



Volunteer Lake Assessment Program Individual Lake Reports

WILD GOOSE POND, PITTSFIELD, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	2,313	Max. Depth (m):	6.8	Flushing Rate (yr ¹)	3
Surface Area (Ac.):	99	Mean Depth (m):	3.1	P Retention Coef:	
Shore Length (m):	3,200	Volume (m ³):	1,255,500	Elevation (ft):	623

TROPHIC CLASSIFICATION

Year	Trophic class
1981	OLIGOTROPHIC
2002	MESOTROPHIC

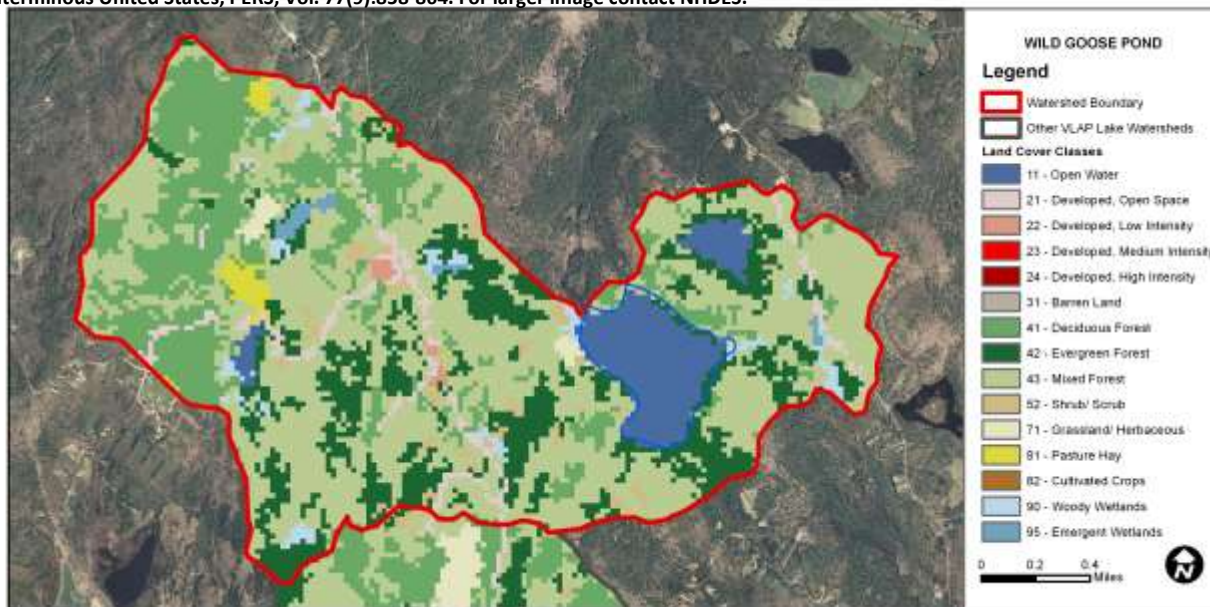
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the DRAFT 2018 305(b) report on the status of N.H. waters, and are based on data collected from 2008-2017. Detailed waterbody assessment and report card information can be found at www.des.nh.gov/organization/divisions/water/wmb/swqa/index.htm

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	Sampling data is better than the water quality standards or thresholds for this parameter.
	pH	Slightly Bad	Data periodically exceed water quality standards or thresholds for this parameter by a small margin.
	Oxygen, Dissolved	Encouraging	Limited data for this parameter predicts water quality standards or thresholds are being met; however more data are necessary to fully assess the parameter.
	Dissolved oxygen saturation	Encouraging	Limited data for this parameter predicts water quality standards or thresholds are being met; however more data are necessary to fully assess the parameter.
Primary Contact Recreation	Chlorophyll-a	Good	Sampling data is better than the water quality standards or thresholds for this parameter.
	Escherichia coli	No Data	No data for this parameter.
	Chlorophyll-a	Good	Sampling data commonly meet water quality standards or thresholds for this parameter.

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.





VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

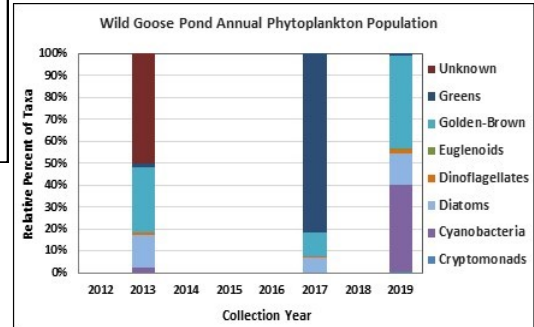
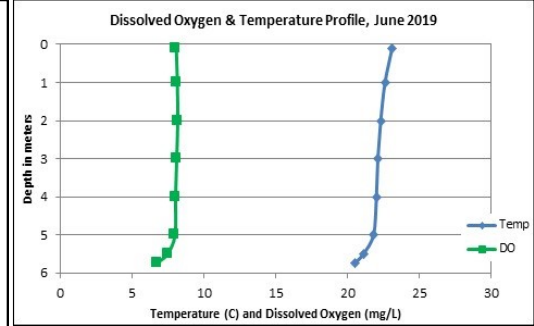
WILD GOOSE POND, PITTSFIELD

2019 DATA SUMMARY

RECOMMENDED ACTIONS: Pond quality is generally representative of oligotrophic, or high quality, conditions, however algal growth tends to spike above the threshold for oligotrophic lakes, and filamentous algal growth along the shoreline has increased. A significant storm event in July caused a short-term increase in nutrients, turbidity and water color, and a decrease in water clarity. This may be a result of the flushing of woody wetland systems and/or stormwater runoff. Work to identify and mitigate areas of stormwater runoff to the pond. DES' "NH Homeowner's Guide to Stormwater Management" is a great resource. Continue to educate pond residents on best practices to reduce nutrient (phosphorus) loading to the pond such as maintaining vegetative shoreline buffers, regularly pumping septic systems and reducing stormwater runoff from steep slopes. Keep up the great work!

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

- ◆ **CHLOROPHYLL-A:** Chlorophyll levels were stable and low from June through August. Average chlorophyll level decreased from 2018 and was less than the state median and the threshold for oligotrophic lakes. Visual inspection of historical data indicates variable chlorophyll levels since monitoring began.
- ◆ **CONDUCTIVITY/CHLORIDE:** Epilimnetic (upper water layer), Hypolimnetic (lower water layer) and Smith Inlet conductivity and/or chloride levels were low and less than the state medians. Visual inspection of historical data indicates stable conductivity levels since monitoring began.
- ◆ **COLOR:** Apparent color measured in the epilimnion indicates the water was lightly tea colored in June and August, and moderately tea colored in July following a significant storm event.
- ◆ **TOTAL PHOSPHORUS:** Epilimnetic and Hypolimnetic phosphorus levels were low in June, increased to a moderate level in July following a significant storm event, and then decreased to a low level in August. Average epilimnetic phosphorus level increased slightly from 2018 and was less than the state median and the threshold for oligotrophic lakes. Smith Inlet phosphorus levels were elevated but within a low range for that station.
- ◆ **TRANSPARENCY:** Transparency measured with (VS) and without (NVS) the viewscope was high (good) in June, decreased (worsened) in July following a significant storm event and when water color was darker, and then increased (improved) in August. Average NVS transparency increased from 2018 and was higher (better) than the state median. Visual inspection of historical data indicates stable transparency since monitoring began.
- ◆ **TURBIDITY:** Epilimnetic turbidity levels increased following the July storm event but remained within an average range. Hypolimnetic turbidity levels were low. Smith Inlet turbidity level was slightly elevated but within a normal range for this station.
- ◆ **pH:** Epilimnetic and Hypolimnetic pH levels were slightly less than the desirable range 6.5-8.0 units. Visual inspection of historical data indicates relatively stable pH levels since monitoring began. Smith Inlet pH level was acidic and potentially critical to aquatic life.



Station Name	Table 1. 2019 Average Water Quality Data for WILD GOOSE POND - PITTSFIELD									
	Alk. mg/l	Chlor-a ug/l	Chloride mg/l	Color pcu	Cond. us/cm	Total P mg/l	Trans. m		Turb. ntu	pH
							NVS	VS		
Epilimnion	3.0	2.57	5	33	33.8	8	4.22	4.39	0.71	6.30
Hypolimnion					33.3	10			0.81	6.26
Smith Inlet					26.4	44			4.45	4.82

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.
Alkalinity: 4.5 mg/L
Chlorophyll-a: 4.39 ug/L
Conductivity: 42.3 uS/cm
Chloride: 5 mg/L
Total Phosphorus: 11 ug/L
Transparency: 3.3 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.

