



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

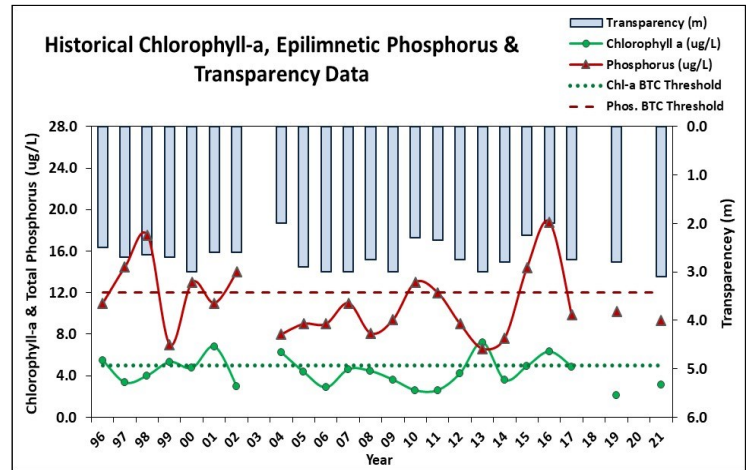
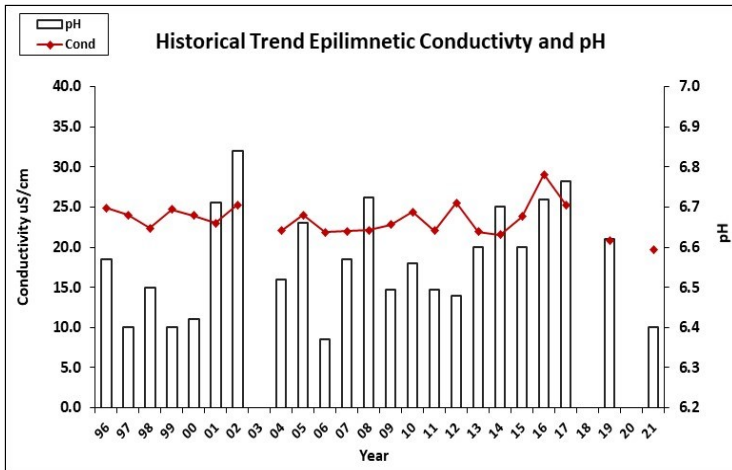
FROST POND, JAFFREY

2021 DATA SUMMARY

RECOMMENDED ACTIONS: Great job sampling in 2021! Pond quality was good and remained stable with that measured in 2019. Pond nutrient (phosphorus) levels and algal growth (chlorophyll) are generally representative of mesotrophic, or average, conditions and have remained within a lower range since the spike observed in 2016, which is encouraging. Continue educating residents on best practices to reduce nutrient loading to the pond through minimizing the impacts of stormwater runoff, erosion, dirt/gravel roads, fertilizer use, and septic systems. Encourage lake front property owners to become certified LakeSmart through NH LAKES lake-friendly living program. Keep up the great work!

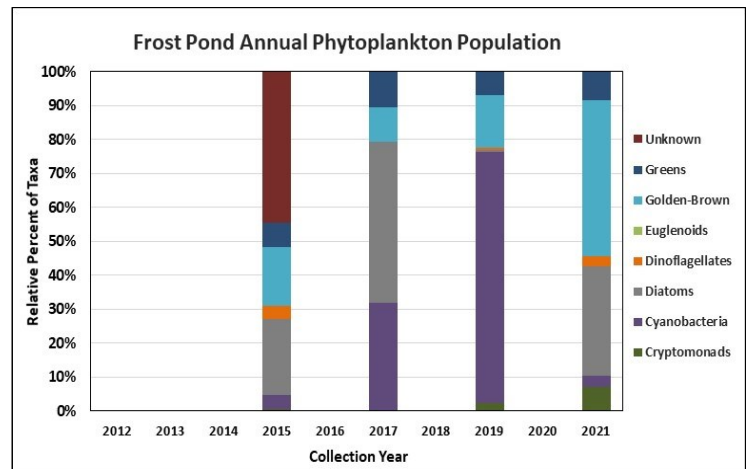
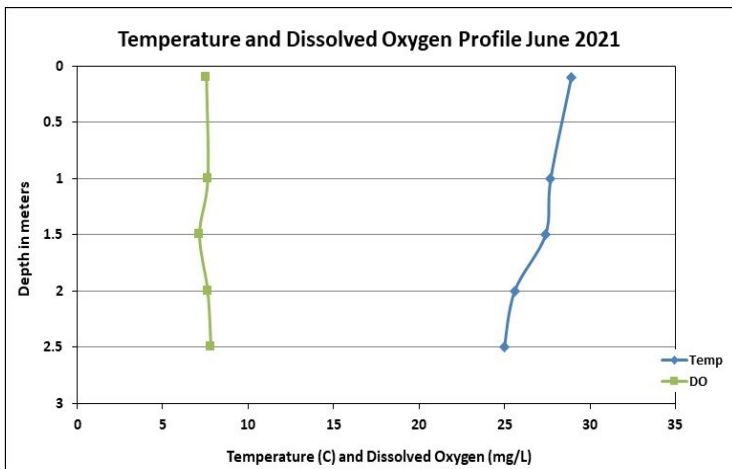
HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Parameter	Trend
Conductivity	Stable	Chlorophyll-a	Stable
pH (epilimnion)	Stable	Transparency	Stable
		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 within a low range in June and was less than state median and the threshold for mesotrophic lakes. Historical trend analysis indicates relatively stable chlorophyll levels since monitoring began.
- ◆ **CONDUCTIVITY/CHLORIDE:** Epilimnetic (deep spot) conductivity and chloride levels remained very low and less than the state medians. Historical trend analysis indicates stable epilimnetic conductivity levels since monitoring began.
- ◆ **COLOR:** Apparent color measured in the epilimnion indicates the water was borderline light to moderately tea colored, or brown.
- ◆ **TOTAL PHOSPHORUS:** Epilimnetic phosphorus level was within a low range and was less than the state median and the threshold for mesotrophic lakes. Historical trend analysis indicates relatively stable epilimnetic phosphorus levels since monitoring began.
- ◆ **TRANSPARENCY:** Transparency measured with (VS) and without (NVS) the viewscope was high (good) and the Secchi disk was visible on the pond bottom. Historical trend analysis indicates stable NVS transparency since monitoring began.
- ◆ **TURBIDITY:** Epilimnetic turbidity level was within a low range for NH lakes.
- ◆ **pH:** Epilimnetic pH level was slightly less than the desirable range 6.5-8.0 units and historical trend analysis indicates stable epilimnetic pH levels since monitoring began.

Station Name	Table 1. 2021 Average Water Quality Data for FROST POND - JAFFREY									
	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	4.4	3.14	3	50	19.8	9	3.10	2.95	0.75	6.40

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)