Volunteer Lake Assessment Program Individual Lake Reports
HARRISVILLE POND, HARRISVILLE, NH

MORPHOMETRIC DATA

						TROPHIC CLASSIFICATION	KNOWN EXOTIC SPECIES

|							
Watershed Area (Ac.):	8,064	Max. Depth (m):	12.5	Flushing Rate (yr¹)	8.4	Year	Trophic class
Surface Area (Ac.):	120	Mean Depth (m):	4.7	P Retention Coef:	0.39	1987	EUTROPHIC
Shore Length (m):	5,300	Volume (m³):	2,264,500	Elevation (ft):	1318	2006	MESOTROPHIC

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	Bad	Data periodically exceed water quality standards or thresholds for this parameter by a large 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.
	Chlorophyll-a	Good	Sampling data is better than the water quality standards or thresholds for this parameter.
Primary Contact Recreation	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.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

HARRISVILLE LAKE - SUNSET TOWN BEACH	Escherichia coli	Cautionary	Limited data for this parameter predicts exceedance of water quality standards or thresholds; however more data are necessary to fully assess the parameter.

VLAP SAMPLE STATION MAP: This map depicts the location of routine sampling stations discussed on page two of the report.
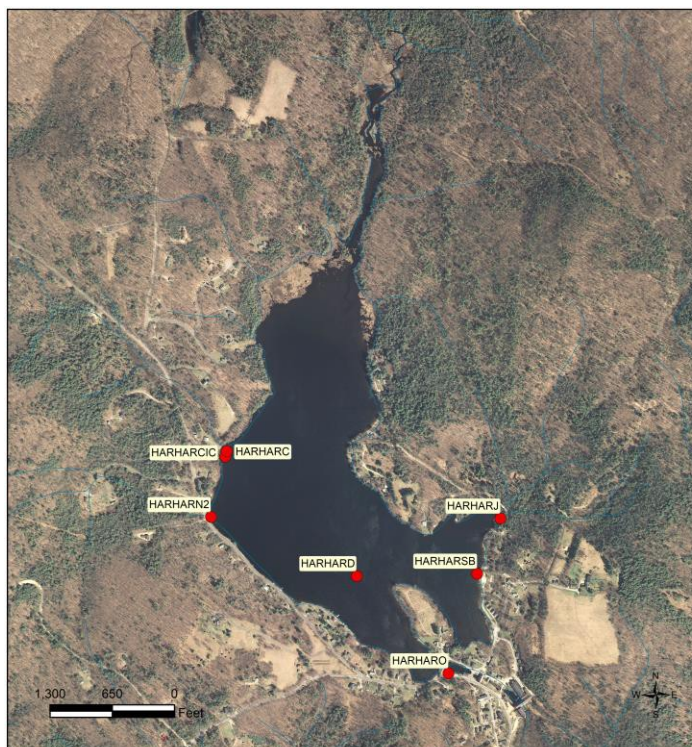
HARRISVILLE POND
HARRISVILLE
VOLUNTEER LAKE ASSESSMENT PROGRAM

STATIONID	STATION NAME
HARHARCIC	CEMETARY INLET COVE
HARHARC	CEMETARY INLET
HARHARD	DEEP SPOT
HARHARJ	JANE DUNN INLET
HARHARN2	NELSON POND INLET
HARHARO	LIBRARY OUTLET
HARHARSB	SUNSET 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
Harrisville Pond, Harrisville
2020 Data Summary

Recommended Actions: Pond quality is generally representative of mesotrophic, or average, conditions however algal growth (chlorophyll) tends to fluctuate above the threshold for mesotrophic lakes. Increase monitoring frequency to once per month during the summer, typically June, July and August, to decrease variability within the data set and better assess seasonal and historical water quality trends. The improving conductivity levels are a positive sign and we hope to see this continue! The increased frequency and intensity of storm events highlights the need to continually address stormwater runoff within the watershed. NHDES' "NH Homeowner's Guide to Stormwater Management" is a great resource for watershed residents. Encourage shoreline property owners to be certified LakeSmart through NHLAKES lake-friendly living program www.nhlakes.org/lakesmart/. Contact the VLAP Coordinator in 2021 to train new volunteers on the lake sampling process.

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

⬥ **Chlorophyll-a:** Chlorophyll level was within a moderate range in August, was slightly greater than the state median, and was approximately equal to the threshold for mesotrophic lakes. Historical trend analysis indicates stable, yet variable, chlorophyll levels since monitoring began.

⬥ **Conductivity/Chloride:** Epilimnetic (upper water layer) and Metalimnetic (middle water layer) conductivity and chloride levels were within a low range and were less than the state medians. Historical trend analysis indicates significantly decreasing (improving) epilimnetic conductivity levels since monitoring began.

⬥ **Total Phosphorus:** Epilimnetic and Metalimnetic phosphorus level were within a low range in August and were less than the state median and the threshold for mesotrophic lakes. Historical trend analysis indicates stable, yet variable, epilimnetic phosphorus levels since monitoring began.

⬥ **Transparency:** Transparency measured without the viewscope (NVS) was within an average range for the pond and was higher (better) than the state median. Historical trend analysis indicates relatively stable NVS transparency since monitoring began. Viewscope (VS) transparency was much higher (better) than NVS transparency and likely a better measure of actual conditions.

⬥ **pH:** Epilimnetic pH level was within the desirable range 6.5-8.0 units and historical trend analysis indicates relatively stable epilimnetic pH levels since monitoring began. Metalimnetic pH level was slightly acidic and potentially critical to aquatic life.

Dissolved Oxygen & Temperature Profile, Aug. 2020
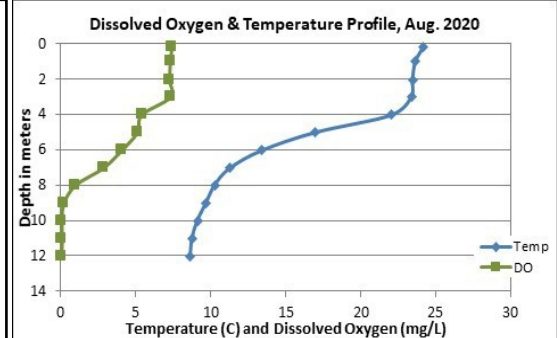
Station Name	Table 1. 2020 Average Water Quality Data for HARRISVILLE POND - HARRISVILLE						
	Chlor-a ug/l	Chloride mg/l	Cond. us/cm	Total P ug/l	Trans. m		pH
					NVS	VS	
Epilimnion	4.79	3	20.4	8	3.70	5.00	6.55
Metalimnion		4	22.6	7			5.89

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	Improving	Data significantly decreasing.	Chlorophyll-a	Stable	Trend not significant; data highly 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 highly variable.

Historical Trend Epilimnetic Conductivty and pH

Historical Chlorophyll-a, Epilimnetic Phosphorus & Transparency Data