



Volunteer Lake Assessment Program Individual Lake Reports

CLOUGH POND, LOUDON, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	230	Max. Depth (m):	18.2	Flushing Rate (yr ⁻¹)	0.4
Surface Area (Ac.):	46	Mean Depth (m):	5.9	P Retention Coef:	0.78
Shore Length (m):	1,600	Volume (m ³):	1,045,000	Elevation (ft):	466

TROPHIC CLASSIFICATION

Year	Trophic class
1983	MESOTROPIC
2002	MESOTROPIC

KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

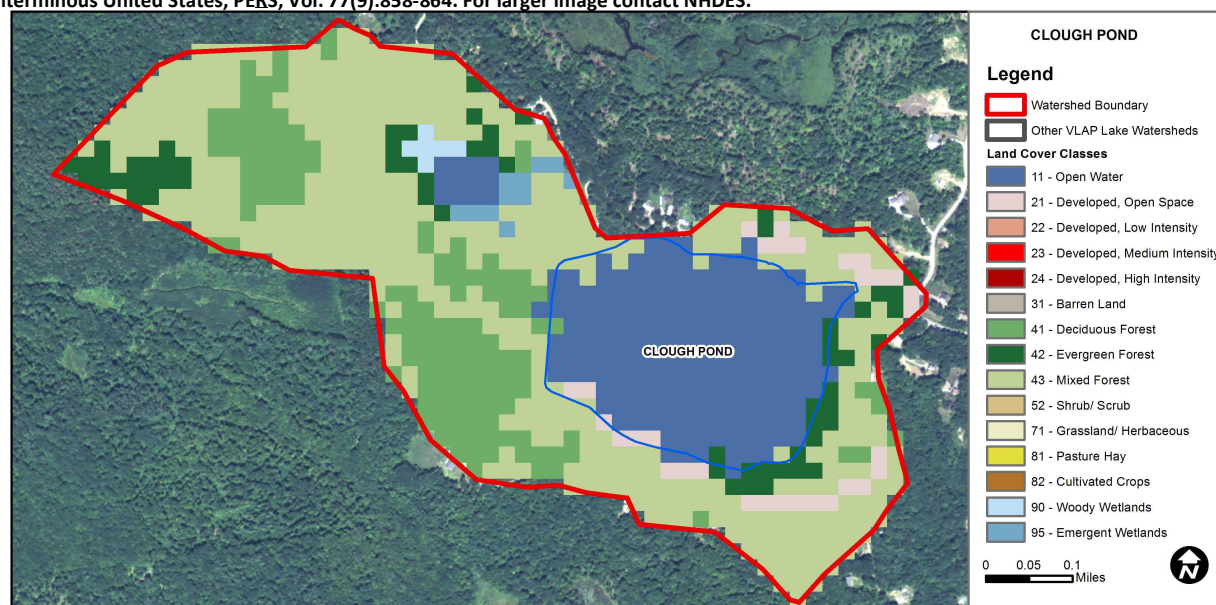
Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Slightly Bad	>/=5 samples and median is >threshold.
	pH	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	D.O. (mg/L)	Cautionary	< 10 samples and 1 exceedance of criteria. More data needed.
	D.O. (% sat)	Cautionary	< 10 samples and 1 exceedance of criteria. More data needed.
	Chlorophyll-a	Slightly Bad	>5 samples and median is > threshold.
Primary Contact Recreation	E. coli	Encouraging	>2 samples exist that are > 75% of geometric mean criteria, but not enough samples to calculate geometric mean. No single sample exceedances. More data needed.
	Chlorophyll-a	Good	At least 10 samples with 1 sample but < 10% of samples exceeding criteria.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

CLOUGH POND - TOWN BEACH	E. coli	No Data	No Data for this parameter.
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WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	22.7	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	3.52	Deciduous Forest	16.13	Pasture Hay	0
Developed-Low Intensity	0	Evergreen Forest	7.04	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	48.4	Woody Wetlands	0.68
Developed-High Intensity	0	Shrub-Scrub	0	Emergent Wetlands	1.25



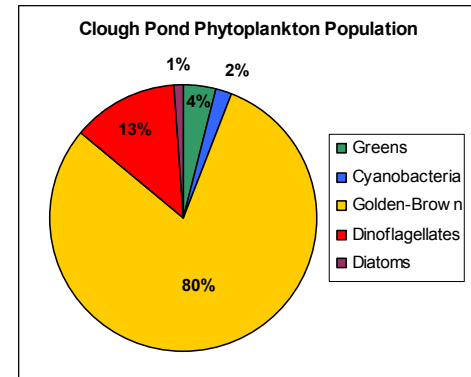
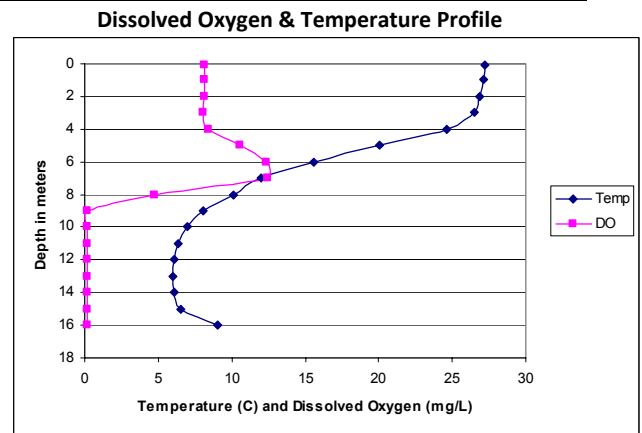
VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

CLOUGH POND, LOUDON, NH

2012 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphic)

- ♣ **CHLOROPHYLL-A:** Chlorophyll levels were relatively low and consistent with those measured since 2010. Overall, historical trend analysis indicates chlorophyll levels tend to fluctuate from year to year.
- ♣ **CONDUCTIVITY/CHLORIDE:** Conductivity and chloride were slightly elevated and above the NH lake median.
- ♣ **TOTAL PHOSPHORUS:** Metalimnetic (middle water layer) phosphorus levels were slightly higher likely due to algal growth as the cells contain phosphorus. All other phosphorus levels were low in 2012 and consistent with those measured since 2010. Overall, historical trend analysis indicates the epilimnetic (upper water layer) phosphorus level is relatively stable since monitoring began (excluding 2005).
- ♣ **TRANSPARENCY:** Transparency was average in 2012 and historical trend analysis indicates a relatively stable transparency since monitoring began.
- ♣ **TURBIDITY:** Metalimnetic turbidity was slightly elevated likely due to a layer of algae at that depth. All other turbidity levels were low.
- ♣ **pH:** pH levels were sufficient to support aquatic life, however have been below desirable levels in the past.
- ♣ **RECOMMENDED ACTIONS:** Address elevated conductivity and chloride levels by approaching the Town/State road agents to implement low salt zones near the lake. Continue homeowner stormwater management projects around the lake to reduce stormwater runoff to the pond.



Station Name	Alk.	Chlor-a	Chloride	Cond.	Total P	Trans.	Turb.	pH
	mg/l	ug/l	mg/l	uS/cm	ug/l	m	ntu	
						NVS		
Deep Epilimnion	5.65	3.72	14	81.7	6	4.18	0.73	6.94
Deep Metalimnion				81.6	12		1.27	6.89
Deep Hypolimnion				83.0	6		0.81	6.92
Inlet			14	83.2	6		0.94	7.01
Outlet			14	81.7	6		0.77	6.91

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.

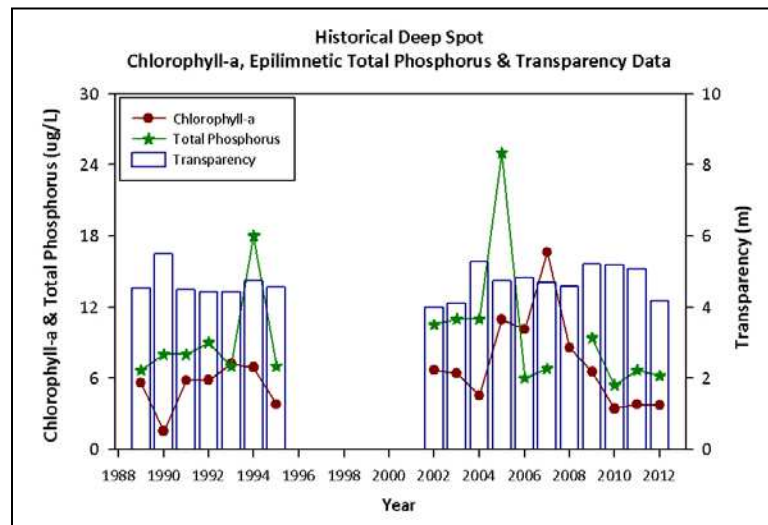
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m³
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

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: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	Variable	Data fluctuate annually, but are not significantly increasing or decreasing.
Transparency	Stable	Data not significantly increasing or decreasing.
Phosphorus (epilimnion)	Stable	Data not significantly increasing or decreasing.



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