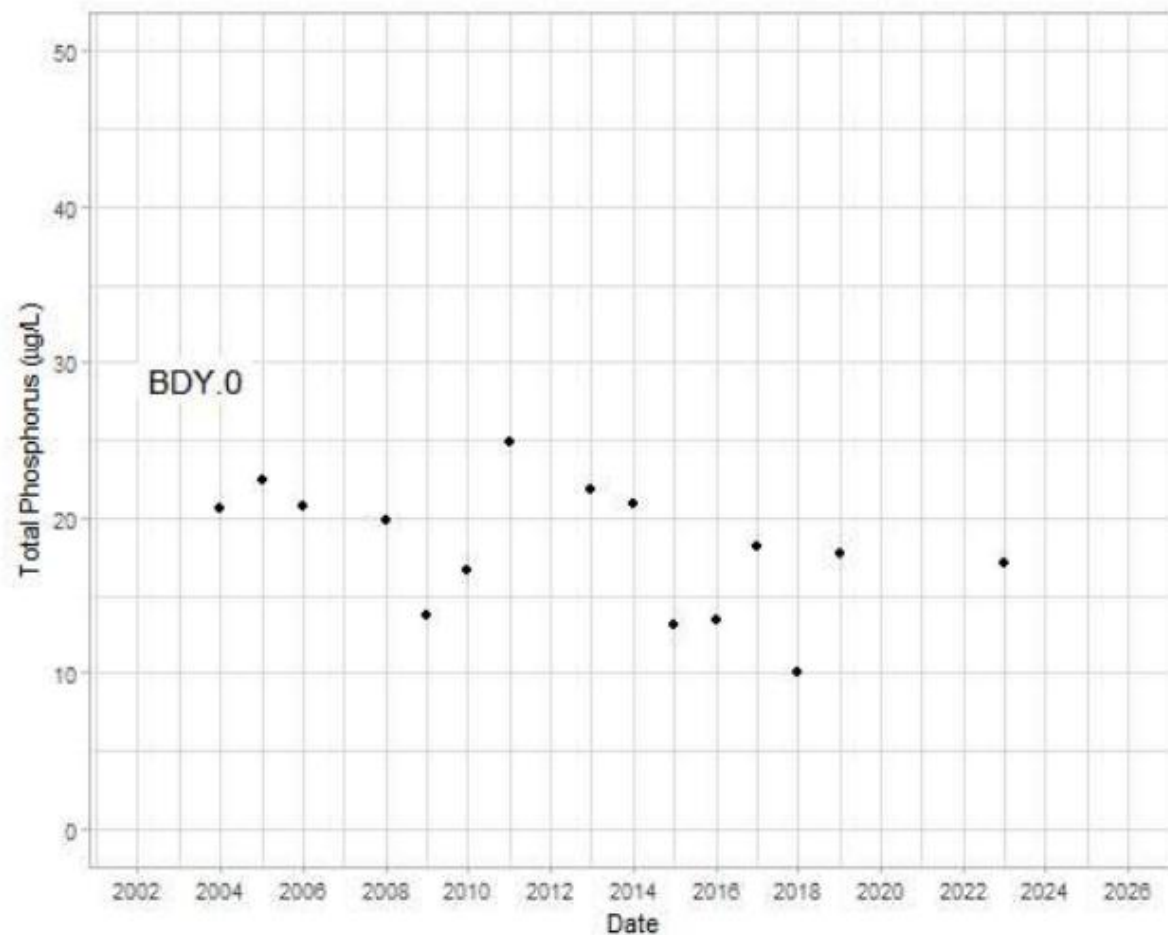
- 2001-2003 reported blooms studied by MECP (published 2006).
- 2019 - reported bloom in early September
- 2020 - reported bloom in late July
 - >25 lakes in MECP Central District reported blooms – we weren't alone
- 2024 Sept 10-22 large unreported bloom
- 2025 some algae in early fall



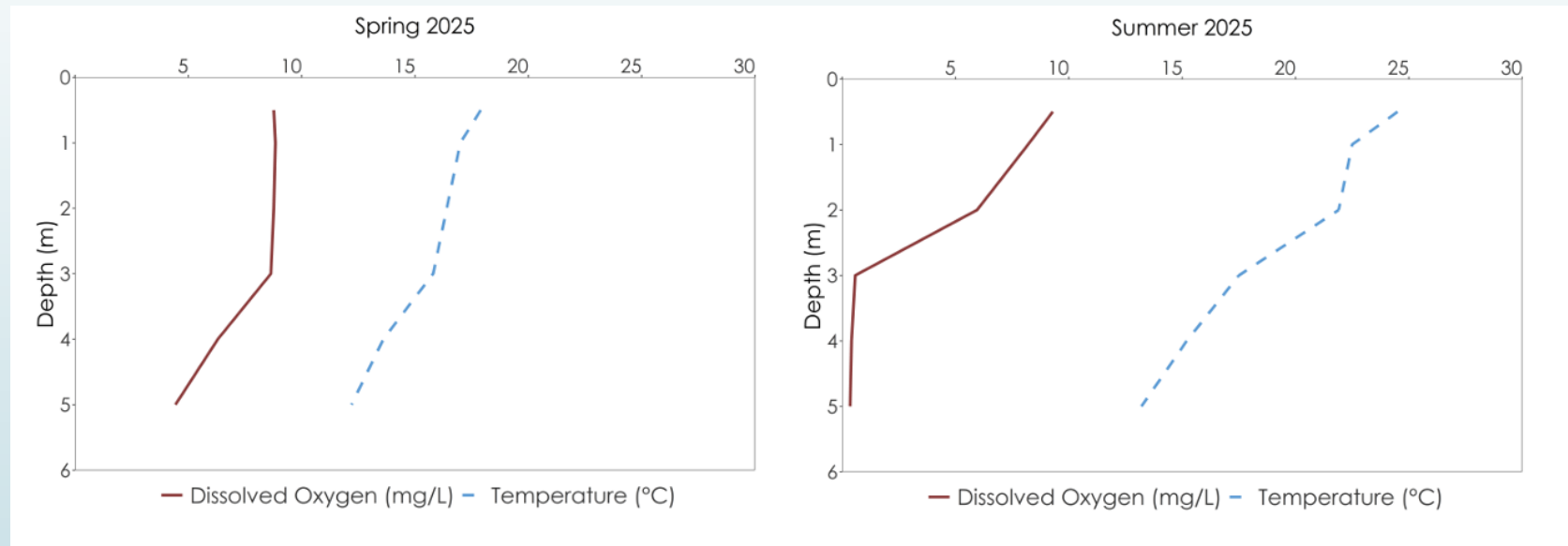
Blue-Green Algae Advisories

- Advisory posted October 2025 – May 2026
- No confirmation of B-G algae or basis for advisory
- BLA notified TML and advisory removed with a description of the new process going forward
- **NEW PROTOCOL - No unconfirmed advisories will be posted**

Phosphorus



Dissolved Oxygen and Temperature Profile (2025)



MLA Water Quality Results 2025



2025 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		
BDY-1	1.0			2	51
BDY-2				1	95
BDY-7				4	49
BDY-9				1	24
BDY-10				1	20
BDY-11				1	38
BDY-12				5	52
BDY-13				1	23
BDY-14				2	40

Note: Grubbs test indicates no data collected for spring or annual average total phosphorus concentration are considered an outlier



In 2025, the spring phosphorus concentrations at the deep-water station (BDY-0) were not collected. *E. coli* counts at all nearshore stations were below the yellow light threshold. Average annual Secchi disk depth at BDY-0 was not measured in 2025. Brandy Lake last experienced a cyanobacteria bloom in 2020 and therefore earned a green light in 2024. HESL recommends ongoing sampling to continue to monitor for long-term trends and emerging issues.

Benthic Invertebrates



Common Name	Site 1 ^R						Scientific Name
	2016	2022	2023	2024	2025	2026	
Hydras							Coelenterata
Flatworms	5						Turbellaria
Roundworms	3	7	3	1	6	3	Nematoda
Aquatic Earthworms	22		2	2	1		Oligochaeta
Leeches	1	1			1		Hirudinaea
Sow Bugs	74	46	9	13	12	24	Isopoda
Clams & Mussels	3	1					Bivalvia
Scuds	62	29	21	14	59	33	Amphipoda
Crayfish	1						Decapoda
Mites	9	2	13	56	66	46	Hydracarina
Mayflies	28	12	37	2	5	3	Ephemeroptera
Dragonflies	25	2	5	4	16	21	Anisoptera
Damselflies	3	3	4	12	25	11	Zygoptera
Stoneflies							Plecoptera
True Bugs		2					Hemiptera
Fishflies & Alderflies	6	1				1	Megaloptera
Caddisflies	3	2			11	5	Trichoptera
Aquatic Moths			1				Lepidoptera
Beetles	17	1	2		3	1	Coleoptera
Snails & Limpets	3	6	3		2	8	Gastropoda
Midges	58	8	1	2	4	4	Chironomidae
Horse & Deer Flies							Tabanidae
Mosquitos					2		Culicidae
No-see-ums	3			2	12	4	Ceratopogonidae
Craneflies		1					Tipulidae
Blackflies			1				Simuliidae
Misc. True Flies							Misc. Diptera
Total Count	326	124	102	108	225	164	
Number of Taxa	18	16	13	10	15	13	
							Muskoka Average *
Richness	18	16	13	10	15	13	13
% EOT	18	15	45	17	25	24	17
% Chironomids	18	6	1	2	2	2	8
% Predators	21	10	24	69	55	51	24
% Shredders	1	2	1	0	5	3	2
% Collectors/Gatherers	75	77	69	31	37	39	68
Hilsenhoff Index	6.45	6.64	5.81	6.34	6.04	6.18	6.27

Benthic Invertebrates



Caddisflies		5		11	3	4	1	1	6	5	Trichoptera
Aquatic Moths											Lepidoptera
Beetles						2	1	3		1	Coleoptera
Snails & Limpets	3	4	29	13			2	3	1	3	Gastropoda
Midges	23	42	10	18	7	6	2	3	5	8	Chironomidae
Horse & Deer Flies											Tabanidae
Mosquitos				2					2		Culicidae
No-see-ums	4	4	5		3			2	4	11	Ceratopogonidae
Crane flies			4								Tipulidae
Blackflies											Simuliidae
Misc. True Flies				3							Misc. Diptera
Total Count	343	392	396	341	120	162	104	115	237	215	
Number of Taxa	13	12	15	16	9	11	15	15	12	14	
											Muskoka Average *
Richness	13	12	15	17	9	11	15	15	12	14	13
% EOT	40	17	7	23	34	20	18	18	11	7	17
% Chironomids	7	10	3	5	6	4	2	3	2	4	8
% Predators	6	11	17	11	54	22	32	59	34	33	24
% Shredders	0	1	1	3	3	2	1	1	3	2	2
% Collectors/Gatherers	92	85	74	80	43	73	64	36	62	63	68
Hilsenhoff Index	5.72	6.25	6.17	6.36	5.81	5.91	6.14	5.95	6.26	6.06	6.27

* The Muskoka Average is based on 228 samples collected at 94 reference sites between 2013 and 2023. Data prior to 2021 is based on three subsamples (min. 300 count) per site while data from 2021 on is based on one sample (min. 100 count) per site.



Bottom of the Food Web



Land Uses



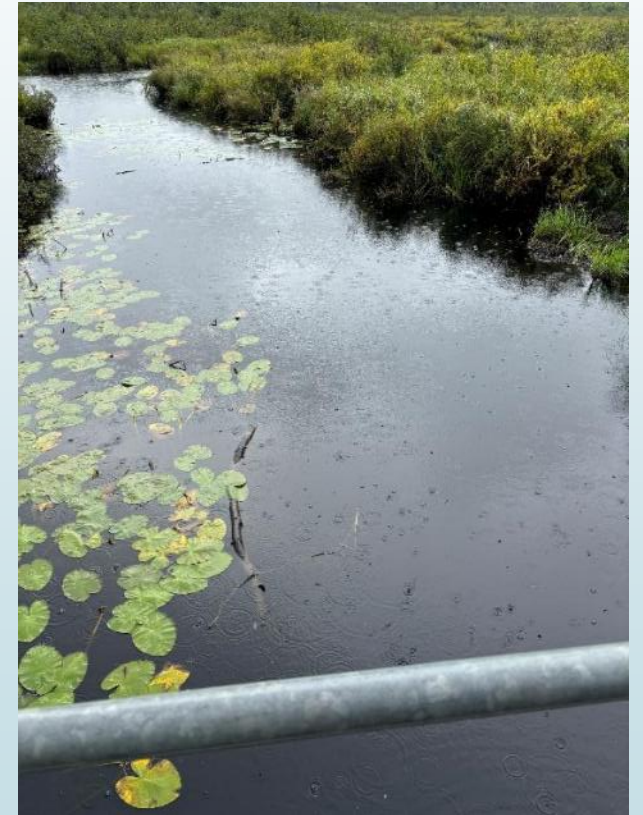


Zoning





Impacts from Adjacent Land Use

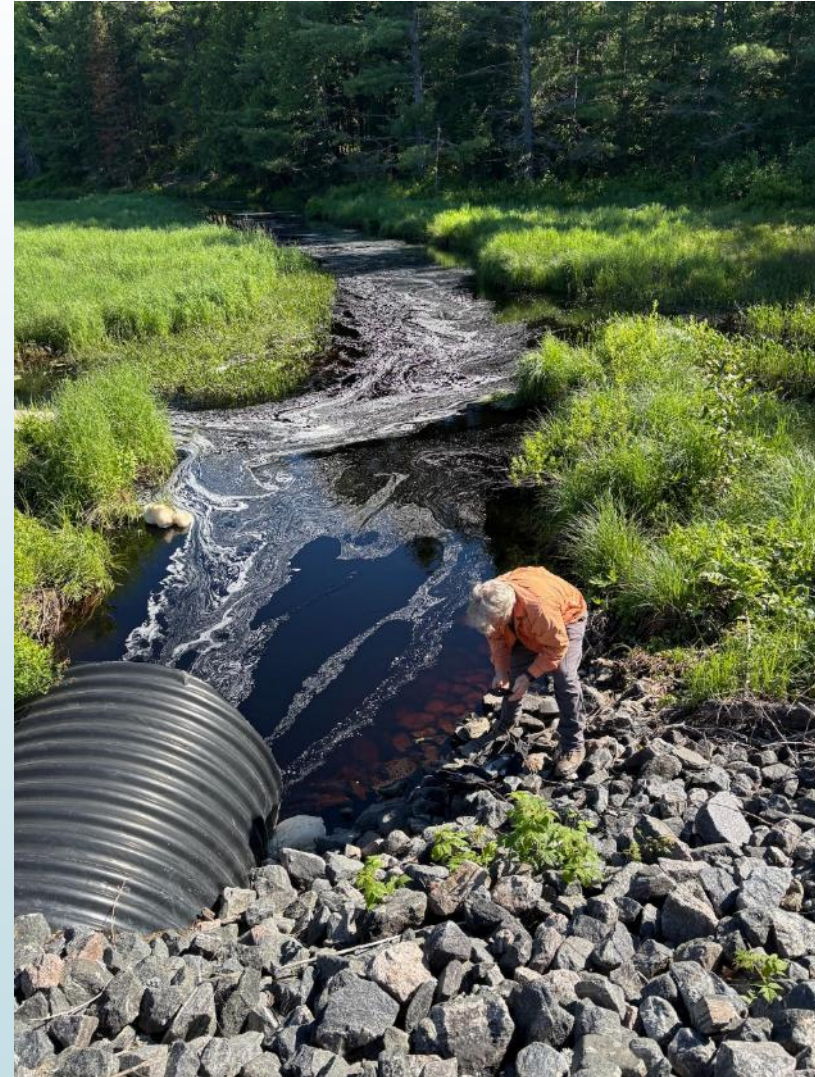




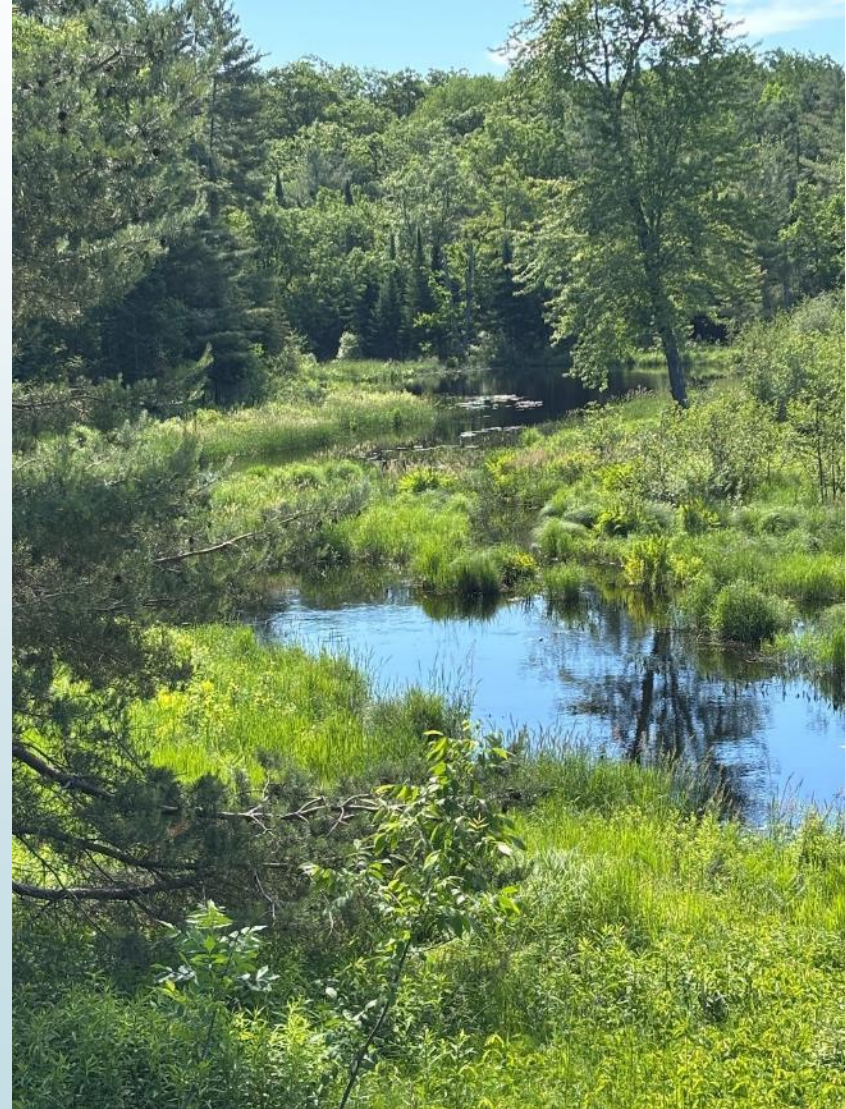
What the BLA is requesting:

That TML provide additional protection for EP1 streams and wetlands from siltation/erosion caused by land use activities on adjacent rural lands

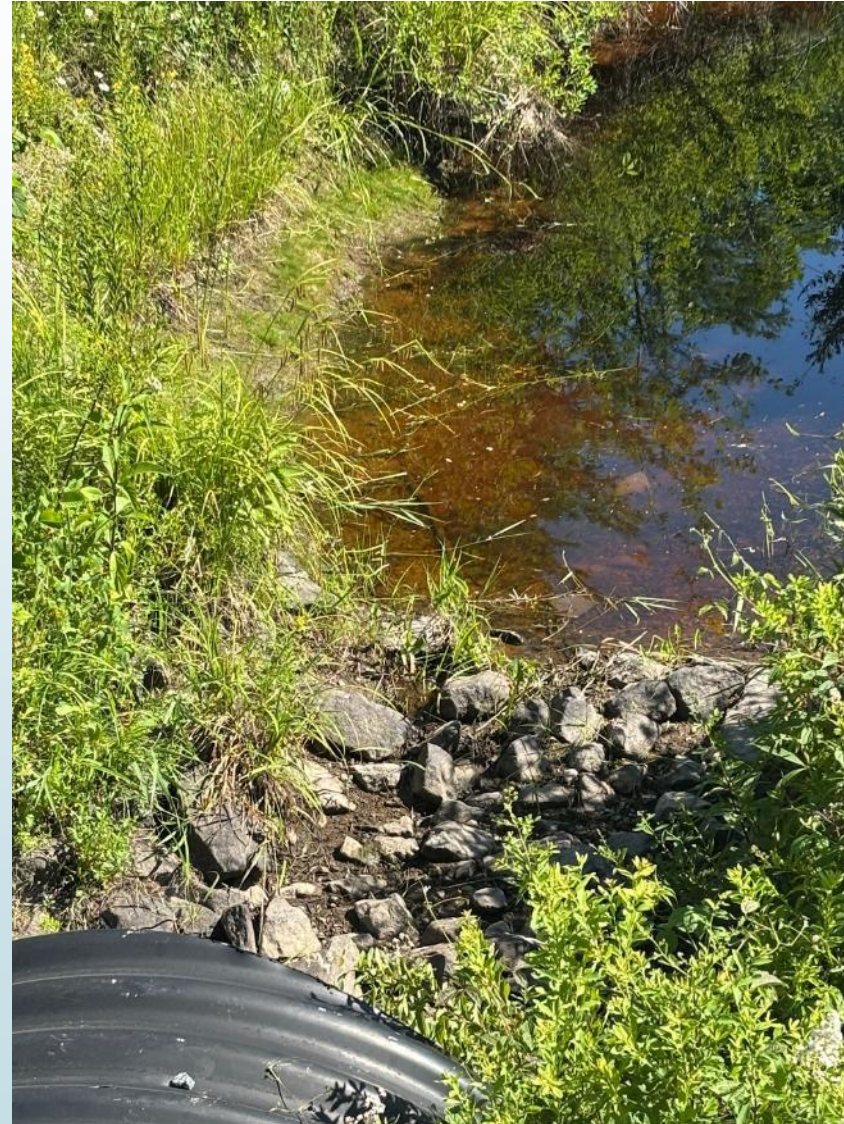
EARLY JUNE AFTER RAIN



EARLY JUNE AFTER RAIN



MID JULY



MID JULY

