



2024 VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

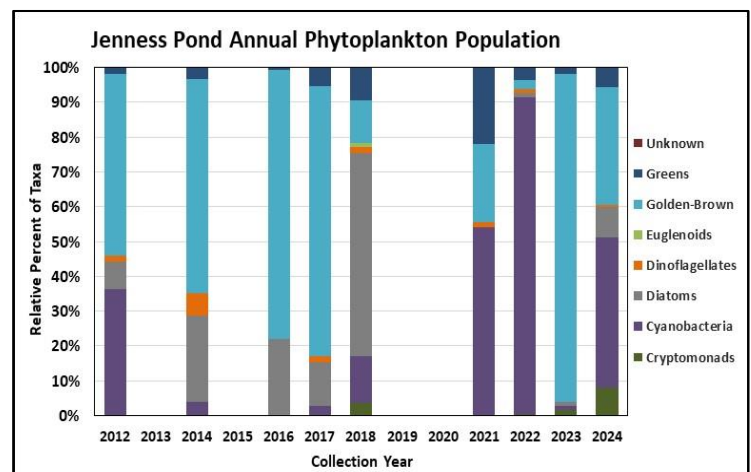
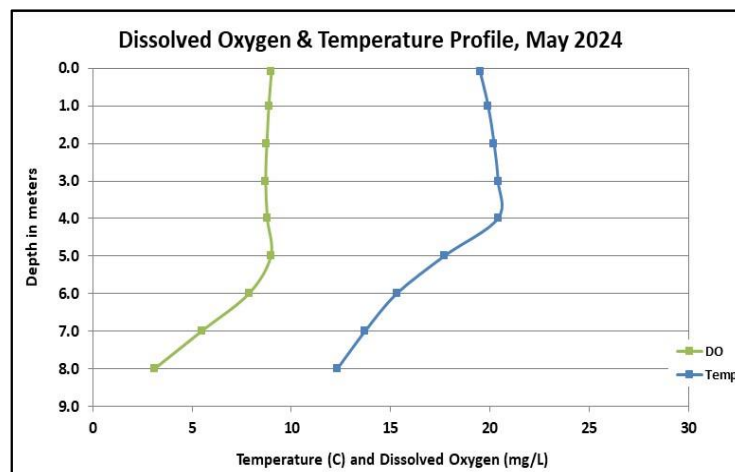
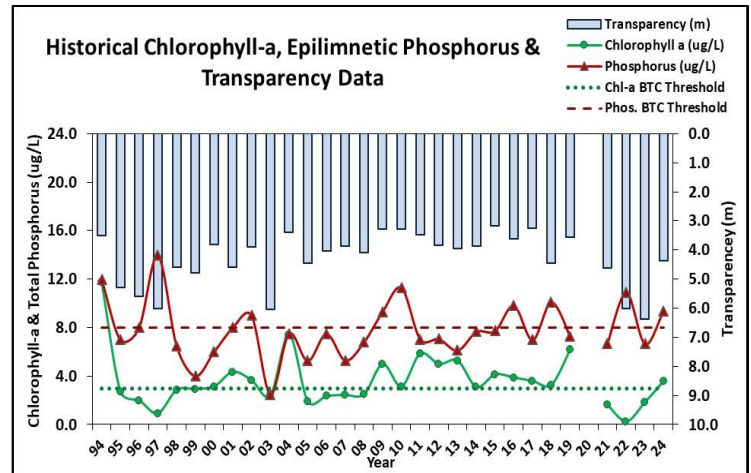
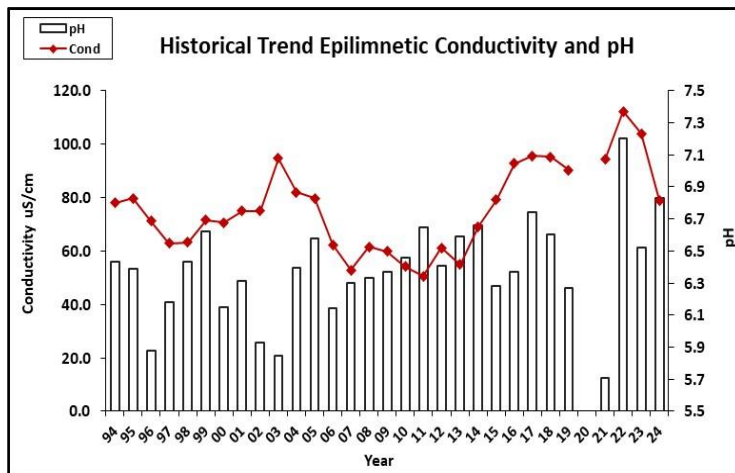
JENNESS POND, NORTHWOOD

RECOMMENDED ACTIONS: Great job monitoring water quality in 2024! Increase monitoring frequency to once per month, typically June, July and August, to better assess summer water quality and reduce variability within the data set. Pond nutrient (phosphorus) levels and algal growth (chlorophyll) have historically fluctuated above the threshold for oligotrophic lakes and the phytoplankton population is typically dominated by cyanobacteria. The pond experienced a Cyanobacteria Watch in July and a Cyanobacteria Warning in September. This is a concern and additional monitoring in the summer will help to assess nutrient levels that feed Cyanobacteria growth. Continue to monitor the pond for any signs of [cyanobacteria](#) blooms or intermittent surface scums and report them to the NHDES' [Harmful Algal Bloom Program](#). The increased frequency and intensity of significant storm events, droughts and low water levels, earlier ice-out, and warmer water temperatures can influence nutrient levels and algal/cyanobacteria growth. Morse Spring Brook phosphorus levels continue to be elevated, and it is recommended to conduct bracket sampling upstream to identify any potential sources of nutrients to the tributary. Contact the [VLAP Coordinator](#) for further information on bracket sampling. Educate lake and watershed property owners on ways to reduce stormwater runoff. NHDES' [NH Homeowner's Guide to Stormwater Management](#), and NH LAKES' [LakeSmart](#) program are great resources. Keep up the great work!

HISTORICAL WATER QUALITY TREND ANALYSIS

PARAMETER	TREND	PARAMETER	TREND
Conductivity	Worsening	Chlorophyll-a	Stable
pH (epilimnion)	Improving	Transparency	Stable
Phosphorus (hypolimnion)	Stable	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 level was slightly elevated in May, increased from 2023, was less than the state median, yet was slightly greater than the threshold for oligotrophic lakes. Historical trend analysis indicates stable, yet variable, chlorophyll levels since monitoring began.
- ◆ **CONDUCTIVITY/CHLORIDE:** Epilimnetic (upper water layer), Hypolimnetic (lower water layer), Hood Brook, Morse Spring Brook, and Tupelo Brook East conductivity levels were slightly elevated and greater than the state median. Chloride levels were also greater than the state median, yet levels were less than the state chronic chloride standard. Historical trend analysis indicates significantly increasing (worsening) epilimnetic conductivity levels since monitoring began.
- ◆ **COLOR:** Apparent color measured in the epilimnion indicates the water was lightly tea colored, or light brown, in May.
- ◆ **TOTAL PHOSPHORUS:** Epilimnetic phosphorus level was slightly elevated in May, increased from 2023, was less than the state median, yet was slightly greater than the threshold for oligotrophic lakes. Hypolimnetic phosphorus level was elevated and above average for that station. Historical trend analysis indicates stable, yet variable, epilimnetic and hypolimnetic phosphorus levels since monitoring began. Hood Brook and Tupelo Brook East phosphorus levels were low. Morse Spring Brook phosphorus level was elevated potentially due a significant storm event 48 hours prior to sampling.
- ◆ **TRANSPARENCY:** Transparency measured with (VS) and without (NVS) the viewscope was within an average range for the pond in May. NVS transparency decreased (worsened) from that measured in 2023 but was higher (better) than the state median. Historical trend analysis indicates relatively stable NVS transparency since monitoring began.
- ◆ **TURBIDITY:** Hypolimnetic, Hood Brook, and Tupelo Brook East turbidity levels were within a low range. Morse Spring Brook turbidity level was slightly elevated.
- ◆ **pH:** Epilimnetic, Hood Brook, Morse Spring Brook, and Tupelo Brook East pH levels were within the desirable range of 6.5-8.0 units. Historical trend analysis indicates significant 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 JENNESS POND - NORTHWOOD

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	3.1	3.58	22	28	79.0	9	4.36	5.42	-	6.83
Hypolimnion	-	-	-	-	79.6	14	-	-	0.58	6.12
Hood Brook	-	-	20	-	82.7	11	-	-	0.55	6.64
Morse Spring Brook	-	-	23	-	95.8	40	-	-	2.91	6.64
Tupelo Brook East	-	-	-	-	81.6	9	-	-	0.31	6.72

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)