



2024 VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

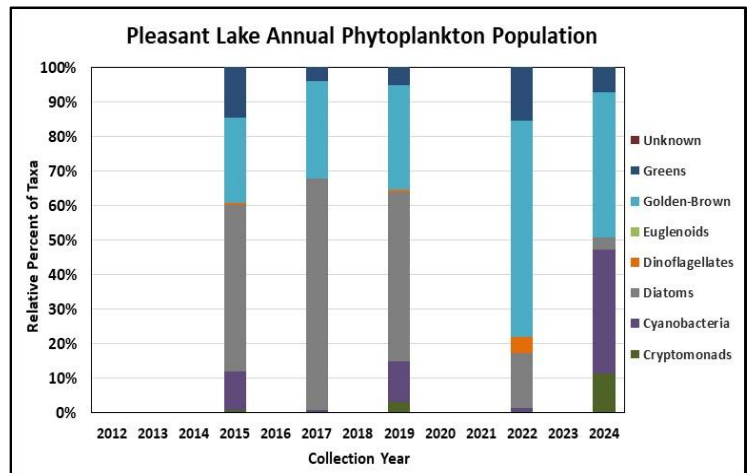
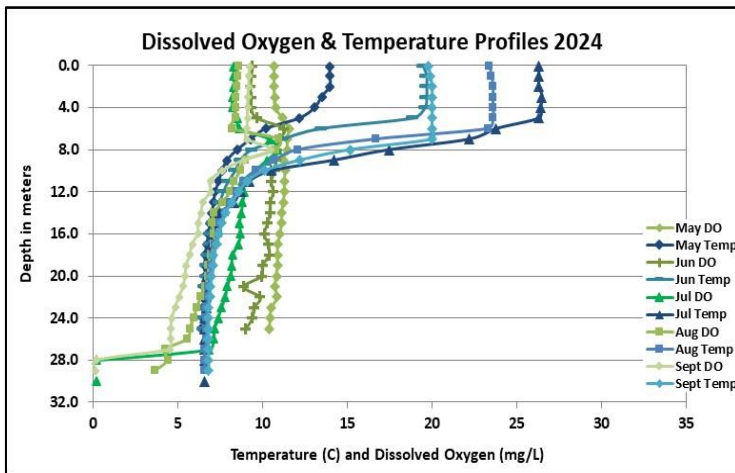
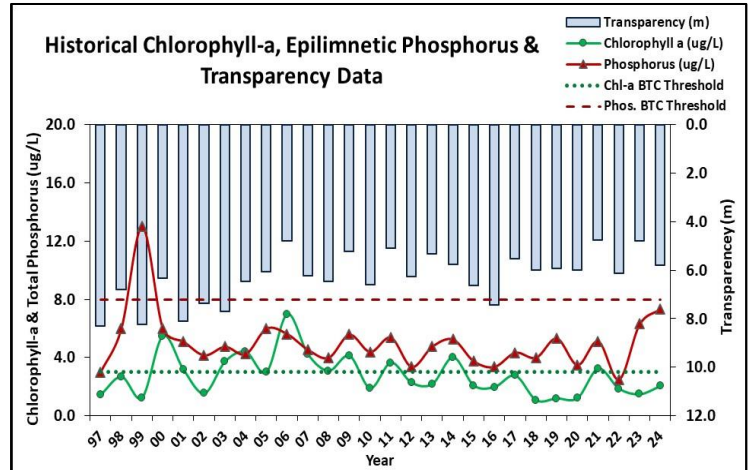
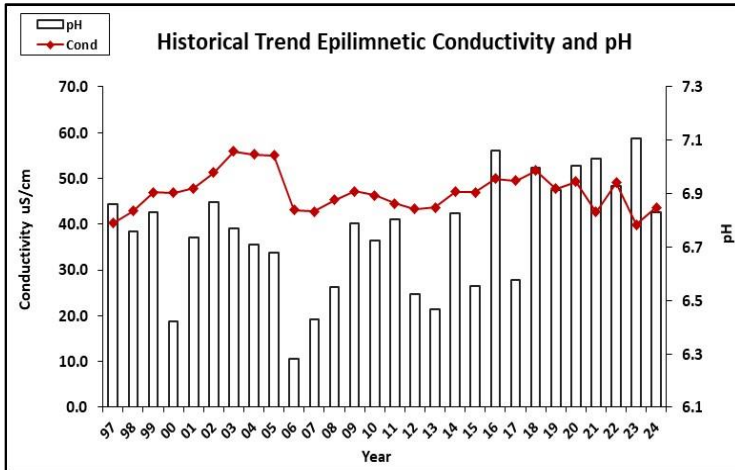
PLEASANT LAKE, NEW LONDON

RECOMMENDED ACTIONS: Great job monitoring water quality in 2024! Lake quality remains representative of oligotrophic, or high quality, conditions. However, phosphorus levels remained higher in 2024 and similar to that measured following excessive summer rainfall in 2023. Several tributaries experienced elevated phosphorus and/or turbidity levels following storm events and efforts should be made to identify potential sources of pollution and erosion within those sub-watersheds. A June storm event likely contributed a pulse of nutrients that fueled a brief Cyanobacteria bloom resulting in a lake warning being issued. This highlights the delicate balance of nutrients and algal/cyanobacteria growth. Be alert for future [Cyanobacteria](#) blooms/scums and notify NHDES' [Harmful Algal Bloom Program](#) if observed. Watershed management efforts should continue to focus on implementing best practices to reduce nutrient and sediment loading to the lake by managing stormwater runoff. Continue efforts to explore the development of a [watershed management plan](#) to identify and quantify nutrient loads and make recommendations on ways to reduce loading to the lake. Encourage shorefront property owners to become certified [LakeSmart](#) through NH LAKES' lake-friendly living program. Keep up the great work!

HISTORICAL WATER QUALITY TREND ANALYSIS

PARAMETER	TREND	PARAMETER	TREND
Conductivity	Stable	Chlorophyll-a	Stable
pH (epilimnion)	Improving	Transparency	Worsening
Phosphorus (hypolimnion)	Improving	Phosphorus (epilimnion)	Stable

HISTORICAL WATER QUALITY GRAPHICS





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OBSERVATIONS (Refer to Table 1 and Historical Deep Spot Data Graphics)

- ◆ **CHLOROPHYLL-A:** Chlorophyll levels fluctuated within a low range and were lowest in August and highest in May. Average chlorophyll level increased from 2023 and was less than the state median and the threshold for oligotrophic lakes. Historical trend analysis indicates relatively stable chlorophyll levels since monitoring began.
- ◆ **CONDUCTIVITY/CHLORIDE:** Deep spot, Nearshore and Tributary station conductivity and chloride levels fluctuated within a low range, increased slightly from 2023, and were approximately equal to or slightly greater than the state medians. Historical trend analysis indicates relatively stable epilimnetic (upper water layer) conductivity levels since monitoring began.
- ◆ **COLOR:** Apparent color measured in the epilimnion indicates the water was lightly tea colored in May following spring runoff and became clear with little to no color through September. Average color was twice as light as that measured in 2023.
- ◆ **TOTAL PHOSPHORUS:** Epilimnetic phosphorus level was low in May, June and July, elevated in August following a significant storm event, and low in September. Average epilimnetic phosphorus level increased slightly from 2023 and remained less than the state median and the threshold for oligotrophic lakes. Metalimnetic phosphorus level was slightly elevated in June. Hypolimnetic phosphorus levels fluctuated within a low range. Historical trend analysis indicates stable epilimnetic phosphorus levels and significantly decreasing (improving) hypolimnetic phosphorus levels since monitoring began. East Brook, Outlet, Chandler Brook, Turtle Cove, PL 8, and Southeast Cove phosphorus levels fluctuated within low ranges. PL 7, White Brook, and Slope Shore Pond Outlet phosphorus levels were slightly elevated in June following a significant storm event.
- ◆ **TRANSPARENCY:** Transparency measured with (VS) and without (NVS) the viewscope was below average (worse) in May and June when algal growth was higher, increased (improved) in through August, and decreased slightly in September. Average NVS transparency improved from 2023 and was higher (better) than the state median. Historical trend analysis indicates significantly decreasing (worsening) NVS transparency since monitoring began.
- ◆ **TURBIDITY:** Epilimnetic turbidity levels were slightly elevated in May and September. Metalimnetic turbidity levels were elevated in August potentially due to a layer of algae. Hypolimnetic turbidity levels were low. All tributaries and nearshore stations experienced slightly elevated turbidity levels in May and June.
- ◆ **pH:** Epilimnetic, Metalimnetic, and all tributary and nearshore station pH levels were within the desirable range of 6.5-8.0 units. Historical trend analysis indicates significantly increasing (improving) epilimnetic pH levels since monitoring began. Hypolimnetic pH level was slightly acidic and less than desirable.

Table 1. 2024 Average Water Quality Data for PLEASANT LAKE - NEW LONDON

Station Name	Alk. (mg/L)	Chlor-a (ug/L)	Chloride (mg/L)	Color (pcu)	Cond. (us/cm)	Total P (ug/L)	Trans. (m)		Turb. (ntu)	pH
							NVS	VS		
Epilimnion	5.3	2.04	6	21	43.6	7	5.80	6.40	0.93	6.83
Metalimnion	-	-	5	-	41.5	7	-	-	1.28	6.61
Hypolimnion	-	-	5	-	42.1	6	-	-	0.68	6.36
Chandler Brook	-	-	5	-	43.7	7	-	-	1.24	6.77
East Brook	-	-	8	-	43.2	5	-	-	0.67	6.82
Outlet	-	-	5	-	43.0	5	-	-	0.67	6.76
PL 7	-	-	5	-	43.6	7	-	-	0.99	6.85
PL 8	-	-	9	-	43.1	6	-	-	0.68	6.81
Slope Shore Pond Outlet	-	-	7	-	43.2	6	-	-	0.51	6.90
Southeast Cove	-	-	8	-	43.1	6	-	-	0.74	6.82
Turtle Cove	-	-	5	-	42.7	5	-	-	0.72	6.82
White Brook	-	-	4	-	44.2	7	-	-	1.15	6.80

NH Median Values

Median values generated from historic lake monitoring data.

Alkalinity: 4.5 mg/L **Chlorophyll-a:** 4.39 ug/L
Conductivity: 42.3 uS/cm **Chloride:** 5 mg/L
Total phosphorus: 11 ug/L **Transparency:** 3.3 m
pH: 6.6

NH Water Quality Standards

Numeric criteria for specific parameters. Water quality violation if thresholds exceeded.

Chloride: > 230 mg/L (chronic) **Turbidity:** > 10 NTU above natural
E. coli: > 88 cts/100 mL (beach)
E. coli: > 406 cts/100 mL (surface waters)
pH: between 6.5-8.0 (unless naturally occurring)