



Volunteer Lake Assessment Program Individual Lake Reports

CONNER POND, OSSIPEE, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	545	Max. Depth (m):	19.2	Flushing Rate (yr ⁻¹)	0.3
Surface Area (Ac.):	87	Mean Depth (m):	9.8	P Retention Coef:	0.73
Shore Length (m):	2,300	Volume (m ³):	3,368,000	Elevation (ft):	899

TROPHIC CLASSIFICATION

Year	Trophic class
1982	OLIGOTROPIC
2002	OLIGOTROPIC

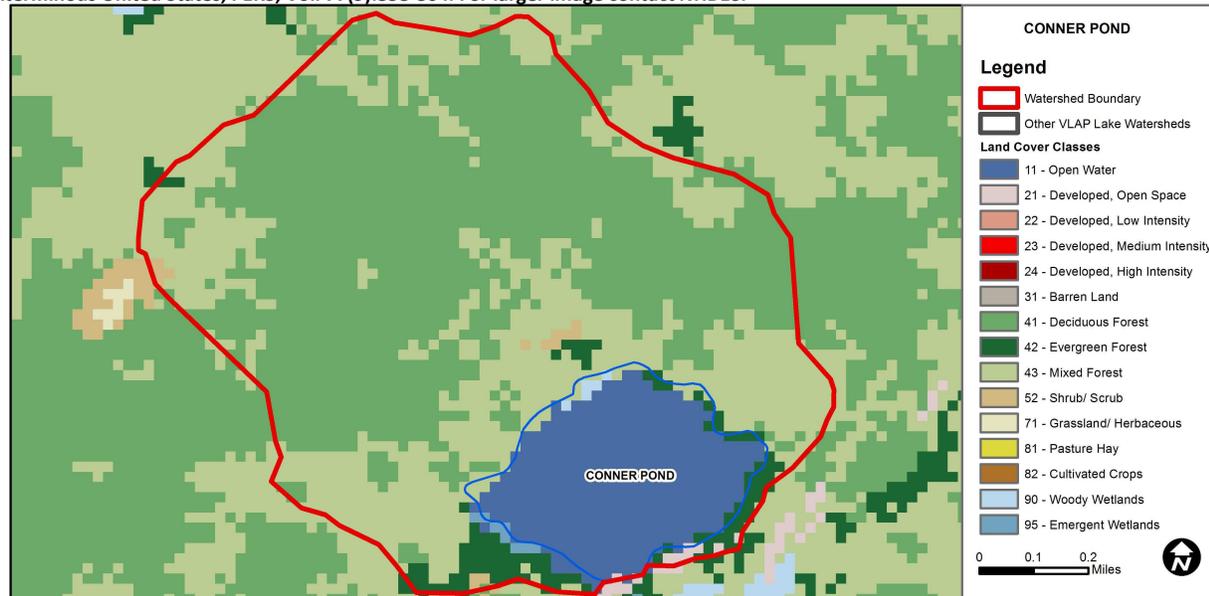
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the DRAFT 2014 305(b) report on the status of N.H. waters, and are based on data collected from 2004-2013. Detailed waterbody assessment and report card information can be found at www.des.nh.gov/organizations/divisions/water/wmb/swqa/index.htm

Designated Use	Parameter	Category	Comments
Aquatic Life	pH	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	Oxygen, Dissolved	Encouraging	There are < 10 samples with 0 exceedances of criteria. More data needed.
	Dissolved oxygen saturation	Encouraging	There are < 10 samples with 0 exceedances of criteria. More data needed.
Primary Contact Recreation	Chlorophyll-a	Very Good	The calculated median is from 5 or more samples and is ≤ 1/2 indicator.
	Escherichia coli	Very Good	Where there are no geometric means, all bacteria samples are < 75% of the geometric mean. Where there are geometric means all single bacteria samples are < the SSMC and all geometric means are < geometric mean criteria.
	Chlorophyll-a	Encouraging	There are < 10 samples with 0 exceedances of indicator. More data needed.

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	13.5	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	0.3	Deciduous Forest	51.36	Pasture Hay	0
Developed-Low Intensity	0	Evergreen Forest	3.71	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	30.36	Woody Wetlands	0.19
Developed-High Intensity	0	Shrub-Scrub	0.57	Emergent Wetlands	0.3



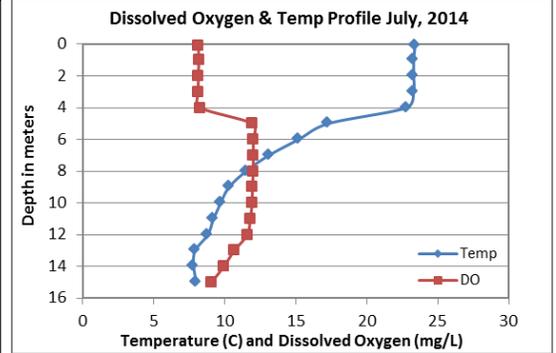
VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

CONNER POND, OSSIPEE

2014 DATA SUMMARY

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

- ◆ **CHLOROPHYLL-A:** Chlorophyll levels were very low in July, increased slightly from 2013, and were much less than the state median. Visual inspection of historical data indicates stable epilimnetic chlorophyll levels since monitoring began.
- ◆ **CONDUCTIVITY/CHLORIDE:** Deep spot conductivity remained low and much less than the state median. Visual inspection of historical data indicates stable epilimnetic (upper water layer) conductivity since monitoring began.
- ◆ **TOTAL PHOSPHORUS:** Deep spot phosphorus levels remained stable and low from the epilimnion to the hypolimnion (lower water layer). Phosphorus levels were much less than the state median and visual inspection of historical data indicates stable epilimnetic phosphorus since monitoring began.
- ◆ **TRANSPARENCY:** Transparency measured without the viewscope (NVS) was good, however moderate waves made viewing the Secchi disk difficult and the NVS transparency decreased slightly from 2013. Transparency measured with the viewscope (VS) was much better than that measured without. In general, transparency was very good and much better than the state median. Visual inspection of historical data indicates relatively stable transparency since monitoring began.
- ◆ **TURBIDITY:** Epilimnetic turbidity was slightly above average likely due to wind and wave conditions at the time of sampling mixing the surface waters and particles within them. Metalimnetic (middle water layer) and hypolimnetic (lower water layer) turbidities were low.
- ◆ **PH:** Deep spot pH levels were relatively stable from the epilimnion to the hypolimnion in the water column and were approximately within the desirable range 6.5-8.0 units.
- ◆ **RECOMMENDED ACTIONS:** Increase monitoring frequency to once per month during the summer, typically June, July and August. This will allow better assessment of seasonal water quality and historical water quality trends. Water quality looks great, keep up the great work!



Station Name	Table 1. 2014 Average Water Quality Data for CONNER POND							
	Alk. mg/l	Chlor-a ug/l	Cond. uS/cm	Total P ug/l	Trans. m		Turb. ntu	pH
					NVS	VS		
Epilimnion	3.10	1.08	16.8	3	8.75	11.1	1.18	6.59
Metalimnion			17.3	3			0.75	6.48
Hypolimnion			17.3	3			0.45	6.53

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:** between 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation	Parameter	Trend	Explanation
Conductivity	N/A	Ten consecutive years of data necessary for analysis.	Chlorophyll-a	N/A	Ten consecutive years of data necessary for analysis.
pH (epilimnion)	N/A	Ten consecutive years of data necessary for analysis.	Transparency	N/A	Ten consecutive years of data necessary for analysis.
			Phosphorus (epilimnion)	N/A	Ten consecutive years of data necessary for analysis.

