



SPOFFORD LAKE ASSOCIATION

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LETTER FROM THE PRESIDENT

This spring's newsletter focuses on Spofford Lake's health and is based on the DES's 'Individual Lake Report' and the 'Core Sediment Analysis' which the SLA commissioned. As you'll see, today the lake's 'Report Card' is pretty good. The lake is clear and clean and has better (lower) levels of plant-promoting elements than similar New Hampshire lakes.

The 'Core Sentiment Analysis' explains, however, the lake's 'grades' are at risk. Decaying organic material eroded from the shoreline is causing game fish stocks to fall and aquatic plant growth to rise. Higher lake water levels from damming is the primary reason for shoreline erosion.

We can't ignore these changes and their causes if the lake's character is to be preserved. I think all of us understand that tackling these issues means striking a balance between how things have been done in the past and what is required now to maintain and promote a healthy lake environment.

The good news is that all of us can participate as we find this balance . The SLA's programs and activities are described in the following pages. Remember that the SLA is in all volunteer organization. We welcome everyone's concerns, suggestions and help. Please volunteer with us.

After eight years as the SLA's president, I have mixed feelings as I step down and pass the baton to Bayard Tracy. I'm grateful for having had the chance to lead the SLA , to meet so many of you and share your concerns for the lake. I look forward to continuing this work with you. I'm only stepping down. I'm not going away.

I'm particularly proud that during this time, the 'Spofford Lake Watershed Management Plan' was completed with the help of our volunteers, the South West Regional Planning Commission and the NH Department of Environmental Services. This document lists 74 'Action Items' which define the SLA's projects and activities. These include the Core Sediment research project, more sophisticated water testing and programs to reduce stormwater runoff from lake shore properties. We are improving our financial position and are working more closely with the town of Chesterfield, the state and regional partners to fulfill our mission 'to protect, enhance and sustain the ecological, environmental and recreational character of the Spofford Lake and surrounding watershed'.

I want to thank this year's board for its fine work and particularly thank Howard Lane and Joe Ragusa for their time, contribution and counsel as they leave board. Most importantly, I want to thank you, our members, for your interest, your time and your financial support. You make it possible.

Unfortunately, COVID-19 self-distancing guidelines required that we cancel our annual meeting. I will miss visiting with you this year.

Please have a safe and happy summer. Enjoy our beautiful lake.

Best Regards,

Steve McGrath
President

YOUR SPOFFORD LAKE REPORT CARD

WE HAVE FAIRLY GOOD GRADES, BUT THERE ARE SEVERAL IMPORTANT ITEMS THAT NEED ATTENTION

LAKE CHARACTERISTIC	GRADE	MEASURED BY	NH LAKE COMPARISON	OUR GRADE IS AFFECTED BY
Cleanliness	Good	E. Coli	Meets State Guidelines	Sewage Spills, Fecal Matter, Blooms
Clarity	Very Good	Transparency	Much Better	Algae, Run Off (Silt, Clay, etc)
Algae Levels	Very Good	Chlorophyll-A	Better	Higher Phosphorous
Promotes Plant Growth	Good	Phosphorus	Better	Septic Leakage, Erosion, Runoff
Fish Stocks	Fair/Poor	pH	N/A	Acid Rain, Decaying Organic Material
Oxygen Levels	Poor	Dissolved Oxygen	N/A	Erosion, Runoff, Phosphorous

KEEP INVASIVE AQUATIC SPECIES OUT OF THE LAKE

A primary reason Spofford Lake is such a recreational gem is that it's free of invasive aquatic plants and animals.

Nothing will foul the lake faster than an infestation of Eurasian Milfoil or other invasive plants. To prevent this, our **Lake Hosts inspected 5,594 watercraft** entering and leaving the lake during the 2019 season. Under the direction of Frank Turner and Art Huggins, this summer, the Lake Hosts will be on duty seven days a week, 12 hours a day, for 20 weeks. Last year, the Lake Host program cost **\$23,323** of which the Chesterfield Conservation Commission donated \$6000 and NH Department of Environmental Services (DES), through a matching grant, contributed \$3800.

We depend on Val Starbuck's '**Weed Watcher**' team to give us a close-up understanding of what's happening on the shoreline. Though often unseen (as they're face-down in the water), weed watchers are very effective at locating and, as a result, stopping the growth of invasive plants.

An **annual lake vegetation inspection** of the shoreline by a regional environmental consulting firm augments the weed watchers work. We see it as a \$950 investment that protects us against infestation.



Invasive plant harvesting in an expensive and temporary solution

FIND WAYS TO REDUCE OR CONTROL EROSION, STORMWATER AND SEPTIC SYSTEM RUN-OFF

Under an \$80,000, 60/40 grant from the EPA/DES (NH Department of Environmental Services), the SLA is working with shoreline property owners to reduce stormwater run-off. Here, consulting costs and materials are covered by the grant while volunteer labor is provided by the property owner. Properties have been identified and plans are under design with the hope that the projects will begin in August. We will be applying for another similar grant in the fall.

By creating a separate **Spofford Lake District**, the town of Chesterfield is encouraging and requiring **more 'lake protective' stewardship** by lake shore property owners. Lake zone septic system regulations can be more strict and, although that can be challenging, the goal is to reduce run-off and seepage by bringing all systems into DES compliance.

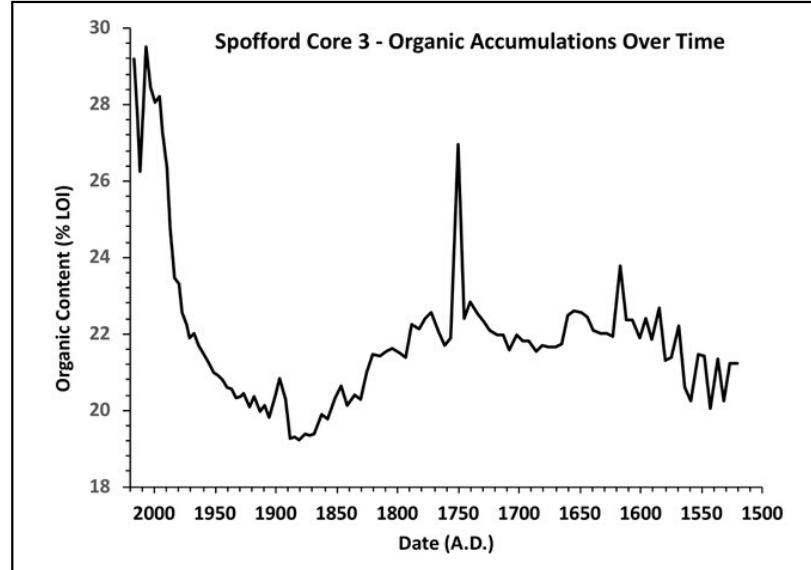
The extensive work at the **town beaches** over the past year will do much to eliminate beach-sand runoff into the Lake.

The SLA is working hard to maintain and improve Spofford Lake's water quality. However, much depends on the actions and participation of shoreline and near-shoreline **property owners**. Learn about and implement the 'Soak up the Rain' program from DES. Read the 'Core Sediment Analysis' conclusions on the SLA website and comply with local and state septic regulations.

TEST THE WATER, KNOW WHERE WE STAND

Last year, following the Spofford Lake Watershed Management Plan's recommendations, the **SLA tested the lake's critical characteristics 4 times** from June through September. DES used this information to compile the 'grades' shown on the first page of this newsletter.

To keep our good grades high, members, property owners, the town and the SLA need to **work together**. Falling or failing grades will mean further loss of fish habitat, more lake bottom sediment and less clean, clear water for all of us.



UNDERSTAND WHAT'S HAPPENING ON THE BOTTOM

The 'Core Sediment Analysis' explains that **decaying organic material eroded from the shoreline** is the cause of the lake becoming 'impaired' for aquatic life. This condition, termed anoxia or low dissolved oxygen (O₂), stimulates plant growth and, if unchecked, can lead to algae and cyanobacteria blooms. It's the reason the lake has less game fish, more aquatic plants and 'muck' than in the past. While we can't reverse what's happened, we can slow or stop these damaging changes.

Decaying organic material consumes O₂ and generates carbon dioxide (CO₂) which promotes plant growth. As more plants decay, more O₂ is used leading to anoxia. Game fish can't live in this low O₂ environment. Conversely, a high CO₂ environment benefits plant growth which, as noted above, can lead to toxic and nontoxic blooms.

The lake's water level has been raised by damming for 200 years. According to a DOT study, Spofford Lake's summer **water level is 4 feet higher** than the lake's natural water level. Higher water has eroded the shoreline, forming layers of decaying, organic rich sediment. In fact, the Core Sediment Analysis shows that "after...1980 the amount of organic material reaching the lake bottom exceeds that of any prior time period" (see above graph).

The Core Sediment Analysis also found an **increase in lead levels** in the lake sediment from 1980 through 1998. The lead source, according to the analysis, is most likely leaded gasoline leaking from an underground tank. Lead concentrations in Spofford Lake reached a peak in 1996 and showed a much different pattern than those of other lakes. Spofford's lead levels then fell in subsequent years, mirroring the profile of these other lakes. (See the Core Sediment Analysis on the SLA website for more information) We are investigating if these lead levels might create any long term adverse effects. We will follow up with you on this.

FIND A BALANCE

As Steve noted in his president's letter, "tackling these issues means striking a balance between how things have been done in the past and what is required now to maintain and promote a healthy lake environment."

At present water levels, the shoreline will likely continue to erode (think Pierce Island's shoreline), unless we take corrective steps to stop filling in the lake. If we don't, it's likely that water clarity will diminish and phosphorus and chlorophyll levels will increase and the lake's grades will fall. We've all made personal decisions based on existing water levels and even though small changes will inconvenience many of us, **we need to strive for a positive balance.**

Here are a number of **steps we can all take** that can significantly reduce erosion, without taking the drastic step of lowering the lake level:

- Tackling the **stormwater and road runoff** that's adding material to the lake. For example, the 'deltas' forming on the south shore opposite Route 9.
- **Limiting the replacement of beach sand.** The sand only goes one way, that is, into the bottom of the lake.
- **Reducing erosion caused by motorized watercraft:**
 - Maintain 'headway' speed when within 150 feet of shore, per NH law.
 - Approach the shoreline slowly.
 - Observe no wake zone.
 - Consider the power of your boat's engine. Ski and wakeboard boats can play in the middle of the lake, further from shore. Here's an easy way to remember this:

For the Sake of the Lake
 When you Ski or you Wake
 Give the Shoreline a Break
 Surf the Middle of the Lake
 For the Sake of the Lake
 Let your POW WAA Dissipate

**LET'S WORK TO
FIND A BALANCE!**



GO TO THE HEAD OF THE CLASS, ALEX



Last summer 8 year old Alex, Sue and Jeff Payton's grandson, went to Audubon Camp where he learned about invasive aquatic plants. Being a bright young lad, he recognized a 'Water Chestnut' plant while paddling along the north shore and nabbed it. After some adult research, all were convinced. An SLA volunteer took the specimen to DES in Concord where, with horror and amazement, the verdict was "You've got Water Chestnut and that's not good!" Just one seed pod will produce many more invasive plants.

That afternoon, Val Starbuck, the SLA's longtime 'Weed Watch' team leader notified DES' Amy Smagula, Exotic Species Program Coordinator. Within days, Val and Amy's team inspected the Lake's shoreline, including tall weeds and cat-tails for any infestation. Nothing was found!

This summer the DES team and our weed watchers will return to look for more Water Chestnut. Let's hope the result is the same. We don't know how the Water Chestnut plant with its seed pod ended up in Spofford Lake...it's still a mystery. But what we do know is that we're lucky a precocious young lad paid attention in class and that both the Weed Watchers and DES were prepared and fast to act.

DES' 319 GRANT: A PLAN TO REDUCE RUN-OFF

Last fall the DES funded an \$80,000 grant to help shoreline property owners reduce their stormwater runoff. **The grant pays for consultants' planning expenses and materials** which could include plants, shrubs, stone, soil, mulch, gutters, rain barrels, etc. The property owner supplies the volunteer labor or hired labor to complete the project. Earlier this spring, members of FB Environmental visited nine properties on the Lake as a first step in the grant process.



Working with the South West Regional Planning Commission (SWRPC), the SLA plans to shortly file for **another, similar grant**. We hope to make this part of an ongoing process to help shoreline properties reduce storm and road runoff.



SLA MERCHANDISE

We've been often asked by members about again creating and selling Spofford Lake merchandise. With the advent of technology and a willing partner, we've overcome our reluctance. We have partnered with Beeze Tees of Keene & Manchester to offer hats, sweatshirts and tee-shirts.

Instructions:

- Go to the SLA web site and click the "Merchandise" link
- This will take you to the Beeze Tees website where you can order directly
- You choose the item, the size and color which will be made to your order
- You choose to pick up at the Keene store or to have the items shipped to you
- Some of the proceeds help support the work of the SLA

Important! The "Spofford Lake Store" will only be open for **14 days beginning July 6th**. You must place your order during this time. After the store closes, it's closed.

Don't procrastinate and miss this opportunity.



Don't get robbed...Be an Eagle!

The Bald Eagle, often found in the same habitat as the Osprey, frequently steals fish from this bird. The eagle waits for the Osprey to catch its prey, then follows behind, harassing the Osprey until it drops the fish, which the eagle then catches in midair.

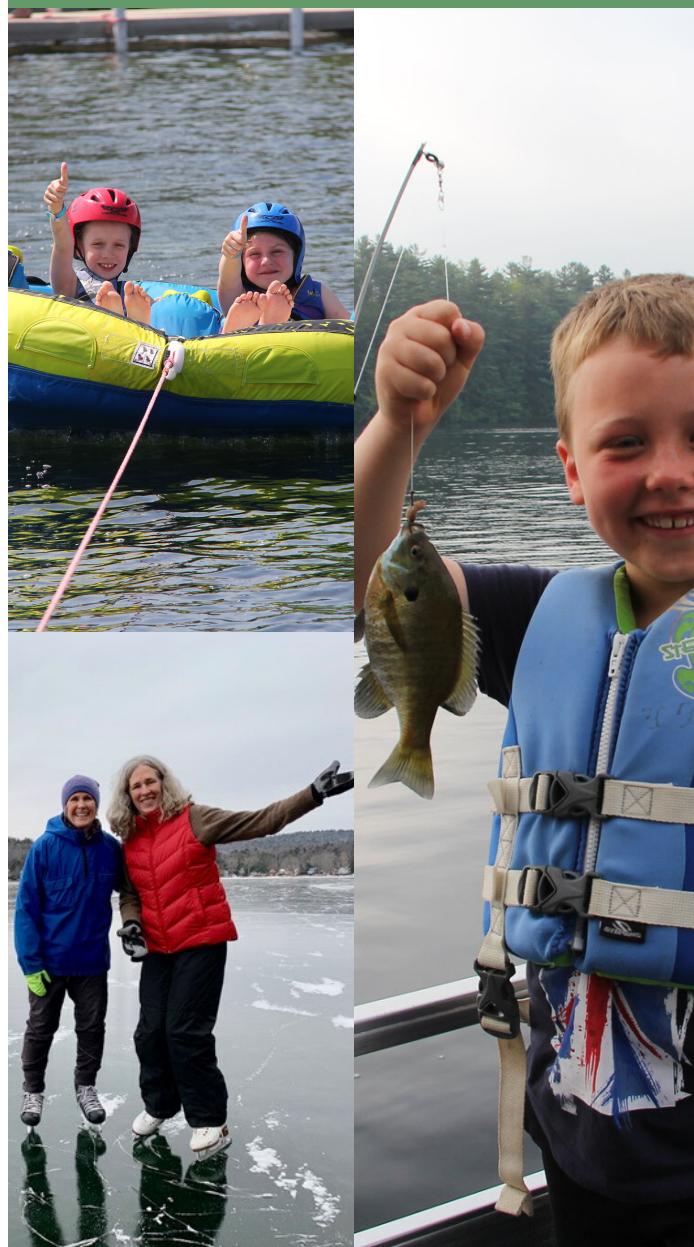
Donate today at spoffordlakeassociation.org

ON THE BLACKBOARD...FOR YOUR ATTENTION!

SLA IN BRIEF:

- **238 SLA Members** in 2019
- **Receipts** from Dues, Donations & Gifts = **\$37,703**
- **Activities**
 - The 2019 **Lake Host** costs totaled \$23,323 of which NH Lakes and the Chesterfield Conservation Commission contributed \$3,800 and \$6,000 respectively. Lake Hosts inspected 5,594 watercraft entering & leaving the lake last year.
 - **Weed Watchers** inspected the lake shore for invasive plants, once in early summer and once late summer.
 - **Water Quality Testing** examined the lake's bacterial, elemental and physical characteristics 4 times last year for a cost of \$5,405.
 - **Spofford Lake Watershed Management Plan** lists 74 'Action Items' which have either been completed or are on-going.
 - Annual **Lake Vegetation Survey** was completed at a cost of \$950.
 - **DES 319 Grant** for \$80,000 to reduce stormwater run-off from shoreline properties is underway.
 - **Water Level Monitoring** is on-going to manage to agreed upon levels.
 - **Core Sediment Analysis** has been completed at a cost of \$12,000. The report is on the SLA website.
- The **Town of Chesterfield** has:
 - Competed extensive erosion controls at the town's public beaches.
 - Reached agreement to reduce winter road salting around the lake.
 - Published a draft '**Wastewater Disposal System Regulation**' for the Spofford Lake District.
 - By town vote, **agreed to establish a trust fund** and to contribute \$10,000 to be used for the control and elimination of exotic invasive plants in Spofford Lake should it be needed.
 - Approved, with conditions, the development plans for Pine Grove Springs and the Spofford Hall properties (see Planning Board page on the town's website).
- For local hikes in town you can see the **Conservation Commision's** website at www.chesterfieldoutdoors.com.
- **Keep your 'social distance' this summer.** We're not 'Out of the Woods' with COVID-19 even though we're in the woods.
- Remember: You need a permit for **fireworks** and a **boat license**.
 - Everyone 16 years of age and older who operates a motorboat over 25 horsepower on New Hampshire waters must have a boating education certificate.

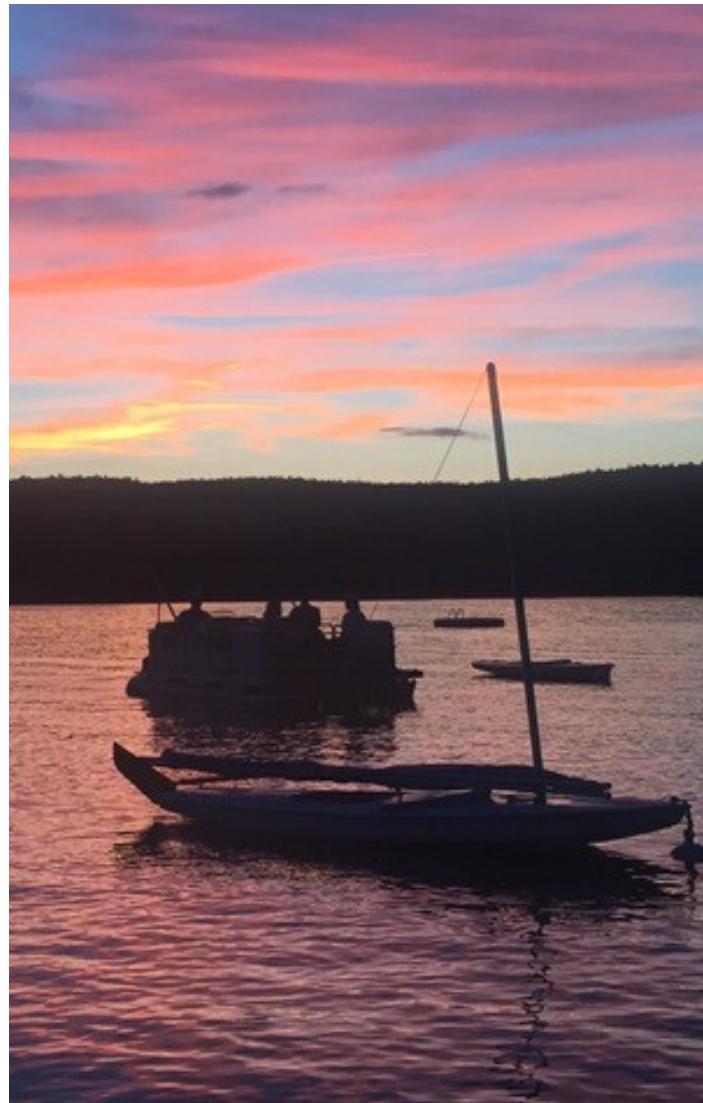
To protect, enhance and sustain the ecological, environmental and recreational character of Spofford Lake and the surrounding watershed.



PLEASE REMEMBER TO DO YOUR HOMEWORK

Important Next Steps

- **Donate** so the SLA can continue its mission to protect the lake
 - Dues are now donations
 - All who donate become a member
 - Donation levels are similar to years past
 - Use the enclosed envelope or pay online to make a donation
- **Vote** for this year's SLA board members and officers. You can use the enclosed envelope
- **Visit** our newly designed SLA website
 - www.spoffordlakeassociation.org
- **Use** our new email address and remember to add it to your contacts
 - info@spoffordlakeassociation.org
- **Contribute** your pictures of Spofford Lake to the website and see them 'published' on the site
- **Order** your Spofford Lake merchandise
 - Instructions on the website
- **Watch** for more communication this summer about a membership vote
 - We'll be asking you to approve changes in the SLA's By-Laws



2019/2020 BOARD MEMBERS

Steve McGrath
President
Bayard Tracy
Vice President
Anton Schoolwerth
Treasurer
Lyle Foley
Secretary

Directors:

Howard Adams	Howard Lane
Lynn Borofsky	Joe Ragusa
Susan Donahue	Smokey Smith
Art Huggins	Dan Syvertsen
Larry LaChance	Frank Turner

IMPORTANT NUMBERS

Emergency
Dial 911

Lake Boater Violations
Contact State of NH
State Police Marine Patrol
603-293-2037

Hunting/Fishing
Contact State of NH
Fish and Game, District 4
Cheshire County
603-352-9669

Town of Chesterfield Police
603-363-4233 (admin only)

Pierce Island Park
Contact Division of
Forest and Lands
Activities and Usage
603-271-2214

NH DES
Shoreline Issues
603-271-6465
Watershed Issues
603-271-2457

Spofford Lake Association
P.O. Box 177
Spofford, NH 03462



SPOFFORD LAKE ASSOCIATION

2020 Newsletter

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The Mission of the Spofford Lake Association (SLA) is to protect, enhance and sustain the ecological, environmental, and recreational character of Spofford Lake and the surrounding watershed. The Spofford Lake Association is a registered 501(c)(3), non-profit organization.