Volunteer Lake Assessment Program Individual Lake Reports

FLINTS POND, HOLLIS, NH

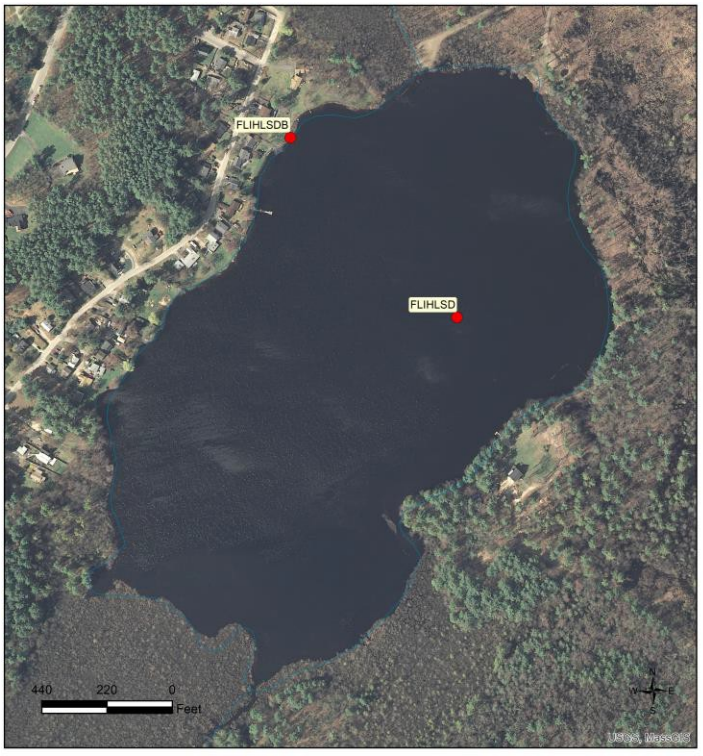
MORPHOMETRIC DATA

						TROPHIC CLASSIFICATION		**KNOWN EXOTIC SPECIES**
Watershed Area (Ac.):	692	**Max. Depth (m):**	2.7	**Flushing Rate (yr^{-1}):**	4.5	**Year**	**Trophic class**	Variable Milfoil
Surface Area (Ac.):	48	**Mean Depth (m):**	1.5	**P Retention Coef:**	0.6	2006	EUTROPHIC	
Shore Length (m):	1,800	**Volume (m^3):**	294,500	**Elevation (ft):**	197	2008	EUTROPHIC	

The Waterbody Report Card tables are generated from the DRAFT 2020 305(b) report on the status of N.H. waters, and are based on data collected from 2010-2019. Detailed waterbody assessment and report card information can be found at NHDES' Water Quality Assessment Website.

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	Good	Sampling data commonly meet water quality standards or thresholds for this parameter.
	Oxygen, Dissolved	Slightly Bad	Data periodically exceed water quality standards or thresholds for this parameter by a small margin.
	Dissolved oxygen satura	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	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.
	Chlorophyll-a	Good	Sampling data commonly meet water quality standards or thresholds for this parameter.

VLAP SAMPLE STATION MAP: This map depicts the location of routine sampling stations discussed on page two of the report.



FLINTS POND
HOLLIS
VOLUNTEER LAKE ASSESSMENT PROGRAM

STATIONID	STATION NAME
FLIHLSD	DEEP SPOT
FLIHLSDB	DEVLIN BEACH

Source: The data layers are derived from NHDES data and are under constant revision. NHDES is not responsible for the use or interpretation of this information. Not intended for legal use.NHDES Watershed Management Bureau Date: 2/17/2021

Volunteer Lake Assessment Program Individual Lake Reports
Flints Pond, Hollis
2020 Data Summary

Recommended Actions: Great job sampling in 2020! Pond phosphorus and chlorophyll levels have remained within the acceptable thresholds for a eutrophic waterbody and the stable water quality trends are a positive sign. Continue to evaluate the relationship between water color and water clarity. Pond conductivity levels have remained lower from the elevated levels measured between 2016-2018 which is a positive sign. Continue working to educate local road agents and winter maintenance companies on the Green SnowPro Certification program and utilize companies that are certified when applying road salt within the watershed. Educate shorefront property owner's on becoming certified LakeSmart through NHLAKES' lake-friendly living program 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 and increased to a slightly elevate level in August. Average chlorophyll level decreased from 2019, was greater than the state median, but was much less than the threshold for eutrophic lakes. Historical trend analysis indicates relatively stable chlorophyll levels since 2011.
- **Conductivity/Chloride:** Epilimnetic (deep spot) conductivity and/or chloride levels remained slightly elevated and greater than the state medians, however chloride levels were much less than the state chronic chloride standard. Average epilimnetic conductivity level remained stable with 2019 and was less than the elevated levels measured between 2016-2018. Historical trend analysis indicates relatively stable epilimnetic conductivity levels since 2011.
- **Color:** Apparent color measured in the epilimnion indicates highly tea colored, or dark brown, water with the darkest conditions measured in June.
- **Total Phosphorus:** Epilimnetic phosphorus level was within a moderate range in June and increased to an elevated level in August during drought conditions and low water levels. Average epilimnetic phosphorus level increased slightly from 2019, was greater than the state median, but was less than the threshold for eutrophic lakes. Historical trend analysis indicates stable epilimnetic phosphorus levels since 2011.
- **Transparency:** Transparency measured without the viewscope (NVS) was below average (worse) in June when water color was darker and then increased (improved) to within an average range for the pond in August. Average NVS transparency decreased slightly from 2019 and historical trend analysis indicates relatively stable transparency since 2011. Viewscope transparency (VS) was slightly higher (better) than NVS transparency and likely a better measure of actual conditions.
- **Turbidity:** Epilimnetic turbidity level was slightly elevated in June and then increased to an elevated level in August likely due to drought conditions and low water levels.
- **pH:** Epilimnetic pH levels were within the desirable range 6.5-8.0 units. Historical trend analysis indicates stable, yet highly variable, epilimnetic pH levels since 2011.

Station Name	Table 1. 2020 Average Water Quality Data for FLINTS POND - HOLLIS									
	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	39.1	5.76	24	135	146.4	24	1.70	2.10	2.46	6.94

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