



Volunteer Lake Assessment Program Individual Lake Reports

GREGG LAKE, ANTRIM, NH

MORPHOMETRIC DATA

TROPIC CLASSIFICATION

KNOWN EXOTIC SPECIES

Watershed Area (Ac.):	2,944	Max. Depth (m):	11	Flushing Rate (yr ⁻¹)	1.6	Year	Trophic class	
Surface Area (Ac.):	195	Mean Depth (m):	5.3	P Retention Coef:	0.57	1978	OLIGOTROPIC	
Shore Length (m):	6,400	Volume (m ³):	4,199,000	Elevation (ft):	1053	1994	OLIGOTROPIC	

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.

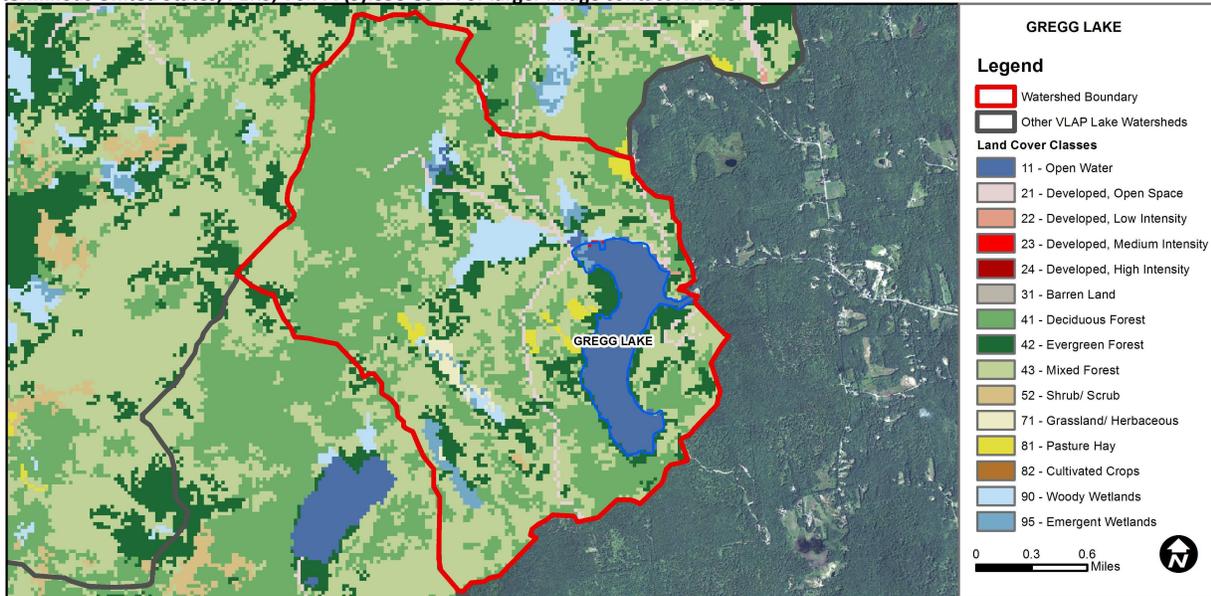
Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Slightly Bad	>/=5 samples and median is >threshold.
	pH	Bad	>10%, with a minimum of 2, samples exceed criteria, with 1 or more by a large margin.
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	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	Good	Geometric means < criteria; however at least 1 exceedance of the single sample criteria occurred.
	Chlorophyll-a	Encouraging	< 10 samples and no exceedance of criteria. More data needed.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

GREGG LAKE - CAMP CHENOA 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.
GREGG LAKE - TOWN BEACH	E. coli	Cautionary	One exceedance of single sample criteria but not enough data to calculate geometric mean. 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	7.36	Barren Land	0	Grassland/Herbaceous	0.72
Developed-Open Space	1.97	Deciduous Forest	40.56	Pasture Hay	1.17
Developed-Low Intensity	0.03	Evergreen Forest	10.39	Cultivated Crops	0
Developed-Medium Intensity	0.03	Mixed Forest	33.02	Woody Wetlands	3.25
Developed-High Intensity	0	Shrub-Scrub	0.1	Emergent Wetlands	1.41



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

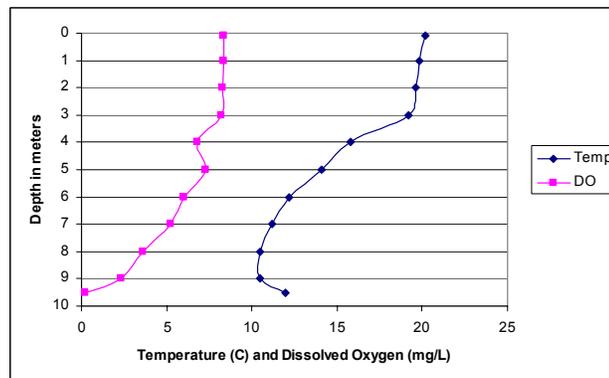
GREGG LAKE, ANTRIM, NH

2012 DATA SUMMARY

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

- 🔥 **CHLOROPHYLL-A:** Chlorophyll levels were slightly greater than the NH lake median value.
- 🔥 **CONDUCTIVITY/CHLORIDE:** Deep spot and tributary conductivity levels were low and well below the NH lake median value.
- 🔥 **E. COLI:** E. coli levels were well below state standards for public beaches and surface waters.
- 🔥 **TOTAL PHOSPHORUS:** Epilimnetic (upper water layer) phosphorus levels remained greater than what was measured from 2007-2010. Hypolimnetic (lower water layer) phosphorus levels were slightly elevated. Inlet phosphorus levels were slightly elevated.
- 🔥 **TRANSPARENCY:** Transparency levels were slightly greater than 2011, however lower than transparency measured for the period 2005-2010.
- 🔥 **TURBIDITY:** Turbidity was slightly elevated in the Inlet which may have contributed to the slightly elevated phosphorus level.
- 🔥 **pH:** pH levels were lower than desirable and potentially critical to aquatic life.
- 🔥 **RECOMMENDED ACTIONS:** Increase sampling frequency to three times per summer to better assess summer water quality and historical trends. Discuss dirt road maintenance with town road agents to reduce stormwater runoff and washout into the lake. Utilize the U.S. Forest Service's "Environmentally Sensitive Road Maintenance Practices for Dirt and Gravel Roads".

Dissolved Oxygen & Temperature Profile



Station Name	Alk.	Chlor-a	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	uS/cm	#/100ml	ug/l	NVS	VS	ntu	
Deep Epilimnion	1.9	5.97	18.7		10	3.3	4.05	0.81	6.03
Deep Metalimnion			20.6		8			0.46	5.98
Deep Hypolimnion			20.5		14			0.63	5.73
Inlet			16.6		16			1.32	5.64
Outlet			19.5		9			0.88	6.36
Sawyer			18.9		7			0.64	6.36
White Birch Point				10					

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	N/A	More data necessary to conduct trend analysis
Transparency	N/A	More data necessary to conduct trend analysis.
Phosphorus (epilimnion)	N/A	More data necessary to conduct trend analysis.

This report was generated by the NH DES Volunteer Lake Assessment Program (VLAP). For more information contact:
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Historical Deep Spot Chlorophyll-a, Epilimnetic Total Phosphorus & Transparency Data

