



Volunteer Lake Assessment Program Individual Lake Reports

COLD POND, ANDOVER, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	738	Max. Depth (m):	5.5	Flushing Rate (yr ⁻¹):	10.7
Surface Area (Ac.):	15	Mean Depth (m):	2.4	P Retention Coef:	0.45
Shore Length (m):	1,000	Volume (m ³):	141,500	Elevation (ft):	1081

TROPHIC CLASSIFICATION

Year	Trophic class
1993	OLIGOTROPHIC

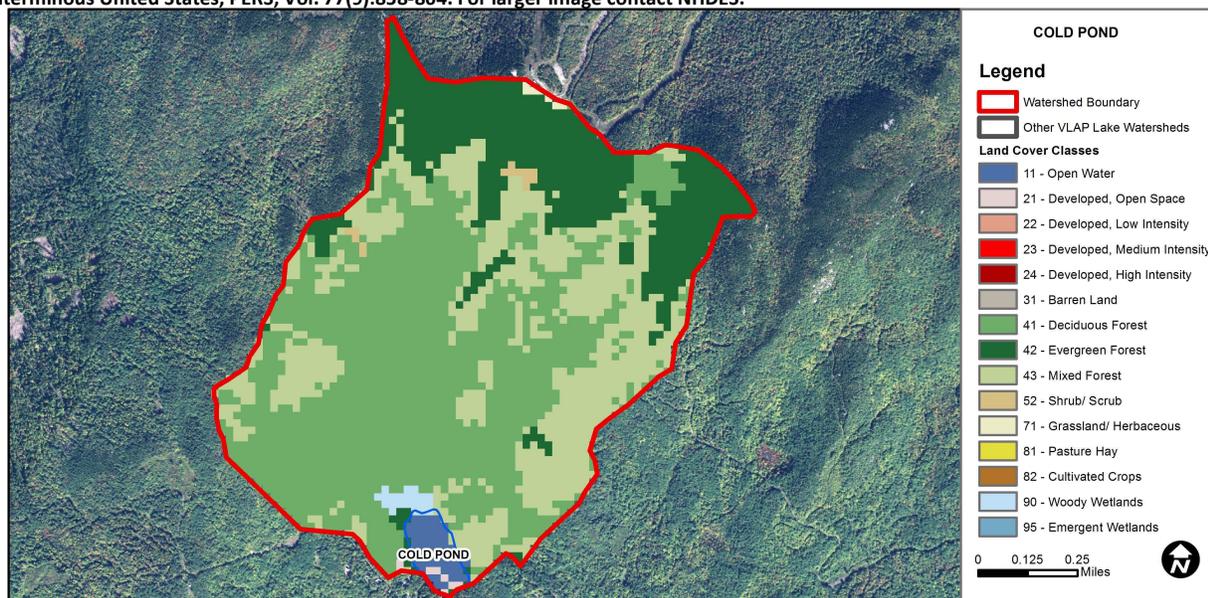
KNOWN EXOTIC SPECIES

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)	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Bad	>10%, with a minimum of 2, samples exceed criteria, with 1 or more by a large margin.
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	Chlorophyll-a	Very Good	>5 samples and median is < 1/2 threshold.
Primary Contact Recreation	E. coli	Good	Geometric means < criteria; however at least 1 exceedance of the single sample criteria occurred.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

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	1.72	Barren Land	0	Grassland/Herbaceous	0.23
Developed-Open Space	0.26	Deciduous Forest	47.66	Pasture Hay	0
Developed-Low Intensity	0	Evergreen Forest	21.68	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	27.02	Woody Wetlands	0.71
Developed-High Intensity	0	Shrub-Scrub	0.45	Emergent Wetlands	0



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2012 DATA SUMMARY

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

- 🔥 **CHLOROPHYLL-A:** Chlorophyll levels were very low and historical trend analysis indicates a stable chlorophyll level since monitoring began.
- 🔥 **CONDUCTIVITY/CHLORIDE:** Conductivity very low in the pond and Inlet.
- 🔥 **TOTAL PHOSPHORUS:** Phosphorus levels were slightly greater in 2012 than previous years, but were relatively low.
- 🔥 **TRANSPARENCY:** Pond transparency was very good and the Secchi disk was visible on the pond bottom. Historical trend analysis indicates a stable transparency since monitoring began.
- 🔥 **TURBIDITY:** Turbidity levels were low in 2012.
- 🔥 **pH:** pH levels were lower than desirable and could potentially affect aquatic life.
- 🔥 **RECOMMENDED ACTIONS:** Collect samples three times per summer; once per month in June, July and August. This will better assess seasonal trends in the pond. Otherwise, pond quality looks good!

Dissolved Oxygen & Temperature Profile

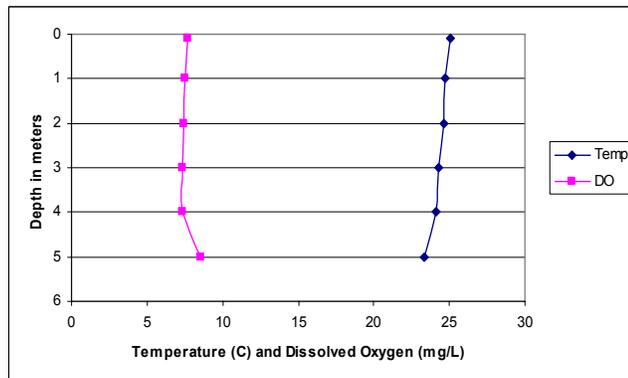


Table 1. 2012 Average Water Quality Data for COLD POND							
Station Name	Alk.	Chlor-a	Cond.	Total P	Trans.	Turb.	pH
	mg/l	ug/l	uS/cm	ug/l	m	ntu	
					NVS		
Deep Epilimnion	1.9	1.12	14.6	10	5.5	0.9	6.08
Deep Hypolimnion			14.7	9		0.46	6.24
Main Inlet			22.2	8		0.61	6.21

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

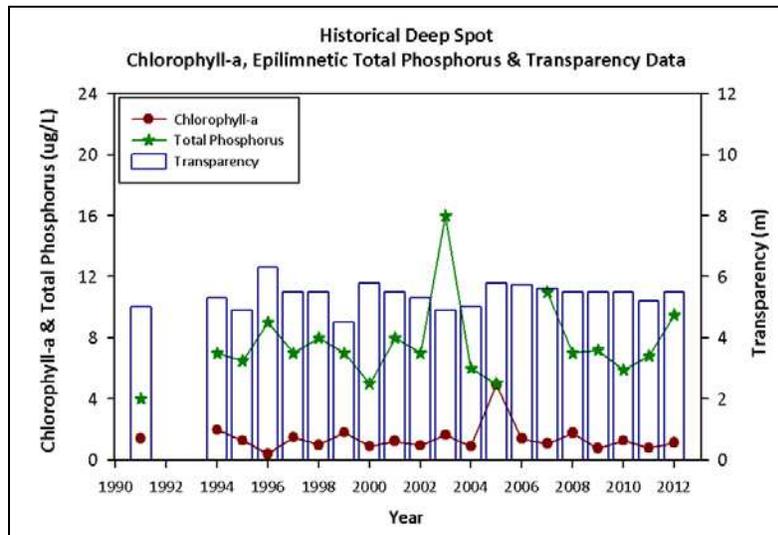
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m³
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

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	Stable	Data not significantly increasing or decreasing.
Transparency	Stable	Data not significantly increasing or decreasing.
Phosphorus (epilimnion)	N/A	Missing data from 2006, unable to perform regression analysis.



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