

# ENGAGING YOUNG ADULTS IN LAKE CONSERVATION EFFORTS

*A Study by Megan Doughty, Trey Michonski, Caleb Grover, Justin Evans*

The Maine Lakes Society (MLS) was recently involved in a study by four UMaine Farmington (UMF) students who wanted to assess young people's level of involvement with, attitudes towards, and barriers to getting involved with conservation organizations. These students met with focus groups comprised of other students on campus, in addition to staff and board members from the MLS and 7 Lakes Alliance in Belgrade Lakes. Their goal was to assess the strengths of these groups for getting young people involved. The students also set up a survey for fellow UMF students that asked questions about their awareness of environmental issues and their interest in getting involved.

The results of the study are mixed but very interesting, and they point to a huge potential for increasing the level of involvement of college-aged students in the activities of MLS and other local conservation groups. Some good news from the student survey responses (103 respondents) include:

- 72% feel fairly informed about the environmental issues facing lakes and ponds
- 80% think it is important to solve local environmental issues
- 50% use lakes more than five times a year
- 30% have houses on lakes
- 50% are very willing to join environmental conservation efforts, with 26% willing to join lake and pond conservation efforts.

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The hardworking Youth Conservation Corps of the 30 Mile River Watershed Association takes a quick break from building a set of infiltration steps that uses crushed stone to slow and infiltrate runoff that had been polluting Lovejoy Pond. From top to bottom: Mitchell Root, Connor Firth, Marissa Rossi, Amber Delaney, Rylee Delaney.



P.O. Box 447  
Belgrade Lakes, ME 04918  
mainelakessociety.org  
info@mainelakessociety.org  
207-495-2301



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These responses are promising. They highlight the potential out there for college students to be more involved with an organization like MLS. If we could get a quarter of UMF students involved in some area of lake conservation, that would mean 450 new volunteers out there to look for invasive plants, monitor water quality, inspect boats, volunteer with Lakes Alive! or engage with LakeSmart.

However, some of the other student responses are less promising. For example:

- 73% are unaware or very unaware of what is going on with the Clean Water Act
- 28% never hear environmental news through any kind of media
- 38% hear environmental news just once a week

It is clear that getting news and information out to this group is a challenge. Questions about their use of media showed, somewhat surprisingly, that Facebook was the leading environmental news source, followed by Instagram and YouTube. The leading barriers to involvement included not knowing enough on the topic (71% of respondents), being too busy (55% of respondents), and meetings or events located too far away (35% of respondents). Almost 10% of respondents said lakes did not affect their everyday life, and 20% identified not having friends who would join them in conservation activities as a barrier.

Clearly, MLS has some work to do to engage this audience so critical to the future of our organization. We have already increased our Facebook presence, and this survey supports that as a worthy effort, especially for sharing lake conservation news. Hosting more events and finding engagement opportunities on campuses could help students learn more about the issues and feel more comfortable jumping in and getting involved. We are encouraged by these results, and hope to work on ways to engage more students with MLS work in the coming years.

For more information, and to read the full study, visit [mainelakessociety.org/umf-study](http://mainelakessociety.org/umf-study).

## Do you know a young person who might be interested lake conservation opportunities?

Watershed and lake associations across the state offer employment opportunities for high school and college-age youth to work as water testers, invasive species managers, boat inspectors, or on Youth Conservation Corps crews. For young people interested in making a difference and helping protect our lakes, these opportunities offer great work experience in the field. Friends of the Cobbossee Watershed, 30 Mile River Watershed Association, Lakes Environmental Association, 7 Lakes Alliance and Lake Stewards of Maine are just some of the organizations regularly hiring seasonal youth staff each spring. Check with your local watershed organization for additional opportunities

## Letter from Our President

Dear Friends of Maine Lakes,

Spring is an exciting time for lake lovers! We eagerly watch the snow melt from the landscape and count the days until the ice is off the water. Just this past weekend I watched as two men cautiously removed the last remaining ice shack on Crowell Pond in Vienna. This is the first pond to be dotted with shacks in December, but also the first to start showing the signs of spring.

As the songbirds return to my yard, and geese fly in formation in the skies above, I reflect on the long, snowy winter that is now behind us, and look forward to the busy summer season ahead! I'm guessing many of you are also looking forward to migrating north to visit your favorite Maine lake?

Here at Maine Lakes Society we have much to celebrate over the past few months! Advocacy from our membership was at a record high to support funding for LakeSmart and the Lake Stewards of Maine/Volunteer Lake Monitoring Program (see page 7). Your voices were heard! Our flagship program, LakeSmart, is running at peak performance under the direction of our LakeSmart Coordinator Maggie Shannon to support existing lake associations, and to expand into new areas of the state (see page 8). Our exceptional LakesAlive! education program aboard our 30-foot floating classroom has more trips booked in 2019 than any year since we began running the program! Our new Executive Director, Susan Gallo, is working diligently and showing true leadership capability, working with our conservation partners and our active board and board committees to support our mission and execute our strategic plan.

Our conference committee is deep into planning for the 49th Annual Maine Lakes Conference to be held at the University of Maine at Farmington on June 22nd. We have an excellent line-up of speakers to headline our conference theme: JUMP IN! TO PROTECT MAINE LAKES. We hope you'll jump on over to UMF to join us for a fun day of learning, sharing, and meeting new and old friends alike. Check out the conference schedule (page 5) and check our website for registration information and program updates.

Sending you all well-wishes on a warm spring breeze and a successful summer season! See you at the conference in June!

Sincerely,



Jennifer Jespersen  
*President, Maine Lakes Society*



## Notes from the Executive Director

I am closing in on six months at the helm of Maine Lakes Society, and so far it's been quite a ride! I want to thank all of you who reached out with phone calls and messages of welcome and support. I really appreciated them all, and they helped curb my anxiety about stepping into this new role. I get asked almost every day how it's going at Maine Lakes Society, and I am happy to say my answer is always a positive one! I say it's challenging and busy, with more to do than time in the day allows, but I am so grateful to work with experienced and talented staff, an engaged and motivated board, and so many helpful colleagues in other lake organizations and nonprofits around the state.

I wanted to share a little bit about what the staff has been up to the last six months. Maggie Shannon is back with more enthusiasm than ever to lead LakeSmart through the 2019 season (see page 8). She has been busy setting up trainings, including a webinar for anyone interested in learning more about starting up new LakeSmart programs; getting in touch with all the LakeSmart coordinators, including our regional partners; and ramping up for a busy summer ahead.

Drew Morris joined the staff just before I did, and has been a steady, calming influence in the office. He has jumped in to manage our website and social media, posting news and articles to our Facebook page each week. Be sure you "like" us on Facebook to keep up to date. He has been busy with Conference planning (see page 4) and getting our online registration to work without a hitch. He's helping organize our Lakes Alive! programming for the summer, and he is also the editor of this fine newsletter. Read more about Drew on page 11.

With help from Maggie and Drew, I have jumped into all aspects of Maine Lakes Society the last six months. After wrapping up 2018 with a newsletter and a year-end appeal, the legislative session rapidly got into full swing (see page 6 for an update). I coordinated with other lake organization staff to develop and deliver testimony, helped pull together a 2019 budget, wrote several grants for support of our programming, joined the many board committee meetings that got rolling in January, and attended a couple of great conferences that made me so appreciate Maine Lakes Society's work and the stature it has in the lake conservation community. I am looking forward to the next six months, seeing bare ground at the office in Belgrade Lakes, and open water all around! Hope I get to meet more of you in person and hear more about your interest in conserving clean and healthy Maine lakes.



Susan Gallo



Please Join Us at the  
**49TH ANNUAL LAKES CONFERENCE**  
JUNE 22, 2019, UNIVERSITY OF MAINE AT FARMINGTON

Our 49th annual Lakes Conference will once again be held at the University of Maine at Farmington with a theme of “Jump In!” We hope participants will “jump in” to learn about ways to monitor lake health with drones, identify lake algae, effectively communicate lake conservation messages, and implement LakeSmart programs.

Our keynote speaker, Whitney King, will be highlighting the value of protecting water quality with a case study of East Pond. Increasingly severe algal blooms on that lake led to a \$1.5 million alum treatment to restore water quality,

largely funded by private residents. Hearing about lessons learned from East Pond will be a highlight for all conference attendees.

Early bird registration is available now at [mainelakessociety.org/registration](http://mainelakessociety.org/registration). The \$35 member rate is good through May 31. After that, the member rate will be \$40.

We are also seeking nominations for both the Lake Watershed Association of the Year and the Lake Steward of the Year. To download the nomination form, please visit [mainelakessociety.org/nomination](http://mainelakessociety.org/nomination) or email [info@mainelakessociety.org](mailto:info@mainelakessociety.org).

### **RAFFLE DONATIONS NEEDED!**

We welcome any and all donations to our popular raffle, let us know what you have and we'd be happy to add it to our impressive list of items (check [mainelakessociety.org/raffle](http://mainelakessociety.org/raffle) for the growing list!)

### **CONFERENCE SPONSORS NEEDED!**

Have a business and want to reach more than 200 people who are interested in lake conservation? Consider supporting the conference as a sponsor and we'll recognize your business and use your logo on conference materials. FMI, visit [mainelakessociety.org/maine-lakes-conference](http://mainelakessociety.org/maine-lakes-conference).

### **NOW ACCEPTING 2019 MAINE LAKES SOCIETY STEWARDSHIP AWARDS NOMINATIONS**

Volunteer lake stewards are the front lines of lake protection in Maine. The Maine Lakes Society seeks your help to identify the extraordinary leaders among us so that we can celebrate and learn from them.

We are now seeking nominations to honor individual lake stewards and associations whose contributions are making a real difference for our lakes. Winners will be honored on June 22 at the 49th Annual Maine Lakes Conference at the University of Maine at Farmington.

Who inspires you? Let us know!

### **Lake Steward of the Year**

Do you know an outstandingly inspiring person in your lake community? Someone who has sparked important programs and seen them through to implementation? Someone who inspires others to give lake conservation their best shot, too? We want to hear about dedicated stewards who are leaders in their communities.

### **Lake or Watershed Association of the Year**

Are you proud of your lake association? Is it active in support of education, invasive species prevention or control, advocacy, and water quality protection? How about outreach? Is your membership energized and informed? Tell us about your activities and programs so we can recognize and learn from real achievements.

Nominations are due by May 31, 2019. To download the nomination form, please visit [mainelakessociety.org/nomination](http://mainelakessociety.org/nomination) or email [info@mainelakessociety.org](mailto:info@mainelakessociety.org).

Friends of Wilson Lake (FOWL) was recognized with a legislative sentiment sponsored by Senator Russell Black (R-Franklin) in the Maine Senate on Thursday, March 7. The legislative sentiment recognizes FOWL for their achievement of being named the 2018 Lake Association of the Year by the Maine Lakes Society for being a leader in lake protection and inspiring other lake associations to be proactive in protecting Maine's valuable freshwater resources.



From L to R: Barry Hathaway, FOWL Board Member; Rhonda Irish, Wilton Town Manager; Martha Lively, FOWL Board Member; Robert Lively, FOWL President; Sen. Russell Black; Jen Jespersen, Maine Lakes Society President, and Peter Campion, FOWL Board Member

# LAKES CONFERENCE TENTATIVE SCHEDULE



## MORNING SESSION (North Dining Hall)

TIME	TOPIC
7:30 - 8:30	Registration and Breakfast
8:30 - 9:00	Maine Lakes Society Annual Meeting
9:00 - 9:15	Welcome and Conference Overview
9:15 - 9:20	President's Welcome
9:20 - 10:05	<b>Plenary Speaker—Maggie Shannon,</b> Community-Based Social Marketing

TIME	SPEAKER	TOPIC
10:40 - 11:25	<b>Key Note—Whitney King,</b> Colby College	Proactive Partnerships to Improve Lake Water Quality: An Example from East Pond
11:25 - 11:40	<b>Susan Gallo,</b> Executive Director, MLS	Lake and Watershed News from the Frontlines in Augusta and Washington DC
11:40 - 12:00	<b>Award Presentations:</b> Lake Steward and Lake Association of the Year, and LakeSmart Gold Achievement Awards	

## LUNCH (South Dining Hall) - (12:00 - 1:00 pm)

### WORKSHOP A: ACTION & COMMUNICATION FOR LAKE ASSOCIATIONS

1:00 - 1:35	<b>Tom Mullin,</b> Unity College	Interpretive messaging for your signs, publications, way-sides and kiosks
1:35 - 2:15	<b>David Rocque,</b> Maine State Soil Scientist	Septic Systems, the hidden threat: How to Identify High Impact Systems in your Watershed
2:15 - 2:55	<b>Susan Gallo,</b> Maine Lakes Society	How To Better Advocate for your Lake at the Local, State & Federal Level

### WORKSHOP B: TECHNOLOGY FOR LAKES IN THE DIGITAL AGE

1:00 - 1:35	<b>Roberta Hill,</b> Lake Stewards of Maine	What's in the Water? A Field Guide App for Identifying the Flora and Fauna in Maine Lakes
1:35 - 2:15	<b>Kevin Spiegel,</b> Unity College	Using Drones to Understand Algal Blooms on Lake Winnecook
2:15 - 2:55	<b>Peter Countway,</b> Bigelow Labs	Algae at Your Dock: A Portable PCR Machine and Algae ID

### WORKSHOP C: FOSTERING SUSTAINABLE BEHAVIOR

1:00 - 1:50	<b>Maggie Shannon,</b> LakeSmart Coordinator, Maine Lakes Society	Effectively using Social Marketing to Create Desired Behavior Changes through LakeSmart
1:50 - 2:55	Panel: <b>Roy Lambert</b> (LEA), <b>Barbara Barrett</b> (BLA) and <b>Becky Schaffner</b> (DEP)	Mastering LakeSmart's Online Survey: A How-To Workshop for LakeSmart Evaluators

**3:00 - 3:30 DRAWING FOR THE LAKE LOVER'S RAFFLE! ~ HAVE A GREAT SUMMER!**

# ADVOCACY UPDATE

Wow! Things in Augusta sure feel different in 2019. There are many new faces in the hallways of the Capital, including new commissioners, new legislators, and of course a new governor. We were excited to hear new governor Janet Mills speak at the inauguration in January about the importance of Maine's natural resources, and it's clear that she understands the value of clean lakes to our businesses, our economy, and our people. It's been great to jump in to advocacy for Maine Lakes Society at a time when there are so many positive bills in front of the legislature enjoying widespread and overwhelming support. Here are some of the priority bills we've followed this session:

**LD 216 – An Act To Protect Water Quality by Standardizing the Law Concerning Septic Inspection in the Shoreland Zone:** This bill, sponsored by Jessica Fay, passed the House 97–42 and was signed by the Governor on Earth Day (see below). The bill will expand requirements for septic inspections for all property transfers in the Shoreland Zone, an important step to strengthening protections of lake water quality.

**LD 562 – An Act To Improve Shoreland Zoning Rules and Enforcement To Support Municipalities:** This bill, sponsored by Lydia Blume, was signed into law by the Governor on April 19. It will increase fines for Shoreland Zone violations and will require pre- and post-construction photos of the shoreline vegetation and development site be sent to the municipal permitting authority. Requiring photo documentation of shoreline vegetation has long been a goal of ours, so it's exciting to see this bill succeed!

**LD 235 – An Act to Increase Funding to Contain and Manage the Spread of Invasive Aquatic Species,** sponsored by Walter Riseman, will increase fees for the Lake and River Protection sticker. It got a strong vote out of committee, and is awaiting a floor vote soon.

Thanks to all who let their legislators know why these bill were important for lake protection, and a special thanks to all who testified in person at the hearings!



Photo © J. Stephen Conn

## Take Action! Revenue Sharing Must Be Restored to 5% to Protect Maine Lakes

**Reinstating a Broken Promise.** When Maine enacted the Minimum Shoreland Zone Regulations (SZA) in 1971, the state made a bargain with municipalities. Local jurisdictions were assigned the task of enforcing the SZA in return for 5% of state revenues to cover code enforcement and other costs. The SZA is the strongest statutory protection Maine's Great Ponds have, but over the years, various administrations have raided this fund to make up for shortfalls. Under the LePage administration, the fund was used to pay for the governor's tax cut. A law passed last legislative session would restore revenue sharing to 5% as of July 1, 2019, but Governor Mills' Budget for this biennium will supersede that law and only lift revenue sharing to 2.5% in 2020 and 3% in 2021.

**This is not enough.** You can influence the outcome of this debate by writing the Appropriations and Financial Affairs Committee saying revenue sharing should be restored to 5% of state revenues in order to support code enforcement and the SZA that protect Maine's \$4 billion lake resources. Use the new testimony portal at [mainelegislature.org/testimony/](http://mainelegislature.org/testimony/) to submit testimony to the committee.

We had a memorable Earth Day when Governor Mills signed LD 216 into law! The new law, sponsored by Representative Fay from Raymond, will require septic inspections for property transfers in shoreland zones to help keep our waters clean. Pictured (L to R): Rep. Jessica Fay, Governor Mills, Susan Gallo (Maine Lakes Society), Colin Holme (Lakes Environmental Association) and Paul Hunt (Portland Water District).



## Thanks to you, the LakeSmart funding bill received unanimous committee support!

### **LD 959 – An Act to Increase Funding for the Maine Lake Society “Lake Smart” Program and the Lake Stewards of Maine Volunteer Lake Monitoring Program,**

sponsored by Denny Keschl, was by far the most exciting bill for MLS this session. This bill would increase funding for both the LakeSmart program and the Lake Stewards of Maine monitoring programs by \$100K. It would allow us to share more funds with our regional coordinators, expand the geographic reach of LakeSmart, and help sustain the on-going LakeSmart program costs.

We are excited to report that with the help of your calls, emails, conversations, and testimony, the Environment and Natural Resources Committee voted unanimously “Ought to Pass!” We are quite certain that without the historic show of support from the entire Maine lakes community, we would not have fared so well. Thank you for all that you did. Speaking up in Augusta really does make a difference!

We hope the bill will have a successful floor vote in the house any day now, and then will go to the Senate where it will await next steps with the Appropriations and Financial Affairs Committee at the end of the session. The competition for funds will be intense, and there are no guarantees what the final outcome will be. However, the strong support of members of the ENR and the Appropriations Committees bodes well. We will be looking for more calls of support near the end of the session (probably late May or early June), and will reach out with more details when the need arises. Sign up for our Advocacy Alerts to stay informed by emailing [info@mainelakessociety.org](mailto:info@mainelakessociety.org) or visiting [mainelakessociety.org](http://mainelakessociety.org).

For now, we’re just glad to be past this one large hurdle and inexpressibly grateful to be working with a stateful of folks who make us so proud. Thank you from Susan, Maggie and the Maine Lakes Society Board of Directors

Photo © Matt MacGillivray

# WE SAID **NO** TO DIRTY WATER

The Federal Register just closed after accepting comments for 60 days on proposed changes to the Clean Water Act that would remove protections for many categories of wetlands and all headwater streams. Thank you to everyone who responded to our emails and social media posts and added their names to our Dirty Water sign on letter. We are excited to report that we heard from 173 people and that our letters were delivered to the offices of our Maine delegation. We think the letters deliver a very strong message to our senators and representatives that Mainers care about clean lakes and the wetlands and headwater streams that feed them. Thanks again to all who signed on, and an extra thanks to all who responded directly with comments to the Federal Register. Your voice will make a difference!

Susan Gallo, MLS Executive Director, on Capitol Hill to share Dirty Water sign-on letters with Maine’s congressional staff.



# in • sid • i • ous

By Maggie Shannon

/in'sidēəs/

adjective

proceeding in a gradual, subtle way, but with harmful effects

synonyms: stealthy, sneaking, indirect, treacherous

Nonpoint Source Pollution (NPS), the leading cause of lake impairment, is insidious. By definition, NPS is diffuse, minute and gradual in its encroachment on water quality. Public naiveté and the sequestration of gathering impacts in deep lake waters may obscure the drastic outcome from observers until the ultimate drop in dissolved oxygen beneath the thermocline kills fish or yields a bloom like that pictured here. Make no mistake, though not inevitable, this unimaginable future is possible for any lake in a developing watershed, however clear its water may appear today.

In 1998, the head of Lake Assessment at the Maine Department of Environmental Protection informed my lake association we had maybe 20 years to avert serious damage to water quality in Great Pond. Although it hasn't bloomed yet, its area of anoxia at depth is 35 times greater than it was in 1983, and professionally guided research suggests we haven't long to wait. Two upstream lakes in our chain of ponds bloom and a third is flirting with it at fall overturn. One of these three was treated with aluminum phosphate in 2018 and had a summerful of clear water for the first time in 30 years. It cost the community \$2,000,000 and in the words of the primary fundraiser, "It was worth every penny." This is no doubt true, but the fix is time-limited and may need to be repeated around 2040.

The point is, NPS is a Stealth Enemy, and it's important for all lake associations to arm themselves against its approach. Because it's counter-intuitive for uninformed lake dwellers to think hardly noticeable stormwater runoff could affect something as large as a lake, effective communication and site-specific remedies are wanted. LakeSmart's unique delivery system, a friendly visit from friends and neighbors, is the surprisingly powerful answer. Leading edge research confirms that person-to-person conversation within a community is the best way to bring about change in behavior; snazzy brochures, advertising, and even expert advice can't move the average person to change day-to-day acts. Think about it: lake associations are perfectly positioned to answer the need, and they (I mean you!) possess the passion, the influence, and people power to get the job done. Act now. Sign up for LakeSmart before more harm comes your lake's way. We provide instruction, all materials, ongoing counsel and technical support without cost to our anti-NPS partners.



## 2019 LakeSmart Training Schedule

### 20 Minute Webinar: You Can Save Loons and Lakes with LakeSmart!

May 3 at noon. Repeats on June 12 and July 9 at noon

### Become a Lake Ambassador! Introduction to Loon Smart and LakeSmart

July 26, 3:30pm to 5:00pm. Nickerson School, 18 Town House Road, Swanville

Refreshments and all materials provided. Bring a friend and meet other loon lovers and lake enthusiasts!

### LakeSmart Trainings for New and Returning LakeSmart Evaluators and Coordinators

LakeSmart Trainings run from 8:30am to 2:30pm. All materials and continental breakfast provided. Participants should dress for the weather, bring a brown bag lunch and expect to have fun. *Training is free, but registration is required!*

- Central: June 8** Maine Lakes Resource Center, 137 Main Street, Belgrade Lakes
- South: June 14** Sebago Lake Protection Office, Portland Water District, 1 White Rock Road, Standish
- Midcoast: June 15** Midcoast Conservancy, 270 US-1, Edgecomb
- Downeast: June 29** Eliasberg Camp on Georges Pond, 138 Cousins Road, Franklin
- North: Early August** Piscataquis SWCD, Place TBD
- Central: August 10** Unity College, 90 Quaker Hill Road, Unity

Register for all trainings at [mainelakessociety.org/events](http://mainelakessociety.org/events)





## Annual Maine Loon Count

Maine Audubon will be conducting its 36th annual Maine Loon Count on July 20th. If you'd like to join, look for sign up information at [maineaudubon.org/loons](http://maineaudubon.org/loons).

# LIVING LAKES: COMMON LOONS

*By Susan Gallo, Executive Director*

Common Loons are one of the most iconic birds of Maine, closely tied perhaps by Atlantic Puffins. Though in a battle of the birds, the Common Loon would most definitely come out on top! Common Loons are not only large birds (with a wingspan up to 46"), they are also heavy. Their solid bones help them swim and dive, with healthy adults weighing up to 15 pounds. (In comparison, a puffin weighs just over a pound. See what I mean about who would win that battle?) Males are slightly larger than females, and the only reliable way to tell the difference between the two is their comparative size. Watch for pairs on the water and see if you can tell them apart!

Male loons return to Maine as soon as the ice is out, followed shortly by females. There is no evidence that males and females spend the winter together, but they typically reunite at the same territory they held the year before. Upon returning in the spring, males and females will undergo several pair bond rituals, swimming in circles and calling back and forth to each other. Pairs will stay together on average about seven years before a new male (or a new female) pushes out an established mate. This can be an ugly interaction, and spring is often a time for mate challenges and dramatic fights over territory. It is no easy feat to successfully acquire and then keep a loon territory on a Maine lake.

By the time you receive this newsletter, loons will have started to settle on their territories, and some will be close to laying eggs. Eggs are incubated for 29 days, so look for chicks to hatch anytime from mid-June to mid-July. While everyone loves a loon chick, be sure to keep your distance, watch with binoculars, and encourage others to do the same. With your help, loon pairs will have a safe and productive summer raising chicks on Maine's lakes and ponds.



### Did You Know?

Some Common Loon pairs in Wyoming raise chicks on fishless lakes. These lakes have abundant populations of invertebrates and amphibians. Western loons are smaller than Maine loons which may allow them to survive on this alternative food source. Loons on fishless ponds are even more successful than their fish-eating counterparts in Wyoming.



### What Is Going On?

Crazy things happen in Alberta! Last summer, a loon pair accidentally tried to raise a Canada Goose gosling. The gosling spent a lot of time on the parents' backs, getting so big it almost sunk its adoptive parents. Unfortunately, fed on a diet of fish and rarely getting out of the water, the gosling was sickly and disappeared after about a month of care. Hopefully, this summer the loon will have one of their own to attend!

# MEET OUR BOARD OF DIRECTORS

Important to our success is all the behind-the-scenes work our active and dedicated board of directors contribute on their own time. To highlight the many amazing people who are committed to a future of healthy lakes in Maine, we've taken the opportunity to ask our board a variety of questions. We'll choose a member to feature each newsletter.

First up, **Steven Mogul**, our 1st Vice President, an attorney with Gross, Minsky & Mogul, P.A., of Bangor.

## *How did you learn about Maine Lakes Society?*

MLS's former executive director, Stephen Kahl, is a camp neighbor on Hopkins Pond. I believe that he was the one who brought my name to the attention of Maine Lakes Society.

## *Why did you decide to join the board of the MLS?*

After learning about the organization, and comparing its values with mine; and in light of my love of my lake, my love of fly fishing, and my love for Maine; how could I resist?

## *Is there an experience from your past that makes you more aware of your natural surroundings?*

From the time I was able to ride a bicycle, I was out exploring the woods and streams within bike-striking distance of my home in Bangor. From the age of 6, my grandfather took me fishing on the Penobscot River and Graham Lake. I wrote a middle school essay about one of those experiences. When I was a bit older, my parents sent me to a Maine summer camp that emphasized remote camping and tripping. I am constantly having experiences that makes me aware of my natural surroundings. Just standing in a stream with water running through my legs, listening to the rush of the water and the sounds of the birds, keeps me connected to the natural environment.

## *What's the single most important thing we can do to protect Maine's lakes?*

Check run off from logging and camp roads, and from camp lawns.

## *Why should younger people be involved in lake and pond conservation?*

Because the health of our ecosystems is dependent on their effort to continue what we old folks are trying to accomplish – the protection of our watersheds.

## *If you could be any animal that lives in, on or by a lake, what would you be and why?*

None. Too risky!

## *What's your favorite Maine lake and why?*

Hopkins Pond, because it's "my" lake. I spend the summer there and commute to work. It gives me peace; and cool, clean water for recreation. Most of the shoreline is protected from development and it is considered one of Maine's most scenic lakes according to the report, "Maine's Finest Lakes, The Results of the Maine Lakes Study," by the Maine State Planning Office, October 1989.

## *What's your favorite time of year on the lake?*

Autumn, of course. No blackflies or mosquitos, beautiful foliage, and brook trout in their electric spawning colors.

## *If you could visit any lake in the world, which one would it be?*

I'd like to fish Lake Okeechobee in the Florida Everglades.



# MEET OUR STAFF

**Drew Morris**, of Winthrop, joined Maine Lakes Society in October 2018 as its office administrator. Full of entrepreneurial spirit, he has experience in journalism, public relations and small business management.

## *How did you learn about Maine Lakes Society?*

A friend of mine is the husband to our board president, Jen Jespersen. Last fall, I was looking for some part-time work he said, “Hey, I know what would be a good fit for you! You need to talk to Jen.”

## *Why did you decide to join the staff of the Maine Lakes Society?*

Aside from the flexibility this position offers that allows me the time to be with my children and support my wife in her own professional career, working for a non-profit is deeply rewarding. Having been employed in the private and government sectors in the past, I wanted to try the non-profit world to be with those who passionately care for the work they do. So far, I can say I have not been disappointed.

## *Is there an experience from your past that makes you more aware of your natural surroundings?*

I’ve been fortunate, both as a child and adult, to have travelled quite extensively, from trekking the Himalayas in Nepal to fishing the Amazon in Peru. But the most-impactful experience was when I was 7 years old and my father was in the Navy and stationed in San Diego. He was returning from a 9-month deployment in the Pacific, and I had the opportunity to meet him in Hawaii and sail back to San Diego with him. At one point during the week-long journey, I found myself alone, on a deck of this huge ship, staring at the endless ocean and thinking, “Wow, I’m lucky to be part of something this big!”

## *What’s the single most important thing we can do to protect Maine’s lakes?*

Keep a healthy buffer of native vegetation around our lakes.

## *Why should younger people be involved in lake and pond conservation?*

I believe we’re at a critical time in preserving the health of our watersheds. The time I spent fishing with my grandfather in New

Hampshire as a child is a main reason why I care today. And it is why I try to spend as much time with my children in or near the water, so they can pass on this environmental respect to the next generation.

## *If you could be any animal that lives in, on or by a lake, what would you be and why?*

Definitely an eagle. To soar over Maine’s natural beauty would be amazing!

## *What’s your favorite Maine lake and why?*

My parents bought a property on Cobbosseecontee in 1990, and while I’ve not always lived in Maine since then, it has been my “home,” too. Lots of great memories with family and friends, and, in fact, our wedding reception was held on their property. Too beautiful not to.

## *What’s your favorite time of year on the lake?*

Summer is perfect for spending a day with the kids on the lake, and joining the rest of the family for cookout at night.

## *If you could visit any lake in the world, which one would it be?*

My wish came true when I spent a few years living in France with my wife in the village of Évian-les-Bains, on the shore of Lake Geneva. The water is crystal clear and so much history from one end of the lake to the other. Don’t be surprised when the locals look at you funny when you call it Lake Geneva, though. To them, it is known as Lac Lemman.

Drew and his wife Joelle near the Swiss village of Montreux on Lake Geneva with the Alps behind in 2005.



# A Socio-Ecological Approach to Study Lead Mortality in Maine's Common Loons

Brooke Hafford MacDonald, Graduate Research Assistant and PhD Student  
Ecology and Environmental Sciences, University of Maine, Orono

I'll never forget the first time I held a loon. During the summer of 2001 I interned with Biodiversity Research Institute (BRI) and was responsible for monitoring Common Loon populations on Mount Desert Island. One cold and foggy July night, I joined senior BRI staff on a loon capture excursion. My job was to simply hold the birds still while the biologists drew blood, collected feather samples, and put bands around the loon's leg. When that first bird was brought into the boat, I could see it up close... that intricate black and white feather pattern! Those piercing red eyes! It was like nothing I had ever experienced before. I can still feel that surprisingly heavy bird on my lap. Turns out, this encounter would shape my professional life in ways I could have never predicted.

Fourteen years and a lifetime later, I found myself back in school and reunited with Maine's loons. I had recently learned about the issue of lead poisoning and convinced faculty members at the University of Maine in Orono to work with me as a M.S. student. As a member of the Maine Lakes Society, you are probably aware that lead poisoning in adult Common Loons from ingested fishing tackle is a conservation concern in the northeastern United States. You are probably also aware that the state of Maine has enacted legislation banning lead sinkers that weigh less than an ounce and bare lead-headed jigs less than 2.5" long. The research I did for my M.S. analyzed data from 471 necropsies from dead adult loons collected in Maine.

But beyond the biological science, I was interested in angler attitudes. Because of course, just because something is illegal doesn't necessarily change behavior. Human behavior is the reason lead fishing tackle is in the aquatic environments, and human behavior also determines the success of legislative and educational campaigns. So in 2016 we surveyed 280 Maine recreationists. I must stress that, due to our small sample size, the following social science findings are not necessarily representative of the entire Maine population. However, incorporating both biological and social science data led to some interesting results and will hopefully lead to future studies. Here are some highlights from our work:

## 1. Lead deaths are decreasing, but trauma (presumably from boat strikes) is an emerging concern.

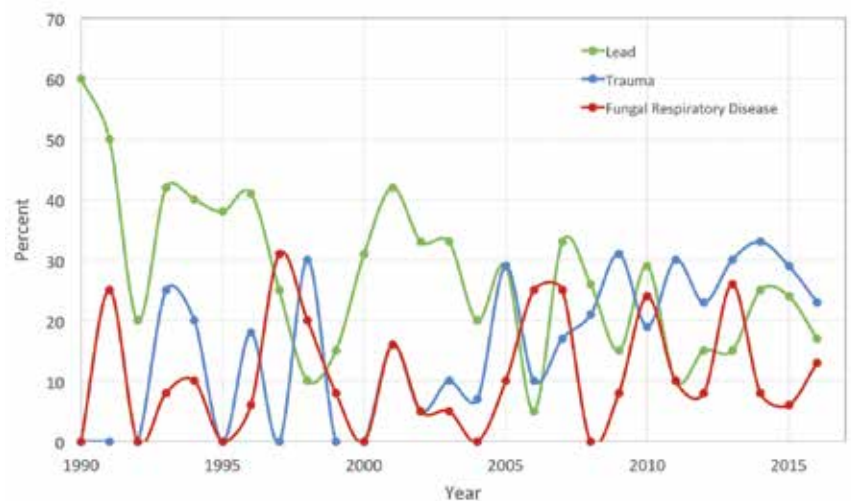


Figure 1: Graph of leading causes of mortality (Maine, 1990-2016). This illustrates how trauma deaths (in blue) have surpassed lead poisonings (in green) as the leading cause of mortality in Maine's adult common loons. Fungal respiratory disease, the third overall leading cause of death, is shown in red.

Analysis of Common Loon mortality revealed that trauma surpassed lead as the leading cause of death in 2011 (Fig. 1). Our social science survey did not address trauma related deaths directly, but over half of our respondents said they believed there were bigger threats to Common Loons than lead fishing tackle. Optional comments highlighted the threat of boat strikes to Common Loons, even though boat strikes were never mentioned previously in the survey. Representative quotes include:

"I have witnessed boaters speeding on our lake (on two separate occasions) running directly at loons and striking and killing the common loon. It was heartbreaking..."

"We do not fish however, I feel that loons are also threatened by the boat traffic on lakes. I think speed limits should be set and adjusted for lakes of different sizes."

## 2. Freshwater anglers report using lead fishing tackle less frequently.

We asked participants identifying as freshwater anglers to indicate whether or not they used lead fishing tackle anytime from 2012 to 2016. Anglers reported using lead fishing tackle less over the last five years (Fig. 2).

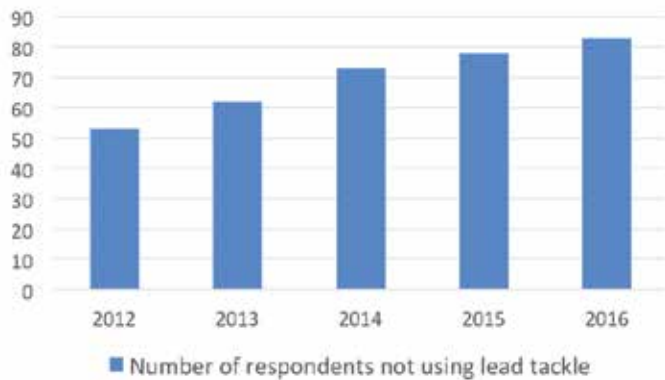


Figure 2: Respondents report using lead fishing tackle less frequently between 2012 and 2016.

The Fish Lead Free campaign, which began after initial stricter lead laws in 2013 may explain why anglers reported using less lead fishing tackle each year, even before additional 2016 legislative restrictions were in place. This reported behavior suggests that anglers stopped using lead fishing tackle by choice, and not because of concerns about breaking the law.

## 3. The main reason anglers have switched to lead-free tackle is to protect Common Loons.

We asked anglers to indicate reasons for using non-lead fishing tackle and rate their level of importance. Choices included: to protect common loons, to protect other wild birds (raptors, waterbirds, etc.), to protect my personal health, to protect the health of my family, because my fishing buddies use non-lead as well, because I participated in a tackle exchange program for free non-lead tackle, because I entered in a raffle or won a prize, to support a local business, because I found affordable non-lead tackle, or because I found non-lead tackle that performs well.

“To protect common loons” elicited the strongest overall response from participants with the majority of respondents (24.6%) selecting this reason as very important. Very few respondents (0.4%) selected this reason as not at all important.

## 4. Reaching anglers currently using lead fishing tackle may require a human health message.

We also asked anglers still using lead fishing tackle to indicate their willingness to replace their lead tackle. We offered the same choices as we did for those who have already switched to non-lead “To protect the health of my family” and “To protect my personal health” elicited the strongest attitudes, just slightly ahead of “To protect Common Loons” and “To protect other wild birds.”

These findings suggest a possible need to include human health messages regarding lead toxicity in outreach and communication efforts in order to reach a broader audience. Lead tackle laws were implemented because scientists were able to document lead poisoning in Common Loons as a wildlife conservation issue. Framing messages to focus on the human health hazards of lead might appeal to those expressing fewer concerns about wildlife health and more concerns about human health.

Socio-ecological systems are exceedingly complex. Integrating social science in conservation studies can help researchers understand interactions between humans and the natural world and also teach us how to communicate conservation messages more effectively. It’s been said that wildlife conservation is 10% wildlife and 90% people! Maine Lakes Society’s LakeSmart program exemplifies the need to think about people’s behavior and attitude as the key to change. Common Loons face many challenges — climate change, habitat loss, chemical contaminants, disease to name a few — but the good news is that there are many things that we can do to help protect these magnificent birds:

- Reduce motorboat speeds and keep an eye out for loons on open water
- Use lead-free tackle when fishing — it’s safer for everyone!
- Collect monofilament line
- Alert the staff at Maine Lakes Society if you find a dead loon: [mlsadmin@mainelakessociety.org](mailto:mlsadmin@mainelakessociety.org) or call (207)495-2301.



Brooke lives in Levant, Maine with her husband Logan and dog Toby. She recently began a PhD program at the University of Maine, Orono in Ecology and Environmental Sciences.

## STUDENT RESEARCH:

# Profiling Four Maine Oligotrophic Lakes for Stormwater Effects and Susceptibility to Eutrophication

*By Madeline Brookings*

Stormwater is precipitation that falls onto land or impervious surfaces, such as pavement and rooftops, collects pollutants and debris, and discharges them into waterways. Stormwater is a major contributor of non-point source (NPS) pollutants which contaminate lakes (for more on NPS, see page 8). My study examined Phillips Lake, Green Lake, Goose Pond, and Hurd Pond, all located in Dedham, Maine. These waterbodies are relatively clear due to low nutrient concentrations; therefore they are considered to be oligotrophic. I wanted to research the effects of stormwater on oligotrophic lakes and their susceptibility to eutrophication, or how prone they are to algal growth.

Samples were tested before and after storm events from July 2017 to September 2018. In the absence of storm events, baseline data was collected once weekly. Tests showed that the smaller waterbodies were more affected by stormwater than larger waterbodies. Sediment cores were gathered once in July of 2018 at the deepest part of the lake on Phillips Lake

and Hurd Pond to measure the aluminum, iron, and phosphorus concentrations in the sediment as well as the probability that sediments would release phosphorus into the water column, ultimately resulting in eutrophication.

Data analysis indicates that Phillips Lake and Hurd Pond have a low risk of becoming eutrophic since their Aluminum to Iron and Aluminum to Phosphorus ratios are above the threshold for possible release of phosphorus into the water column. To continue this research, more long-term data will need be collected because lake research requires a lot of time to see possible trends in the data. Also, an invasive plant patrol will be conducted to further inspect the lakes for harmful plant invasion. Early detection of high levels of nutrients in lakes and ponds is essential to determining future outcome, and programs like Maine Lake Society's LakeSmart (see page 8), that can help landowners reduce their levels of NPS pollution, help tackle the problem. Detection and action can help to save Maine lakes and further keep our waterways clean.

**My family has lived on Phillips Lake for over 60 years and the lake has become a big part of my life. When the opportunity arose to pursue research as a Science Technology Engineering and Math (STEM) student at Bangor High School, I knew that I wanted to conduct research on something that meant a lot to me and that was very important: the lake. Next year I will be attending Northeastern University to study Bioengineering and I hope to continue this lake research to support our local Maine lakes.**



# WORKING TOGETHER TO COMBAT SUMMER ALGAL BLOOMS

Photos © Colby College; Charlie Baeder

*Reprinted with permission by 7 Lakes Alliance*

7 Lakes Alliance and East Pond Association teamed up to complete a \$1.1 million alum treatment on East Pond. While new to Belgrade Lakes, alum treatments on other Maine lakes successfully prevented phosphorus that collects in lake-bottom sediments from causing summer algal blooms. In June of last year, both groups, working closely with Colby College, completed the first phase of a two-part alum treatment on East Pond. In early October, the team completed the second phase of the treatment to ensure that the treatment will be effective for as long as possible. Alum treatments on East Pond, combined with prevention of phosphorous-causing inputs to the lake, could prevent algal blooms for 15–20 years.

Alum applications, targeted and carefully formulated, cause aluminum to bind with phosphorous in sediments deposited on the lake bottom over decades to prevent it from leaching into the lake. There were no algal blooms on East Pond in the summer of 2018 — an encouraging early sign! However, scientists must monitor and analyze many complex factors to fully understand the treatment's effects to make informed decisions on other lakes. In the meantime, if conditions cause a release of phosphorous from East Pond sediments, experts expect the alum will sequester the phosphorous and prevent algal blooms.

One thing is certain — it is critical that we do everything possible to prevent the introduction of new phosphorus to East Pond and other lakes. Prevention through erosion control efforts on roads and driveways; updating and maintaining waste-water systems to prevent seepage; and installing lake-shore buffers will help prevent future algal issues. Together as a community, if we limit phosphorus entering the lake, we could prevent the need for expensive alum treatments through the watershed in the future.

## For More Information

Colby College's Whitney King, this year's keynote presenter at the 49th Annual Lakes Conference, will use this partnership between 7 Lakes Alliance and East Pond Association as an example on how proactive partnerships can improve lake water quality.

“Happy so far! Our daughter is enjoying swimming in the pond in August for the first time in about 20 years!

—RANDIE MARTIN,  
EAST POND RESIDENT



## LAKE EVENTS

Check [mainelakessociety.org/events](http://mainelakessociety.org/events) for more details and an updated listing of lake events. If you have a lake event to add to our online calendar, email details to [mlsadmin@mainelakessociety.org](mailto:mlsadmin@mainelakessociety.org).

### MAINE LAKES RESOURCE CENTER, BELGRADE LAKES

June 26, 1-5:00, **Communicating about Climate Change**: An interactive workshop for volunteers and professionals looking to improve messaging to members and constituents around climate change issues. FMI and registration: [mainelakessociety.org/events](http://mainelakessociety.org/events). Cosponsored by MLS and 7LA.

**LAKES ENVIRONMENTAL ASSOCIATION, BRIDGTON** FMI [mainelakes.org](http://mainelakes.org) or email [alanna@mainelakes.org](mailto:alanna@mainelakes.org) to register (fees for some programs).

June 7, 9-12:00, Adaptations of the Beaver, Holt Pond Preserve, Bridgton

June 19, 9-12:00, Holt Pond Kayak, Bridgton

June 21, 9-3:00, Amazing Wetlands, a local tour, Bridgton area

July 6, Paddle Battle, SUP race on Highland Lake, Bridgton

July 16, 17, 18 LEA Lake School, for HS and early college students: 3-day primer on lake and wetland ecology and testing. Bridgton.

July 24, 5-6:00, Boat Wake Presentation, Maine Lake Science Center, Bridgton.

**LAKE STEWARDS OF MAINE, AUBURN** FMI [lakestewardsofmaine.org](http://lakestewardsofmaine.org), call (207) 783-7733 or email [stewards@lakestewardsofmaine.org](mailto:stewards@lakestewardsofmaine.org).

June 29, 10-2:30, Watershed Survey Training Workshop: How to Identify, Monitor and Mitigate Ways in Which Watershed Land Use Influences Lake Water Quality. LSM Center for Citizen Lake Science, Auburn

July 27, 8-2:00, Lake Stewards of Maine Annual Conference, Great Outdoors, Turner

Dates TBD: Invasive Plant Patrol Workshops, check website FMI.

# Maine Lakes Society

P.O. Box 447  
Belgrade Lakes, ME 04918  
mainlakessociety.org  
info@mainlakessociety.org  
207-495-2301



## THANK YOU TO OUR EARLY CONFERENCE SPONSORS!

We'd like to send a big "thank you" to the early sponsors of this year's conference. Their commitment to Maine Lakes Society allows for us to plan, organize and present the event at an affordable cost to attendees. And it's not too late to become a sponsor. If you know of a business that would be interested, please contact us at [info@mainlakessociety.org](mailto:info@mainlakessociety.org).



**We hope you enjoy our Spring 2019 Newsletter! You have received this newsletter because we have your address in our database. Starting with our Fall 2019 Newsletter, we will send only to Maine Lakes Society members who are current on their dues. If you are unsure of the status of your membership, please send us an email at [info@mainlakessociety.org](mailto:info@mainlakessociety.org). The printed version of the newsletter is a member benefit.**