Paring 2024 Paring

A publication of the Pawtuckaway Lake Improvement Association

www.pawtuckawaylake.com

Please Help Us Welcome...



Bruce Henden took over from Dee Decker last year as Lake Host Manager, coordinating and supervising Lake

Hosts at the Fundy Boat Launch and State Park. This year he has agreed to add to his duties, replacing Dee as Coordinator of the entire Program. In that capacity, he has already secured our grant with NH LAKES and we are off to a running start.

You're the best, Bruce!

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President's Message by Steve Soveff

In 2023 the PLIA faced two huge challenges: (1) a crisis of widespread milfoil infestations across the lake and (2) the expansion of campsites at the State Park. Galvanized by our mission to protect, preserve, and educate about our lake, we took action. We commissioned a DES survey, which verified the milfoil spread and recommended the use of a new herbicide targeted to milfoil. A grant helped us support this effort. *It worked*. By the end of the season, the lake was almost *free of milfoil* (see p. 2). We educated the community about the State Park expansion, sponsoring an organized letter-writing campaign in opposition. *It worked*. State Park officials *abandoned campsite expansion* to spend the ARPA funds on infrastructure instead.

Thanks to you, our members, we met the challenges. Your interest, efforts, and support paid off!! We go forward to continue to protect, preserve, and educate about our lake.

The Lake as an Ecosystem: What Does it Mean?



Lakes are essential for many species of fish, frogs, turtles, beavers, otters, aquatic plants, insects, and migratory birds providing food, shelter, and breeding

habitat. Pawtuckaway is a key migration spot for birds and a crucial habitat for Blanding's Turtles. Understanding and appreciating our lake enhances our recreation and enjoyment, helping us to preserve it for future generations. This issue explores what we can do to accomplish that.

Wonder what the lake looks like when fully drained? Go to: https://pawtuckawaylake.com/photos/1985-lake-drawdown/

Annual Meeting—See You There!



Saturday, June 8, 2024 9:30 AM

AGENDA

9:30—10:00 Registration, Membership, Refreshments

10:00—10:15 Socialize, Program Displays, Raffle Sales

10:15—10:45 Business Meeting, Program Reports

10:45—10:50 Local Hero Award

10:50—11:50 Speaker and Questions

11:50—12:00 Wrap Up

Once again, the State Park has generously donated the use of its Pavilion for our meeting. That means we can look forward to some fresh air while we meet, greet, and learn all about PLIA news and information. As before, entry into the State Park is *free*, so at the gate all you have to do is say that you are attending the PLIA's Annual Meeting and drive the 1.35 miles to the sign marking the location. The map to the right shows where we will be.



Milfoil Team

Milfoil was largely eradicated last summer with a DASH boat crew and targeted herbicide treatment but we are not free of its threat. It <u>does return</u>, so our Milfoil Team needs your continued support. To see how you can help, contact Team Captain Neil Santos at <u>neilsantos@comcast.net</u>.



JOE AND DAWN FERNALD

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Annual Meeting Speaker



We are pleased to welcome Nisa Marks as our speaker this year. She comes to us from NH DES where she is the Watershed Coordinator. She helps lake associations and watershed stakeholders with issues related to cyanobacteria, watershed planning, water quality, and other topics of concern. She is one of the authors of New Hampshire's statewide cyanobacteria plan. Nisa has a BS in Biology from Yale University and an MLA in Government from Harvard Extension School. She knows all about lake ecosystems!

Spotlight on Members

Our members are what make this organization possible. Their contributions are worth more than gold. Help us *thank* these volunteers for their extraordinary service if you see them on the lake!



Former Board member Therese Thompson has been a member of the PLIA outstanding Weed for decades, including after she moved from the lake. As a Lake Host, she used to inspect boats during fishing tournaments in the

early hours of the morning. Tapping her expertise as a biologist and naturalist, she has trained countless Weed Watchers with her own PowerPoint presentation over the years.

As a long-time member of the Lamprey River Advisory Committee, Therese was instrumental in



helping us obtain a \$5,000 research grant and has kept the Board aware of important issues confronting neighboring rivers and lakes. Thank you, Therese!

For over a decade Gary St. Pierre has been one of our Watchers, among the first to be trained. Each season he has logged over 25 hours of surveying. We won the phragmites infestation

war with his help removing - at the rhizome level the "island" of phragmites between the Twin Islands. He has pulled that invasive weed at several locations, monitoring annually at recurring sites. Gary has also helped control the purple

loosestrife growths on Horse Island, And twice, he has actually surveyed the entire shoreline of Pawtuckaway Lake for invasive species in his kayak. *Thank you,* Gary!





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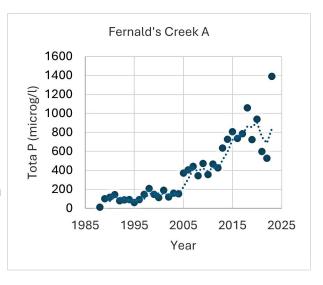
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Experiential Learning with a Twist of Humor

Our Lake Chemistry - the Phosphorus Problem

Phosphorus in lake water *promotes algae and aquatic plant growth* that decreases oxygen levels. Multiple times a year, our Water Testing Team collects samples that are analyzed by NH DES for several measures, including phosphorus. In 2021, members Sue and Mike Herron examined that data from 1988 to 2020.

They found that phosphorus concentrations in the south of the lake have *declined slightly*, while those in the north have *continuously increased*, mostly coming from Fernald's Brook, which had *20 to 100 times* that of any other tributary. *Look at the graph of phosphorus levels to the right!* This area of the lake remains a concern that the PLIA is studying to find ways to alleviate the problem.



Mike and Sue updated the data to include 2023 measurements, and the conclusions were the same. In 2023, abundant rain caused phosphorus concentrations in streams feeding the lake to increase temporarily, and climate change could worsen this trend. We must identify and manage areas of runoff and nutrient loading, and encourage residents to learn ways to do that. (see following articles)

Ping Pong Balls, You Say?

It began as an imaginative musing, around 2007, about how phosphorus travels in the lake during the fall drawdown. Does it escape to the nearest dam and exit that way? As he pondered these questions, member Tom Duffy realized that during a drawdown moving water would likely pull

OANGE.

phosphorus along with it. He devised an experiment, placing ping pong balls on the lake surface in the north end at the beginning of a drawdown and following their progress as they floated on the current.

Here's what he discovered: the current moved toward Drowns Dam to the north <u>if it got a head start</u>. Otherwise, the flow was toward Dolloff Dam, since the highest volume of water passes over it at the greatest velocity, making its pull stronger. (Drowns Dam is more sluggish, its lower level release restricting the flow.) So the drawdown was effectively pulling water <u>from the north end of</u>

the lake to the south end, likely leaving trails of phosphorus in its wake along the way. (cont. on p. 5)



(cont. from p. 4) Knowing that would not be an efficient way to purge our

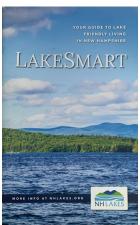


lake of its phosphorus load and would even distribute it more widely, Tom contacted NH DES to request that the Dam Bureau change the way it releases water during fall drawdown. He asked that Drowns be opened first to allow a 70% release of water from the north end, where phosphorus has historically been in higher concentrations. NH DES leadership agreed, and now tries to adhere to this pattern during drawdowns. They



follow Tom's plan, opening Drowns (*right*) early for two weeks. If Drowns Dam could be altered so that it opens from the top, like Dolloff (*left*), it would be even more effective. *The PLIA is always working to make Pawtuckaway better!*

How Can We Protect Our Lake Ecosystem?



Start in your own backyard! Runoff is a major source of nutrients like phosphorus in the lake. NH LAKES' LakeSmart Program is the best way to learn how your property affects the lake and what is *within your power* to ensure it does no harm. It is a useful review that offers you ideas and options, that is all. No one expects you to do an entire makeover of your property!

To set an example, all the PLIA Board of Directors have agreed to enroll in this program to get FREE evaluations of their land from a LakeSmart specialist. First you complete a simple online questionnaire. Then, if you like, NH LAKES will arrange for a visit by an evaluator or you can submit photos if you prefer. After your property has been assessed, you will receive a written evaluation with suggestions only about changes that you can make to avoid polluting runoff, and

to protect lake water quality, wildlife habitat, and property values.

All information gathered is kept strictly confidential and shared only with you.

Here are some areas of your property that might need attention:

- Septic system
- Shoreline vegetation
- Pathways to the waterfront
- Driveway design and composition
- Open spaces vs wooded areas
- Lawn and garden cultivation
- Beach maintenance

Please show your love for Pawtuckaway and have a LakeSmart evaluation done of your property – the sooner the better! https://nhlakes.org/lakesmart/. Contact any Board member if you have questions https://pawtuckawaylake.com/about-us-contact-us/board-of-directors-committees/.

The sponsors appearing throughout this edition of PawPrints are local, reliable, and enthusiastic boosters of Pawtuckaway Lake and the PLIA. We hope you will show your appreciation for their support by visiting their establishments and using their services.



Climate Change and Pawtuckaway Lake

In what ways has climate change affected the lake – what developments have we noticed? First off, warmer water and more rain events have caused the growth of excess weeds. This lake is a key migration spot for birds; it's important to keep it safe and healthy for these wildlife neighbors. An unprecedented *third* loon pair attempted to nest on the lake but it was swamped by high waters last summer! The proliferation of Chinese mystery snails has been on the rise. Most notably, slow and thin ice formation has discouraged winter sports. In fact, the ice disappeared so quickly this year that there was no time to organize an ice-out contest! What to do? We can:



- Support Sonoma Potavin's campaign to remove Chinese mystery snails.
- Volunteer for the Loon Preservation Committee to monitor and safeguard nests. https://loon.org/
- Promote boat inspections in our neighborhoods and volunteer as a **Lake Host**; contact Bruce Henden at moosehenden@gmail.com.
- Be on the lookout for invasive weeds and join the Weed Watchers; contact Steve Soreff at soreffs15@aol.com.

Paddle Poker Returns!



People love this tournament, so Paddle Poker will be back on September 14. Board Member Shelly Heit volunteered to take over organizing the event, member Michele Lefebvre will solicit raffle items, and member Barb Thompson will host again. We are looking forward to another successful fundraiser—our biggest of the year! You can buy raffle tickets at our Annual Meeting on June 8. And a big thank you to Troy Brown of Mountain Road Trading Post for sponsoring this event! Stay tuned for details.

New Pawtuckaway Lake Cards

Do you have a photo of the lake or its wildlife that you would love to share for everyone to enjoy? Board Member Shelly Heit is inviting folks to create playing cards adorned with their favorite lake photos, as a fundraiser companion to our Paddle Poker Tournament. Start looking through your photo files, and for a modest fee contribute your photograph of the lake to become the face of a card in our Pawtuckaway Lake deck of cards. For details, see https://www.zeffy.com/en-US/ticketing/93e55a75-655b-47aa-907e-185146b3db6d





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Road Reps

Ambassadors for the PLIA, Road Reps have a new Chair this year – Board member Kim Gable has volunteered to take over for Pete Wawrzonek. She will be sending out news, organizing her team to contact neighbors, and looking for new volunteers. Reach out to her if you want to learn more about being a Road Rep: kimgable56@icloud.com. We are grateful for your spirit, Kim!



Membership and Fundraising



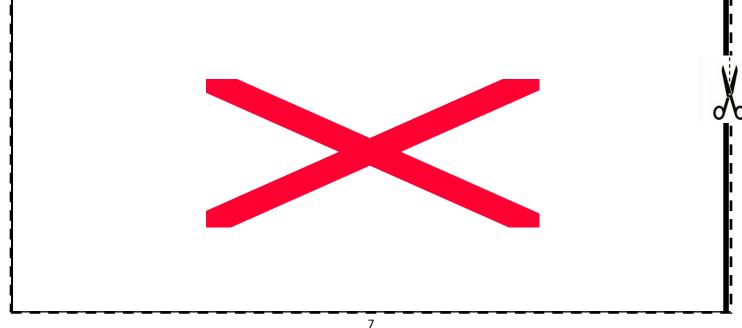
When Board member Mike Coltin stepped down last year, Board member Shelly Heit stepped up to take over as Membership Chair. In the process, she introduced a new payment platform to replace PayPal for online membership donations. Zeffy not only makes online payments easy, it is *fee free* and also handles sales of tickets for events such as our Paddle Poker Tournament, which Shelly will also now organize. In fact, Shelly has enthusiastically proposed other fundraising ideas, like the Pawtuckaway playing cards (p. 6). Looks like we now have a new position on our Board, the Membership and

Fundraising Chair, and the perfect person to fill that position. We are lucky to have you, Shelly!

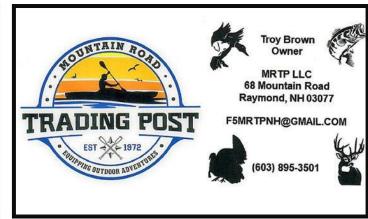
As you may be aware, there has been an extensive amount of invasive milfoil in the lake in the past few years. As a result of having fewer Weed Control Divers, we have had to pay for extraction services in the past. Last year the spread from the South Channel and nearby coves into the State Park's canoe rental area and Nottingham Town Beach necessitated herbicide treatment. While our summer season ended with almost no milfoil plants identified on the lake, we don't expect that to last. Our volunteer diver and support teams will continue to actively search for milfoil in the future.

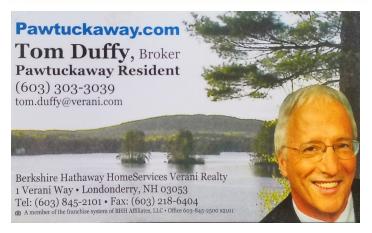
Your donation will allow us to continue to improve the quality of the lake, through the Lake Host Program, Weed Watchers, Milfoil Team, and Volunteer Lake Assessment Program; and to educate lake lovers about the best conservation practices.

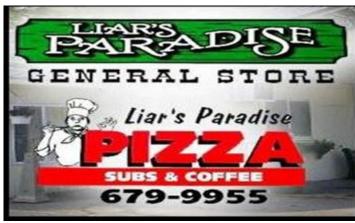
Instead of PayPal, we have a new online payment platform: Zeffy. See membership coupon below.











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