



Volunteer Lake Assessment Program Individual Lake Reports

FROST POND, JAFFREY, NH

MORPHOMETRIC DATA

TROPHIC CLASSIFICATION

KNOWN EXOTIC SPECIES

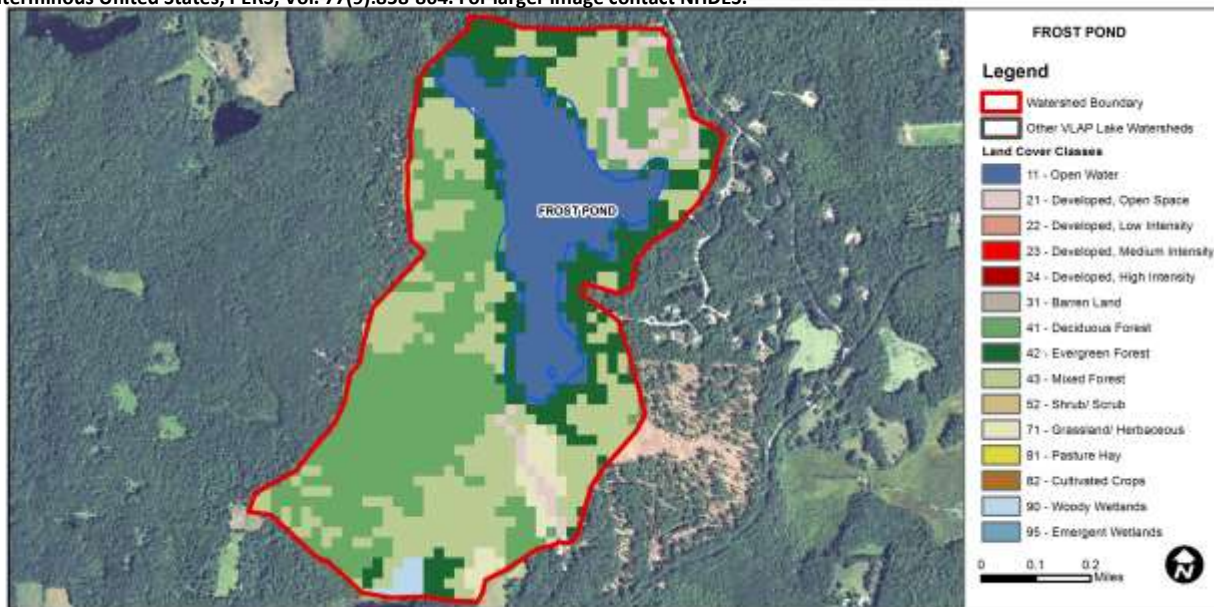
Watershed Area (Ac.):	314	Max. Depth (m):	3.7	Flushing Rate (yr ⁻¹):	0.8	Year	Trophic class	
Surface Area (Ac.):	103	Mean Depth (m):	2.1	P Retention Coef:	0.84	1980	MESOTROPIC	
Shore Length (m):	3,100	Volume (m ³):	889,500	Elevation (ft):	1095	2001	MESOTROPIC	

The Waterbody Report Card tables are generated from the DRAFT 2018 305(b) report on the status of N.H. waters, and are based on data collected from 2008-2017. Detailed waterbody assessment and report card information can be found at www.des.nh.gov/organization/divisions/water/wmb/swqa/index.htm

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	Sampling data is better than the water quality standards or thresholds for this parameter.
	pH	Slightly Bad	Data periodically exceed water quality standards or thresholds for this parameter by a small margin.
	Oxygen, Dissolved	Encouraging	Limited data for this parameter predicts water quality standards or thresholds are being met; however more data are necessary to fully assess the parameter.
	Dissolved oxygen satura	Encouraging	Limited data for this parameter predicts water quality standards or thresholds are being met; however more data are necessary to fully assess the parameter.
Primary Contact Recreation	Chlorophyll-a	Good	Sampling data is better than the water quality standards or thresholds for this parameter.
	Escherichia coli	No Data	No data for this parameter.
	Chlorophyll-a	Very Good	All sampling data meet water quality standards or thresholds for this parameter.

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	19.0	Barren Land	0	Grassland/Herbaceous	2.54
Developed-Open Space	3.22	Deciduous Forest	29.78	Pasture Hay	0
Developed-Low Intensity	0	Evergreen Forest	15.09	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	29.71	Woody Wetlands	0.89
Developed-High Intensity	0	Shrub-Scrub	0	Emergent Wetlands	0



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

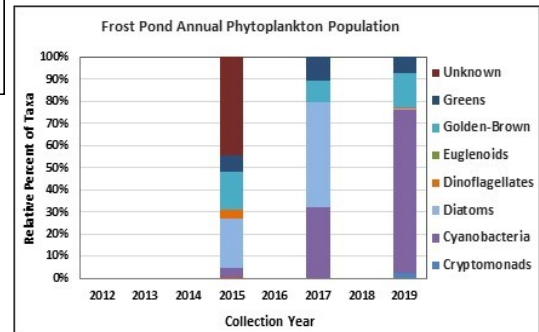
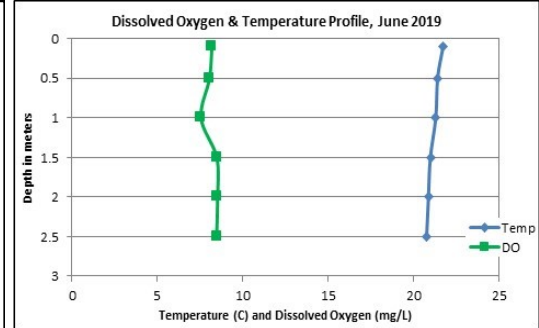
FROST POND, JAFFREY

2019 DATA SUMMARY

RECOMMENDED ACTIONS: Pond quality was good and representative of mesotrophic, or average, conditions. Pond nutrient levels and algal growth decreased from the spikes seen in 2016 and water quality trends are stable, which is encouraging. Continue educating residents on best practices to reduce nutrient loading to the pond via stormwater runoff, erosion, fertilizer use, and properly maintaining septic systems. Consider participating in NH LAKES' LakeSmart program to evaluate and certify lake front properties as lake-friendly. For more information visit www.nhlakes.org/lakesmart/. Keep up the great work!

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

- ◆ **CHLOROPHYLL-A:** Chlorophyll level was low in June, much less than the state median and the threshold for mesotrophic lakes, and was the lowest measured since monitoring began. Historical trend analysis indicates relatively stable chlorophyll levels since monitoring began.
- ◆ **CONDUCTIVITY/CHLORIDE:** Epilimnetic conductivity and chloride levels were within a low range and much 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 lightly tea colored, or light brown.
- ◆ **TOTAL PHOSPHORUS:** Epilimnetic phosphorus level was within a low range and was slightly 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 was great and the Secchi disk was visible on the pond bottom. Historical trend analysis indicates stable transparency since monitoring began.
- ◆ **TURBIDITY:** Epilimnetic turbidity level was within a low range for the pond.
- ◆ **PH:** Epilimnetic pH level was within the desirable range 6.5-8.0 units, however has historically fluctuated below the desirable range. Historical trend analysis indicates relatively stable epilimnetic pH levels since monitoring began.



Station Name	Table 1. 2019 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 mg/l	Trans. m	Turb. ntu	pH
							NVS		
Epilimnion	4.5	2.12	3	30	20.8	10	2.8	0.70	6.62

NH Median Values: Median values for specific parameters 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. Results exceeding criteria are considered a water quality violation.

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

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation	Parameter	Trend	Explanation
Conductivity	Stable	Trend not significant; data show low variability.	Chlorophyll-a	Stable	Trend not significant; data moderately variable.
pH (epilimnion)	Stable	Trend not significant; data moderately variable.	Transparency	Stable	Trend not significant; data moderately variable.
			Phosphorus (epilimnion)	Stable	Trend not significant; data moderately variable.

