

### Volunteer Lake Assessment Program Individual Lake Reports WINNISQUAM, LACONIA, NH

### MORPHOMETRIC DATA

### TROPHIC CLASSIFICATION KNOWN EXOTIC SPECIES

Watershed Area (Ac.):	291,649	Max. Depth (m):	53	Flushing Rate (yr <sup>1</sup> )	2.2	Year	Trophic class	Variable Milfoil
Surface Area (Ac.):	4264	Mean Depth (m):	15.2	P Retention Coef:		1984	OLIGOTROPHIC	
Shore Length (m):	45,400	Volume (m <sup>3</sup> ):	262,306,500	Elevation (ft):	482	1994	OLIGOTROPHIC	

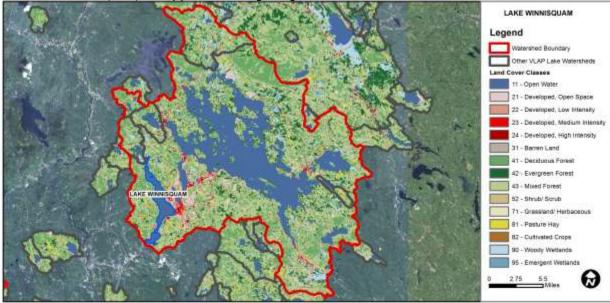
The Waterbody Report Card tables are generated from the DRAFT 2018 305(b) report on the status of N.H. waters, and are based on data collected from 2008-2017. Detailed waterbody assessment and report card information can be found at www.des.nh.gov/organization/divisions/water/wmb/swqa/index.htm

Designated Use	Parameter	Catego	ory	Comments				
Aquatic Life	Phosphorus (Total)	Good		Sampling data	is better than the water quality standards or thresholds for this parameter.			
	Slightly	Bad	Data periodically exceed water quality standards or thresholds for this parameter by a small margin.					
	Oxygen, Dissolved	Very G	ood	All sampling d	ata meet water quality standards or thresholds for this parameter.			
	Dissolved oxygen satura			Limited data for this parameter predicts water quality standards or thresholds are being met; however more data ar necessary to fully assess the parameter.				
	Chlorophyll-a	Good	Good		Sampling data is better than the water quality standards or thresholds for this parameter.			
Primary Contact Recreation	Escherichia coli	Very G	ood	All sampling data meet water quality standards or thresholds for this parameter.				
Chlorophyll-a			Very Good		All sampling data meet water quality standards or thresholds for this parameter.			
BEACH PRIMARY CONTACT A	BEACH PRIMARY CONTACT ASSESSMENT STATUS							
LAKE WINNISQUAM - BELMON	nerichia coli	Cautiona	ry	Limited data for this parameter predicts exceedance of water quality standards or thresholds; howe				

	AM - BELMONT TOWN BEACH	Escherichia coli		more data are necessary to fully assess the parameter.
LAKE WINNISQU	AM - AHERN STATE PARK	Escherichia coli	Bad	Data periodically exceed water quality standards or thresholds for this parameter by a large margin.
LAKE WINNISQU	AM - BARTLETTS BEACH	Escherichia coli	Bad	Data periodically exceed water quality standards or thresholds for this parameter by a large margin.
LAKE WINNISQU	AM - SANBORNTON TOWN	Escherichia coli	Bad	Data periodically exceed water quality standards or thresholds for this parameter by a large margin.
BEACH				

### 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	21.4	Barren Land	0.11	Grassland/Herbaceous	0.51
Developed-Open Space	4.8	Deciduous Forest	17.08	Pasture Hay	1.83
Developed-Low Intensity	1.65	Evergreen Forest	11.12	Cultivated Crops	0.52
Developed-Medium Intensity	0.7	Mixed Forest	32.34	Woody Wetlands	3.2
Developed-High Intensity	0.23	Shrub-Scrub	2.67	Emergent Wetlands	0.57



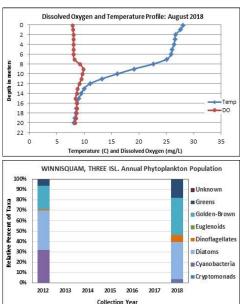
### VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS LAKE WINNISQUAM, THREE ISLAND, LACONIA 2018 DATA SUMMARY

RECOMMENDED ACTIONS: Lake quality was representative of high quality conditions. However, conductivity levels have increased since monitoring began and chloride levels indicate road salt is likely impacting the lake. Encourage road agents and winter maintenance companies that apply de-icing materials to roads, parking lots, walkways, and driveways to obtain NH Voluntary Salt Applicator licenses through UNH Technology Transfer Center's Green SnowPro certification program. Consider partnering with Soak Up the Rain NH to identify areas prone to stormwater runoff and implement projects designed to capture and infiltrate stormwater prior to reaching the lake. For more information visit www.soaknh.org. Keep up the great work!

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

- CHLOROPHYLL-A: Chlorophyll levels were low in June, decreased slightly in July, increased slightly in August, and then remained stable into September. Average chlorophyll level decreased slightly from 2017 and was much less than the state median and the threshold for oligotrophic lakes. Historical trend analysis indicates relatively stable chlorophyll levels since monitoring began.
- CONDUCTIVITY/CHLORIDE: Epilimnetic (upper water layer), Metalimnetic (middle water layer) and Hypolimnetic (lower water layer) conductivity levels were slightly elevated and greater than the state median. Epilimnetic chloride levels were greater than the state median, yet less than the state chronic chloride standard. Historical trend analysis indicates significantly increasing (worsening) epilimnetic conductivity levels since monitoring began.
- COLOR: Apparent color was measured in the epilimnion and indicated the lake water fluctuated between clear and lightly tea colored and was darkest in August following significant rainfall.
- TOTAL PHOSPHORUS: Epilimnetic phosphorus levels were stable and low from June through August and increased slightly in September, but remained within a low range. Average epilimnetic phosphorus level decreased slightly from 2017 and was much less than the state median and the threshold for oligotrophic lakes. Historical trend analysis indicates significantly decreasing (improving) epilimnetic phosphorus levels since monitoring began. We hope to see this continue! Metalimnetic and Hypolimnetic phosphorus levels were stable and low from June through September.
- TRANSPARENCY: Transparency measured without the viewscope (NVS) was average in June, decreased slightly in July, increased (improved) greatly in August, and then decreased again in September. Average NVS transparency increased (improved) from 2017 and was much higher (better) than the state median. Viewscope (transparency) was generally higher (better) than NVS transparency and likely a better measure of actual conditions. Historical trend analysis indicates relatively stable transparency since monitoring began.
- TURBIDITY: Epilimnetic turbidity levels were stable and low from June through September. Metalimnetic and
- Hypolimnetic turbidity levels fluctuated within a low to moderate range from June through September.
- PH: Epilimnetic, Metalimnetic and Hypolimnetic pH levels were within the desirable range 6.5-8.0 units. Historical trend analysis indicates stable epilimnetic pH levels since monitoring began.

Station Name	Tab	Table 1. 2018 Average Water Quality Data for LAKE WINNISQUAM, THREE ISLAND									
	Alk.	Chlor-a	Chloride	Color	Cond.	Total P	Tra	Trans.		рН	
	mg/l	ug/l	mg/l	pcu	us/cm	ug/l	n	า	ntu		
							NVS	VS			
Epilimnion	9.0	1.28	23	28	106.5	5	8.25	8.75	0.27	7.12	
Metalimnion					105.7	6			0.43	6.98	
Hypolimnion					105.8	7			0.62	6.63	

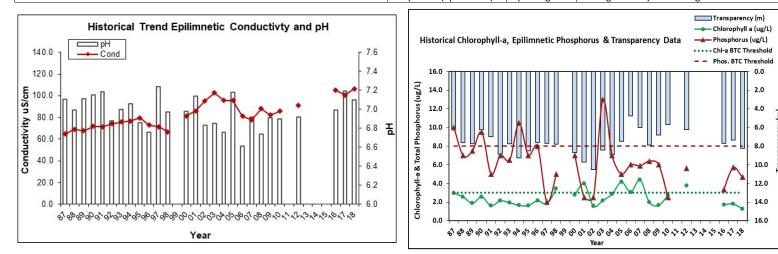


NH Median Values: Median values for specific parameters generated from historic lake monitoring data. Alkalinity: 4.5 mg/L Chlorophyll-a: 4.39 mg/m<sup>3</sup> Conductivity: 42.3 uS/cm Chloride: 5 mg/L Total Phosphorus: 11 ug/L Transparency: 3.3 m pH: 6.6

NH Water Quality Standards: Numeric criteria for spe-
cific parameters. Results exceeding criteria are consid-
ered 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	Worsening	Data significantly increasing.	Chlorophyll-a	Stable	Trend not significant; data moderately variable.
pH (epilimnion)	Stable	Trend not significant; data show low variability.	Transparency	Stable	Trend not significant; data moderately variable.
	÷		Phosphorus (epilimnion)	Improving	Data significantly decreasing.



This report was generated by the NHDES Volunteer Lake Assessment Program (VLAP). For more information contact VLAP at (603) 271-2658 or sara.steiner@des.nh.gov



### VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS LAKE WINNISQUAM, POT ISLAND, LACONIA 2018 DATA SUMMARY

RECOMMENDED ACTIONS: Lake quality was representative of high quality conditions. However, conductivity levels have increased since monitoring began and chloride levels indicate road salt is likely impacting the lake. Encourage road agents and winter maintenance companies that apply de-icing materials to roads, parking lots, walkways, and driveways to obtain NH Voluntary Salt Applicator licenses through UNH Technology Transfer Center's Green SnowPro certification program. Consider partnering with Soak Up the Rain NH to identify areas prone to stormwater runoff and implement projects designed to capture and infiltrate stormwater prior to reaching the lake. For more information visit www.soaknh.org. Keep up the great work!

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

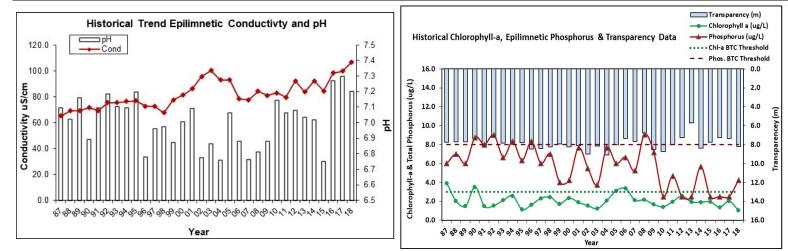
- CHLOROPHYLL-A: Chlorophyll levels were low in June and increased gradually as the summer progressed, but remained within a low range. Average chlorophyll level decreased from 2017 and was much less than the state median and the threshold for oligotrophic lakes. Historical trend analysis indicates relatively stable chlorophyll levels since monitoring began.
- CONDUCTIVITY/CHLORIDE: Epilimnetic (upper water layer), Metalimnetic (middle water layer) and Hypolimnetic (lower
  water layer) conductivity levels were slightly elevated and greater than the state median. Epilimnetic chloride levels
  were greater than the state median, yet less than the state chronic chloride standard. Historical trend analysis
  indicates significantly increasing (worsening) epilimnetic conductivity levels since monitoring began.
- COLOR: Apparent color was measured in the epilimnion and indicated the water generally clear, except following the significant rainfall in August.
- TOTAL PHOSPHORUS: Epilimnetic phosphorus levels were stable and low from June through September. Average epilimnetic phosphorus level increased from 2017 but remained much less than the state median and the threshold for oligotrophic lakes. Historical trend analysis indicates significantly decreasing (improving) epilimnetic phosphorus levels since monitoring began. We hope to see this continue! Metalimnetic and Hypolimnetic phosphorus levels also fluctuated within a low range from June through September.
- TRANSPARENCY: Transparency measured without the viewscope (NVS) was average in June, decreased slightly in July, increased (improved) greatly in August, and then decreased again in September. Average NVS transparency increased (improved) from 2017 and was much higher (better) than the state median. Viewscope (transparency) was generally higher (better) than NVS transparency and likely a better measure of actual conditions. Historical trend analysis indicates stable transparency since monitoring began.
- **TURBIDITY:** Epilimnetic turbidity levels were stable and low from June through September. Metalimnetic turbidity levels were slightly higher in July potentially due to a layer of algae. Hypolimnetic turbidity levels were also slightly elevated in July potentially due to fall out of organic matter in the system.
- PH: Epilimnetic, Metalimnetic and Hypolimnetic pH levels were within the desirable range 6.5-8.0 units. Historical trend analysis indicates stable epilimnetic pH levels since monitoring began.

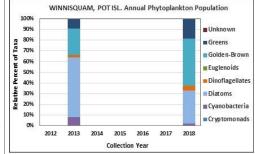
Station Name	Tabl	Table 1. 2018 Average Water Quality Data for LAKE WINNISQUAM, POT ISLAND								
	Alk.	Chlor-a	Chloride	Color	Cond.	Total P	Tra	ins.	Turb.	рН
	mg/l	ug/l	mg/l	pcu	us/cm	ug/l	n	n	ntu	
							NVS	VS		
Epilimnion	9.1	1.04	22	20	107.0	4	8.19	8.72	0.30	7.15
Metalimnion					104.0	7			0.44	6.94
Hypolimnion					104.9	6			0.63	6.70

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)

Parameter	Trend	Explanation	Parameter	Trend	Explanation
Conductivity	Worsening	Data significantly increasing.	Chlorophyll-a	Stable	Trend not significant; data moderately variable.
pH (epilimnion)	Stable	Trend not significant; data show low variability.	Transparency	Stable	Trend not significant; data show low variability.
			Phosphorus (epilimnion)	Improving	Data significantly decreasing.

HISTORICAL WATER QUALITY TREND ANALYSIS







### VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS LAKE WINNISQUAM, MOHAWK ISLAND, BELMONT 2018 DATA SUMMARY

RECOMMENDED ACTIONS: Lake quality was generally representative of high quality conditions, however hypolimnetic phosphorus levels indicate an internal load of phosphorus that is released from bottom sediments as the summer progressed. This could potentially fuel algal and cyanobacteria growth which highlights the importance of reducing phosphorus inputs from external sources such as fertilizers, stormwater runoff and agricultural practices. Consider partnering with Soak Up the Rain NH to identify areas prone to stormwater runoff and implement projects designed to capture and infiltrate stormwater prior to reaching the lake. For more information visit www.soaknh.org. Keep an eye on chloride levels which indicate road salt is likely impacting the lake. Encourage road agents and winter maintenance companies that apply de-icing materials to roads, parking lots, walkways, and driveways to obtain NH Voluntary Salt Applicator licenses through UNH Technology Transfer Center's Green SnowPro certification program. Keep up the great work!

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

- CHLOROPHYLL-A: Chlorophyll levels were very low in June, remained stable through August, and then increased in September but remained within a low range. Average chlorophyll level decreased slightly from 2017 and was much 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), Metalimnetic (middle water layer) and Hypolimnetic (lowe water layer) conductivity levels were slightly elevated and greater than the state median. Epilimnetic chloride levels were greater than the state median, yet less than the state chronic chloride standard. However, visual inspection of historical data indicates increasing (worsening) epilimnetic conductivity levels since monitoring began.
- **COLOR:** Apparent color was measured in the epilimnion and indicated the lake water fluctuated between clear and lightly tea colored conditions and was the darkest in August following significant rainfall prior to sampling.
- **TOTAL PHOSPHORUS:** Epilimnetic phosphorus levels were stable and low from June through September. Average epilimnetic phosphorus level remained stable with 2017 and was much less than the state median and the threshold for oligotrophic lakes. Visual inspection of historical data indicates variable phosphorus levels since monitoring began Metalimnetic phosphorus levels fluctuated within a moderate range and increased from 2017. Hypolimnetic phosphorus levels were moderate in June and increased steadily to an elevated range as the summer progressed likely due to the release of phosphorus from bottom sediments under anoxic (no dissolved oxygen) conditions.
- **TRANSPARENCY:** Transparency measured with (VS) and without (NVS) the viewscope fluctuated within an average range for the station and was highest (best) in July. Average NVS transparency increased (improved) slightly from 2017 and was much higher (better) than the state median. Visual inspection of historical data indicates stable transparency since monitoring began.
- TURBIDITY: Epilimnetic turbidity levels were low in June, remained stable in July, increased in August following the significant storm event, and decreased back to a low level in September. Metalimnetic turbidity levels were slightly elevated in July likely due to a layer of algae. Hypolimnetic turbidity levels were low in June and increased steadily as the summer progressed to the accumulation of organic compounds formed under anoxic conditions. **PH:** Epilimnetic and Metalimnetic pH levels were within the desirable range 6.5-8.0 units. Visual inspection of historical data indicates relatively stable epilimnetic pH levels since monitoring began. Hypolimnetic pH levels were
- approximately equal to the low end of the desirable range.

Station Name	Table	Table 1. 2018 Average Water Quality Data for LAKE WINNISQUAM, MOHAWK ISLAND									
	Alk.	Chlor-a	Chloride	Color	Cond.	Total P	1	ins.	Turb.	pН	
	mg/l	ug/l	mg/l	pcu	us/cm	ug/l	r	n	ntu		
							NVS	VS			
Epilimnion	9.3	1.04	22	25	108.0	5	6.50	6.53	0.46	7.12	
Metalimnion					107.4	12			0.82	6.82	
Hypolimnion					109.1	21			3.84	6.46	

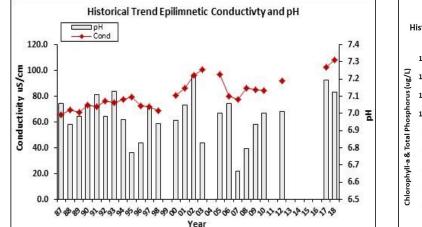
NH Median Values: Median values for specific parameters generated from historic lake monitoring data. Alkalinity: 4.5 mg/L Chlorophyll-a: 4.39 mg/m<sup>3</sup> Conductivity: 42.3 uS/cm Chloride: 5 mg/L Total Phosphorus: 11 ug/L Transparency: 3.3 m pH: 6.6

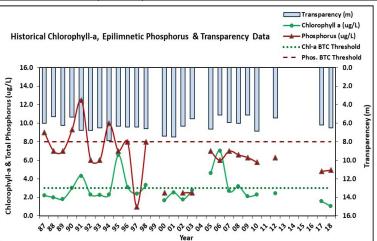
NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation. Chloride: > 230 mg/L (chronic) E. coli: > 88 cts/100 mL – public beach E. coli: > 406 cts/100 mL – surface waters Turbidity: > 10 NTU above natural level pH: between 6.5-8.0 (unless naturally occurring)

	100%	_			Popul	ation		_	
	90%								Unknown
EX	80%								Greens
<b>Relative Percent of Taxa</b>	70%	_							Golden-B
t	60%	_							Euglenoid
5	50%	_							
Pe	40%							_	Dinoflage
Ē	30%	-							Diatoms
Rek	20%	_							Cyanoba
	10%							-	Cryptom
	0%								
		2012	2013	2014	2015	2016	2017	2018	

### **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





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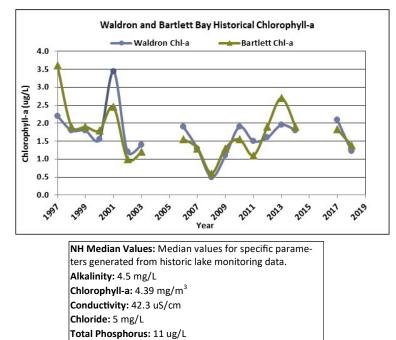
### VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS LAKE WINNISQUAM, BARTLETT AND WALDRON BAYS 2018 DATA SUMMARY

RECOMMENDED ACTIONS: Phosphorus levels at both bays have improved since monitoring began, which is a great sign. However, water clarity (transparency) has declined (worsened) since monitoring began. This could be a result of the increased frequency and intensity of storm events and flushing of waters rich in dissolved organic matter that impart a brown or tea color to the water. This was indicative in August following several inches of rainfall prior to sampling. This highlights the importance of managing and reducing stormwater runoff to the lake. Consider partnering with Soak Up the Rain NH to identify areas prone to stormwater runoff and implement projects designed to capture and infiltrate stormwater prior to reaching the lake. For more information visit www.soaknh.org. Keep an eye on chloride levels which indicate road salt is likely impacting the lake. Encourage road agents and winter maintenance companies that apply de-icing materials to roads, parking lots, walkways, and driveways to obtain NH Voluntary Salt Applicator licenses through UNH Technology Transfer Center's Green SnowPro certification program. Keep up the great work!

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

- CHLOROPHYLLA: Chlorophyll levels at Bartlett and Waldron Bays were very low in June and July, and increased in August and September, however remained within a low range. Average chlorophyll levels at both stations decreased from 2017 and were much less than the state median and the threshold for oligotrophic lakes. Historical trend analysis indicates stable chlorophyll levels at both stations since monitoring began.
- CONDUCTIVITY/CHLORIDE: Bartlett and Waldron Bay conductivity levels were slightly elevated and greater than the state median. Chloride levels were greater than the state median and higher than expected for undisturbed surface waters, but levels did not exceed the state chronic chloride standard.
- COLOR: Apparent color levels at Bartlett and Waldron Bays indicated clear conditions in June, July and September. Following a significant storm event in August, water color darkened to borderline light to moderate tea colored conditions.
- TOTAL PHOSPHORUS: Bartlett Bay phosphorus levels were low in June, decreased in July and August, and then increased slightly in September. Average Bartlett Bay phosphorus level decreased slightly from 2017 and was much less than the state median and the threshold for oligotrophic lakes. Waldron Bay phosphorus levels were slightly elevated in June and July, decreased slightly from 2017, was slightly elevated in August, and remained stable into September. Average Waldron Bay phosphorus level increased slightly from 2017, was slightly less than the state median, and was slightly greater than the threshold for oligotrophic lakes. Historical trend analysis indicates significantly decreasing (improving) phosphorus levels at both stations since monitoring began.
- TRANSPARENCY: Transparency measured at both stations was slightly below average in June, increased (improved) to an above average range in July, was not measured in August, and then decreased in September. Average transparency at Bartlett Bay increased (improved) from 2017 was much higher (better) than the state median. Average transparency at Waldron Bay remained stable with 2017 and was also much higher (better) than the state median. However, historical trend analysis indicates significantly decreasing (worsening) transparency at both stations since monitoring began.
- TURBIDITY: Bartlett Bay turbidity levels were stable and low from June through September. Waldron Bay turbidity levels were low and remained stable from June through August, but increased slightly in September when algal growth was higher.
- PH: Barlett and Waldron Bays pH levels were within the desirable range 6.5-8.0 units from June through September. Bartlett Bay pH levels were notably more acidic (decreased) following the significant storm event in August.

Station Name	Table 1	. 2018 Ave	rage Water	<sup>-</sup> Quality D	ata for LAN	E WINNIS	QUAM, B	ARTLETT	& WALDRO	ON BAYS
	Alk.	Chlor-a	Chloride	Color	Cond.	Total P	Tra	ns.	Turb.	рН
	mg/l	ug/l	mg/l	pcu	us/cm	ug/l	n	n	ntu	
							NVS	VS		
Bartlett-Epilimnion	10.4	1.38	23	28	103.5	5	8.08	7.25	0.44	7.17
Waldron-Epilimnion	9.5	1.23	25	25	102.0	10	7.83	7.25	0.49	6.96



NH Water Quality Standards: Numeric criteria for spe-

cific parameters. Results exceeding criteria are consid-

Transparency: 3.3 m

ered a water quality violation.

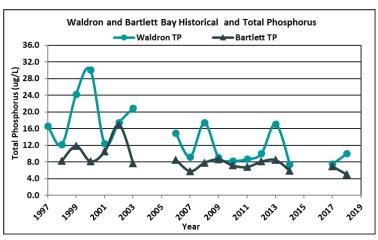
Chloride: > 230 mg/L (chronic)

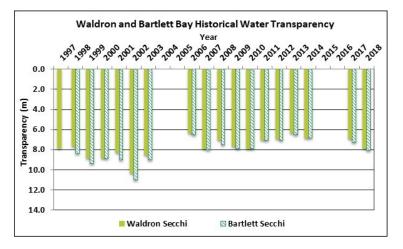
E. coli: > 88 cts/100 mL – public beach

E. coli: > 406 cts/100 mL – surface waters

Turbidity: > 10 NTU above natural level pH: between 6.5-8.0 (unless naturally occurring)

pH: 6.6





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# **2018 WINNISQUAM LAKE TRIBUTARIES VRAP DATA**

Measurements not meeting New Hampshire surface water quality standards

Measurements not meeting NHDES quality assurance/quality control standards

 $^{
m A}$  Specific conductance > 835  $\mu$ S/cm indicate exceedance of chronic chloride standard of 230 mg/L

<sup>B</sup> Chronic water quality standard

<sup>c</sup> Calculated using 1/2 of the 0.25 mg/L detectin limit of Total Kjeldahl Nitrogen (0.125 mg/L) and/or 1/2 of the 0.050 mg/L detection limit of Nitrate+Nitrite (0.025 mg/L)

### WICMEREC02, Lake Wicwas Outlet, Mill Brook, Meredith

Date         Time of Sample         DO (mg/L)         DO (% sat.)         pH         Turbidity (NTUs)         Specific Conductance         Water         Chloride (mg/L)         Chloride Total Phosphous           Standard         NA         >5.0         >75% Daily Average         6.5.8.0         above backgrd         NA         <2.30 mg/L <sup>b</sup> Narrative           07/30/2018         12:35         .3.47         .3.67         16.49         12.3         23.61         115         0.042				
DO (mg/L)     DO (% sat.)     pH     Turbidity (NTUs)     Specific Conductance     Water Temp. (°C)     Chloride (mg/L)     Total Total       >5.0     >75% Daily Average     6.5-8.0     above backgrd     NA     NA     (mg/L)     I       3-3.1     36.3     6.09     11.2     361.3     21.6     115	08/21/2018	07/30/2018	Standard	Date
DO (% sat.)     pH     Turbidity (NTUs)     Specific Conductance     Water Temp. (°C)     Chloride (mg/L)     Tota       >75% Daily Average     6.5-8.0     40 NTU above     NA     NA     <2.30 mg/L <sup>®</sup> I       39-2     6.26     16.4     1.12     361.3     21.6     115	13:10	12:35	NA	Time of Sample
pH     Turbidity (NTUs)     Specific Conductance     Water Temp. (°C)     Chloride (mg/L)     Total Total       6.5-8.0     above backgrd     NA     NA     c.230 mg/L <sup>b</sup> I       6.09     11.2     361.3     21.6     115	4.89	Jef	>5.0	DO (mg/L)
Turbidity (NTUs)     Specific Conductance     Water Temp. (°C)     Chloride (mg/L)     Total Total       above backgrd     NA     NA     emg/L <sup>b</sup> I       16.4     23.6     108     108	62.3	2.65	>75% Daily Average	DO (% sat.)
Specific (uS/cm)         Water Temp. (°C)         Chloride (mg/L)         Tota           NA         NA         <230 mg/L <sup>B</sup> I           361.3         21.6         115	6.09	6.26	6.5-8.0	рН
Water Temp. (°C)         Chloride (mg/L)         Tota           NA         <230 mg/L <sup>B</sup> I           23.6         108         115	11.2	16.4	<10 NTU above backgrd	-
Chloride Tota (mg/L) - Tota -230 - I mg/L <sup>B</sup> - I 108 - I 115	361.3		NA	Specific Conductance (uS/cm)
e Tota	21.6	23.6	NA	Water Temp. (°C)
Total Phosphous Narrative 0.049 0.062	115	108	<230 mg/L <sup>B</sup>	Chloride (mg/L)
	0.062	0.049	Narrative	Total Phosphou

### 03-CLNS, Collins Brook, Sanctuary Lane, Meredith

08/21/2018	07/30/2018	Standard	Date
13:00	12:23	NA	Time of Sample
8.46	5.04	>5.0	DO (mg/L)
92.4	56.7	>75% Daily Average	DO (% sat.)
6.39	6:48	6.5-8.0	рН
0.34	0.35	<10 NTU above backgrd	Turbidity (NTUs)
167.8		NA	Specific Conductance (uS/cm)
19.8	21.3	NA	Water Temp. (°C)
53		<230 mg/L <sup>B</sup>	Chloride (mg/L)
0.014		Narrative	Total Phosphous

### WINPLACB, Winnisquam Lake Outlet, Black Brook, Laconia

0.010	25	22.2	109.4	0.40	6.67	104.9	8.95	09:50	08/21/2018
0.008	20	23.4		0.96	6.75	94.0	8.35	09:47	07/30/2018
Narrativ	<230 mg/L <sup>B</sup>	NA	NA	<10 NTU above backgrd	6.5-8.0	>75% Daily Average	>5.0	NA	Standard
Total Phosphou	Chloride (mg/L)	Water Temp. (°C)	Specific Conductance (uS/cm)	Turbidity (NTUs)	рН	DO (% sat.)	DO (mg/L)	Time of Sample	Date

## WINPLACW, Winnipesaukee River, Launching Dock, Laconia

0 -	6.5-8.0	~	4 6.5-8.0	y 6.5-8.0 above backgrd	v 6.5-8.0 above NA backgrd 0.53
>75% Daily Average	6.5-8.0		above	above NA backgrd	above NA NA
			<10 NTU	<10 NTU	<10 NTU
DO (% sat.)	рН	pH Turbidity (NTUs)		Turbidity (NTUs)	Turbidity Specific (NTUs) Conductance . (uS/cm)