

Water quality team loading up. Don Griggs with Biologist Laura Diemer and Hydrologist Maggie Burns of FB Environmental.

Record Water Quality in Upper Bay

by HEINRICH WURM

his July we recorded the best clarity measurement in Kezar Lake's Upper Bay in close to 50 years. Clarity is measured as the depth to which the 10-inch white disk, named after Angelo Secchi, remains visible when lowered into the water. On July 19, that depth was 12 meters or 36 feet.

Several factors contributed to this memorable event. In May and June, pine pollen and algae growth lowered Secchi disk readings. In July, as the lake warmed and daylight increased, algae-consuming zooplankton emerged, contributing to increased clarity. Low precipitation in July further contributed to the record reading.

Another high point was the continued rise in pH, both in lake and ponds, indicating less acidity and more favorable conditions for micro- and macro-organisms. Our consulting limnologists believe that two snowy winters with a gradual snow melt contributed to this improvement.

On the down side, a recent review of water temperatures in Kezar Lake showed a gradual but steady increase in measurements above 80°F in all lake basins and ponds. In the Lower Bay, this was again accompanied by clouds of submerged algae known as metaphyton. Look for a complete report on 2018 water quality on our website in late January 2019.

As I learn more about lakes and lake science, I come to realize that we are not even close to being able to predict a lake's future based on a few data points. Factors and scenarios potentially damaging to a lake are driven by a whole host of variables, some natural, some man-made. This understanding leads to the

conclusion that anything we can do to keep our lake and ponds healthy, should be done. If we have an opportunity to decrease run-off by planting a few shrubs along the shoreline, let's do it. If rain water carries sand and debris down your camp road, put in a water bar. Our *Lake Dweller's Handbook* is a valuable resource for anyone with concerns for the lake. If you didn't get a copy this year, look for one in the spring.

Finally, I am very pleased to announce that we now have seven certified water quality monitors in our midst. Certified by Lake Stewards of Maine, formerly VLMP, these folks are licensed to measure and report water quality parameters and their data will be added to the DEP data base. They are the following in the order of their years of service: Steve Lewis, Horseshoe Pond; David Littell, Farrington Pond; Heinrich Wurm, Lower Bay; Eric Ernst, Middle and Upper Bay; Andy Chakoumakos, Trout Lake; Bob Winship, Bradley Pond; and Sue Fulshaw, Cushman Pond. Welcome and thank you for taking this initiative.





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Kezar Lake Watershed Association

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President's Message

by JIM STONE

hope everyone had a safe and enjoyable summer in this magnificent watershed. Each year I use this newsletter to comment on the state of the KLWA and I am happy to tell you that we had a very successful year. Our Annual Meeting had record attendance; our talks at the library on our Loon Project and the state of the fishery on Kezar Lake were very popular; and as of this writing, membership is up 25% over last year. The articles within will update you on our activities and inform you of developments in the watershed.

You might notice that for the first time in a while there are no articles reporting on the US Forest Service's Albany South timber harvest or potential development in the Evergreen Valley/Cold Brook watershed. The reason for this is that there is no new information on either. We have an excellent relationship with the Forest Service and are maintaining a dialogue with them on their project. We will be monitoring the harvest, which is expected to begin in December 2020, and will keep you informed of its progress. Regarding Cold Brook, we are not aware of any new developments at this time, but we are continuing to monitor the situation and we think we have the resources in place to respond to any developmental threats to the watershed.

None of what you will read about in this newsletter could be accomplished without our dedicated and hard working Board. It is my honor to serve with them.

I am also delighted to tell you that Laura Robinson has been elected by the Trustees to the Board, filling our last vacant position. Laura has been on the lake for 18 years; is a passionate birder; and has taken an active role in the Loon Project.

Finally, I'll end with my usual plea. Your KLWA receives a significant portion of its annual membership contributions in the fourth quarter. If you have already donated, we thank you. If you are a fourth quarter contributor, please use the enclosed remittance envelope to continue your support. We operate the KLWA on a break-even basis every year, so your support is critical to our survival.





Wake Up to Wakes

by DON GRIGGS

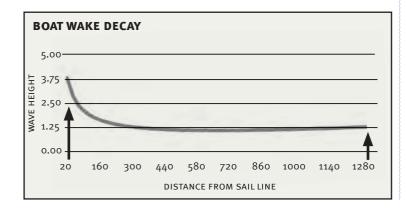
n important part of the KLWA mission is to be aware of anything that might negatively impact the watershed. This year we learned something new that merits our attention. You may share our surprise.

We learned that the lake's own waves can be harmful in a number of ways. Of course, wind-driven waves are beyond our reach, but man-made wakes from boats are not and merit a harder look.

While all boats have wakes, boats that travel at slow speeds, such as 6 to 12 MPH (faster than headway speed but not on plane) make big wakes because they "plow the water" rather than ride on it. Also, some boats are specially designed to go slow and make large wakes (four feet) for wake boarding and wake surfing. More on that later.

The problems with large wakes are the following:

1. They impact water quality by eroding the shoreline, scouring the lake bottom, and stirring up phosphorus, which may speed up aquatic growth. Lake bottom in less than 20 feet deep is most vulnerable.



- 2. Large wakes threaten the safety of other in-water activities including kayaking, paddleboarding and canoeing.
- 3. Large wakes can damage docks and moored boats.

Big wakes reduce by half for every eight-fold increase in the distance from the boat. The chart to the left shows how a four-foot wake will decay down to two feet at 160 feet from the boat and down to one foot at 1,280 feet. Thus, slow boating well off-shore tends to have less negative impact.

Boat activities that slowly "plow the water" include tubing, touring, wake boarding and wake surfing, a relatively new water sport where a person "surfs" down the slope of a large wake without a rope, just like surfing in the ocean.

To benefit all who enjoy the lake, the KLWA is developing a set of voluntary guidelines to help mitigate the adverse impact of big wakes on the water quality of our lake. The guidelines are likely to recommend that these activities occur at certain distances from shore and in water over twenty feet deep.

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.

KLWA Takes Concerns to Augusta

by LUCY LACASSE

his past summer, bass tournaments were booked on Kezar Lake for five consecutive weekends in July and August, triggering concerns about the possible negative impacts of so many competitive fishing events.

A KLWA/GLLT co-sponsored summer lecture by James Pellerin, Regional Fisheries Biologist from Inland Fisheries and Wildlife, was well attended and provided a forum for some dialogue.

To further the conversation, representatives from KLWA and the Lovell Invasive Plant Prevention Committee traveled to Augusta on September 6 to meet with Francis Brautigam, IFW's Fisheries & Hatcheries Division Director, who is responsible for managing bass tournament policies.

Expressed concerns included the following:

- There is an increased risk of introducing invasive species because of boats traveling from infested waters.
- Lack of knowledge and/or adherence to tournament rules and state boating laws can cause safety issues and shoreline erosion.
- Malfunctioning live-wells put fish at risk.
- Increased stress to fish and the risks of delayed mortality are compounded during the hot summer months of July and August. With climate change, summer water temperatures in Kezar Lake are increasing.

To mitigate these risks, KLWA has asked that there be no more than three bass tournaments scheduled for any Maine body of water during the hot and busy months of July and August.

During 2018, there were a total of 264 tournaments scheduled in Maine from April to October. If the proposed policy had been initiated (only three per water body in July and Aug), only ten tournaments would have been denied permits of choice and asked to seek another time or body of water. That is only 3.9% of the total number of permits granted. KLWA does not think that this is an unreasonable request.

Though Brautigam expressed reluctance to limit access to any body of water, we emphasized that KLWA was not asking to reduce the over-all number of tournaments (max of seven allowed on Kezar), but to simply limit the number during July and August.

KLWA will follow up with Francis Brautigam and will keep you posted. ${\color{gray} \blacktriangle}$



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Fewer Fish due to October 2017 Storm

by LUCY LACASSE

his summer's Brook Trout Survey was the third year of collaboration between KLWA and the White Mountain National Forest to gather baseline data on Brook Trout populations prior to potential future impacts from upstream logging activities and climate change. The surveys have been conducted at multiple sites within Great and Beaver Brooks.

This August's survey had a mild glitch with one day having to be rescheduled because of rain, which resulted in fewer volunteers. Fortunately, the Forest Service was able to wrangle additional helpers. Huge thanks to all who participated.



Brook trout in net



Nets ready, surveyors await trout

The waters were relatively high, but the overall Brook Trout numbers were down, especially for young-of-the-year fish. This can most likely be attributed to a major storm last October, which would have flushed out many of last fall's freshly spawned eggs. Numbers of fish in the three- to six-inch range were also slightly down. But as Mark Prout, Fisheries Biologist from the Forest Service stated, "despite the drought, floods, and heat of the last three years, all age classes are still present at all sites." This is good news.

Of particular note were three young-of-the-year salmon caught in Great Brook. That sample site is far upstream, so last October's rains must have enabled the adults to leap the "first impediment," a feat that hasn't been attainable since 2012 because of low waters. We will try to get a proper salmon redd count this fall, after they spawn in November.

With regards to the Brook Trout Survey, Jake Riley of Stantec, will soon draft a summary of our three year's of data that will be posted on the KLWA website. \blacktriangle

Turf Ramsden Makes a Differnece

by tom gilmore

he summer of 2018 was marked by a very successful Lake Patrol season. I would like to acknowledge and thank our new Lake Patrol Officer, Turf Ramsden. He has lived in Lovell for many years, serves as a Lovell Selectman and has experience dealing with people of all ages in a calm and effective way.

Turf brought new skills and enthusiasm to the position. He is a huge asset to KLWA and I am happy to report that he will be back next summer. Lee Conary, owner of the Kezar Lake Marina said, "It was so nice this summer as there wasn't a single complaint. In fact, everyone had only good things to say about Turf." This reflects well on everyone. Thanks for a great summer, Turf.

The "successful summer" we had was measured in a number of ways. As of season's end, we handed out 151 whistles (Maine law requires that every kayaker and paddleboarder must wear a life jacket AND carry a whistle), conducted 51 boat assists, met with State Wardens on the lake 16 times, helped with 22 swim assists, and performed 290 boat safety inspections. There can be

no doubt that Lake Patrol contributed greatly to safety on Kezar Lake, one of our highest priorities.

Finally, a brief note on Kezar Lake buoy maintenance. At our annual meeting in July, a concern was raised that some buoys, particularly in the Lower Bay, might be out of position. Clearly this would represent a serous safety concern and was immediately addressed by KLWA.

Responsibility for lake buoy maintenance rests with the Navigational Aids Supervisor at the Maine State Bureau of Parks and Lands. The supervisor responded right away to our query and provided the following information:

Kezar Lake has 47 buoys.

Every buoy is inspected for functionality and location each year shortly after ice-out. This year, that inspection was done on May 7.

All buoys are then inspected monthly during the summer, focusing primarily on preventive maintenance. ${\color{orange} \blacktriangle}$

The Loon Project

by HEINRICH WURM AND LEE ATTIX

his was the first year of KLWA's initiative to study *Gavia immer*, the Common Loon, in our watershed. Funded by the Stephen and Tabitha King Foundation, the project "Sustaining the Loons in the Kezar Lake Watershed: A Community's Response" brought out a number of enthusiastic and dedicated volunteers ("loon rangers"), who under the guidance of Lee Attix, principal of Loon Conservation Associates, organized what turned out to be a very successful season of citizen science in action.

We observed adult loons establishing territories early in the season and nesting in almost all territories (some very challenging to find), and we closely monitored chicks hatching and their fight for survival. We all enjoyed many hours of observation, experienced excitement over not one, but three successful nesting efforts using nesting platforms (a first for KLWA), as well as disappointment over failed nests, disappearing chicks and abandoned eggs. In the end, we all learned a great deal and we look forward to 2019.

By the numbers:

Overall, we conducted over 500 loon surveys, identified and mapped the territories of 15 loon pairs, and confirmed 13 nest attempts on Kezar Lake and six surrounding ponds that make up our watershed. Seven of these nesting attempts were successful and resulted in hatching ten chicks, five of which survived and are still out there, being actively monitored as fall temperatures chill the water, and migration beckons.

We were also successful in banding eight adult loons, all parents of recently hatched chicks. Banding allows us to better follow the life cycle of "our" loons in years to come. Samples obtained during the banding effort allow us to check contaminant levels in the loons, a key component of loon conservation, as well as an indicator of possible issues with degrading lake water quality.

What have we learned:

During May and early June, loons may nest anywhere and lay eggs almost overnight, once a nest has been built. It takes a trained eye, good survey technique, patience and dedication to find and monitor the outcome of these nests.

Loon behavior varies greatly. Some are extremely shy while others seem to either ignore an approaching kayak or may approach to "check you out."

Our loons appear healthy and sampling has not revealed any worrisome results.



Persistence and proper placement are key components of the slow and challenging task of enticing loons to use artificial nest rafts. Loon pairs that used rafts in 2018 had a higher success rate than pairs who nested naturally, and they account for four of the five chicks that survived.

Volunteers make it happen. The success of the project this first year is a direct reflection of the effort, passion and dedication of over 15 volunteers.

What's next?

We hope to entice even more pairs to choose platforms. Next year, we will place one on Trout Pond since there are no islands for nesting, forcing loons to nest on the mainland where they are at greater risk to mammalian predation.

Placing and storing these nesting platforms is hard work and requires an organized team effort, so we are now seeking volunteers who can spare a few days in late April/early May to get the season going.

We hope to have a resident loon ranger on each waterbody throughout the watershed next season. Good binoculars, safe boating practices, patience, and accurate data collection are all that's required.

As you can see from the accompanying images, we have some outstanding photographers among our loon rangers documenting the highlights of this season and we are planning a major display at next year's annual KLWA meeting.

Anyone interested in volunteering for this project, please get in touch with me. \blacktriangle



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News From Greater Lovell Land Trust

by JILL RUNDLE, INTERIM EXECUTIVE DIRECTOR

he Greater Lovell Land Trust has wrapped up its most successful summer program yet. Some of our summer walks and talks saw capacity crowds of families and children, and the GLLT/Lovell Rec summer camp kids even put on a program about exploring the natural world. Sharing fascinating presentations from experts and passionate volunteers with our community is a major part of our mission, and outings continue through the year, along with programs for kids in our local schools. Check gllt.org for dates.

Along with the busy schedule of walks and talks, our Associates, Aidan Black and Dakota Ward, worked with many new volunteers who came out to help with trail repairs, cutting views that were becoming obscured, and working together to make improvements for the enjoyment of the community. Volunteers are the mainstay of the GLLT—in the field, on the walks, monitoring our properties and easements, and in the important work of stewardship. There are many ways to share the joys of our area, and volunteers are welcome all year.

The ambitious goal announced at our Annual Meeting of bringing our procedures into compliance with Land Trust Alliance accreditation standards is on track. The raised standards will bring us to a new level that could open new opportunities for collaboration. The accreditation project will take several years to complete, and board members are stepping up to help with the records work, while Associates and volunteers bring the fieldwork and documentation up to date.

In early October, I attended the Land Trust Alliance conference in Pittsburgh and participated in regional discussions about the importance of land conservation in facing the threats



of climate change. The recent report of the KLWA climate change observatory is a timely baseline for the conservation work ahead in our community.

Finally, we expect to begin the search for a new Executive Director in the months to come. With all of the activities, work, fun, and exploration that the past few months have brought, the GLLT is poised for the next phase of conservation and education work for our region. We look forward to seeing you and welcome you to join us. 🌢

LIPPC Keeps "Eyes on the Water"

by DIANE CARACCIOLO

he 2018 CBI season was a busy one. Total inspections for the year were 3,456 vs. 2,831 in 2017, an increase of 22% and our busiest year ever. Inspectors found 48 plants on boats—all non-invasive. Numerous other surrounding CBI programs, however, reported saves on boats coming into their lakes, confirming the importance of this first line of defense. In addition, two new infestations were announced by Lake Stewards of Maine (previously VLMP) on Cobbossee Lake in Winthrop.



As a result of the support of the Town and the community, we were able to keep our program running through mid-October. We would like to thank the KLWA and the GLLT for adopting a day (or two) at the ramp. It is an important part of our ability to attain grant funds and it also spreads awareness. We appreciate everyone who donates their time.

Our education committee had a busy summer as well. First, we put together an amazing float for Lovell Old Home Days with a slogan of "Know your weed, man!" It provided a fun way to spread awareness to the community. Science in the Sand, featuring the "plant ladies," also spent a morning at the Town Beach during the Lovell Recreation swim lessons. The kids look forward to this visit, which fosters awareness at the youth level. Finally, an awareness sheet was provided to all renters through Kezar Realty; our thanks to them for passing this information along. Education is the key to awareness.

Over the summer, our entire watershed was surveyed by 62 volunteer stewards who make up an incredible team. I know of no other watershed that has such an amazing program. Thanks to everyone who volunteers their time.

In addition, we contracted Lake and Watershed Resource Management Associates to do a professional survey of one third of the Kezar Lake Watershed. This year, the Upper Bay, Middle Bay, and Narrows were surveyed, along with Cushman Pond, the ramp at Horseshoe Pond, and two locations that were suggested by stewards in the Lower Bay. We're thrilled to report that no invasive aquatic species were found. The more "eyes on the water" the more likely we are to stop an invader from entering our watershed.

FALL 2018 / WATERSHED VIEWS / 7

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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Kezar Lake Watershed Association

