



## Volunteer Lake Assessment Program Individual Lake Reports

### DORRS POND, MANCHESTER, NH

**MORPHOMETRIC DATA**
**TROPIC CLASSIFICATION**
**KNOWN EXOTIC SPECIES**

<b>Watershed Area (Ac.):</b>	1,473	<b>Max. Depth (m):</b>	2.9	<b>Flushing Rate (yr<sup>1</sup>)</b>	31.2	<b>Year</b>	<b>Trophic class</b>	
<b>Surface Area (Ac.):</b>	18	<b>Mean Depth (m):</b>	1.3	<b>P Retention Coef:</b>	0.39	1981	EUTROPHIC	
<b>Shore Length (m):</b>	1,600	<b>Volume (m<sup>3</sup>):</b>	92,000	<b>Elevation (ft):</b>	270	1997	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)	Bad	Data exceed water quality standards or thresholds for this parameter by a large margin.
	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	Slightly Bad	Data exceed water quality standards or thresholds for this parameter by a small margin.
Primary Contact Recreation	Escherichia coli	No Data	No data for this parameter.
	Chlorophyll-a	Slightly Bad	Data periodically exceed water quality standards or thresholds for this parameter by a small margin.

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



**DORRS POND  
MANCHESTER  
VOLUNTEER LAKE ASSESSMENT PROGRAM**

STATIONID	STATION NAME
DORMAND	DEEP SPOT
DORMANE	E II INLET
DORMANI	LESSARD INLET
DORMANO	OUTLET
DORMANJ	JUNIPER ST INLET

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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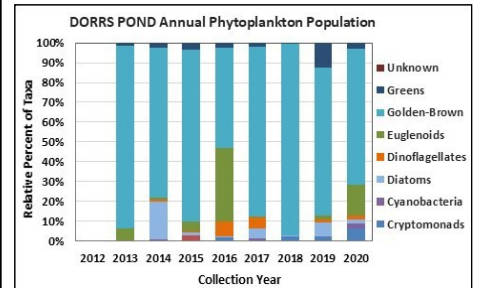
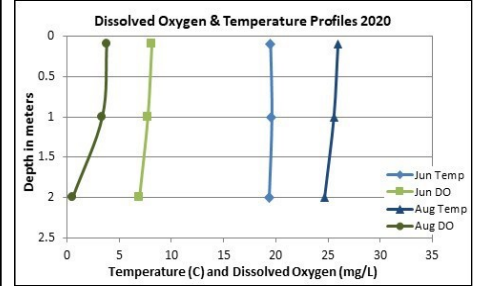
## Dorris Pond, Manchester

### 2020 Data Summary

**Recommended Actions:** Great job sampling in 2020! Drought conditions likely led to increased nutrient, conductivity/chloride levels and algal growth in 2020. While chlorophyll levels have improved since monitoring began, transparency or water clarity appears to be worsening over time. This could be caused by an increase in dissolved organic matter that imparts a tea color to the water, as measured by apparent color, as well as operation of a fountain in recent years. Chloride levels continue to exceed the state chronic chloride standard and could be toxic to aquatic life. These levels are indicative of an urban watershed and best efforts should be made to reduce the use of road salt within the watershed. Keep up the great work!

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

- ◆ **Chlorophyll-a:** Chlorophyll level was elevated in June and increased to a level indicative of an algal bloom in August. Average chlorophyll level increased from 2019 and was much greater than the state median and the threshold for mesotrophic lakes. Historical trend analysis indicates significantly decreasing (improving) chlorophyll levels since monitoring began.
- ◆ **Conductivity/Chloride:** Epilimnetic (deep spot) and tributary conductivity and chloride levels remained greatly elevated and much greater than the state medians. Average chloride levels exceeded the state chronic chloride standard at all stations except Juniper St. Inlet. Historical trend analysis indicates highly variable epilimnetic conductivity levels since monitoring began.
- ◆ **Color:** Apparent color measured in the epilimnion indicates the water was highly tea colored, or dark brown, and the water became darker from June to August.
- ◆ **Total Phosphorus:** Epilimnetic and Outlet phosphorus levels were elevated in June and August but within an average range for that station. Average epilimnetic phosphorus level increased slightly from 2019 and was much greater than the state median and the threshold for mesotrophic lakes. Historical trend analysis indicates stable epilimnetic phosphorus levels since monitoring began. East II Inlet and Juniper St. Inlet phosphorus levels were low in June and elevated in August following a rain event during drought conditions. Lessard Inlet phosphorus levels were elevated on each sampling event and lab data noted colored water with sediment and/or organic matter.
- ◆ **Transparency:** Transparency measured with (VS) and without (NVS) the viewscope was below average (worse) in June and decreased (worsened) in August likely due to elevated algal growth. Average NVS transparency was the lowest (worst) measured since monitoring began. Historical trend analysis indicates stable, yet highly variable, transparency since monitoring began.
- ◆ **Turbidity:** Epilimnetic turbidity level was slightly elevated in June and increased in August when algal growth increased. East II Inlet and Outlet turbidity levels were within a low range. Juniper St. Inlet turbidity level was low in June and increased to a slightly elevated level in August following a rain event during drought conditions. Lessard Inlet turbidity levels were elevated on each sampling event and lab data noted colored water and low levels of sediment and/or organic matter in the samples.
- ◆ **pH:** Deep spot and tributary pH levels were within the desirable range 6.5-8.0 units. Historical trend analysis indicates stable epilimnetic pH levels since monitoring began.



Station Name	Table 1. 2020 Average Water Quality Data for DORRS POND - MANCHESTER									
	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	31.9	15.96	248	155	926.5	25	1.12	1.25	3.02	7.12
East II Inlet			218		862.5	24			0.26	7.16
Juniper St. Inlet			158		601.0	32			1.86	6.68
Lessard Inlet			364		1371.5	40			9.46	7.12
Outlet			257		948.0	24			0.96	6.89

**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)

**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

### Historical Water Quality Trend Analysis

Parameter	Trend	Explanation	Parameter	Trend	Explanation
Conductivity	Stable	Trend not significant; data highly variable.	Chlorophyll-a	Improving	Data significantly decreasing.
pH (epilimnion)	Stable	Trend not significant; data show low variability.	Transparency	Stable	Trend not significant; data highly variable.
			Phosphorus (epilimnion)	Stable	Trend not significant; data show low variability.

