

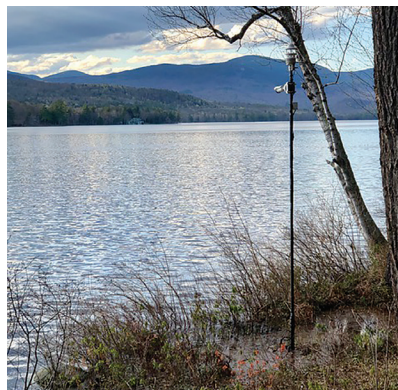
# WATERSHED VIEWS

NEWSLETTER OF THE KEZAR LAKE WATERSHED ASSOCIATION

FALL 2023



HEINRICH WURM



## KLWA Cautiously Optimistic About Water Quality

by STEVE LEWIS

The spring of '23 turned out to be a wake-up call for many lake dwellers: dock-covers and swim-rafts got carried into the marshes and much debris from our front yards drifted to the lake bottom. While the degree of flooding was only moderately above the usual annual high-water mark, it was the series of storm events that caused repeated flood stage late into May and again, in July. On several occasions, the Cold River brought storm water from Evans Notch to the Old Saco River, raising its level so high that it created a reverse flow up the Kezar Outlet River into the Lower Bay, further raising the level. These floods

brought boat wakes sloshing water into front yards and crawl spaces, eroding exposed land. Many septic systems' leach fields were likewise covered, causing worry about what that might do to the water quality.

As a result of this and concern about some higher Phosphorus readings in Bradley and Horseshoe Ponds last year, KLWA took additional Phosphorus samples outside the normal testing conducted by FB Environmental in June, August, and September. These samples were evaluated by Lakes Environmental As-  
*continued on page 3*



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## President's Message

by STEVE LEWIS

**A**t the time of this writing, September 29th, we have had light precipitation for the first time in about nine days. Not since March has there been a stretch of clear weather like this. The wet season began with a torrential downpour of 5+ inches on the night of April 30th – May 1st that blew out roads, collapsed the bridge on Fern

Drive over Kezar River, and continued through the summer with a couple of three-inch rains interspersed with many gray days of “regular” rain.

This weather even affected the summer vacation season as many people paid attention to the forecasts and didn't come up when they might have otherwise.

One of the results of this

very wet summer is that usually by the last week of September the change in leaf color is quite noticeable. This year it is just beginning. The photo of Horseshoe Pond shows the first color along the shoreline. Normally there would be a lot more of it in late September and it would be more vibrant. Talking with my brothers in the Midwest, where there has been a pretty bad drought, their fall is already past peak. In our case, too much rain dimmed the display.

Our new headquarters, the Water Shed located by the Center Lovell Market, is up and running. Volunteers have been a big help. We have an extensive reference library on water-related topics, as well as watershed lands and critters from kids' picture books to Limnology textbooks. While it is an office, it is fine to come in and say “Hi” and see what reference materials and brochures we have and ask questions. We also have a lead sinker/lure disposal box to encourage people to “Get the Lead Out!” to protect loons and other creatures that ingest discarded or lost lead fishing tackle that eventually kills them. A new Maine State law bans even painted lead jigs, which had been allowed under the state's earlier bans on lead sinkers and jigs of certain sizes. Now no lead is allowed in a sinker/lead headed tackle if less than 2.5 inches or less than 1 oz.

This year's annual meeting at the Old Saco Inn was well attended by 100+ people, and we were successful in keeping the presentations mercifully short but providing the opportunity to talk about things with presenters afterwards in more depth where desired. We had to chase people out at the end as many were seeing old friends for the first time in quite a while. Genuinely, a good time was had by all. ♡



A dock on Horseshoe Pond after a July 16th 3 + incher rainfall



First colors with Styles and Adam's Mountains in the distance; foliage over a week late



Tom Gilmore presenting this year's Lake Patrol highlights to the crowd

continued from page 1

sociation at their Maine Lake Science Center in Bridgton, where they give much quicker results than the state labs in Augusta. Phosphorus is usually the limiting nutrient to algal growth and is an indication of runoff/pollution levels. We figured if the large amounts of runoff were an issue for lake health, the Phosphorus readings would let us know. In the chart, you can see the results.

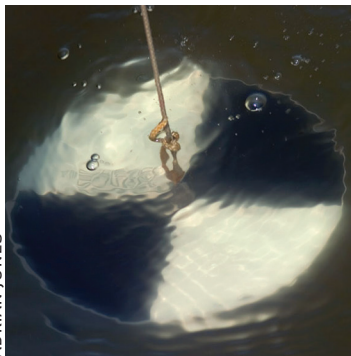
Sample site	Date	Value in parts per billion	Historic average
Horseshoe Pond	May 17	6.8	7
Lower Bay (high water)	May 17	10.5	9
Bradley Pond	June 12	7.2	9
Lower Bay	June 18	9.6	9
Lower Bay (high water again-large rain the 16 <sup>th</sup> )	July 18	9.1	9

These results show that there was some effect on Lower Bay early on at the tail end of the highest water in May, but it went down to historic levels even with continued heavy runoff into July. Fortunately, the readings are on the lower end of the fertility scale and are not of concern. Horseshoe and Bradley Ponds numbers are fine, so last year's higher readings appear to be a blip of some sort.

Testing for E. coli, a mark of leaky septic systems, would have been a good idea but we were not equipped this year to do so. In the future, we will be ready to do these tests when similar events occur.

Large amounts of runoff often affect the clarity of the water due to suspended silt or, in our case, dissolved tannins from decaying matter on forest floors. The clarity is easily measured using a Secchi disc.

We recorded the lowest reading ever in Upper Bay in August of about 4.9 meters instead of the usual 9 -10 meter readings. This was due to tannins being washed into streams, then flowing to the lake; we used to call the effect "root beer rivers" when we were



ADRIAN JONES

Secchi Disk



STEVE LEWIS

kids (Cold Brook above, is an example). It's a natural phenomenon that colors the water brown and impedes light penetration. The most likely cause of the high amount of tannins this year is due to large amounts of logging along Cold Brook, and elsewhere the last two years where the soil has been disturbed, thus releasing much more of the tannins than normal, particularly when coupled with the large amounts of runoff from all the precipitation this summer. Even now there is visible tannin coloration in streams.

While we await the full results of our water quality sampling by FBE, we have reason to be cautiously optimistic. It was a challenging season, but our watershed dealt with it and remains healthy overall.

To help keep it healthy in future high-water events, which will happen, we urge people with shore frontage to have their shores evaluated by our LakeSmart crew to get recommendations on how to better protect the shoreline, and our common waters, from such events. Also, please avoid wakes during these events. The Town of Lovell has issued "no wake" advisories in the past, and though they have no legal authority to do so, it is nevertheless a good idea and a courtesy to lakeshore owners to follow these advisories. ♪

## New boat ramp approved by state and town

**A** new boat ramp at the Narrows has been approved by the State of Maine Dept. of Agriculture, Conservation & Forestry for Lovell

The current ramp is very short and has a bad drop off at the end. This has caused a couple of issues. Boats must rev their engines and power their boats onto their trailers. This action results in phosphorus being stirred up into the lake that can lead to algal blooms. A second issue is that trailer axels are dropping off the ramp and the trailers are being damaged.

The new ramp will extend farther into the lake and will alleviate both issues. The concrete pads for the ramp are at the landing and permitting is done, but it is not known when the work will commence. The bids to install the ramp, however, have come in over the budget set aside by the town and state so the project is on hold until they can figure out where they will find money to complete the task. ♪





## Loons struggled to nest in rising waters

Text and photos by LAURA ROBINSON

**A**s May rains poured into June, Kezar's loons hunkered in their nests, watching and waiting while the lake level rose around them. For loons not using nesting platforms, the situation was dire. Their carefully built nests—sanctuaries that were high and dry when built—became tattered as waves and boat wakes slapped against their edges. Nest bowls, once well above water level, became saturated, threatening the health of the eggs within.

Between rainfalls, the birds scooped up mud and decaying leaves from the lake bottom, building up the height of their nests. Their forays were quick as their eggs needed the warmth of constant incubation to survive the wet conditions.

Trout Pond's loons were the watershed's first to nest, a strategy that by late May seemed to be backfiring. With their nest just an inch above the pond's edge, the forecast of four inches of rain in the final week before their eggs would hatch was foreboding.

Hidden from the incubating bird's view, our loon team silently rolled nesting materials down the steep slope behind the birds' nest. Undisturbed and uninterested, the loons ignored the materials throughout the next day. But on the second day, as rains poured down, the adult birds worked through the pile, pecking and packing as they raised the nest walls. Their efforts paid off when days later, two healthy chicks hatched, a playful pair that would learn to thrive in a summer of storms.

But Kezar's loons were not so lucky. Having gotten off to a later start, the unceasing rains proved to be more than any nest-bolstering could handle. One by one, Kezar's land nests were abandoned as drenched eggs grew cold. On Heald Pond as well, the waters rose too high for the birds to hang on.

So was the year a total wipe out? With just one chick surviving on Kezar, at times it felt that way. But in seasons like this one, nesting rafts can provide an important haven because they rise and fall with the water level, keeping the nests dry despite flooding conditions. Yet, while multiple chicks did hatch on Kezar's nesting rafts, all but one were lost to eagles and intruding loons.

As in past years, the watershed's total chick count was boosted by the high survival rate of the chicks on our ponds. A pair of chicks hatched on Horseshoe's raft and a singleton from Cushman Pond's raft all thrived. Combined with Trout's pair and Kezar's Lower Bay chick, the watershed's fledging chick count was six: a fortunate outcome for a very wet year.

Although average chick numbers of eight or more per season keep our loon population in the sustainable range, year to year fluctuation is expected. With a little help from nesting rafts, the devastation of 2023 was not as bad as it might have been, yet the weakness of one season puts pressure on years that follow. ♡





Figure 1: Before with no buffer



Revegetated Shorefront

## LakeSmart : Preserving water quality one lake at a time

by DAVE DURRENBURGER

**KLWA's** LakeSmart team is amid another successful season thanks to the many property owners who signed up for lakefront evaluations. LakeSmart teaches lakefront owners how to preserve water quality, shoreland aesthetics, and wildlife, one property at a time.

This year there was an increase in word-of-mouth referrals, and we extend a special thanks to Chris Brink, who surpassed all KLWA Trustees in this effort. Additionally KLWA's Outreach Manager, Emlyn Emerock built LakeSmart awareness and referrals by talking directly to home owners about the benefits and features of the program. When was the last time a door knocker gave you something for free that could increase the value of your property?

A LakeSmart evaluation provides owners with shoreland education and actionable recommendations that will help preserve our lakes and ponds. LakeSmart participants then share that knowledge with friends and neighbors. But education and knowledge alone do nothing to improve a waterbody; we need to make physical changes to buffers that have been compromised from their natural state. Any one change is a win for the lake or pond.

Aside from preventing invasive species, or egregious dumping of pollutants directly into the water, the vegetated shoreland buffer is the only way to protect the lake or pond, and the shoreland buffer along a tributary river or stream protects the water flowing into the lake or pond. As occurred this year, heavy precipitation leads to flooding, and the damage caused by human-destroyed buffers is twofold: runoff and floodwater. Both may carry nutrients, sediment, pollutants, pesticides, debris, and sewage into the waterbody.



After LakeSmart, buffer added

Every property should have a naturally vegetated buffer to protect the lake. Buffers come in various shapes and sizes, and for the last 40 years Shoreland Zoning Law sets the depth at a minimum of 100 ft. For properties built before the Shoreland Zoning Amendments of the 1980s, they may have structures located 5-100 feet from the water, and the buffer is even more imperative. These properties were built in the days when sacrificing water quality and shoreland aesthetics for a better view of the water was acceptable. These properties have less distance for trees and plants to uptake water, remove nutrients and filter pollutants and debris. See Figure 1 and Figure 2 of a Kezar Lake camp circa 1930.

A buffer with native species of trees, shrubs, plants, vegetated groundcover, and duff, as deep as possible, is critical. Lawns don't help; they don't uptake volumes of water as do trees, they leach nutrients from the soil, and lawns become compacted soil, encouraging runoff nearly as much as an impervious surface.

During our many LakeSmart evaluations, property owners have told us they want to maintain their shoreland in a positive direction, but don't know how to get started. To that end, the KLWA LakeSmart team, with guidance from Roy Lambert of the neighboring Lakes Environmental Association (LEA), initiated the LakeSmart financial assistance program. This program provides money for property owners to make physical changes, resulting from recommendations in the LakeSmart Property Owners Evaluation Report.

This year, through the project management efforts of Emlyn Crocker and Chris Brink, KLWA has financially assisted multiple property owners for the following: native planting consults, tree and plant selection, erosion control for paths, stairs and shorelines, materials and labor purchases, and other improvements to restore and stabilize property owner's shoreland within the 100-foot buffer. 💧



Figure 2: Driveway to Lake



LAURA ROBINSON

## Legislature Updates: Two new laws will go into effect next year

by CHRIS BRINK

### Watercraft Educational Requirement for those born after 1/1/1999

**B**eginning January 1, 2024, a person born on or after January 1, 1999, may not operate a motorboat of twenty-five (25) horsepower or greater for recreational boating purposes on inland waters of Maine or territorial waters, unless that person is at least 12 years old and has completed an NAS-BLA approved Boating Safety Education Course and obtained the Boating Safety Education Card. Courses are offered both online and in person. For details check out Maine Inland Fisheries and Wildlife website: [www.maine.gov/ifw/programs-resources/educational-pro-](http://www.maine.gov/ifw/programs-resources/educational-pro-grams/safety-courses/boating-safety.html)

[grams/safety-courses/boating-safety.html](http://www.maine.gov/ifw/programs/safety-courses/boating-safety.html).

### All smaller lead tackle ban

**T**he State of Maine passed a law banning sale in 2024 of any lead tackle, painted or not, of less than 1 oz. or shorter than 2.5 inches. It will be illegal to use them beginning in 2026. This is to protect loons and other wild waterfowl from lead poisoning. A loon died last year from ingesting a lead headed fishing jig and we are investigating another loon death on Kezar Lake this year to see if it also was from lead poisoning. You may drop old lead sinkers off at the KLWA Water Shed, Charlotte Hobbs Memorial Library, and the Town Hall. KLWA will collect and safely dispose of them. ♠



### HELP YOURSELF. HELP KLWA.

Make a Qualified Charitable Distribution (QCD) from your IRA to KLWA and avoid taxes. If you are age 70½ or older, you're required to take minimum distributions (RMDs) each year from your tax-deferred retirement accounts. Normally, taxable as income, the amount is tax-free if donated directly to a qualified non-profit organization such as KLWA.

# Education and Outreach in the Watershed

by EMLYN EMEROCK & WENDY MOLIN

**O**n a crisp and sunny morning in early October a group of Fryeburg Academy ninth graders got their first look at benthic macro-invertebrates by visiting a pond right on their campus. This class was one of four Fryeburg Academy classes our Outreach Manager visited this fall to provide hands-on water quality lessons.

We were also busy with kids earlier this summer at Camp Susan Curtis. During a KLWA lesson, campers created mini model-watersheds and collected macro-invertebrates. We determined that Trout Pond is fed by a healthy stream and had a great time with the kids.

In addition, we took several groups onto Kezar Lake where we hosted a few free pontoon boat rides in August. We also introduced a group of Fryeburg Academy research students to water quality sampling on the lake this fall. The group sampled dissolved oxygen, took water clarity readings with a Secchi disk, and encountered a most memorable raft of twelve loons.

KLWA membership contributions support our education and outreach programs. Thanks to each of you for your ongoing support as we work to engage and educate future generations of water stewards. ♡



During a visit to Camp Susan Curtis, KLWA taught campers to collect and identify macro-invertebrates.

## LIPPC finds Water-Forget-Me-Not in Upper Bay a minor threat



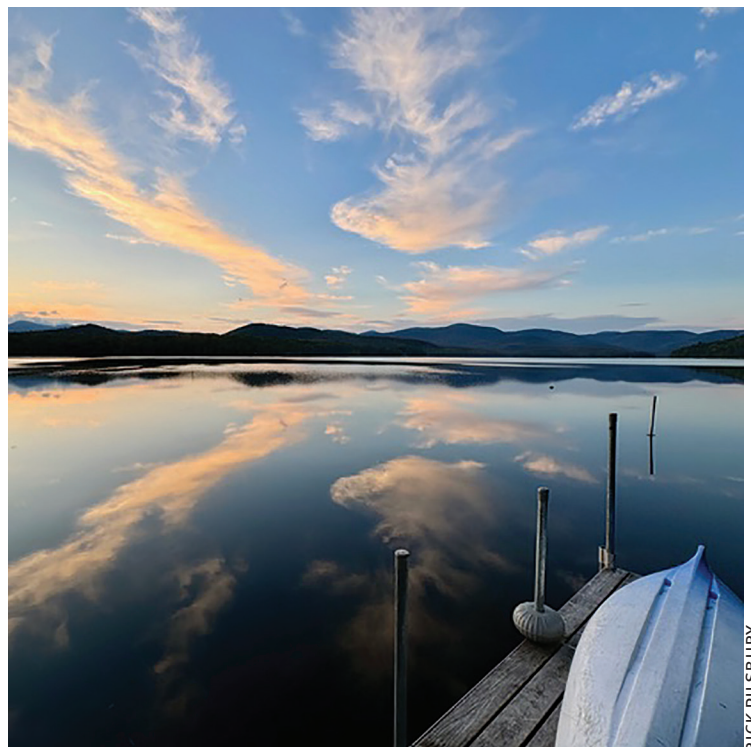
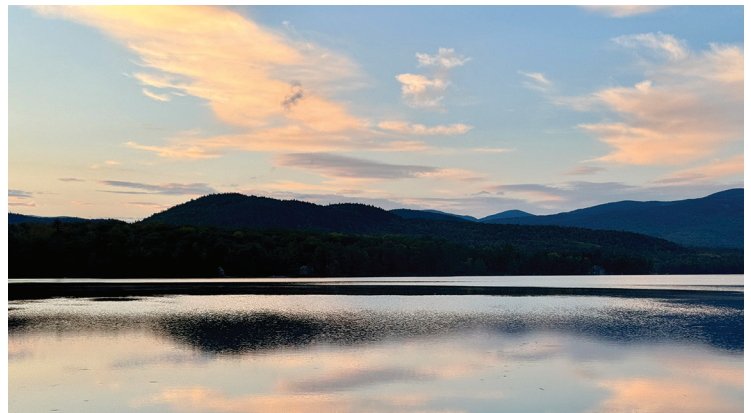
**T**he Lovell Invasive Plant Prevention Committee (LIPPC) is a town-sponsored organization formed over 20 years ago to combat invasive water plants and animals like milfoil and zebra mussels. LIPPC was formed in response to a Eurasian Milfoil infestation in Cushman Pond, now eradicated thanks to Cushman residents and LIPPC.

Through Courtesy Boat inspections at town landings, Shoreline Stewards inspecting the lakes and ponds, and professional inspectors, LIPPC is continuing to watch over our waters, report infestations, and quickly remove them.

LIPPC recently found an infestation of Water Forget-Me-Not, *Myosotis scorpioides*, in Upper Bay along Boulder Brook and on the Vinton shoreline. Water Forget-Me-Not is native to moist meadows and stream banks of Eurasia. It is invasive in North America and lives in marshes, river shores, lakes, and wetlands. The plant will grow in a clump that expands each year. Waterfowl are the most common method of transmission. It is currently found in ME, NH, VT, MA, RI, CT.

This is not a serious threat, but LIPPC is working on a plan to handle the situation. We hope to have an update in next summer's newsletter.

The Courtesy Boat inspections continue through the fall and so far this year, there have not been any invasive plants found on boats or trailers launching from the Narrows or the North Landing. ♡



RICK PILSBURY

## Corporate Sponsors

The KLWA has enjoyed a long tradition of partnership with local business. Each of these Corporate Sponsors has made a much-valued contribution to the financial stability of our organization and to the programs that we support. We are most grateful for their continued commitment and for their recognition of the many benefits that a vibrant and sustainable watershed brings to our community.

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