



## Volunteer Lake Assessment Program Individual Lake Reports

### WILD GOOSE POND, PITTSFIELD, NH

#### MORPHOMETRIC DATA

#### TROPHIC CLASSIFICATION

#### KNOWN EXOTIC SPECIES

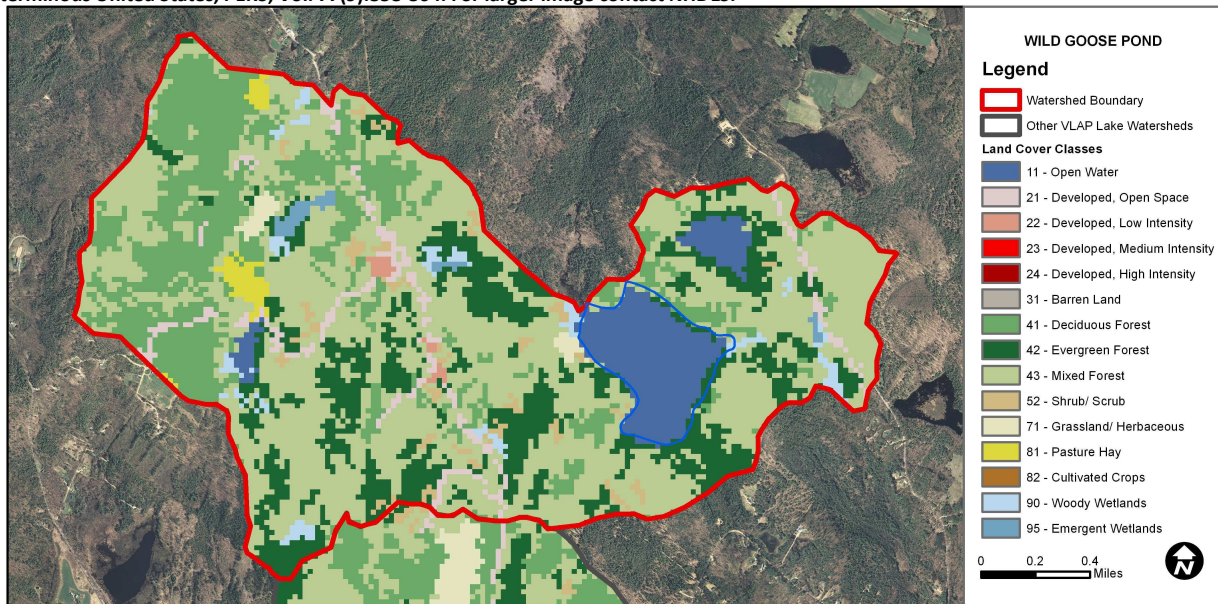
Watershed Area (Ac.):	2,313	Max. Depth (m):	6.8	Flushing Rate (yr <sup>1</sup> )	3	Year	Trophic class	
Surface Area (Ac.):	99	Mean Depth (m):	3.1	P Retention Coef:		1981	OLIGOTROPIC	
Shore Length (m):	3,200	Volume (m <sup>3</sup> ):	1,255,500	Elevation (ft):	623	2002	MESOTROPIC	

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](http://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 satura	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

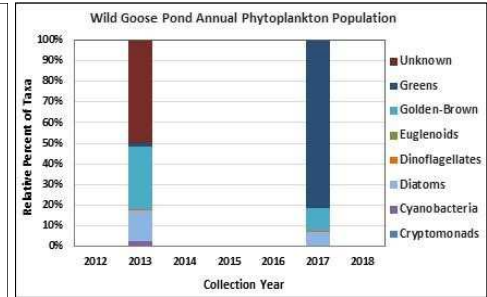
## WILD GOOSE POND, PITTSFIELD

### 2018 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. The stable water quality trends since 2013 are a positive sign, and it appears that pond pH may be recovering from historical acidic inputs. Maintain the current monitoring program to establish a baseline set of water quality data and to better understand seasonal variations in water quality and track historical water quality trends. 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 level was low in June, remained stable in July, and increased to a slightly elevated level in August. Average chlorophyll level increased slightly from 2017 and was slightly greater than the state median and the threshold for oligotrophic lakes. Visual inspection of historical data indicates slightly variable chlorophyll levels since monitoring began.
- ◆ **CONDUCTIVITY/CHLORIDE:** Epilimnetic (upper water layer), Hypolimnetic (lower water layer) and Smith Inlet conductivity levels were low and less than the state median. Epilimnetic chloride levels were also low and approximately equal to the state median. Visual inspection of historical data indicates stable epilimnetic conductivity levels since monitoring began.
- ◆ **COLOR:** Apparent color was measured in the epilimnion and indicates the pond water is moderately tea colored, or brown.
- ◆ **TOTAL PHOSPHORUS:** Epilimnetic and Hypolimnetic phosphorus levels were stable and low from June to August. Average epilimnetic phosphorus level remained stable with 2017 and was less than the state median and threshold for oligotrophic lakes. Visual inspection of historical data indicates stable epilimnetic phosphorus levels since monitoring began. Smith Inlet phosphorus levels were elevated in June and increased greatly in August following above average rainfall in the weeks prior to sampling.
- ◆ **TRANSPARENCY:** Transparency measured with (VS) and without (NVS) the viewscope was high (good) in June, remained stable in July, and decreased (worsened) in August likely due to wave conditions while sampling. Visual inspection of historical data indicates stable transparency since monitoring began.
- ◆ **TURBIDITY:** Epilimnetic and Hypolimnetic turbidity levels were stable and low. Smith Inlet turbidity levels were slightly elevated in June and greatly elevated in August and lab data noted highly colored water with light amounts of organic material.
- ◆ **pH:** Epilimnetic pH levels were within the desirable range 6.5-8.0 units and visual inspection of historical data indicates slightly increasing (improving) epilimnetic pH levels since monitoring began. Hypolimnetic pH levels were slightly less than desirable. Smith Inlet pH levels were acidic and critical to aquatic life.



Station Name	Table 1. 2018 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 ug/l	Trans. m		Turb. ntu	pH
							NVS	VS		
Epilimnion	2.8	4.68	5	43	35.1	7	3.34	3.96	0.70	6.56
Hypolimnion					34.7	7			0.77	6.39
Smith Inlet					26.4	151			12.92	4.75

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

- Alkalinity:** 4.5 mg/L
- Chlorophyll-a:** 4.39 mg/m<sup>3</sup>
- 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 years of data necessary for analysis.	Chlorophyll-a	N/A	Ten years of data necessary for analysis.
pH (epilimnion)	N/A	Ten years of data necessary for analysis.	Transparency	N/A	Ten years of data necessary for analysis.
			Phosphorus (epilimnion)	N/A	Ten years of data necessary for analysis.

