



Volunteer Lake Assessment Program Individual Lake Reports

BLAISDELL LAKE, SUTTON, NH

MORPHOMETRIC DATA

TROPIC CLASSIFICATION

KNOWN EXOTIC SPECIES

Watershed Area (Ac.):	448	Max. Depth (m):	13.1	Flushing Rate (yr ⁻¹)	0.3	Year	Trophic class	
Surface Area (Ac.):	158	Mean Depth (m):	5.2	P Retention Coef:	0.86	1990	OLIGOTROPIC	
Shore Length (m):	4,700	Volume (m ³):	3,355,500	Elevation (ft):	827	2005	MESOTROPIC	

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.

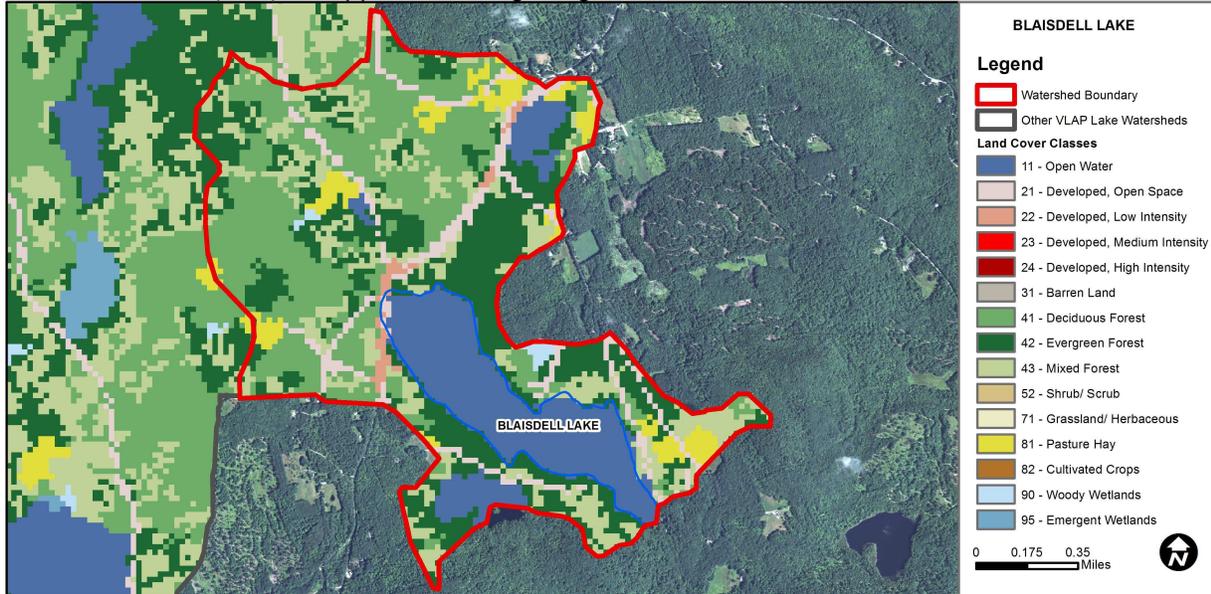
Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Slightly Bad	>/=5 samples and median is >threshold.
	pH	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	Chlorophyll-a	Slightly Bad	>5 samples and median is > 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.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

BLAISDELL LAKE - CAMP WABASSO BEACH	E. coli	Very Good	All bacteria samples <75% of geometric mean criteria, but not enough to calculate geometric mean. Or, all bacteria samples are < single sample criteria and calculated Geometric means are less than geometric mean criteria.
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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	17.9	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	6.52	Deciduous Forest	27.53	Pasture Hay	5.02
Developed-Low Intensity	1.15	Evergreen Forest	25.92	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	15.65	Woody Wetlands	0.49
Developed-High Intensity	0	Shrub-Scrub	0	Emergent Wetlands	0



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

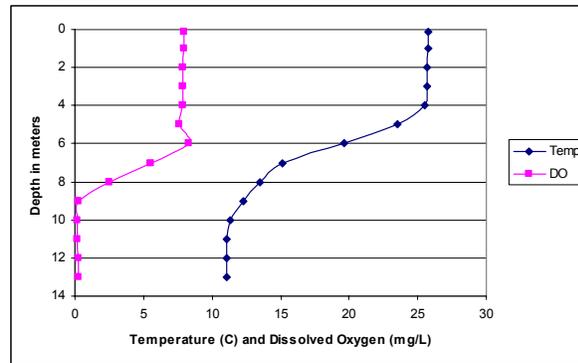
BLAISDELL LAKE, SUTTON, NH

2012 DATA SUMMARY

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

- 🔥 **CHLOROPHYLL-A:** Average chlorophyll levels were low and well below the NH lake median. Historical trend analysis indicates chlorophyll levels tend to fluctuate from year to year.
- 🔥 **CONDUCTIVITY/CHLORIDE:** Conductivity average for most NH lakes. Russell Pond experienced slightly elevated conductivity, but decreased downstream in Russell Inlet before entering the lake.
- 🔥 **E. COLI:** E. coli levels were well below state standards for public beaches and surface waters.
- 🔥 **TOTAL PHOSPHORUS:** Phosphorus levels in the hypolimnion (lower water layer) and Russell Pond were slightly elevated, however phosphorus levels decreased downstream in Russell Inlet. Historical trend analysis indicates epilimnetic (upper water layer) phosphorus levels have remained relatively stable since monitoring began.
- 🔥 **TRANSPARENCY:** Average lake transparency was better than the NH lake median value. Historical trend analysis indicates a relatively stable transparency since monitoring began.
- 🔥 **TURBIDITY:** Slightly elevated turbidities in the hypolimnion and Russell Pond could have contributed to slightly elevated phosphorus levels.
- 🔥 **pH:** pH decreased to undesirable levels in the hypolimnion.
- 🔥 **RECOMMENDED ACTIONS:** Continue monitoring Russell Pond for potential impacts to water quality downstream. Conduct in-lake and tributary chloride monitoring to assess potential road salting impacts.

2012 Dissolved Oxygen & Temperature Profile



Station Name	Table 1. 2012 Average Water Quality Data for BLAISDELL LAKE								
	Alk.	Chlor-a	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	uS/cm	#/100ml	ug/l	m		ntu	
						NVS	VS		
Billings Inlet			60.5	3	6			0.43	7.03
Billings Pond			41.8		7			0.94	6.3
Brown Inlet			61.0	2	6			0.72	7.03
Bum Carter Cove			61.6		6			0.53	7.15
Deep Epilimnion	7.15	2.25	60.1		6	5.93	6.92	0.46	6.96
Deep Hypolimnion			64.6		13			2.26	6.28
Deep Metalimnion			59.7		8			0.8	6.79
North Shore Trib			63.9		10			0.57	6.69
Outlet			60.7		6			0.45	6.8
Russell Inlet			61.3	0	7			0.54	6.77
Russell Pond			106.2		14			2.23	6.66

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)

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

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

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	Variable	Data fluctuating since 2000.
Transparency	Stable	Data not significantly increasing or decreasing.
Phosphorus (epilimnion)	Stable	Data not significantly increasing or decreasing.

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