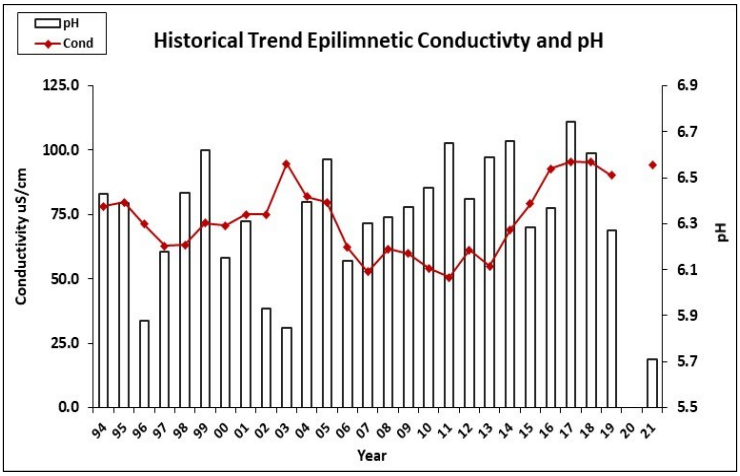
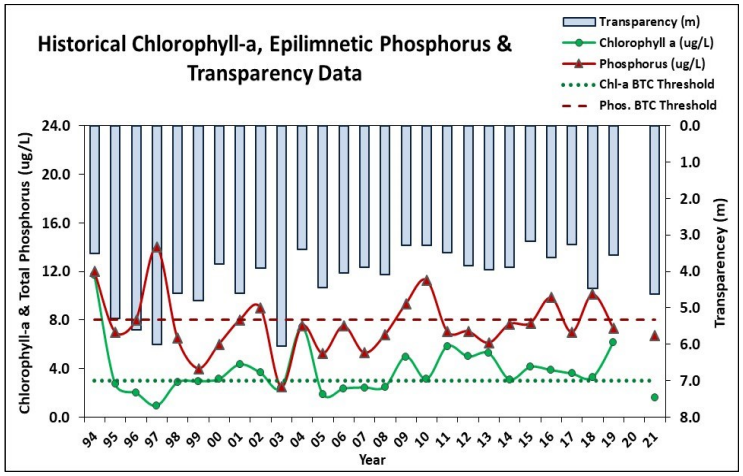
Volunteer Lake Assessment Program Individual Lake Reports
Jenness Pond, Northwood
2021 Data Summary

Recommended Actions: Great job sampling in 2021! Pond nutrient (phosphorus) levels and algal growth (chlorophyll) tend to fluctuate above the threshold for oligotrophic lakes and water clarity (transparency) has declined over time. The increased frequency and intensity of significant storm events, earlier ice-out and warmer water temperatures can influence nutrient levels and algal/cyanobacteria growth. Cyanobacteria were dominant in the phytoplankton sample in 2021. Be aware of any surface scums or blooms and report them to the NHDES Harmful Algal Bloom Program. 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. Increase monitoring frequency to once per month, typically June, July and August, to better assess seasonal and annual water quality. Contact the VLAP Coordinator in 2022 to schedule a biologist visit. Keep up the great work!

Historical Water Quality Trend Analysis

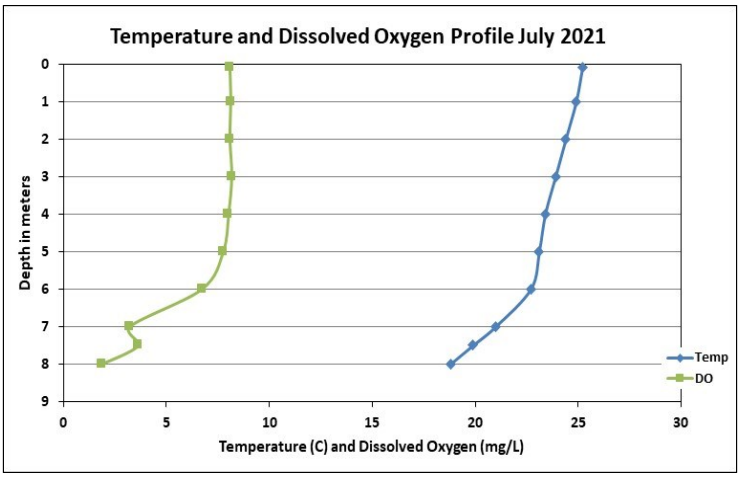
Parameter	Trend	Parameter	Trend
Conductivity	Stable	**Chlorophyll-a**	Stable
pH (epilimnion)	Stable	**Transparency**	Worsening
		Phosphorus (epilimnion)	Stable

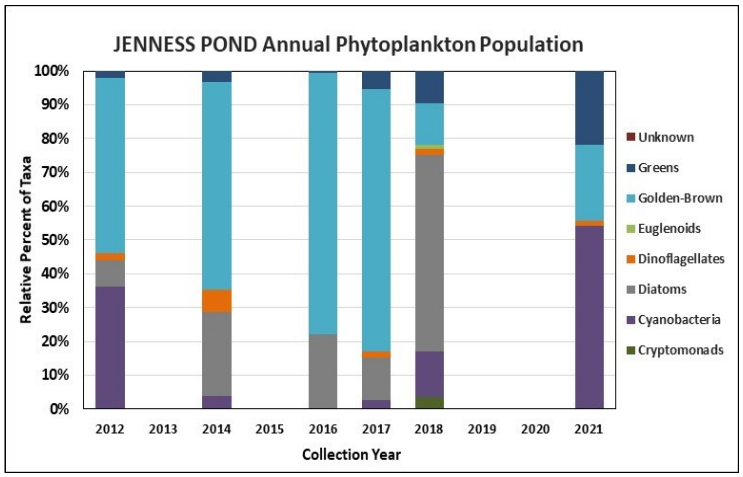




Dissolved Oxygen and Phytoplankton

(Note: Information may not be collected annually)





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

- **Chlorophyll-a:** Chlorophyll level was low in July, was much less than the state median and the threshold for oligotrophic lakes, and was the lowest measured since 1998. 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. Epilimnetic and Morse Spring Brook chloride levels were also slightly elevated and greater than the state median, yet were much less than the state chronic chloride standard. Historical trend analysis indicates stable, yet variable, epilimnetic conductivity levels since monitoring began.
- **Color:** Apparent color measured in the epilimnion indicates the water was clear with little to no tea, or brown, coloring.
- **Total Phosphorus:** Epilimnetic phosphorus level was within a low range and less than the state median and threshold for oligotrophic lakes. Historical trend analysis indicates stable, yet variable, epilimnetic phosphorus levels since monitoring began. Hypolimnetic, Hood Brook and Tupelo Brook East phosphorus levels were also within a low range. Morse Spring Brook phosphorus level was within a moderate range.
- **Transparency:** Transparency measured with (VS) and without (NVS) the viewscope was above average (good) for the pond in July, was higher (better) than the state median, and was the highest (best) measured since 2003. However, historical trend analysis indicates significantly decreasing (worsening) NVS transparency since monitoring began.
- **Turbidity:** Epilimnetic, Hypolimnetic, Hood Brook, Morse Spring Brook, and Tupelo Brook East turbidity levels were within low ranges for those stations.
- **pH:** Epilimnetic, Hypolimnetic, Hood Brook, Morse Spring Brook, and Tupelo Brook East pH levels were slightly acidic and less than desirable range 6.5-8.0 units in July following significant rainfall.

Station Name	Table 1. 2021 Average Water Quality Data for JENNESS POND - NORTHWOOD									
	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	2.2	1.63	27	20	94.3	7	4.63	5.20	0.76	5.71
Hypolimnion					97.0	8			0.82	5.66
Hood Brook					95.3	7			0.64	6.17
Morse Spring Brook			36		136.2	17			0.75	6.04
Tupelo Brook East					96.1	6			0.59	6.08

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)