



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

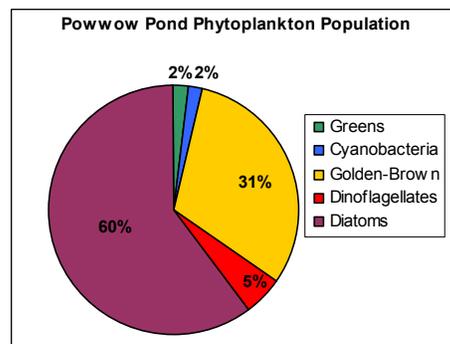
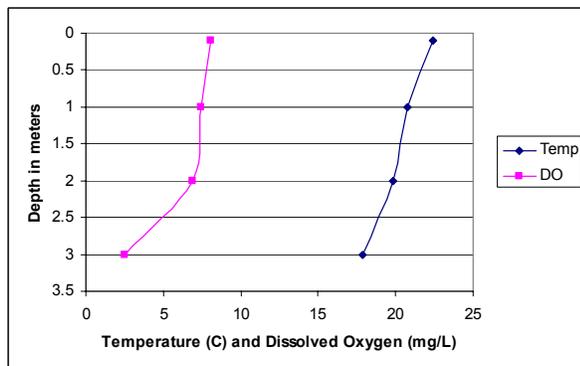
POWWOW POND, EAST KINGSTON, NH

2012 DATA SUMMARY

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

- ♣ **CHLOROPHYLL-A:** Chlorophyll levels were fairly stable throughout the summer and were slightly greater than the NH lake median.
- ♣ **CONDUCTIVITY/CHLORIDE:** Conductivity and chloride were elevated greater than the NH lake median values.
- ♣ **E. COLI:** The E. coli level was much less than state standards for public beaches and surface waters.
- ♣ **TOTAL PHOSPHORUS:** Epilimnetic phosphorus levels were slightly elevated and greater than the NH lake median. Bakie Brook phosphorus was elevated and the turbidity was also elevated likely due to low flow conditions. Rte. 125 Inlet and Rowell Cove phosphorus levels were elevated potentially due to wetland influences.
- ♣ **TRANSPARENCY:** Transparency was slightly lower in June and July, but improved in August as the Secchi disk was visible on the pond bottom.
- ♣ **TURBIDITY:** Epilimnetic (upper water layer) turbidity was elevated in June potentially due to algal growth or suspended sediments following a rain event. Bakie Brook turbidity was elevated throughout the summer.
- ♣ **PH:** Deep spot pH levels were sufficient to support aquatic life, however have dropped below desirable ranges in the past.
- ♣ **RECOMMENDED ACTIONS:** Conductivity and chloride were elevated suggesting impacts from road salting activities. Consider adopting low salt zones to help reduce chloride impacts. Epilimnetic turbidity was elevated following a rain event in June suggesting potential stormwater erosion is occurring in the watershed. Educate residents on ways to reduce stormwater runoff from their properties utilizing DES' "NH Homeowner's Guide to Stormwater Management".

Dissolved Oxygen & Temperature Profile



Station Name	Alk.	Chlor-a	Chloride	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	mg/l	uS/cm	#/100ml	ug/l	m		ntu	
							NVS	VS		
Bakie Brook				100.6		62			2.36	6.22
Deep Epilimnion	13.6	4.77	35	161.2		18	1.68	2.50	2.19	6.77
Outlet				167.6		21			1.25	6.92
Powwow River Inlet			40	176.2		18			1.46	6.44
Rowell Cove				135.0		25			1.47	6.55
Rte 125 Inlet				162.5		54			0.79	4.49
Sandy Point					10					

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

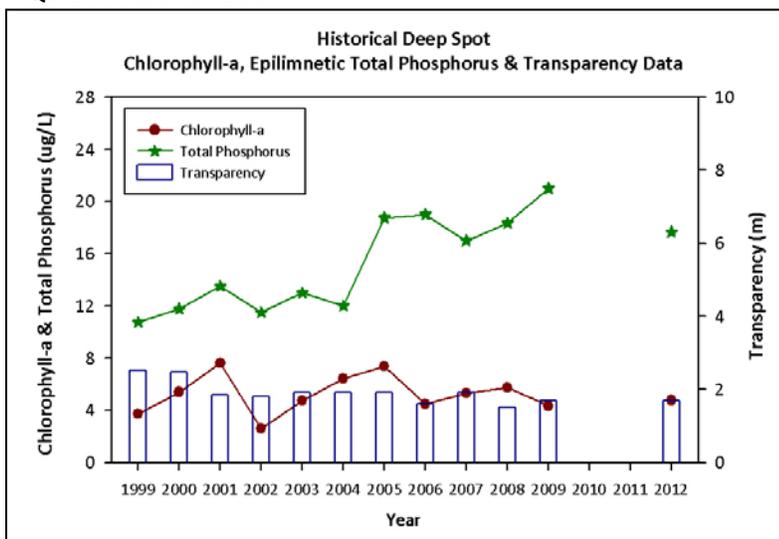
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m³
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

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	Ten consecutive years of data necessary for trend analysis.
Transparency	N/A	Ten consecutive years of data necessary for trend analysis.
Phosphorus (epilimnion)	N/A	Ten consecutive years of data necessary for trend analysis.



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