

Fracestown Watershed Study Subcommittee Minutes – Monday Sept 14, 2026

Members in attendance: Elizabeth Lavallee, Cathy Eby, Ted Graham, Joanne Santospago

New Business:

Updates on both Pleasant and Scoby pond

- Scoby Pond
 - Annual SPPA meeting was held.
 - Members were updated on VLAP 2025 water quality results, LakeSmart property evaluations. Distributed handouts, FTN article Protecting Fracestown Lakes, Septic System information
 - Added a new volunteer for 2027 VLAP water sampling
- Pleasant Pond
 - Completed a VLAP water sampling with biologist from NHDES.

Reviewed and updated the WSSC summary report for the Fracestown Conservation Commission.

- All members agreed any minor changes can be completed by Cathy and Elizabeth without another meeting.
 - Due to multiple spellings, all members agreed to use the NHDES version of Scobie Pond.
- Finalized WSSC summary report is available here for further reference.

The WSSC summary report will be presented by Elizabeth at the October 5th, 2026 Conservation Commission meeting. Meeting starts at 7pm, all available WSSC members plan to be there.

- All members agreed the WSSC has been a beneficial committee and has served the town well. We applaud the Conservation Commission for taking the action to form it.

Minutes:

Minutes for the August meeting were approved.

Additional New Business:

Reviewed and approved the FTN article “Call to Action” for November

- Approved photo for article

Respectfully submitted by Joanne Santospago

Watershed Study Subcommittee Report

September 14, 2026

The Francestown Watershed Study Subcommittee (WSSC) of the Conservation Commission was formed in 2022 to assess potential issues impacting water quality in Pleasant Pond and Scobie Pond (aka Haunted Lake). This report provides a summary of our findings.

BACKGROUND

Information about the physiographic features of the watersheds of both ponds is attached (Appendix A).

Water Quality

A lake with good water quality is termed “oligotrophic,” and has very low nutrient levels, clear water and a healthy ecosystem. A lake with poor water quality is called “eutrophic,” characterized by excessive plant and algal growth. In the middle is a “mesotrophic” lake. NHDES classified Pleasant Pond as oligotrophic in 1979 and 1989 and downgraded it to mesotrophic in 2004. NHDES classified Scobie Pond as borderline mesotrophic/eutrophic in 1980 and as mesotrophic in 2002.

Lake associations have been formed by property owners around both ponds (Pleasant Pond Association and Scobie Pond Preservation Association) and both have participated in the NHDES Volunteer Lake Assessment Program (VLAP) collecting and analyzing water samples for over 20 years. Copies of the NHDES 2025 VLAP Individual Lake Reports are attached (Appendix B). Both ponds show increasing (worsening) trends in total phosphorus in the lower water layer, “hypolimnion”. These increases in hypolimnetic phosphorus are a concern; phosphorus from lake-bottom sediments under low oxygen and warm temperatures can become readily available to provide nutrients for plant, algae and cyanobacteria growth which can cause overgrowth or blooms. During 2019-2020, cyanobacteria concerns involving NHDES were experienced at both ponds. Also, a considerable increase in native aquatic vegetation is being observed at both ponds. Water clarity is affected by algae and particulate matter in a lake. Based on VLAP results, Pleasant Pond has experienced a significant decrease in transparency. In 2024, through VLAP sampling, elevated E. coli counts were detected at a culvert entering Pleasant Pond; the NHDES and Town Health Officer identified the source as domestic birds; the birds were removed and E. coli concentrations at the culvert have significantly decreased to safe levels.

In 2016, Scobie Pond was listed as impaired for “aquatic life integrity” by NHDES due to elevated total phosphorus and chlorophyll a. This listing prompted a Total Maximum Daily Load (TMDL) plan to identify the contributors, estimate the amount of total phosphorus input (load) and recommend input amounts to meet water quality standards. The categories of contributors cited in the plan are listed below.

- Atmospheric, direct precipitation: rainfall
- Surrounding Watershed: inlet streams, springs
- Direct Drainage: storm water runoff, road runoff, culvert drainages, steep terrain
- Internal recycling, phosphorus contained in lake bottom sediment “hypolimnion” released back to water
- Waterfowl
- Groundwater seepage: septic systems, agricultural runoff

Although this study was for Scobie Pond, the same categories of contributors would potentially affect Pleasant Pond.

Invasive Aquatic Species

Invasive plants and organisms are a concern for both ponds. Scobie Pond has variable milfoil, an invasive plant. It was listed by NHDES in 2002 and has had inspections for milfoil yearly by NHDES since. NHDES recommends herbicide treatment and/or manual harvesting each year based on their inspections of plant growth. The Town spent \$8,800 for milfoil harvesting in 2026. This cost was matched with a grant from NHDES. VLAP testing and trending has not indicated water quality effects from the treatments. Scobie Pond now also has a population of large invasive freshwater snails known as “Chinese mystery snails.”

To help prevent variable milfoil and other invasive species from being introduced to Pleasant Pond, the Pleasant Pond Association has participated in NH LAKES' Lake Host program at the public boat launch since 2005. The program involves inspection of incoming and outgoing boats and has been credited with six "saves" of invasive species: Curly-leaf pondweed (2009), Eurasian milfoil (2006), and Variable milfoil (2011, 2013, 2014, 2023). In 2026, the total cost of the program was \$20,800, which was funded by a Town contribution of \$4,000, an award from NH LAKES of \$2,150, and \$14,650 in private donations.

FINDINGS AND RECOMMENDED ACTIONS

The WSSC looked at identifying the principal sources of phosphorus loading to the ponds and suggesting possible actions to help reduce inputs, including educating the public.

NH LAKES' LakeSmart Program

Camp property land use and activities along the shoreline are potential contributors of phosphorus to the ponds. NH LAKES' LakeSmart program was established to educate and encourage shorefront property owners about lake-friendly living to protect lake health. NH LAKES offers audits for LakeSmart certification that are free, confidential, non-regulatory and voluntary. To date, ten private waterfront properties on Pleasant Pond have participated in the program, and five have been awarded LakeSmart certification. According to NH LAKES, the principal concern of the properties that did not receive a certificate was the need to get their septic system inspected by a professional (these typically cost ~ \$500). The other concerns were the need to capture runoff from impermeable surfaces (primarily parking areas and roofs) and planting out and deepening the shoreline vegetation buffer. There have been no LakeSmart assessments of private properties at Scobie Pond; however, WSSC arranged for a visit to the Scobie Pond Town Beach, as discussed below.

Scobie Pond Town Beach

In August 2025, a representative of NH LAKES LakeSmart program conducted a tour of the Scobie Pond Town Beach and determined that soil erosion of the beach appeared to be a problem. Based on the tour, NH LAKES developed recommendations for reducing erosion and nutrient loading at the Town Beach (Appendix C).

Pleasant Pond Boat Launch

The launch consists of a sloping ramp with gravel and partial pavement. It is a location of stormwater runoff and erosion to the pond, documented by samples collected during three storm events, in 2022, 2023, and 2026, containing very high levels of phosphorus. NHDES VLAP has recommended evaluating the boat launch area at Pleasant Pond to minimize stormwater runoff and erosion.

Runoff to Ponds from Unpaved Roads and Driveways

NHDES VLAP reports for both ponds have recommended evaluating dirt and gravel roads around the ponds and implementing erosion control measures where necessary. Poor Farm Road is a gravel road that runs approximately 1.5 miles within the Pleasant Pond watershed along the eastern side of the pond where the topography slopes steeply toward the pond, and road runoff and erosion have been observed following storm events. There are also several steep private roads and gravel driveways off Poor Farm Road leading to various camps.

At Scobie Pond a portion of Scobie Road along the boat launch area is within ~10-15 ft of the pond's edge on one side and a wetland that drains into the pond on the other. There is a culvert that allows water flow between. This area flooded in the spring of 2025 and caused erosion of gravel into the pond. The road erosion required repair by the Highway Department. The Town Beach on Scobie Pond also typically has signs of sand erosion from storm runoff.

Vegetated Shoreline Buffer

Maintaining natural vegetated buffers along pond shorelines is essential for helping control erosion and runoff entering the pond. There are steep areas of non-vegetated exposed soil along portions of the western shoreline of Pleasant Pond. As most of the shoreline of both ponds is privately owned, education of and cooperation from property owners is important for management practices to minimize erosion. The February 2025 New Hampshire Stormwater Manual is a source for homeowners to learn landscaping and buffer/filtering planting methods. This information can be found on the Town website in the Conservation Commission area under Water Quality.

Septic Systems

Failing septic systems within the shoreland protection area are generally considered the most controllable source of nutrient loading to lakes. In addition to the cost of hiring a licensed inspector, a possible disincentive to having septic systems inspected is that inspectors are required to report failed systems to the NHDES and owners are obligated to correct problems. In 2024, a new law went into effect that requires the buyer of a developed property with a septic system located within 250 ft of a lake reference line to have the system evaluated within 180 days of purchase.

Water Level Management

The NHDES VLAP reports for Pleasant Pond have identified water level management as a potential factor contributing to higher nutrient levels. The outlet of Pleasant Pond has a relatively small and poorly designed dam that somewhat controls the water level in the pond. In a recent communication, a staff scientist from DES suggested that low water levels could contribute to the increase of aquatic vegetation because of increased light penetration. At the other extreme, high-water levels cause erosion of shoreline soils and undermining, killing and collapsing of trees and vegetation loss along the shoreline. Water levels can also affect lake turnover.

Public Education

Educating the community on “watershed-friendly” practices has been a major goal of the WSSC. On September 24, 2025, Ted Diers of NHDES gave an informative and engaging presentation “Navigating the Waters” that was well attended at the Town Hall. This summer, several articles have been published in *The Franconia News*, describing the NHDES VLAP and the NH LAKES’ LakeSmart, Lake Host, and Lake Advocacy programs to increase public awareness of issues and actions related to both ponds.

Publicize Citizen Response Protocol

The WSSC promoted the NHDES Harmful Algae Bloom Program, including obtaining several signs and posting them at public access locations to both ponds; they describe procedures for evaluating and reporting suspected cyanobacteria outbreaks.

Watershed Management Plan

The NHDES VLAP report for Pleasant Pond recommends continuing efforts to develop a watershed management plan to help identify and quantify nutrient loading to the pond. Another benefit of having these plans is that they are required to apply for Clean Water Act funds. In May 2023, Forest Bell of FB Environmental visited the Pleasant Pond boat ramp and the Scobie Pond public beach, along with representatives of the Conservation Commission and the WSSC, to discuss possible measures to address erosion at both locations. The possibility of combining both watersheds into one plan was discussed but not pursued.

SUMMARY

The WSSC has been a valuable conduit for the sharing of information and ideas between representatives of the two pond communities. Since its inception, members of the WSSC have included Kelly Marshall (chair 2022-2023), Elizabeth Hunter Lavalley (chair 2024-2026), Cathy Eby, Ted Graham, Brad Howell, Joanne Santospago, and Harry

Woodbury. It has focused its efforts on utilizing existing resources to learn about lake health issues. These included the following:

- Water Resources Plan included in the 2021 Town Master Plan;
- Attending NH LAKES' Lakes Congress workshop, presentations by Chesterfield Conservation Commission and Lake Sunapee Protective Association, webinars on topics such as dirt roads, dams, watershed management plans, lake advocacy;
- NHDES VLAP training and Annual Reports; and
- NH LAKES' LakeSmart reports

Looking ahead, worsening water quality and increasing nuisance vegetation risks persist for both ponds. This is underscored by the experience of other ponds throughout the state. Whether or not a formal watershed management plan is prepared, it will serve both ponds well to maintain close contact with NHDES staff and NH LAKES, including participation in the Lake Advocates and LakeSmart programs. The VLAP and Lake Host efforts have been invaluable and should continue. The Subcommittee recommends that a representative(s) of the Conservation Commission regularly attend the NH LAKES' annual Lakes Congress, an education, training, and networking event designed to help attendees play an active role in preserving New Hampshire's lakes.

Appendices

- A: Additional Information on the Ponds
Watershed Land Use Summary, Haunted Lake (aka Scobie Pond) (2019)
Watershed Land Use Summary, Pleasant Pond (2016)
- B: 2025 Volunteer Lake Assessment Program Individual Lake Reports, Scobie Pond, Frankestown
2025 Volunteer Lake Assessment Program Individual Lake Reports, Pleasant Pond, Frankestown
- C: NHLakes LakeSmart Review for Scobie Pond Town Beach, Frankestown, NH

APPENDIX A

Additional Information on the Ponds

Watershed Land Use Summary, Haunted Lake (aka Scobie Pond) (2019)

Watershed Land Use Summary, Pleasant Pond (2016)

Additional Information on the Ponds

Pleasant Pond - Pleasant Pond is the largest water body in Frankestown, at 197.9 acres, and its watershed encompasses 1,052 acres in Frankestown and Deering. It is the headwaters of the South Branch of the Piscataquog River. The main inlet is at the north end of the pond, in the Town of Deering. Approximately 12 other tributaries or culverts have been identified that also discharge (many on a seasonal basis) to the pond. Discharge at the outlet is controlled by a simple dam at the south end of the pond. The pond has an estimated turnover, or flushing rate, of 90% of its volume annually.

Its shoreline is approximately 14,760 feet (4,500 meters) long. There are 53 separate lots with waterfront, including the boat launch located off Pleasant Pond Road. The boat launch is owned by the State but controlled by the Town. Thirty-five of the lots, including an island, are assessed by the Town as having a building, though one is downstream of the pond. Most of the properties with buildings are used as summer camps, although several are used as year-round residences. Approximately 17% of the shoreline is protected from future development due to land conservation.

Scobie Pond – Scobie Pond is the second largest water body in town, at 138.9 acres. The watershed covers an area of 3,776 acres and it forms the headwaters of the Middle Branch of the Piscataquog River. Whiting Brook is the main inlet, and the outlet is at the north end. The estimated flushing rate is 4.3 times its volume per year.

Its shoreline is approximately 11,155 feet (3,400 meters) long and there are 33 property owners with lots abutting the pond. The Town Beach is located here, along Dodge Hill Rd. The beach property is privately owned and the Town leases it. The boat launch located on Scobie Road is also on private property and the Town has permission to use the area. The State of NH has a right-of-way off Dodge Hill Rd, beside the Town Beach property for public access. About 10% of the shoreline is conserved by the Frankestown Land Trust.

After the 1938 hurricane Scobie Pond was used to store logs from downed trees. Based on photographs and accounts, the surface area of the pond was fully covered. Logs still surface from time to time and are removed to prevent boating hazards. Although there is no specific data, residents who witnessed this event observed a change in the ponds water color and clarity. There is analysis for other water bodies used for log storage indicating water quality changes due to bark and sinking logs.



Volunteer Lake Assessment Program Individual Lake Reports

HAUNTED LAKE, FRANCESTOWN, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	3,776	Max. Depth (m):	5.2	Flushing Rate (yr ⁻¹):	4.3
Surface Area (Ac.):	171	Mean Depth (m):	2.4	P Retention Coef:	
Shore Length (m):	3,400	Volume (m ³):	1,699,500	Elevation (ft):	636

TROPHIC CLASSIFICATION

Year	Trophic class
1980	EUTROPHIC
2002	MESOTROPHIC

KNOWN EXOTIC SPECIES

Variable Milfoil

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

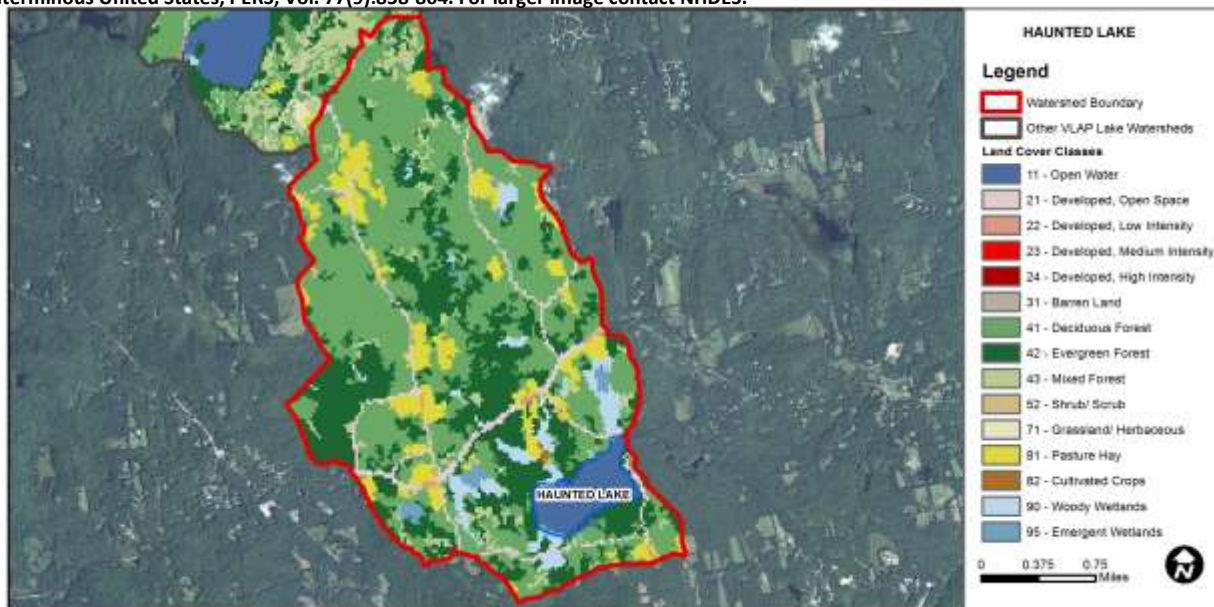
Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Slightly Bad	Data exceed water quality standards or thresholds for a given parameter by a small margin.
	pH	Slightly Bad	Data periodically exceed water quality standards or thresholds for a given parameter by a small margin.
	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	Cautionary	Limited data for this parameter predicts exceedance of water quality standards or thresholds; however more data are necessary to fully assess the parameter.
	Chlorophyll-a	Slightly Bad	Data exceed water quality standards or thresholds for a given parameter by a small margin.
Primary Contact Recreation	Escherichia coli	No Data	No data for this parameter.
	Chlorophyll-a	Good	Sampling data commonly meet water quality standards or thresholds for this parameter.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

HAUNTED LAKE - TOWN BEACH	Escherichia coli	Very Good	All sampling data meet water quality standards or thresholds for this parameter.
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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	3.69	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	4.14	Deciduous Forest	46.64	Pasture Hay	8.59
Developed-Low Intensity	0.39	Evergreen Forest	27.26	Cultivated Crops	0.09
Developed-Medium Intensity	0	Mixed Forest	3.98	Woody Wetlands	3.98
Developed-High Intensity	0	Shrub-Scrub	0.03	Emergent Wetlands	1.24



Volunteer Lake Assessment Program Individual Lake Reports

PLEASANT POND, FRANCESTOWN, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	1,052	Max. Depth (m):	6.4	Flushing Rate (yr ⁻¹)	0.9
Surface Area (Ac.):	187	Mean Depth (m):	3.2	P Retention Coef:	0.76
Shore Length (m):	4,500	Volume (m ³):	2,394,000	Elevation (ft):	817

TROPHIC CLASSIFICATION

Year	Trophic class
1989	OLIGOTROPHIC
2004	MESOTROPHIC

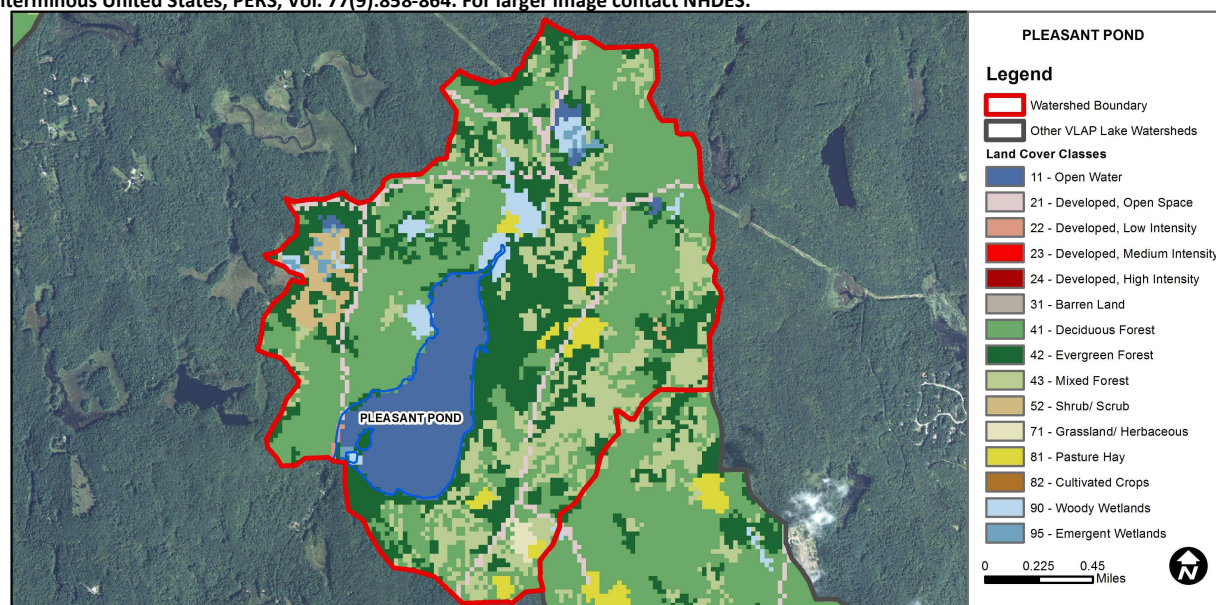
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the DRAFT 2014 305(b) report on the status of N.H. waters, and are based on data collected from 2004-2013. Detailed waterbody assessment and report card information can be found at www.des.nh.gov/organizations/divisions/water/wmb/swqa/index.htm

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Cautionary	Limited data for this parameter predicts exceedance of water quality standards or thresholds; however more data are necessary to fully assess the 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.
	Chlorophyll-a	Good	Sampling data is better than the water quality standards or thresholds for this parameter.
Primary Contact Recreation	Escherichia coli	Very Good	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.

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	10.9	Barren Land	0	Grassland/Herbaceous	0.43
Developed-Open Space	3.77	Deciduous Forest	36.19	Pasture Hay	2.22
Developed-Low Intensity	0.11	Evergreen Forest	24.45	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	16.42	Woody Wetlands	3.01
Developed-High Intensity	0	Shrub-Scrub	1.85	Emergent Wetlands	0.68

APPENDIX B

2025 Volunteer Lake Assessment Program Individual Lake Reports, Scobie Pond

2025 Volunteer Lake Assessment Program Individual Lake Reports, Pleasant Pond

2025 Volunteer Lake Assessment Program

Individual Report: Haunted Lake (Scobie Pond) – Francestown

Water Quality Summary: Lake quality is generally representative of mesotrophic, or average, conditions, with moderate levels of phosphorus and algal growth. Historical trend analysis indicates improving epilimnetic (upper water layer) pH levels, stable epilimnetic conductivity, chlorophyll, water transparency and epilimnetic phosphorus levels and worsening hypolimnetic (bottom water layer) phosphorus levels since monitoring began. On average, Haunted Lake has lower (worse) water quality compared to the median New Hampshire lake but doesn't exceed any New Hampshire water quality standards.

Recommended Actions: The increased intensity of storm events and associated stormwater runoff and fluctuating climate conditions resulting in shorter periods of ice cover, warmer water temperatures and longer periods of thermal stratification can impact pond quality over time and accelerate the eutrophication process. This could result in future [cyanobacteria blooms](#). Notify NHDES' [Harmful Algal Bloom Program](#) if you notice potential cyanobacteria blooms or scums. This highlights the importance of stormwater management within the watershed to reduce external nutrient (phosphorus) and sediment loading to the pond. Educate shoreline property owners on ways to reduce stormwater runoff and erosion. NHDES' [New Hampshire Homeowner's Guide to Stormwater Management](#) is a great resource. Evaluate dirt and gravel roads within the watershed and implement erosion control measures if necessary. Maine DEP's [Camp Road](#) website is a great resource. Keep up the great work and thank you for your continued participation in VLAP!

Historical Water Quality Trend Analysis

Table 1. Historical Water Quality Trends for Haunted Lake – Francestown

Parameter	Trend
Conductivity (Epilimnion)	Stable
Chlorophyll-a (Composite)	Stable
pH (Epilimnion)	Improving
Transparency	Stable
Phosphorus (Epilimnion)	Stable
Phosphorus (Hypolimnion)	Worsening

Historical Water Quality Graphics - Deep Spot

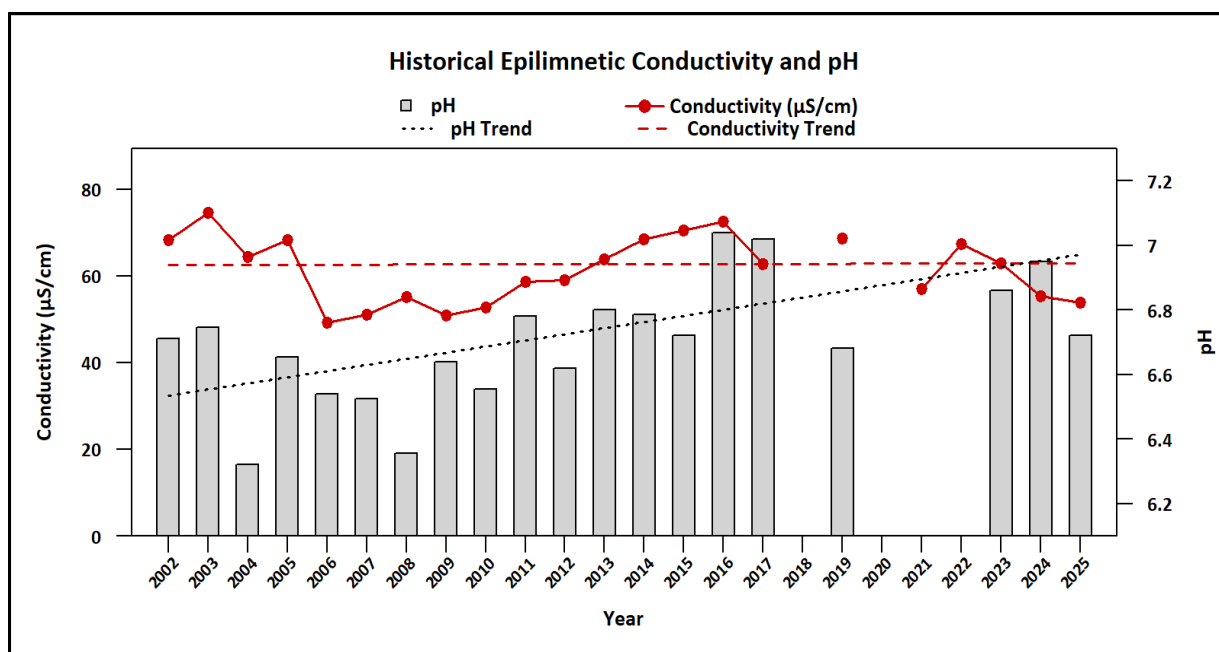


Figure 1. Median epilimnetic pH (gray bars) and conductivity (red points) by year, with corresponding trend lines shown as black and red dashed lines, respectively. Epilimnetic pH is improving and conductivity is stable since monitoring began.

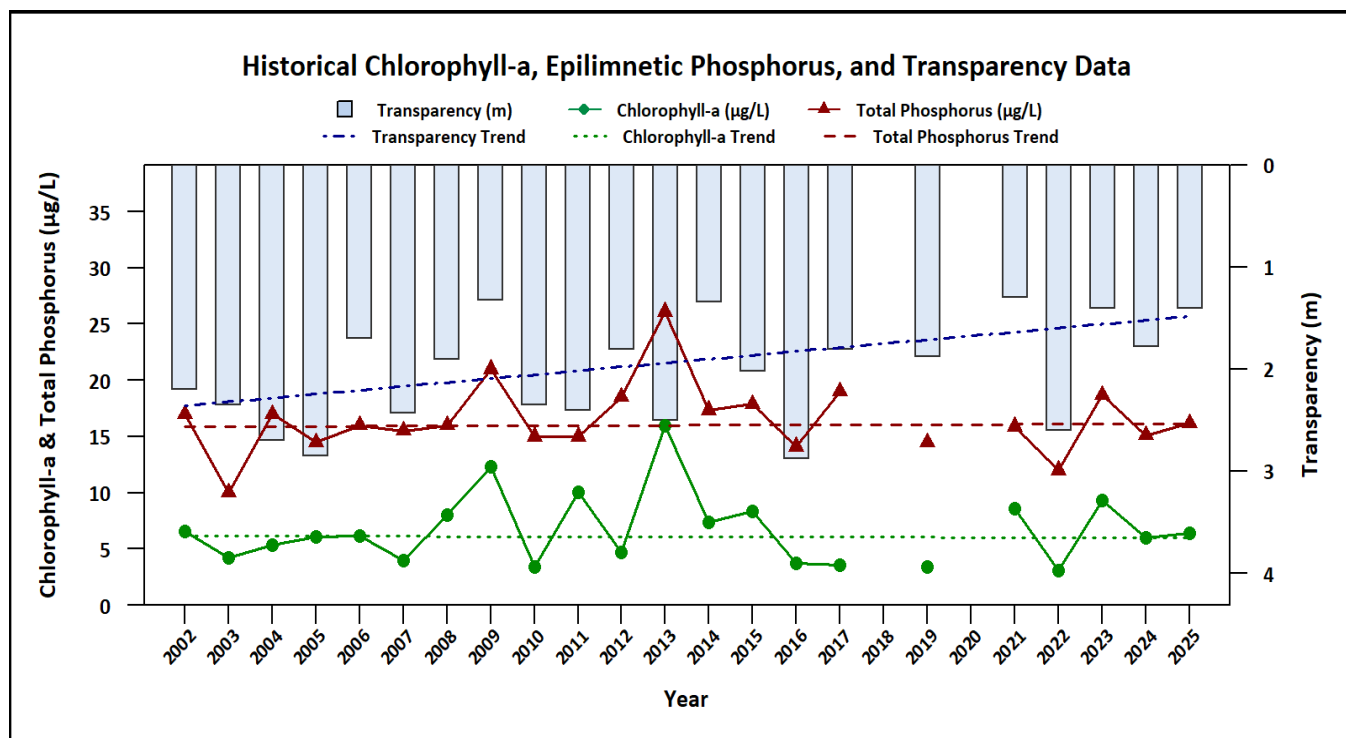


Figure 2. Median Secchi disk transparency (blue bars), epilimnetic phosphorus (red triangles), and chlorophyll-a (green points) by year, with corresponding trend lines shown as blue, red, and green dashed lines, respectively. Water transparency is stable, phosphorus is stable, and chlorophyll-a is stable since monitoring began.

Table 2. 2025 Average Water Quality Data for Haunted Lake – Franconia

Station	Alk. (mg/L)	Chlor-a (µg/L)	Chloride (mg/L)	Color (pcu)	Cond. (µS/cm)	Total P (µg/L)	Trans. NVS (m)	Trans. VS (m)	Turb. (ntu)	pH
Epilimnion	7.73	5.69	6.42	135	54.40	16.30	1.69	2.32	1.65	6.76
Hypolimnion	No Value	No Value	No Value	258	62.39	27.43	No Value	No Value	10.04	6.26
Inlet	No Value	No Value	No Value	No Value	57.53	20.40	No Value	No Value	1.63	6.60
Inlet 2	No Value	No Value	5.91	No Value	58.28	42.57	No Value	No Value	3.37	6.46
Outlet	No Value	No Value	No Value	No Value	54.91	14.90	No Value	No Value	1.01	6.73

Observations (Refer to Table 2 and Historical Deep Spot Data Graphics):

- Chlorophyll-a (Chlor-a):** Chlorophyll level was elevated in June, increased in July, then decreased to a low level in August. The median chlorophyll level slightly increased from 2024 and remained greater than the state median and the threshold for mesotrophic lakes. Historical trend analysis indicates stable, yet variable, chlorophyll levels since monitoring began.
- Conductivity (Cond.)/Chloride:** Epilimnetic, Hypolimnetic, Inlet, Inlet 2 and Outlet conductivity and/or chloride levels were slightly greater than the state median, yet less than a level of concern and the state chronic chloride standard. Historical trend analysis indicates stable epilimnetic conductivity levels since monitoring began.
- Color:** Apparent color measured in the epilimnion indicates the water was highly tea colored from June through August. Hypolimnetic color data indicates highly tea colored conditions that are twice as dark as epilimnetic levels indicating high rates of decomposition of organic matter in bottom sediments.
- Total Phosphorus (Total P):** Epilimnetic phosphorus levels fluctuated within an elevated range and was highest in June and lowest in August. The median epilimnetic phosphorus level increased slightly from 2024 and remained greater than the state median and the threshold for mesotrophic lakes. Historical trend analysis indicates stable, yet variable, epilimnetic phosphorus levels since monitoring began. Hypolimnetic phosphorus levels were elevated in June through August and historical trend analysis indicates significantly worsening (increasing) hypolimnetic phosphorus levels since monitoring began. Inlet and Inlet 2 phosphorus levels were greatly elevated. Outlet phosphorus level was slightly elevated.
- Transparency (Trans.):** Transparency measured with (VS) and without (NVS) the viewscope was below average (worse) in June, slightly increased (improved) in July and improved again in August but was still below average. The median NVS transparency worsened from 2024 and remained lower than the state median. Historical trend analysis indicates stable, yet variable, NVS transparency since monitoring began.
- Turbidity (Turb.):** Epilimnetic turbidity levels were elevated in August. Hypolimnetic turbidity levels were greatly elevated and worsened as the summer progressed, indicating formation and accumulation of organic compounds under anoxic (no dissolved oxygen) conditions. Inlet, Inlet 2 and Outlet turbidity levels fluctuated within a slightly elevated range.
- pH:** Epilimnetic, Inlet and Outlet pH levels were within the desirable range of 6.5-8.0 units. Historical trend analysis indicates significantly increasing (improving) epilimnetic pH levels since monitoring began. Hypolimnetic and Inlet 2 pH level was slightly acidic and less than desirable.

How does your lake compare to New Hampshire lakes and water quality standards?

Table 3. New Hampshire Median Lake Water Quality Values. Median values generated from historic lake monitoring data.

Parameter	Median Value
Alkalinity	4.5 mg/L
Chlorophyll-a	4.39 µg/L
Chloride	5 mg/L
Conductivity	42.3 µS/cm
Total Phosphorus	11 µg/L
Transparency	3.3 m
pH	6.6

Table 4. New Hampshire Water Quality Standards. Numeric criteria for specific parameters. Water quality violation occurs if thresholds are exceeded.

Parameter	Threshold
Chloride	> 230 mg/L (chronic)
E. coli (beach)	> 88 cts/100 mL
E. coli (surface water)	> 406 cts/100 mL
pH	between 6.5-8.0 (unless naturally occurring)
Turbidity	> 10 NTU above natural

Volunteer Lake Assessment Program – Individual Reports

New Hampshire Department of Environmental Services

29 Hazen Drive, Concord, New Hampshire 03301 • (603) 271-2658 • www.des.nh.gov

Report number: LM-122



Pleasant Pond – Franconia (2025)

Water quality summary: Pond quality is generally representative of borderline oligotrophic/mesotrophic, or high to average quality, conditions, with pond nutrient (phosphorus) levels having remained higher than the threshold for oligotrophic lakes since 2015. Hypolimnetic (bottom water layer) phosphorus levels have also significantly worsened (increased), particularly since 2016. Historical trend analysis also indicates worsening water transparency, improving epilimnetic (upper water layer) pH levels and stable levels of epilimnetic conductivity, chlorophyll and epilimnetic phosphorus since monitoring began. On average, Pleasant Pond has similar or higher (better) water quality compared to the median New Hampshire lake and doesn't exceed any New Hampshire water quality standards.

Recommended actions: Despite worsening trends, the 2025 average water quality improved from 2024 levels, with lower average levels of chlorophyll, chloride, conductivity, and total phosphorus at some stations, and improved water transparency. Continue sampling in 2025 to monitor changes. Continue to conduct storm event sampling to better assess impacts of stormwater runoff from the watershed. New Hampshire Department of Environmental Services' [New Hampshire Homeowner's Guide to Stormwater Management](#) is a great resource. Focus efforts on SF 9 sub-watershed to identify potential pollution sources as it has historically exhibited elevated nutrient loads but not elevated sediment loads. Continue efforts to develop a [Watershed Management Plan](#). Continue monitoring once per month, typically June, July and August, to better assess seasonal variations in water quality and historical water quality trends. Keep up the great work and thank you for your continued participation in VLAP!

Historical Water Quality Trend Analysis

Table 1. Historical Water Quality Trends for Pleasant Pond – Franconia

Parameter	Trend	Parameter	Trend
Conductivity (Epilimnion)	Stable	Chlorophyll-a	Stable
pH (Epilimnion)	Improving	Transparency	Worsening
Phosphorus (Epilimnion)	Stable	Phosphorus (Hypolimnion)	Worsening

Historical Water Quality Graphics - Deep Spot

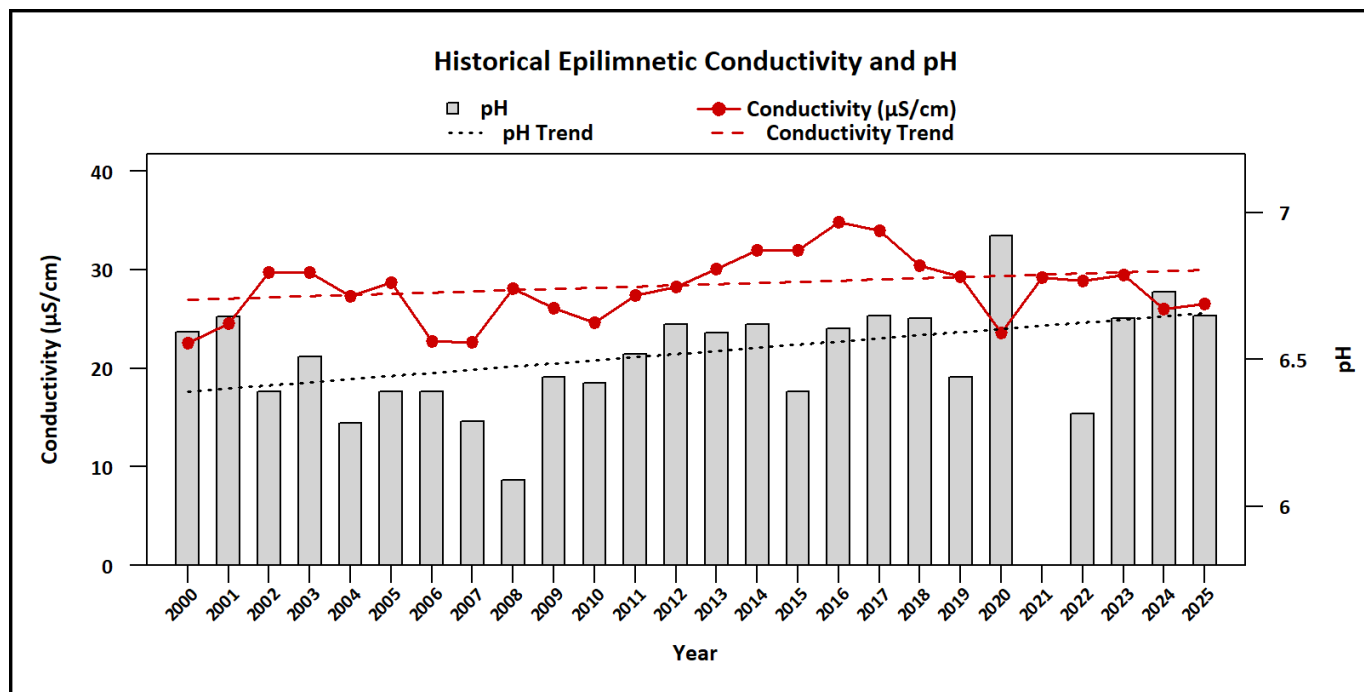


Figure 1. Median epilimnetic conductivity (red points) and pH (gray bars) by year, with corresponding trend lines shown as red and black dashed lines, respectively. Epilimnion pH is improving and conductivity is stable since monitoring began.

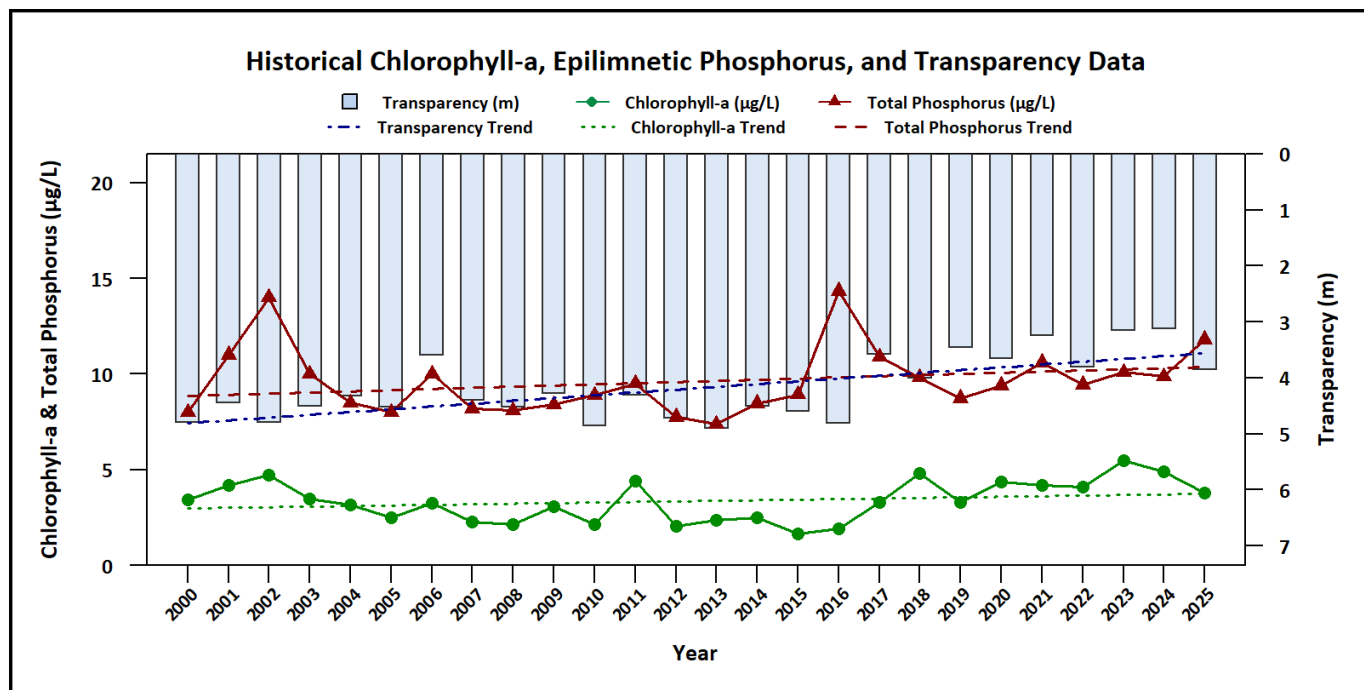


Figure 2. Median Secchi disk transparency (blue bars), epilimnetic phosphorus (red triangles), and chlorophyll-a (green points) by year, with corresponding trend lines shown as blue, red, and green dashed lines, respectively. Water transparency is worsening, phosphorus is stable and chlorophyll-a is stable since monitoring began.

Table 2. 2025 Average Water Quality Data for Pleasant Pond – Franchestown

Station	Alk. (mg/L)	Chlor-a (µg/L)	Chloride (mg/L)	Color (pcu)	Cond. (µS/cm)	Total P (µg/L)	Trans. NVS (m)	Trans. VS (m)	Turb. (ntu)	pH	E. coli (mpn/100 mL)
Epilimnion	4	3.84	2.52	51.33	26.37	12.4	3.62	3.73	0.74	6.72	
Hypolimnion					26.99	14.17			1.22	6.12	
Bartlett Hill Rd			1.5		20.31	19.53			1.17	6.13	
Dam Outlet					26.65	9.06			0.52	6.33	
Sf-2											26.37

Observations (Refer to Table 2 and Historical Deep Spot Data Graphics):

- Chlorophyll-a (Chlor-a):** Chlorophyll level was low in June and July and increased slightly in September. The median chlorophyll level decreased from 2024 and was less than the state median but slightly greater than the threshold for oligotrophic lakes. Historical trend analysis indicates relatively stable chlorophyll levels since monitoring began.
- Conductivity (Cond.)/Chloride:** Epilimnetic, Hypolimnetic, Bartlett Hill Road and Dam Outlet conductivity and/or chloride levels were low and less than or approximately equal to the state medians. Historical trend analysis indicates relatively stable epilimnetic conductivity levels since monitoring began.
- Color:** Apparent color measured in the epilimnion indicates the water color fluctuated within a moderately tea colored range and was darkest in June and lightest in September.
- Total Phosphorus (Total P):** Epilimnetic phosphorus level was moderate in June, increased in July and decreased but remained slightly elevated in September. The median epilimnetic phosphorus level increased from 2024 and was greater than the state median and the threshold for mesotrophic lakes. Hypolimnetic phosphorus level was elevated in June and July but decreased to a lower level in September. Historical trend analysis indicates relatively stable epilimnetic phosphorus levels and significantly worsening (increasing) hypolimnetic phosphorus levels since monitoring began. Dam Outlet phosphorus levels were low. Bartlett Hill Road phosphorus levels were elevated, particularly in July and September during low flow conditions.
- Transparency (Trans.):** Transparency measured with (VS) and without (NVS) the viewscope was average in June and lightly increased (improved) as the summer progressed. The median NVS transparency improved from 2024 and was greater than the state median. However, historical trend analysis indicates significantly worsening (decreasing) NVS transparency since monitoring began.
- Turbidity (Turb.):** Epilimnetic turbidity levels fluctuated within a low to average range. Hypolimnetic turbidity levels were slightly elevated in September suggesting formation and accumulation of organic compounds under low dissolved oxygen conditions. Bartlett Hill Road turbidity levels were elevated in July and September during low flow conditions. Dam Outlet turbidity levels were low.
- pH:** Epilimnetic pH levels were within the desirable range of 6.5-8.0 units. Historical trend analysis indicates improving (increasing) epilimnetic pH levels since monitoring began. Hypolimnetic, Bartlett Hill Road and Dam Outlet pH levels were slightly acidic and less than desirable.
- E. coli:** E. coli levels at SF 2 were much lower than the state surface water standard in June, July and October and were much lower than the levels measured in 2024. Levels were highest in July and lowest in October.

How does your lake compare to New Hampshire lakes and water quality standards?

Table 3. New Hampshire Median Lake Water Quality Values. Median values generated from historic lake monitoring data.

Parameter	Median Value
Alkalinity	4.5 mg/L
Chlorophyll-a	4.39 µg/L
Chloride	5 mg/L
Conductivity	42.3 µS/cm
Total Phosphorus	11 µg/L
Transparency	3.3 m
pH	6.6

Table 4. New Hampshire Water Quality Standards. Numeric criteria for specific parameters. Water quality violation occurs if thresholds are exceeded.

Parameter	Threshold
Chloride	> 230 mg/L (chronic)
E. coli (beach)	> 88 cts/100 mL
E. coli (surface water)	> 406 cts/100 mL
pH	between 6.5-8.0 (unless naturally occurring)
Turbidity	> 10 NTU above natural

APPENDIX C

NHLakes LakeSmart Review for Scobie Pond Town Beach, Frankestown, NH

From: Brea Arvidson <barvidson@nhlakes.org>

Date: November 21, 2025 at 4:05:06 PM EST

To: [REDACTED]

Subject: NH Lake LakeSmart review report for Scoby pond town beach- Francestown NH

Dear Scoby Pond Community Beach folks,

Thank you for your patience while I catch up on all the interest we've had in our LakeSmart Program this season. And, thank you for meeting with me to discuss the runoff water and erosion issues you've noticed at the town beach!

Below is a summary of our conversation and the options we discussed during the property tour. Please share your lake-friendly projects with us by sending a few before and after photos! This email is long, so please take your time with the information below and let me know if you have any questions.

Sincerely,
Brea

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Property Tour Summary: You are working towards your LakeSmart Award!

In the short-term, consider placing coir logs or DIY firehose diverters at the start of the summer season between the beach and Dodge Hill Road to help direct the runoff water to areas with vegetation, on either side of the beach area. While this does little to reduce the volume of runoff water impacting the area, it may help prevent additional erosion of the beach sand. Additional coir logs could be used to create catchments down the slope, interrupting the flow of water and helping sediment and other debris settle out before reaching the lake.

In the long term, we discussed multiple options. The site is challenging due to the steep slope of the general area and the beach itself, as well as the proximity of the road.

- Fortify and reestablish tiers in the beach area.
 - The previous construction of the beach involved the installation and exposure of large boulders, creating various walls to help level out the beach area and provide designated areas for beachgoers to use. Consider working with a local contractor to create more formal tiers of the beach area, like a modified perched beach.

- By creating multiple levels, areas can be constructed in a way to help promote plant growth and drainage for runoff water.
- A top tier could be made level with the road to help prevent road gravel and snow from pushing into the beach area. We discussed the possibility of adding boulders and drought-tolerant shrubs in the top tier to guide parking, reduce road encroachment, and also help mitigate the steep slope.
- By establishing tiers, we discussed the benefits of defining access and use areas of/on the beach, incorporating an ADA-accessible point, installing infiltration steps from the road to the lakeshore, and improving cartop access.
- Install a swale between the road and the hillside across the road.
 - This would open a longer and wider drainage area for runoff water impacting the road. While the space in this area may be undersized for the runoff water the road is experiencing, it may help alleviate the expectation of lakeside slope to manage the runoff water.
 - This would be a large project and would require collaboration and approvals from the state, town, and private homeowners to remove vegetation and create space in front of the stone wall to construct the swale.
 - Due to the space available for a swale, installing a swale and no other practice may be insufficient to manage the volume of runoff water from the road. Pairing a swale with a series of drywells may be beneficial; however, it would require installing culverts in the road for overflow.

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