



Volunteer Lake Assessment Program Individual Lake Reports

STOCKER POND, GRANTHAM, NH

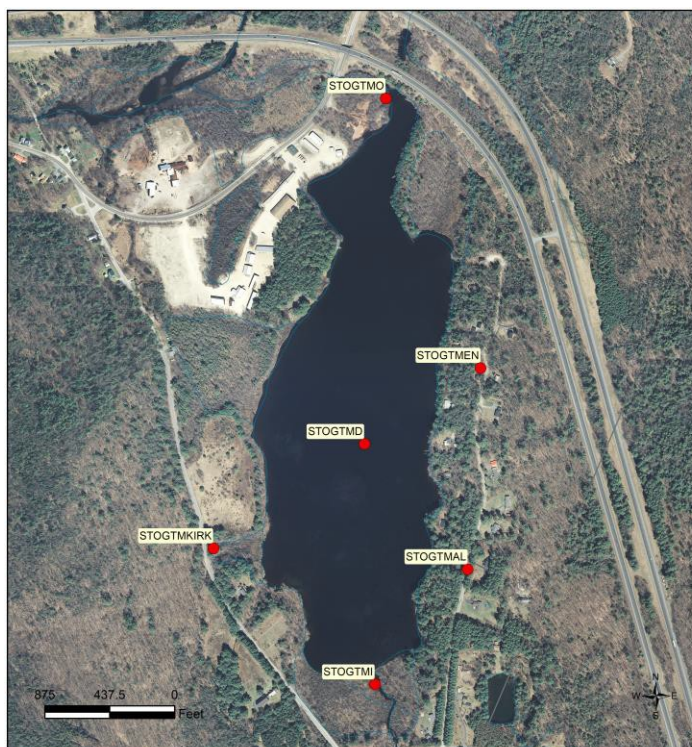
MORPHOMETRIC DATA

Watershed Area (Ac.):	1,253	Max. Depth (m):	5.8	Flushing Rate (yr ⁻¹):	3.5	Year	Trophic class	KNOWN EXOTIC SPECIES
Surface Area (Ac.):	64	Mean Depth (m):	2.7	P Retention Coef:	0.56	1983	MESOTROPHIC	
Shore Length (m):	2,600	Volume (m ³):	697,000	Elevation (ft):	1019	2001	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](https://www.nhdes.gov/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	Slightly Bad	Data periodically exceed water quality standards or thresholds for a given 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 saturation	Slightly Bad	Data periodically exceed water quality standards or thresholds for a given 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	Very Good	All sampling data 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.



STOCKER POND GRANTHAM VOLUNTEER LAKE ASSESSMENT PROGRAM

STATIONID	STATION NAME
STOGTMD	DEEP SPOT
STOGTMI	INLET
STOGTMO	OUTLET
STOGTMKIRK	KIRK
STOGTMAL	ALLAN
STOGTMEN	ENGLISH

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





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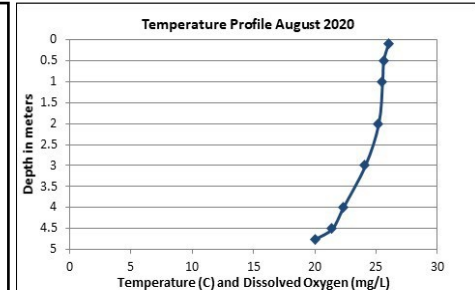
Stocker Pond, Grantham

2020 Data Summary

Recommended Actions: Great job sampling in 2020! Pond nutrient (phosphorus) levels, algal growth (chlorophyll), water clarity (transparency), and turbidity have improved since 2015. This may be a result of overall improvements in water quality, the introduction of an exotic and invasive aquatic species such as the Asian clam, changes in hydrological conditions such as decreased flow from the Inlet or increased flushing or flow through the Outlet, or the reduction in monitoring frequency. It is suggested to increase monitoring frequency to once per month, typically June, July and August, to better assess seasonal water quality and make comparisons with historical data. Survey the shoreline and sandy areas for the presence of freshwater mussels and clams and submit samples to NHDES for identification. Continue to encourage local road agents to remove winter sand and salt accumulation along roadside ditches and culvert that discharge to the pond. Keep up the great work!

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

- ◆ **Chlorophyll-a:** Chlorophyll level was very low in August, was much less than the state median and the threshold for mesotrophic lakes, and was the lowest measured since monitoring began. Historical trend analysis indicates significantly decreasing (improving) chlorophyll levels since monitoring began.
- ◆ **Conductivity/Chloride:** Epilimnetic (deep spot), Inlet and Outlet conductivity and chloride levels were elevated and much greater than the state medians, however chloride levels were less than the state chronic chloride standard. Historical trend analysis indicates significantly increasing (worsening) epilimnetic conductivity levels since monitoring began.
- ◆ **Color:** Apparent color measured in the epilimnion indicates the water was lightly tea colored, or light brown, in August.
- ◆ **Total Phosphorus:** Epilimnetic, Inlet and Outlet phosphorus levels were very low in August. Epilimnetic phosphorus level decreased from 2019 and was much 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) in August due to low levels of algal growth and lighter water color. NVS transparency decreased slightly from 2019 and was approximately equal to the state median. Historical trend analysis indicates stable, yet variable, NVS transparency since monitoring began. Historical trend analysis of VS transparency indicates significantly increasing (improving) transparency since 2006 and we hope to see this continue!
- ◆ **Turbidity:** Epilimnetic, Inlet and Outlet turbidity levels were within a low range in August.
- ◆ **pH:** Epilimnetic, Inlet and Outlet pH levels were within the desirable range 6.5-8.0 units. Historical trend analysis indicates relatively stable epilimnetic pH level since monitoring began.



Station Name	Table 1. 2020 Average Water Quality Data for STOCKER POND - GRANTHAM									
	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	15.7	0.71	52	40	226.3	6	3.30	4.20	0.41	7.18
Inlet			49		227.5	6			0.64	7.11
Outlet			49		229.5	6			0.71	7.11

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	Worsening	Data significantly increasing.	Chlorophyll-a	Improving	Data significantly decreasing.
pH (epilimnion)	Stable	Trend not significant; data moderately variable.	Transparency	Stable	Trend not significant; data highly variable.
			Phosphorus (epilimnion)	Stable	Trend not significant; data moderately variable.

