



Volunteer Lake Assessment Program Individual Lake Reports

NEW POND, CANTERBURY, NH

MORPHOMETRIC DATA

MORPHOMETRIC DATA				TROPIC CLASSIFICATION		KNOWN EXOTIC SPECIES	
Watershed Area (Ac.):	101	Max. Depth (m):	3	Flushing Rate (yr ¹)	1.1	Year	Trophic class
Surface Area (Ac.):	29	Mean Depth (m):	1.4	P Retention Coef:	0.85	1985	MESOTROPIC
Shore Length (m):	2,100	Volume (m ³):	167,000	Elevation (ft):	821	1997	MESOTROPIC

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)	Slightly Bad	Data exceed water quality standards or thresholds for a given parameter by a small margin.
	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	Slightly Bad	Data periodically exceed water quality standards or thresholds for a given parameter by a small margin.
	Chlorophyll-a	Slightly Bad	Data exceed water quality standards or thresholds for a given parameter by a small margin.
Primary Contact Recreation	Escherichia coli	Very Good	All sampling data meet water quality standards or thresholds for this parameter.
	Cyanobacteria hepatoto	Slightly Bad	Cyanobacteria bloom(s).
	Chlorophyll-a	Bad	Data periodically exceed water quality standards or thresholds for a given parameter by a large margin.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

NEW POND-SHERWOOD FOREST SHORES BEACH 3	Escherichia coli	Good	Sampling data commonly meet water quality standards or thresholds for this parameter.
NEW POND-SHERWOOD FOREST SHORES BEACH 2	Escherichia coli	Good	Sampling data commonly meet water quality standards or thresholds for this parameter.
NEW POND-SHERWOOD FOREST SHORES BEACH 1	Escherichia coli	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.



**NEW POND
CANTERBURY**
VOLUNTEER LAKE ASSESSMENT PROGRAM

STATIONID	STATION NAME
NEWCNTO	OUTLET
NEWCNTBB1	BLUE BOAR #1
NEWCNTBB2	BLUE BOAR #2
NEWCNTD	DEEP SPOT
NEWCNTSR	SHAKER ROAD
NEWCNTBB	BLUE BOAR

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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New Pond, Canterbury

2020 Data Summary

Recommended Actions: Great job sampling in 2020! Pond phosphorus and chlorophyll levels have become more stable since 2012 which is a good sign. However, levels still fluctuate above desirable thresholds for mesotrophic lakes and cyanobacteria growth has been noted in recent years. We encourage implementation of management efforts aimed at reducing stormwater runoff and nutrient loading to the pond. Identify areas prone to stormwater runoff and erosion and install stormwater management controls to reduce impacts. NHDES' "NH Homeowner's Guide to Stormwater Management" is a good resource. Consider converting existing beach areas to perched beaches to prevent erosion and filling in of the pond from beach sand. Regularly pump and maintain septic systems and utilize only phosphate free fertilizers. Maintain shoreline vegetative buffers to stabilize soils and prevent erosion from wind/wave action and boat wakes, and to help take up nutrients. NHLAKES' LakeSmart lake-friendly living program is a great way to encourage property owner's to maintain a healthy shoreline property. 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 within a low range in July and remained stable in September. Average chlorophyll level decreased slightly from 2019, and was approximately equal to the state median and the threshold for mesotrophic lakes. Historical trend analysis indicates stable, yet variable, chlorophyll levels since monitoring began.
- ◆ **Conductivity/Chloride:** Epilimnetic (deep spot) and Shaker Rd. conductivity and chloride levels remained greater than the state medians yet were less than a level of concern. Epilimnetic conductivity level has decreased since 2018 however historical trend analysis indicates significantly increasing (worsening) epilimnetic conductivity levels since monitoring began.
- ◆ **Color:** Apparent color measured in the epilimnion indicates the water was highly tea colored, or dark brown, in July and then lightened to within a moderately tea colored, or brown, range in September.
- ◆ **Total Phosphorus:** Epilimnetic phosphorus level was slightly elevated in July and then decreased to a moderate level in September. Average epilimnetic phosphorus level decreased slightly from 2019 but remained slightly greater than the state median and the threshold for mesotrophic lakes. Historical trend analysis indicates stable epilimnetic phosphorus levels since monitoring began. Shaker Rd. phosphorus level was elevated in July following a storm event and the turbidity of the sample was also elevated. Lab data noted colored water with light organic matter indicating wetland influences.
- ◆ **Transparency:** Transparency measured without the viewscope (NVS) was below average (worse) in July when water color was darkest and then increased (improved) to within an average range for the pond in September when water color was lighter. Average NVS transparency increased (improved) slightly from 2019 and historical trend analysis indicates stable, yet variable, NVS transparency since monitoring began. Viewscope transparency (VS) was much higher (better) than NVS transparency and likely a better measure of actual conditions.
- ◆ **Turbidity:** Epilimnetic turbidity level fluctuated within a low range and was higher in July. Shaker Rd. turbidity level was elevated in July following a storm event and lab data noted colored water with light organic matter.
- ◆ **pH:** Epilimnetic pH level was within the desirable range 6.5-8.0 units and historical trend analysis indicates significantly increasing (improved) epilimnetic pH levels since monitoring began. Shaker Rd. pH level was slightly acidic and potentially critical to aquatic life.

Station Name	Table 1. 2020 Average Water Quality Data for NEW POND - CANTERBURY									
	Alk.	Chlor-a	Chloride	Color	Cond.	Total P	Trans. (m)		Turb.	pH
	(mg/L)	(ug/L)	(mg/L)	(pcu)	(us/cm)	(ug/L)	NVS	VS	(ntu)	
Epilimnion	7.4	4.67	17	80	74.0	14	1.98	2.52	0.66	6.87
Shaker Rd.			16		89.6	74			3.39	5.77

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	Stable	Trend not significant; data highly variable.
pH (epilimnion)	Improving	Data significantly increasing.	Transparency	Stable	Trend not significant; data highly variable.
			Phosphorus (epilimnion)	Stable	Trend not significant; data show low variability.

