

Introducing LakeSmart. Be a Hero. Help Save the Lake.

by CHRIS BRINK AND DAVE DURRENBERGER

ur lakes may seem timeless, but they are very fragile. Thousands of years of transformation created the gems they are today, but they can rapidly deteriorate from the pressure of homes and cutting along the shoreline, creating runoff and erosion that deliver nutrients and pollutants from yards, gardens, and dysfunctional septic systems.

KLWA monitors water quality to track the impact of these pollutants. Our findings show

that nutrient levels in some areas are at a tipping point, and runoff/erosion impact is growing at an exponential rate. Small, seemingly innocuous things that lake shore owners do (or don't do), lead to large negative impacts on the water quality. It's easy to overlook the small cuts of shoreline vegetation, aka the buffer zone, but a thousand cuts will create irreversible damage. This damage may include algae blooms (of the over 6,000 Maine lakes and ponds, there are 53 lakes

in Maine with algae blooms and 490 lakes and ponds considered at risk), decreases in water clarity, and harm to fish and wildlife. We can be sure this will adversely affect property values.

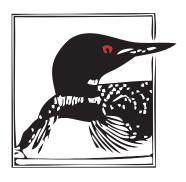
Nature alone, can't fix rapid damage caused by development with suburban landscape techniques. You can help prevent degradation of the lake, however, by becoming LakeSmart.

What is LakeSmart?

LakeSmart is an education and information program for lake shore property owners. It teaches the owner how to minimize impact on water quality and lake shore aesthetics. It is continued on page 5



LakeSmart Awards are displayed on waterside and roadside of properties



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Kezar Lake Watershed Association

P.O. Box 88 Lovell, Maine 04051 (207) 925-8020 KezarWatershed.org



President's Message

by RICK PILSBURY

his newsletter introduces "LakeSmart," KLWA's newest program, which partners with individual lakeshore landowners to identify and support "best practices" for protecting water quality. "LakeSmart" is a state-wide program launched by the Maine Department of Environmental Protection in 2003. In 2013, Maine Lakes (formerly called Maine Council of Lake Associations) took over management of the program. The program is free, non-regulatory, and voluntary. Participating homeowners receive individualized suggestions for

keeping pollutants out of lake and pond waters.

KLWA, with its nine waterbodies, is off to a strong start with LakeSmart. Kezar Lake now has seven recently LakeSmart awarded properties; Heald Pond has two and Farrington Pond one. For perspective, in 2020 total LakeSmart awards across the state were earned by 40 properties on 20 Maine lakes. Kudos to Dave Durrenberger and Chris Brink, our two newest directors, who made this kickoff so successful.

For all the details on LakeSmart, go to our website, kezarwatershed.org, and click on "Projects" to learn how to be a hero. It's a great way to help our watershed.

KLWA had a good 2021 season. Nine loon chicks sur-

vived to six weeks of age, the most since the study began four years ago. Thanks go to our new nesting platforms and community support.

Steve Lewis reports our water quality and transparency remained at high levels due in part to a dry winter and spring that limited the inflow of nutrients, which can cause algae growth. And Tom Gilmore reports a successful Lake Patrol season with thanks to Turf Ramsden, our intrepid skipper.

And a personal thank you to KLWA's Board of Directors as they make all of this happen. But you, our members, make everything possible including continued vigilance, our top priority. Your support is critical and greatly appreciated.



A loon incubating eggs on one of our new platforms on Virginia Lake in Stoneham

An Encouraging Loon Season

by Laura robinson

his summer-the fourth of our five-year loon study-brought some good news. Chick productivity was the highest since the study began, with nine of our thirteen hatchlings surviving past the benchmark age of six weeks. Both nesting platforms and community efforts appear to be helping. Yet with the study's average chick survival rate still lagging below sustainable levels, it is too early to draw conclusions about the stability of our watershed's loon population.

While the focus of our study is chick productivity, this year we were reminded of the vulnerability of our adult loons as well. In July, an adult was attacked and killed by an eagle just off the town beach. While eagles snatching chicks is somewhat commonplace, the attack of an adult is not typically seen on Kezar. We are awaiting necropsy results on that bird to see if it was healthy prior to the attack.

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The 2021 season energized with an experiment as we field-tested our new platforms. Plants thrived in the planting boxes, and launch and haul-out efforts were greatly simplified. We discovered that the new platforms were less likely to be washed out by boat wakes than the older platforms. The drastic tilt caused by the sudden onslaught of tall wakes, however, was still enough to break an experimental chicken egg-underscoring the need to keep large wakes at least 500 feet from shore. Interest in adopting our design resulted in the distribution of our platforms throughout New England.

What did the birds think of the new platforms? To avoid any changes that might dissuade our current platformnesters from returning to their familiar platforms, new rafts were placed only in territories where platforms had not been introduced in the past. As with any platform, it typically takes several years of sitting empty before the birds become accustomed to them and give them a try. That said, the Virginia Lake pair at first ignored the new platform that we placed near their old nesting site. Once we relocated it to a cove across the lake, however, the loons were on it within fifteen minutes, and ultimately used it to nest successfully.

As leaves now tumble and late-season tremolos echo in the chilled air, it is the ideal time to keep an eye out for chicks learning to fly. With a crescendoing slap of accelerating feet, watch for the young birds running straight into a stiff wind. One can't help but cheer as they wildly patter toward the moment of lift off-or burnout-as they develop the necessary strength to fuel their first migration to the ocean. A valiant but ultimately failed flight attempt is shown here, with the same chick later nuzzling its parent. If you see any loon chicks practicing flight, drop us a line at KLWA@gmail. com. We'd love to include your observation in our records.





A valiant, albeit unsuccessful flight attempt as the Fox Cove chick prepares for migration to the ocean. Still dependent on its parents, the same chick later nuzzles with its mother.

KEZARWATERSHED.ORG

Water Quality - Dry Weather Blunts Algae Growth

by STEVE LEWIS

his summer was unusual. It started out dry following a winter with about 1/3 normal snowfall. In July the trend abruptly changed for the wetter. The graph shows the flow rate of Wild River from May to mid-October monitored a few hundred yards above where it flows into Androscoggin River. It is a good gauge of the general water situation in our area as the Wild is located in Gilead, Maine, just a little north of the Kezar Lake Watershed.

The orange triangles show the average daily water flow over 56 years. The takeaway is that until the beginning of July, the flow was at times almost a tenth of its norm. After the July rains, the flow settled down to a roughly average amount. The big peaks are typical individual rain events that the 56 years of averaging smooth out in the historical data plot.

The result of this pattern was a low inflow of nutrients in the earlier part of the summer so that transparency was better than usual and other indicators of nutrient load were down. Remember, nutrients are needed for human and plant growth, but nutrients in a lake lead to algae growth, which is a major problem. This year's data isn't all in yet and will be reviewed in total in the spring newsletter.

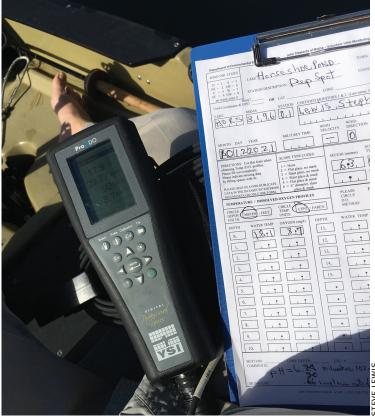
Water Quality Monitoring

The monitoring of water quality has been occurring since 1970. This has been done by both KLWA volunteers and Lake Stewards of Maine (formerly known as "Volunteer Lake Monitoring Program" or VLMP). Monitoring first began at Kezar, followed by Horseshoe Pond in 1974, then Cushman and Heald in 1975, Farrington in 1983, Trout in 1997, and Bradley in 2006. KLWA amped up the WQ reading effort since 2009 by employing FB Environmental. They use both manual and automated measurements that are funded both by KLWA donors and various grants.

To be confident volunteer—gathered data is accurate and useable in general studies and even for possible legislation input, the volunteer monitor must be trained, tested, and certified on a yearly basis. I have been taking data on Horseshoe Pond since 1996, typically two times a month from May through October. It involves going to the deepest spot in the lake, about 40 feet deep, and taking various measurements.

Gathering Data - Horseshoe Pond

First, I measure the water clarity by lowering a black and white



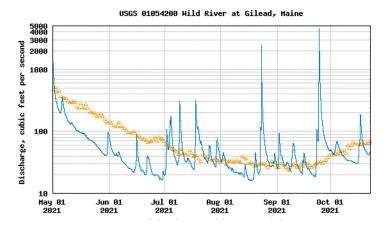
Collecting Horseshoe Pond water quality date

Secchi* disc until I can't quite see it anymore (typically about 20+ feet deep). Then I take an oxygen and temperature reading every meter until reaching the bottom (about 12 meters). It's important to take the readings at the same time of day on similar weather days. I pick late morning on calm, clear days.

I send these readings to the Lake Stewards of Maine HQ in Auburn, Maine, three times over the season, where they check over the readings and alert me to any problems. To date, Horseshoe Pond has received a clean bill of health.

*Angelo Secchi, Italian astronomer (1818-1878)

Wild River Flow



2021 Horseshoe Pond Secchi Depth Readings



5/4/2021 5/24/2021 6/13/2021 7/3/2021 7/23/2021 8/12/2021 9/1/2021 9/21/2021 10/11/202110/31/2021

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Best practices for a shoreland path

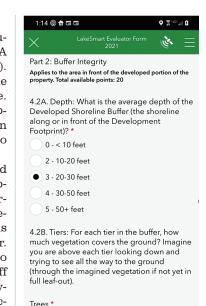
a voluntary and non-regulatory program designed to educate owners to implement restorative changes that collectively will have a large, long-term, positive impact on the lake. We found that owners don't know what they don't know. A natural, multi-tiered, vegetated buf-

fer and healthy septic system is the best protection for the lake. Many remedies to past digressions are quite simple, but owners don't always realize how their activities affect the lake, and are unaware of how to help. Once you know what to do, you can take action.

How does it work?

Sign up for a LakeSmart evaluation appointment at the KLWA website (kezarwatershed.org). Early evening and daytime appointments are available. If there are no convenient appointment times, send us an email at KLWA@gmail.com to make other arrangements.

A Maine Lakes/LEA trained evaluator will visit your property. The evaluator will perform a standardized review developed by Maine Lakes. This review takes about one hour. The goal of an evaluation is to eliminate or minimize runoff into the lake with the following best management practices: (1) basic landscaping techniques and (2) assuring a robust, vegetated, natural buffer to promote interception and infiltration of runoff, resist erosion, and extract nutrients from infiltrated water.



(woody vegetation >6' tall, including both trees and large shrubs)

0 - Very little of the ground is covered

A sample question from a LakeSmart evaluation.

KLWA Vigilance Pays Off

by RICK PILLSBURY

t the KLWA Annual Meeting in July, "vigilance" was said to be the Association's top priority. We reported on activities at Evergreen Valley in the Fall 2017 and Summer 2108 newsletters, voicing concerns about development plans by the new owner, Harold Brooks. This provides an update and current status of the situation.

As background, Brooks initially planned to develop the Evergreen Valley property for various outdoor group activities and gatherings that were judged to threaten the Kezar Lake Watershed. Concerned citizens in the Watershed and Stoneham mobilized to respond. Legal activity ensued between Mr Brooks and the Evergreen Valley Inn over replacement of the Inn's faulty septic system located on Brooks' property as well as control of the Inn going forward.

Litigation concluded with agreement to replace the septic system and retain the existing ownership and management of the Inn. Fund raising, planning and a matching grant from the State came together this past summer and bids for the work went out. We hoped the project would be completed this November / December before the weather closed in.

A glitch, however, popped up when the State reported the approved specs for the new septic system were outdated and needed rebidding. After a rapid regroup, financial review plans are back on track with hopes to break ground this year. If not, the Inn should be protected since the delay was not their doing.

Meanwhile, we learned Mr. Brooks is now planning to construct an RV/tenting park on his Evergreen Valley property. To date there has been no activity. Fortunately, we have an ally in the Maine DEP, which has rigorous permitting standards.

We will keep you informed. Your generous financial support funds our continued vigilance. Thank you.





Safety Check-up on Kezar

by tom gilmore

It is a pleasure to report that again this past summer Kezar Lake was a very safe place to boat. No serious incidents were reported and anecdotally the marina, area restaurants, and numerous lodging establishments all reported a record summer season.

Turf Ramsden did his usual exceptional job as Lake Patrol Officer and we are pleased to report that he has agreed to return next summer. The lake benefits from his calming and professional presence.

Lest you think Lake Patrol activity amounts to just a boat ride during a summer day on a beautiful lake, imagine being on the water with temperatures in the 90°s and humidity you could cut with a knife. Thank-

fully those days are few in number. Turf spent a total of 216 hours on Kezar Lake, conducted 514 safety checks, and gifted 109 whistles. The contributions to safety are self evident.

Our collaboration with the State of Maine Navigational Aids Division of the Bureau of Parks and Lands continued into its second season. Every two weeks we did a visual inspection of Kezar's 47 buoys to make sure of proper positioning and functionality. The State simply could not keep up with its responsibilities without our help.

During the summer an important issue was raised concerning the placement of "Headway Speed Only" buoys. The question was whether a particular buoy could be

moved 500 feet to a different location in order to mitigate shorefront wave action on a particular property as boats slowed to comply. The answer lies in Maine boating law which states "Headway Speed Only" must be maintained within 200 feet of any shore. When an area is greater than 400 feet across it cannot be marked as a Headway Speed

Zone. All such buoys on Kezar are in compliance with the law, and cannot be moved.

Finally. a closing word on safety. When you step in to drive your boat or allow someone else to do so, please think safety. It is primarily through your continued efforts that Kezar will remain the very safe boating lake that it is and always has been.

HELP YOURSELF. HELP THE KLWA.

Make a Qualified Charitable Distribution (QCD) from your IRA to the 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 qualified non-profit organizations such as KLWA, a 501 (c)(3) non-profit. Roth IRAs are not qualified. If you are interested in making a QCD to the KLWA, contact the firm that manages your IRA. Thank you for your support.

Cushman Pond 27-year-long milfoil eradication complete!

by DIANE CARACCIOLO, LIPPC CHAIR

his summer, after 26 years of battling an insidious milfoil infestation, caretakers of Cushman Pond declared that they have finally eradicated this stubborn green foe. Residents first discovered variable-leaf milfoil in 1995, perhaps unwittingly brought by bait fishermen who move traps from pond to pond.

Over the past 26 years, more than 150 people have participated in the milfoil removal effort, which collectively has taken thousands of hours. In 1998, an aquatic herbicide was applied to the infestation and isolated from the rest of the pond. Following the treatment, snorkelers and divers removed recurring growth by hand.

The Maine Department of Environmental Protection considers a water body to be milfoil free if the plant has not been found for three consecutive years. Eradication is rare; only a small number of infestations have been successfully cleared. The last time eradication workers found milfoil in Cushman Pond was in August 2018. When the final dive of the 2021 season was complete and the divers came out of the water and declared nothing had been found, champagne flowed, cake was served and the milfoil eradication trophy was passed to the two well-deserving divers. Over the next few years the pond will continue to be monitored so that this milfoil-free status can be maintained.

Congratulations to everyone who has participated in this tremendous effort! ${\color{gray} \blacktriangle}$



Left: Scott Gregory, Right: Doug Faille

Greater Lovell Land Trust

by ERIKA ROWLAND, EXECUTIVE DIRECTOR

onservation happenings in our surrounding watersheds have definitely kept Greater Lovell Land Trust on its toes over the last several months and will continue to do so through year's end.

Summer kicked off with a bang when we hired three interns to support our work in 2021. The combined muscle and brain



power of three interns, two from Kezar Lake and one from Sweden, contributed enormously to the summer's diverse mix of programs, activities with Lovell Rec, and stewardship across GLLT's 3,000 acres of owned lands. In addition to new signs at all of our trailhead parking areas, check out the customized GLLT posters now displayed at each of the town offices in our service area; one of three major projects undertaken by the industrious next generation group.

Speaking of Sweden (and the Kezar River watershed that it is part of), GLLT added its first conservation easement in the town to its portfolio of conserved lands. The 282-acre, forested property encompasses the top of Popple Hill. It is located in an area of climate resilient landscape and enhances north-to-south connectivity for wildlife in this relatively undeveloped watershed in the state-recognized Upper Saco River conservation focus area around Kezar and Lovewell Ponds.

Ponds and aquatic organisms were one theme of GLLT's programs this year. Lots of time was spent on Charles Pond at GLLT's newest reserve, including daily visits during a two-week turtle (and whatever else happened to appear in our traps) survey in the late spring. In addition, kayak groups of all ages paddled Heald, Bradley, and the Five Kezar Ponds, as well as learned about fairy shrimp, dragonfly emergence, and, everyone's favorite, leeches. Lots more is planned through the colder months, so subscribe to our weekly email to get announcements about scheduled events, opportunities to get out, and photos from the trails. Sign up on our website: gllt.org/events.

Lastly, GLLT is now firmly on the path to land trust accreditation through the national Land Trust Alliance. We were selected for consideration in the lottery in September (the only Maine land trust chosen), and we will be diligently completing various application requirements through March 2022. This is an important step in demonstrating GLLT's commitment to professionalism in its conservation practice.

GLLT's mission is to protect and preserve the ecosystems of the Kezar Lake, Kezar River, and Cold River watersheds for the benefit and enjoyment of the natural and human community in the towns of Lovell, Stoneham, Stow, and Sweden today and as a legacy for the future. Consider a conversation about creating your own conservation legacy in this lovely region of lakes, ponds, mountains, and forests.

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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