



Volunteer Lake Assessment Program Individual Lake Reports

COBBETTS POND, WINDHAM, NH

MORPHOMETRIC DATA

TROPHIC CLASSIFICATION

KNOWN EXOTIC SPECIES

Watershed Area (Ac.):	2,048	Max. Depth (m):	19.2	Flushing Rate (yr ⁻¹)	0.4	Year	Trophic class	Variable Milfoil
Surface Area (Ac.):	345	Mean Depth (m):	5.2	P Retention Coef:	0.8	1986	MESOTROPHIC	
Shore Length (m):	7,400	Volume (m ³):	7,208,000	Elevation (ft):	177	2003	EUTROPHIC	

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.

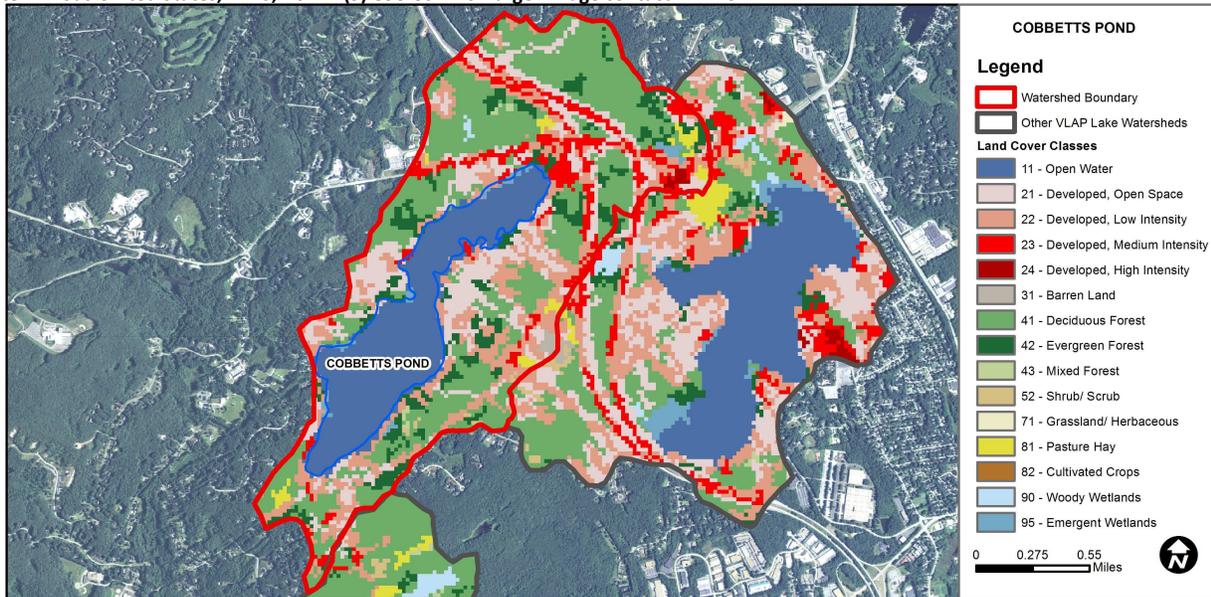
Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Slightly Bad	>/=5 samples and median is >threshold.
	pH	Good	At least 10 samples with 1 sample but < 10% of samples exceeding criteria.
	D.O. (mg/L)	Very Good	At least 10 samples with 0 exceedances of criteria.
	D.O. (% sat)	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	Chlorophyll-a	Slightly Bad	>5 samples and median is > threshold.
Primary Contact Recreation	E. coli	Cautionary	One exceedance of single sample criteria but not enough data to calculate geometric mean. More data needed.
	Cyanobacteria	Slightly Bad	Cyanobacteria bloom(s).
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

COBBETTS POND - DUNKAN BEACH	E. coli	No Data	No Data for this parameter.
COBBETTS POND - TOWN BEACH	E. coli	Bad	>/=1 exceedance(s) of geometric mean criterion and/or >/=2 exceedances of single sample criterion, with 1 or more >2X criteria.
COBBETTS POND - TOWN BEACH	Cyanobacteria	Slightly Bad	Cyanobacteria bloom(s).

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	19.5	Barren Land	0.34	Grassland/Herbaceous	0
Developed-Open Space	14.9	Deciduous Forest	31.57	Pasture Hay	1.44
Developed-Low Intensity	15	Evergreen Forest	7.92	Cultivated Crops	0
Developed-Medium Intensity	7.25	Mixed Forest	0.22	Woody Wetlands	0.14
Developed-High Intensity	0.27	Shrub-Scrub	0.22	Emergent Wetlands	0.9



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

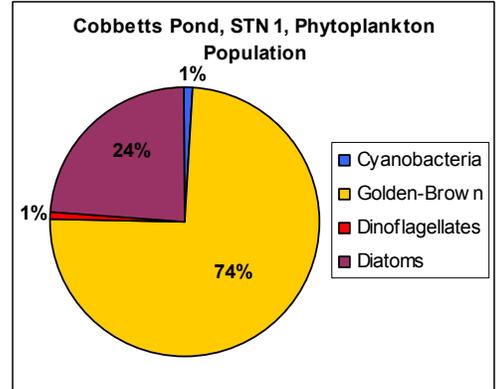
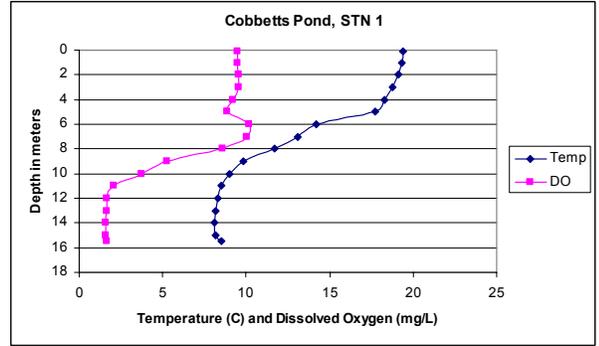
COBBETTS POND, STN 1, WINDHAM, NH

2012 DATA SUMMARY

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

- ♣ **CHLOROPHYLL-A:** Chlorophyll level was average for most NH lakes, however historical trend analysis indicates a significantly increasing (worsening) level since monitoring began.
- ♣ **CONDUCTIVITY/CHLORIDE:** Conductivity and chloride levels were elevated and much greater than NH lake medians.
- ♣ **E. COLI:** E. coli level was slightly elevated at Town Beach, but not greater than the state standard for public beaches.
- ♣ **TOTAL PHOSPHORUS:** Deep spot phosphorus levels were average in 2012. Although epilimnetic (upper water layer) phosphorus levels have decreased since 2009, historical trend analysis indicates a significantly increasing (worsening) epilimnetic phosphorus level since monitoring began. Phosphorus was elevated in Monson Inlet likely due to sediment and/or organic matter.
- ♣ **TRANSPARENCY:** Transparency levels were lower in 2012, likely due to heavy pine pollen. Historical trend analysis indicates a significantly decreasing (worsening) lake transparency.
- ♣ **TURBIDITY:** Turbidity levels were elevated in Monson Inlet and Mueller stream. Approx. 1.0 inch of rainfall occurred prior to sampling and stormwater may have contributed to elevated turbidity.
- ♣ **pH:** pH levels were sufficient to support aquatic life.
- ♣ **RECOMMENDED ACTIONS:** Increase monitoring frequency to three times per summer (June, July and August) to better assess summer and historical water quality trends. Chloride levels are approaching the state standard for chronic toxicity. It is recommended to try and implement low salt zones or utilize salt alternatives where possible. Recently, a watershed ordinance was passed by the Town, along with other projects in the watershed to reduce non-point source pollution. Keep up the great work and we hope to see water quality improve or stabilize in the future.

Dissolved Oxygen & Temperature Profile



Station Name	Table 1. 2012 Average Water Quality Data for COBBETTS POND, STN 1									
	Alk.	Chlor-a	Chloride	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	mg/l	uS/cm	#/100ml	ug/l	NVS	VS	ntu	
Fossa Rd Inlet			98	346		11			1.28	6.97
Monson Inlet			83	281		30			6.47	7.12
Mueller Stream			94	353					2.32	7.46
Outlet						17				
Station 1 Epilimnion	26	4.63	77	295		11	3.75	4.13	0.99	7.68
Station 1 Metalimnion				297		14			0.91	7.44
Station 1 Hypolimnion				296.5		13			1.24	6.73
Town Beach					82					

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

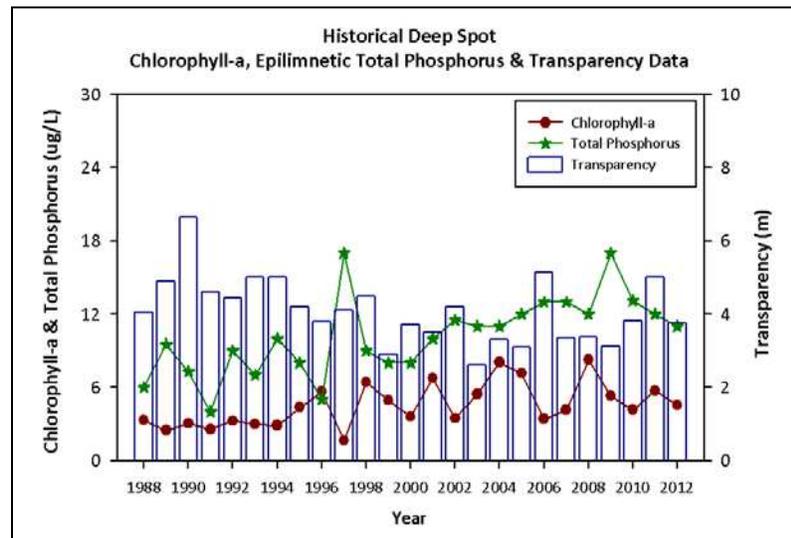
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m³
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

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	Degrading	Data significantly increasing (worsening) since monitoring began.
Transparency	Degrading	Data significantly decreasing (worsening) since monitoring began.
Phosphorus (epilimnion)	Degrading	Data significantly increasing (worsening) since monitoring began.



This report was generated by the NH DES Volunteer Lake Assessment Program (VLAP). For more information contact:
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