



Volunteer Lake Assessment Program Individual Lake Reports

FLINTS POND, HOLLIS, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	692	Max. Depth (m):	2.7	Flushing Rate (yr ⁻¹):	4.5
Surface Area (Ac.):	48	Mean Depth (m):	1.5	P Retention Coef:	0.6
Shore Length (m):	1,800	Volume (m ³):	294,500	Elevation (ft):	197

TROPHIC CLASSIFICATION

KNOWN EXOTIC SPECIES

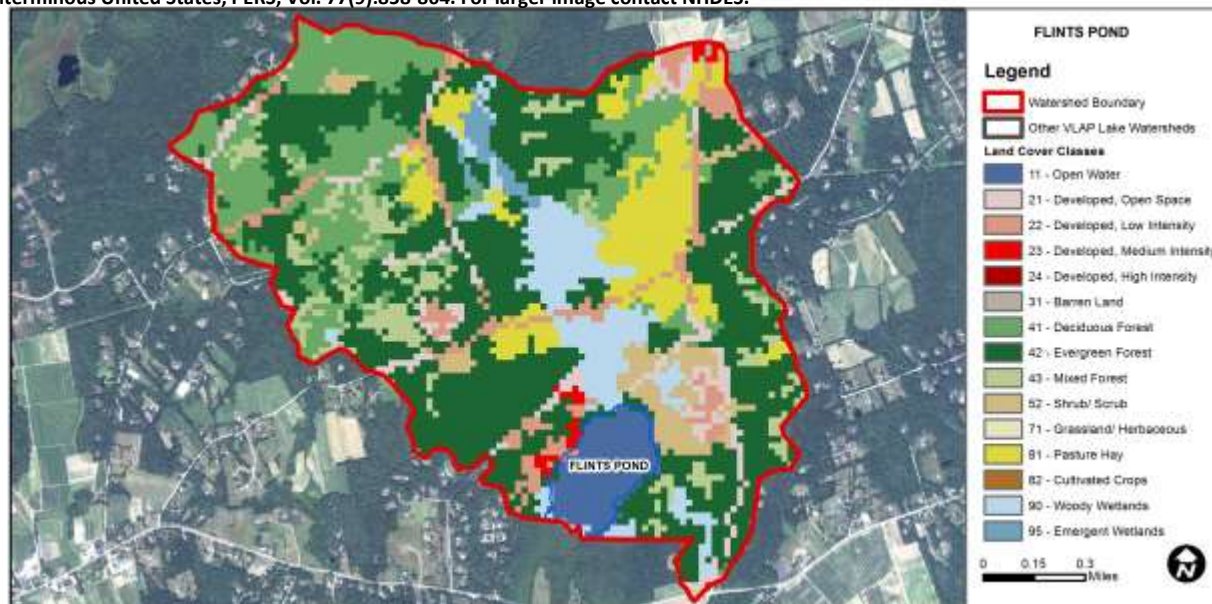
Year	Trophic class	Variable Milfoil
2006	EUTROPHIC	
2008	EUTROPHIC	

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	Cautionary	Limited data for this parameter predicts exceedance of water quality standards or thresholds; however more data are necessary to fully assess the parameter.
	Oxygen, Dissolved	Slightly Bad	Data periodically exceed water quality standards or thresholds for this parameter by a small margin.
	Dissolved oxygen saturation	Slightly Bad	Data periodically exceed water quality standards or thresholds for this parameter by a small margin.
	Chlorophyll-a	Good	Sampling data is better than the water quality standards or thresholds for this parameter.
Primary Contact Recreation	Escherichia coli	Very Good	All sampling data meet water quality standards or thresholds for this parameter.
	Chlorophyll-a	Good	Sampling data commonly 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	4.06	Barren Land	0.05	Grassland/Herbaceous	0
Developed-Open Space	4.82	Deciduous Forest	15.7	Pasture Hay	9.32
Developed-Low Intensity	5.75	Evergreen Forest	40.17	Cultivated Crops	0
Developed-Medium Intensity	0.73	Mixed Forest	6.64	Woody Wetlands	7.84
Developed-High Intensity	0	Shrub-Scrub	3.78	Emergent Wetlands	1.13



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

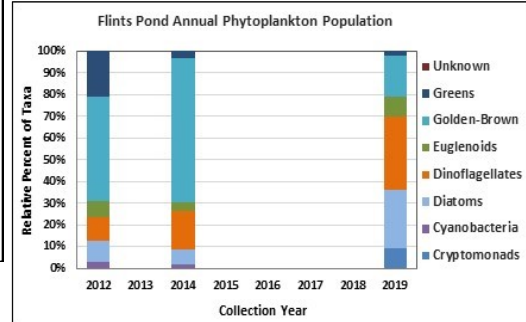
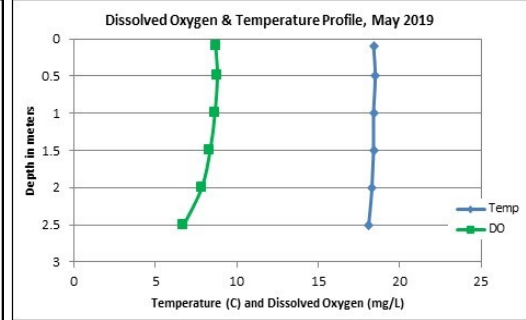
FLINTS POND, HOLLIS

2019 DATA SUMMARY

RECOMMENDED ACTIONS: Pond phosphorus and chlorophyll levels are within acceptable thresholds for a eutrophic waterbody which is good, however chlorophyll levels have steadily increased since 2012. The increased frequency and intensity of storm events highlight the importance of reducing stormwater runoff in the watershed. Continue to measure the relationship between water color and water clarity. Pond conductivity levels have increased since 2011 likely indicating the influence of winter de-icing materials. Encourage local winter maintenance companies to obtain NH Voluntary Salt Applicator license through UNH Technology Transfer Center's Green SnowPro Certification program. Keep up the great work!

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

- ◆ **CHLOROPHYLL-A:** Chlorophyll level was low in May, remained stable in July, and then increased to a slightly elevated level in August. Average chlorophyll level decreased slightly from 2018, was greater than the state median, and was less than the threshold for eutrophic lakes. Visual inspection of historical data indicates slightly increasing chlorophyll levels since 2011.
- ◆ **CONDUCTIVITY/CHLORIDE:** Epilimnetic (deep spot) conductivity and chloride levels were elevated and greater than the state medians, however chloride levels were much less than the state chronic chloride standard. However, visual inspection of historical data indicates increasing (worsening) epilimnetic conductivity levels since 2012.
- ◆ **COLOR:** Apparent color measured in the epilimnion indicates the water was highly tea colored, or dark brown.
- ◆ **E. COLI:** Devlin Beach E. coli levels were less than the state standard for public beaches in July and August.
- ◆ **TOTAL PHOSPHORUS:** Epilimnetic phosphorus levels were moderate in June, decreased in July, and then increased in August. Average epilimnetic phosphorus level remained stable with 2018, was greater than the state median, and was less than the threshold for eutrophic lakes. Visual inspection of historical data indicates variable epilimnetic phosphorus levels since 2011.
- ◆ **TRANSPARENCY:** Transparency measured with (VS) and without (NVS) the viewscope was high (good) in June and then decreased (worsened) gradually as the summer progressed. Average NVS transparency increased (improved) from 2018 and visual inspection of historical data indicates relatively stable transparency since 2011.
- ◆ **TURBIDITY:** Epilimnetic turbidity levels were slightly elevated in May and then decreased as the summer progressed but remained above average for the pond.
- ◆ **pH:** Epilimnetic pH levels were within the desirable range 6.5-8.0 units. Visual inspection of historical data indicates variable epilimnetic pH levels since 2011.



Station Name	Table 1. 2019 Average Water Quality Data for FLINTS POND - HOLLIS										
	Alk. mg/l	Chlor-a ug/l	Chloride mg/l	Color pcu	Cond. us/cm	E. coli mpn/100ml	Total P mg/l	Trans. m		Turb. ntu	pH
Epilimnion	36.9	7.51	22	120	156.0		23	NVS	VS	2.52	7.09
Devlin Beach						33					

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	N/A	Ten consecutive years of data necessary for analysis.	Chlorophyll-a	N/A	Ten consecutive years of data necessary for analysis.
pH (epilimnion)	N/A	Ten consecutive years of data necessary for analysis.	Transparency	N/A	Ten consecutive years of data necessary for analysis.
			Phosphorus (epilimnion)	N/A	Ten consecutive years of data necessary for analysis.

