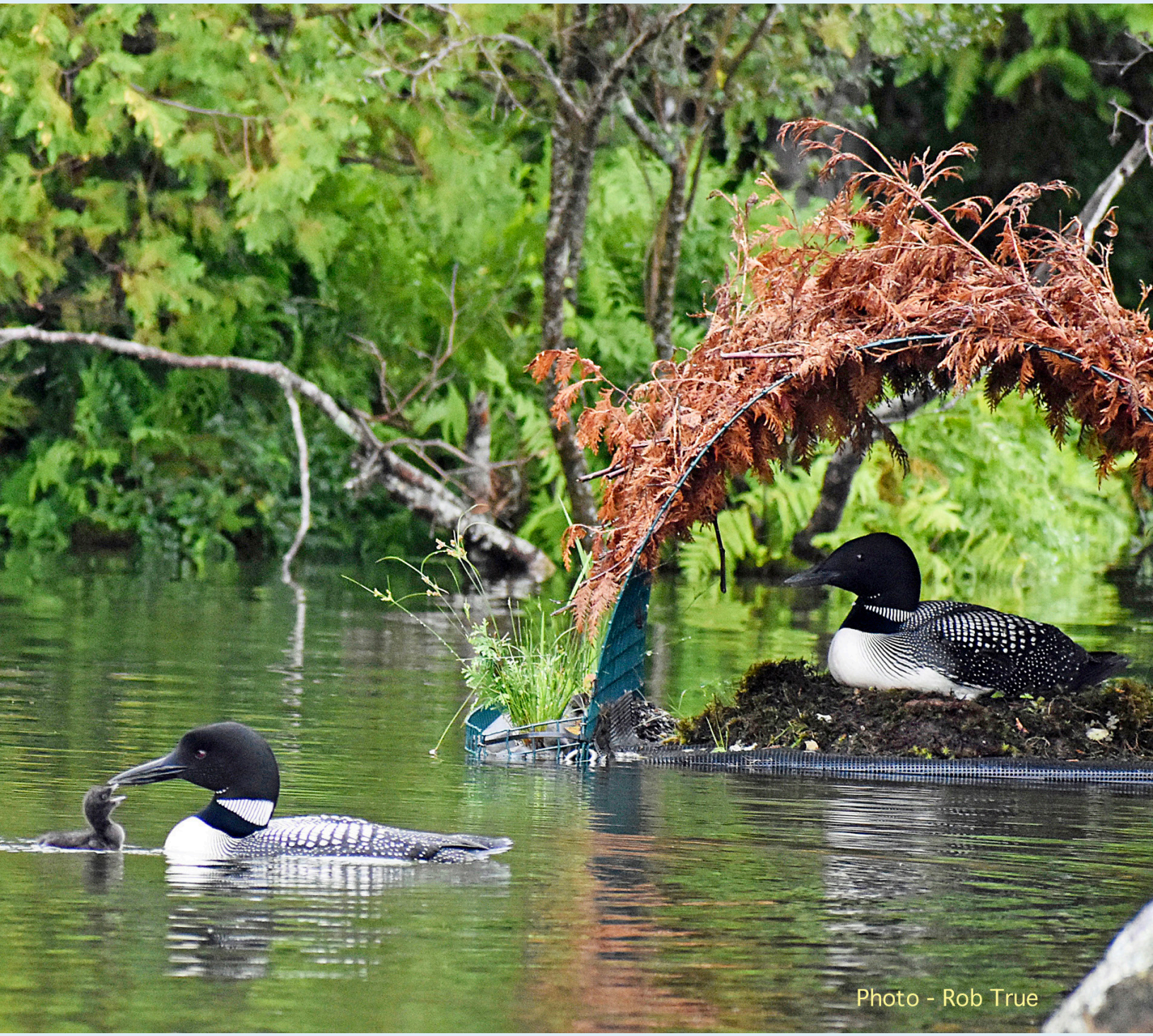
McGrath Pond – Salmon Lake Association

Stewards of Our Belgrade Lakes

Spring 2024 Newsletter

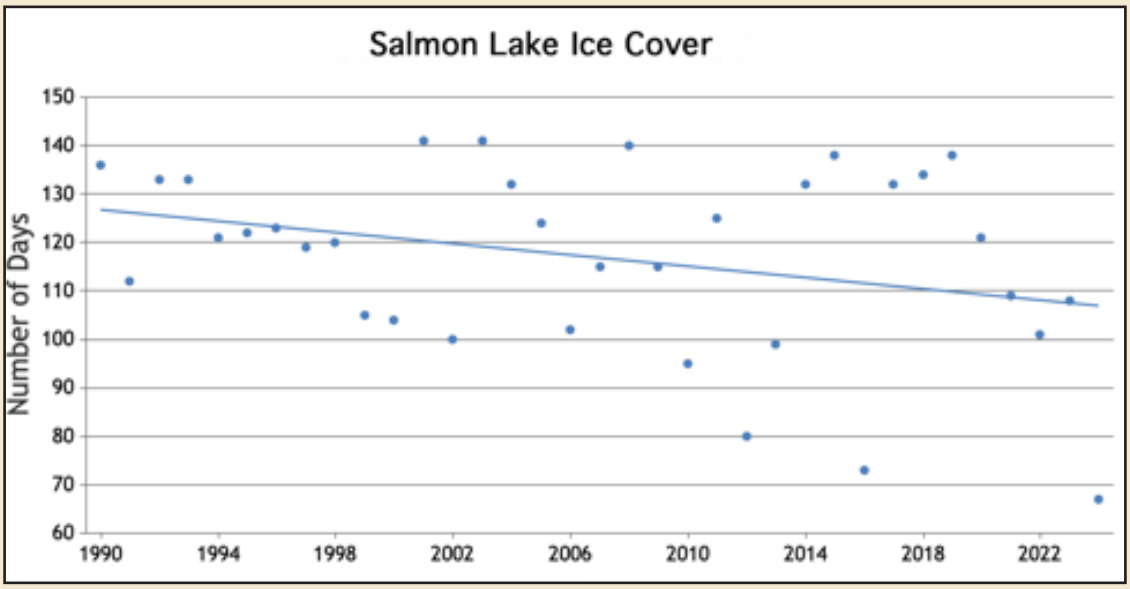


Chick hatched on Salmon Lake summer ’23 through the Maine Loon Restoration Project, subject of the presentation at our Annual Meeting on July 29th.

President's Message

By Lenny Reich

As everyone who was around the lakes this past winter and spring knows, they shed their ice blanket earlier than usual. That followed on the heels of a late ice-over and gave us the shortest iced-over period in a very long time, at least on Salmon Lake, where I've kept records for the last 35 years. Ice covered the lake for just 67 days, a little over two months. Not only did this limit winter activities like ice fishing, it also got the water warming much earlier in spring and enhanced the ability of ever-present algae to feed and multiply. For those of us who've been watching Salmon Lake's water clarity decrease as the water warms in July, that's not good news.



This graph shows what's been happening. The best-fit line, sloping down from left to right, minimizes total linear distance to the data points. The dates are the years of spring ice-out, from 1990 through this year. One result of climate change is more-erratic weather patterns, and you'll note that's especially true in the variation among years since around 2012.

Climate change is beginning to have significant impact on our lakes environment. Summers are longer and winters shorter, as both get warmer. The temperature of northern New England lake waters have increased about 1.5 degrees per decade since 1984. Warmer lake water not only speeds the growth of algae, it does the same for all aquatic plant growth, including invasives like milfoil if, despite our best efforts, they find a way into our lakes.

At the same time, summer rainstorms are growing more intense because heat draws more moisture into the atmosphere, making runoff problems greater and erosion worse, sometimes in areas far back in the watershed where eroded soil gets into steams feeding the lakes. Those streams normally flow clear but turn murky brown with nutrient-laden soil during the big gulley-washers. Bigger storms can also cause temporarily raised lake water levels during high

wind conditions, leading to bank erosion and more phosphorus in the water.

Climate change started slowly a couple hundred years ago when humanity began to generate power by burning coal in steam engines during the first industrial revolution. That brought us wealth and mobility beyond what we had ever experienced. We didn't look back, soon adding oil and natural gas to our carbon-based "fossil fuel" mix. Yet, we've known since the 1890s that taking carbon from the Earth and burning it for fuel adds gasses to the atmosphere that capture additional heat from the sun, something like the glass of a greenhouse or the windows of a closed car. The more of this gas that accumulates in the atmosphere, the more effective the glass at holding in heat.

Only recently, we've come to realize that the rate at which that heat is increasing has begun to accelerate. The thermal inertia of the Earth's oceans and its crust have so far slowed temperature rise, but that's beginning to change in perceptible ways. If you've been paying attention to the geophysical effects, as I have, it's starting to get a little scary. We currently have over 425 parts per million of carbon dioxide in the atmosphere – after starting at 280 back in 1800 – and add about 4.5 ppm each year. Tipping points, both known and unknown, await us.

A rapidly warming climate will make it very difficult to preserve our lakes like we've known them. It's time for everyone who cares about McGrath Pond and Salmon Lake to double-down – to do whatever we can to slow climate change and to work harder to protect the lakes with the tools we've heard so much about. If you're not sure what I mean by that last part, this issue of the Newsletter is chuck-full of information on ways to do just that, so read on.

This is my last Message as MPSLA President. I will be stepping down at this summer's Annual Meeting after two two-year terms, as limited by our Bylaws, but will remain on the Board of Directors. As I mentioned in my first message in the Spring 2020 issue, I was MPSLA's first President, back in 1989. It's been both an honor and a thrill to head up this organization once again so many years later, to see and feel it flourishing and to know that what we started 35 years ago has made such a big difference in the lives of these two wonderful bodies of water and the community that loves them. I would like to extend a very big Thanks! to everyone who made that possible.

Lenny Reich

PS: Don't forget to take photos this summer for the 2025 McGrath Pond-Salmon Lake Calendar. We received many wonderful ones last year and put out a handsome calendar that was, I think, a fine first effort. Kudos to Board member Amy Bernatchez, who put a lot into that effort. If your photo is used this time around, you will receive a free 2025 calendar. Please send your photos at a high resolution and with an identifying caption to outreach@mcgrath-pond-salmonlake.org *Thank you!*

And, finally, don't forget to join with other MPSLA members at our festive mid-summer Pot-Luck & Barbeque and to come to the Annual Meeting, where the presentation will be on the Maine Loon Restoration Project, which has been successful right here on our lakes. Details for both are on page 19.

Watershed Wisdom from Charlie Baeder

As he was retiring after a dozen years working with 7 Lakes Alliance and the Belgrade Regional Conservation Alliance (BRCA), Charlie Baeder sat down to talk with us this past February. You may know Charlie's name because it's appeared in this Newsletter many times over the last decade attached to articles about ways to keep our lakes clear and healthy.

Charlie originally came to Maine to attend Colby College. He graduated in 1976 and ultimately found his way back to settle in Mt. Vernon with his family when he ran a "headhunting" consultancy in 1993, finding executive talent for growing businesses. Becoming increasingly interested in conservation issues and working part-time as Mt. Vernon's treasurer, Charlie joined the BRCA Board of Directors in 1999 as its treasurer when the big Kennebec Highlands project was in its early stages. (See https://www.7lakesalliance.org/post/land2)

In 2007, Charlie made the leap into conservation full-time, running the Sheepscot Watershed Council for three years. He says that's where he learned about the dynamics of streams and the importance of right-sizing culverts. He then worked with the highly successful Penobscot River Restoration Trust for two years until he came back home to BRCA and took on lakes and land preservation in 2012. Much of the lakes work Charlie did, first with BRCA and since it merged into 7 Lakes Alliance during 2017, involved applying for and overseeing remediation grants funded by Section 319 of the Federal Clean Water Act.

From here on, we'll let Charlie Baeder tell it:

I'm always looking at "How can we do more?" because, quite frankly, we're in a really challenging situation. In the last several years, one of our lakes, North Pond, has developed regular algal blooms, and other lakes in the system are at risk for something similar if we don't change what we do on the ground. Climate change is going to make that more difficult every year, whether it's through extremely heavy downpours that cause erosion where we've never had it before, warmer summers, or a shorter period of ice cover during the winter. We have to double down on our efforts just to hold the line.

At 7 Lakes Alliance, we do prevention in the form of the LakeSmart program helping shorefront owners create lake-friendly properties that both beautify their land and protect the lakes by such things as planting a 25'-wide buffer strip of native shrubs along the lakeshore to absorb stormwater before it carries phosphorus into the lake. 7 Lakes is the regional LakeSmart hub, and each lake has its own program. You folks have a strong program here on McGrath and Salmon. [Get in touch with our LakeSmart team by contacting Kim Hallee at khallee@gwi.net.]

At 7 Lakes Alliance, we've also done a lot of outreach with the town governments as well as education programs about caring for the lakes. Overall, we've been working to build a conservation ethic in the whole Belgrade Lakes watershed through nature-based education activities that connect people with the natural world.

Under the guidance of 7 Lakes Alliance, the five lake associations in the Belgrades perform watershed surveys once every decade. MPSLA's last survey was in 2017. Those surveys form the basis of Watershed-Based Manage-

ment Plans for each lake, and the Plans give us the information we need to apply for Section 319 grants. Our system, based on teamwork of the lake associations, 7 Lakes Alliance, direct input from staff at Maine DEP, and the services of an environmental consultant is unique in the state and has resulted in our receiving 25-30% of all the 319 funds awarded statewide in recent years. That's quite an accomplishment.

People who come here from other places see our lakes and think they're pristine, but we know better. They're threatened or in some cases already impaired by what we're doing on the land around them.

Camp roads and driveways are perhaps the biggest problem. There are more miles of camp roads and driveways in the watershed than public roads. Watch carefully in a big rainstorm and you'll see that a lot of water washes down these gravel camp roads, picking up material as it goes. Much of the water eventually flows down to driveways, runs over the driveways, across lawns, and into the lakes. Driveways are themselves big problems because there are hundreds of them, often very close to the lakes. Sometimes, it would take very little to improve their drainage and prevent runoff that carries nutrients like phosphorous into the lakes.

MGrath Pond camp road in need of remediation

Or if the water running down that camp road gets into a ditch, after the heavier gravel material drops out, the water carries silt and dissolved phosphorus into a stream, and then in a few minutes it's in the lake. If I had to guess, I'd say that about 50% of the lakes' nutrient load comes from camp roads and driveways like this. It's a big problem all over the watershed, especially where gradients are steep – and there are some steep gradients around both McGrath and Salmon.

When we rebuilt camp roads with 319 grants, the aim was to improve the drainage so the water flowed sideways off the road into a ditch that turned out into the woods at regular intervals to spread the water with its sediment and nutrients. This let the water sink into the ground and kept it away from streams. One problem,though, is that a beautifully crowned and turned-out camp road can be badly compromised by a season or two of careless snowplowing. Property owners need to be careful of the crown, or make sure their plowing contractor is!

Let me give you an example I'm especially happy about. A couple of years ago, we rebuilt Spruce Lane on the west side of McGrath Pond – crowning, ditching, culverts, and all – plus the four homeowners at the end of the road had the contractor work on their driveways at the same time. Because he was already there with his people and equipment, the contractor could do the driveways for a really good price, and it made the whole job that much more effective. I've been back after a number of big storms. Everything's holding up really well, and I couldn't be more pleased.

Town and state roads provide another source of nutrient loading for the lakes. There are big sand deltas coming from road sand in quite a few places in the Belgrades, including a big one at the northwest corner of McGrath Pond where ditching from McGrath Pond Road empties into the lake. Of course, there's dirt in there as well as sand, so between the phospho-

rous bound up in road sand and the phosphorous in the dirt, you've got a substantial nutrient load getting into the lake.

The big delta in the northwest corner of McGrath Pond caused by runoff from road sand. Shown at low water several summers ago

I would really like the towns to use less sand and salt on the winter roads because the long-term impact on the lakes is very bad. In addition, the towns should build small holding ponds near the ends of their road ditches, just before the ditches empty into streams that flow to the lakes. That would settle most of the sand and capture some of the nutrients. Those ponds have to be dredged regularly or they'll fill up and be useless. That's a matter of getting the towns' road commissioners more involved in lakes protection. The roads are already in there, whether we like it or not. The folks who maintain them have to be educated about the importance of protecting the lakes from the worst of road runoff.

That said, I'm definitely heartened by the direction the towns are going. Belgrade, in particular, has established a Lakes and Natural Resources Committee that's bringing a lot of attention to lakes protection. I know they've worked with the road commissioner on improving his ditching practices and making those practices more consistent. We'll see if that translates to changes out on the roads. The Committee is also looking at ways to improve the town's Shoreland Zoning Ordinance. Hopefully, other towns in the greater Belgrade Lakes watershed will follow suit.

One source of nutrient loading to our lakes most people don't know about is phosphorus falling from the sky, either in rain or attached to dust. Most of it's coming from the tall smokestacks of powerplants in the Midwest. The nutrient loading to our lakes this way could be as much as 15-20% of the total – it's really hard to know. That's another reason why lawns down to the shore are so bad. They collect the phosphorus, then a storm washes it right into the lake. So, it's important to have nice wide buffer strips to get the rainwater into the ground before it reaches the lake.

I guess that sums things up pretty well. I just want to say that, at the end of the day, I've really enjoyed getting things done. This job has let me make a difference for these beautiful lakes with the help of some highly dedicated people like the folks in MPSLA, and I very much appreciate having had the opportunity.

Charlie Baeder

Youth Conservation Corps Installs Best Management Practices Summer '23

By Stuart Cole, 7 Lakes Alliance – Erosion Control Program Director

The effects of the near record rainfall over the summer made it abundantly clear that we still have a long way to go in preventing erosion on our shorefront property and camp roads. Fortunately, with increased staff, a new truck, and a new dumping trailer, the YCC conducted one of its most productive seasons, even with all the rainy days. Having two trucks allowed three crews to work on projects throughout the watershed every day, and the dumping trailer provided materials as needed in a timely fashion. With increased capacity and efficiency, the YCC was able to install a total of 124 BMPs throughout the watershed this year.

New Truck and Trailer

With the increasing frequency of extreme precipitation events, installing BMPs that infiltrate runoff into the ground, instead of letting it run across the ground's surface picking up dirt containing harmful phosphorus, is more important than ever. Dry wells, rain gardens, dripline infiltration trenches, and French drains are popular examples of run–off infiltrating BMPs that the YCC installs.

Erosion Control Mulch

Infiltration Steps

Riprap with Buffer Plants

If you think your property might benefit from the YCC installing one of these BMPs, or if you're not sure and you'd like to have an erosion control site evaluation, contact 7 Lakes Alliances erosion control program by emailing stuart.cole@7lakesalliance.org or calling 207-495-6039.

TOGETHER FOR THE LONG TERM

MPSLA & 7 Lakes Alliance

By Lenny Reich

Watershed Improvement

In 1998, the McGrath Pond–Salmon Lake Association embarked on its first comprehensive watershed survey to learn where nutrient-laden runoff entered our lakes. Working with 7 Lakes Alliance's predecessor, the Belgrade Regional Conservation Alliance (BRCA), MPSLA accessed the Federal Clean Water Act Section 319 funds administered through the Maine DEP to remediate erosion at many of the problematic sites identified in the survey. BRCA's new Youth Conservation Corps provided most of the labor to make that possible.

This began a working relationship between MPSLA and 7 Lakes Alliance that has grown stronger through the years. In 2017, 7 Lakes staff helped organize our second watershed survey and provided professional guidance during the survey process. They also worked with us and our environmental consultant to transform the survey results into a Watershed-Based Management Plan designed to guide remediation efforts for the next decade.

Using that Management Plan, 7 Lakes staff applied for the first two rounds of Section 319 grants through Maine DEP, and they've overseen the resulting projects. Fifteen projects with budgets totaling over $180,000 have recently been completed to keep phosphorus out of our lakes, and a new proposal has been submitted for work beginning the summer of 2025.

The 7 Lakes Alliance building in Belgrade Lakes Village at the time of its opening in 2011

Complementary Strengths

7 Lakes Alliance is based in Belgrade Lakes Village and currently has a full-time professional staff of 14, with many more workers coming onboard during the summer season. The key to its success working with the five lake associations in the Belgrades is how its strengths complement those of the lake associations.

Those lake associations are composed of amateur volunteers in close contact with their own lakes, with the land around the lakes, and with the people who live on the land and use the water. The 7 Lakes staff members are full-time professionals, including lakes scientists, conservation and aquatic biologists, grant writers, project managers, communications specialists, and support staff. 7 Lakes also has a strong working relationship with the Chemistry and Environmental Science Departments at Colby College for when additional scientific firepower is needed.

All of these people, working together and equally committed to preserving our beautiful lakes, present a powerful force, whether that involves gathering data and analyzing problems, sharing information with the public, dealing with invasive aquatic plants, or influencing state and local governments.

Together MPSLA and 7 Lakes Alliance pursue vital programs such as water-quality monitoring, LakeSmart, Courtesy Boat Inspections, and, of course, the watershed survey and remediation work mentioned above.

Camp roads workshop in the 7 Lakes Alliance building, April 2024

Other 7 Lakes Services

Two other services 7 Lakes Alliance provides to lake associations have so far *not* included MPSLA, and we want to keep it that way. The first is finding a way to counter the months-long algae blooms like the ones on East Pond and North Pond. After several years of research, 7 Lakes oversaw the application of the powdered aluminum sulfate alum to East Pond's bottom sediments in 2018 to prevent a recycling of phosphorus from the bottom of the lake. The water has stayed clear since. The treatment has a maximum expected lifetime of about 20 years. The situation on North Pond is still under study, but it looks like a similar alum treatment will help keep the water clear after the North Pond Association and 7 Lakes Alliance are able to alleviate runoff problems in the watershed. These alum treatments are not entered into casually; they require significant permitting and are expensive. The East Pond work cost well above $1 million, and North Pond is expected to run even more.

The other service MPSLA has not required is managing an invasive aquatic infestation such as the variable leaf milfoil found in the northern part of Great Pond and throughout Messalonskee Lake and, recently, the curly leaf pondweed in East Pond's winding outlet stream. With effective Courtesy Boat Inspections and a bit of luck, we won't be needing that service any time soon!

SOLitude Lake Management barge spreading alum on East Pond in 2018

Land Trust

As a nationally certified Land Trust, 7 Lakes Alliance has so far protected approximately 5,500 acres of environmentally sensitive land in the Belgrade Lakes watershed, either through direct ownership or conservation easements. In addition, it purchased 6,700 pristine acres known as the Kennebec Highlands and deeded it as conservation land to the State to Maine.

One of 7 Lakes's primary criteria in choosing land is whether keeping it in a natural state will protect water quality in the lakes. It controls a 108 acre parcel purchased by Dr. Joseph Sataloff more than 30 years ago on the east side of The Narrows between McGrath and Salmon, partially through ownership, partially by easement. If you have or know of a property that would be appropriate for similar treatment, give 7 Lakes Alliance a call at 495-6039.

And Coming Soon to a Lake Near You

7 Lakes has just completed the purchase of a 24-foot 16-passenger pontoon boat to use for aquatic nature trips all over the Belgrade Lakes, and the very first adventure planned is to take kids from Camp Tracy on McGrath Pond for tours of our lakes, from shore-side wildlife and aquatic plants to waterfowl, shore birds, and the raptors that prey on them. Equally important, the boat will be outfitted with equipment to read water clarity and dissolved oxygen, to sample bottom sediments, and to allow the naturalists aboard to explain why and how water quality is being threatened by activities ashore.

Be sure to check out the 7 Lakes Alliance website for lakes- and nature-oriented activities going on year-round. https://www.7lakesalliance.org

Water Quality Update

By Matt Farragher

Lake Scientist – 7 Lakes Alliance

Matt Farragher

On average, both Salmon Lake and McGrath Pond had slightly worse water quality in 2023 than in previous years, which comes as no surprise given the amount of rainfall the Belgrade region received last summer. With over 54 inches of rainfall across the state, the extent of damage was obvious in the erosion of the landscape and lake shorelines. The immediate impact of the influx of eroded soils on our lakes was the visible reduction of water clarity after storms. Additionally, the gush of water and sediment brought phosphorus with it. Phosphorus is a key nutrient required for the growth of algae, and in sufficient quantity it can lead to blooms, although the timing between phosphorus inputs and algae blooms is variable and complex.

In 2023, McGrath Pond and Salmon Lake had similar average Secchi disk depth readings (a reliable way to measure water clarity). Table 1 shows how McGrath Pond water clarity remained reasonably consistent throughout the 2023 season, ranging from 4.8 to 7.2 meters (m) and averaging 6.0 m. However, Salmon Lake was highly variable, averaging 4.7 m but being as high as 6.8 m in May and as low as 1.6 m in early September. Note that a Secchi disk reading < 2 m is caused by extremely murky water and designated a full algal bloom by Maine DEP. Overall, both Salmon Lake and McGrath Pond had slightly below-average water clarity for the entire 2023 season compared their previous 10-year averages (Figures 1 and 2), and as part of that Salmon had a month-long period of very poor clarity.

Figures 3 and 4 show 2023 temperature profiles for Salmon and McGrath, as well as Secchi depth values taken throughout the 2023 season. You can see in Figure 4 that McGrath Pond water clarity remained over 5 m for much of the season until reaching a minimum of 4.7 m in mid-September. Salmon Lake, on the other hand, began to lose clarity during July, culminating in an algal bloom in mid-to-late August, into September, then clarified again during September as the algae died and sank to the bottom.

Salmon Lake has a high internal load of phosphorus, meaning a lot of nutrients are built up in the lake's sediments. These nutrients emerge into the water when dissolved oxygen levels at the bottom of the lake drop very low during the summer. The nutrients become available to algae when the surface water cools down, sinks, and mixes with the deeper water. This brings the nutrient-laden deep water up into the light, resulting in a bloom. In comparing the internal recycling of phosphorus in Salmon Lake (Figure 5) and McGrath Pond (Figure 6), note the much higher phosphorus concentration in Salmon, particularly at lower depths that are anoxic – that is, depleted of oxygen – throughout the summer.

This past year was certainly worse than some previous years for both Salmon and McGrath, and another summer of higher rainfall and erosion could lead to more sediment and nutrients washed into the lakes. For property owners who want to prevent erosion and other

runoff problems that lead to water quality degradation, both 7 Lakes Alliance (lynn.geiger@7lakesalliance.org) and MPSLA (khallee@gwi.net) have programs that can help. Please get in touch!

Table 1: 2023 McGrath Pond and Salmon Lake Seasonal Averages and Trophic Status

	Oligotrophic	Mesotrophic	Eutrophic	McGrath Pond Average (Range)	Salmon Lake Average (Range)
Water Clarity (meters)	> 8	4 - 8	< 4	6.0 (4.8 - 7.2)	4.7 (1.6 - 6.8)
Surface Total Phosphorus (ppb)	< 4.5	4.5 - 20	> 20	9 (7 - 11)	13 (9 - 17)

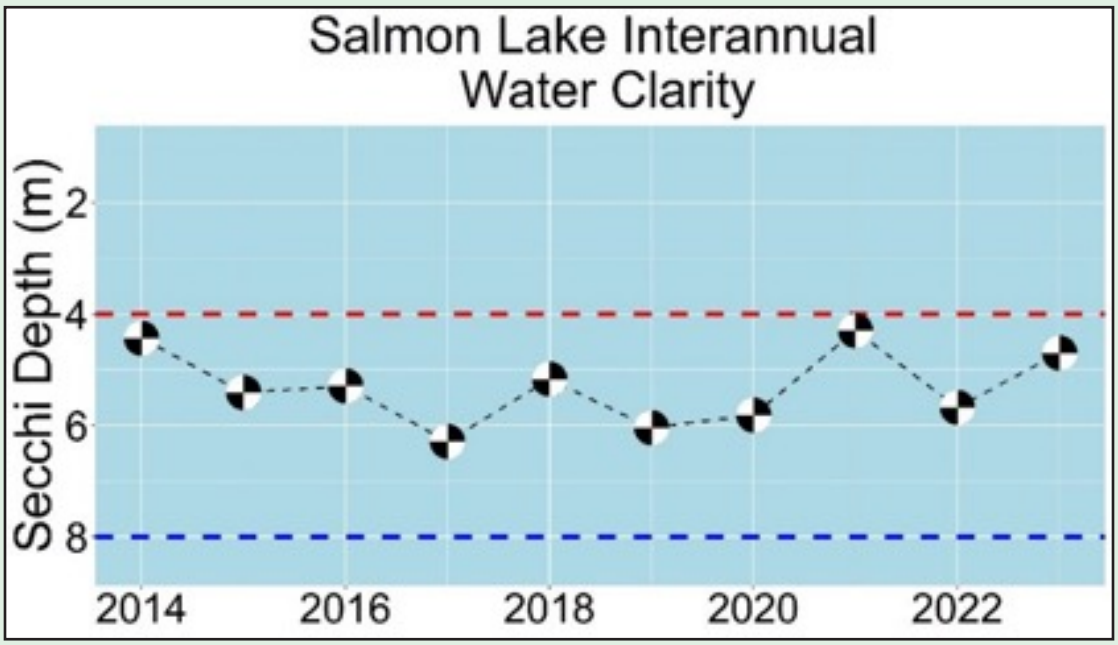


Figure 1. Secchi disk depth (in meters) for Salmon Lake from 2014 through 2023. The average Secchi in 2023 (4.7 m) was slightly worse than the 10-year average (5.3 m). Note the inverted y- axis; the surface of the lake is on top of the graph. The red and blue dotted lines indicate benchmarks for eutrophic lakes (highly productive, reduced water clarity, < 4 m), mesotrophic lakes (medium productivity, clarity between 4 and 8 m), and oligotrophic lakes (low productivity, high water clarity, > 8 m).

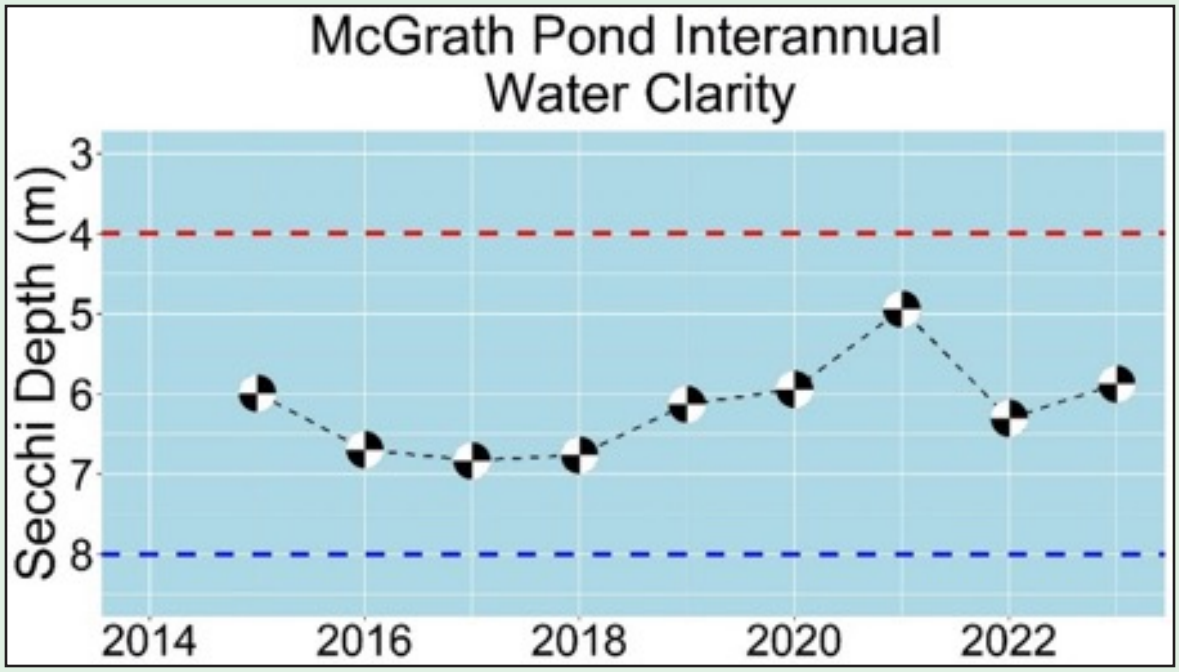


Figure 2. Secchi disk depth (in meters) for McGrath Pond from 2015 through 2023. The average Secchi in 2023 (6.0 m) was slightly below the 9-year average (6.2 m).

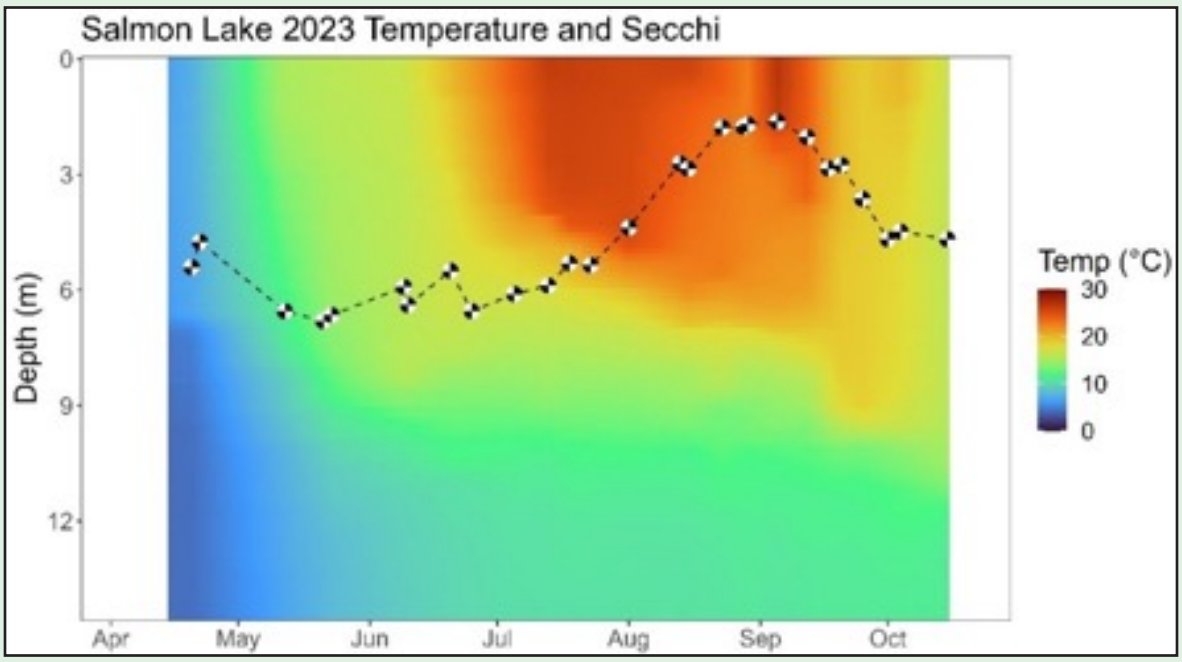


Figure 3. Temperature heatmap for the 2023 season in Salmon Lake, overlaid with Secchi depth (meters). Note the inverted y-axis with the surface of the lake on top of the graph. Onset of stratification began in mid-June and persisted until late-September.

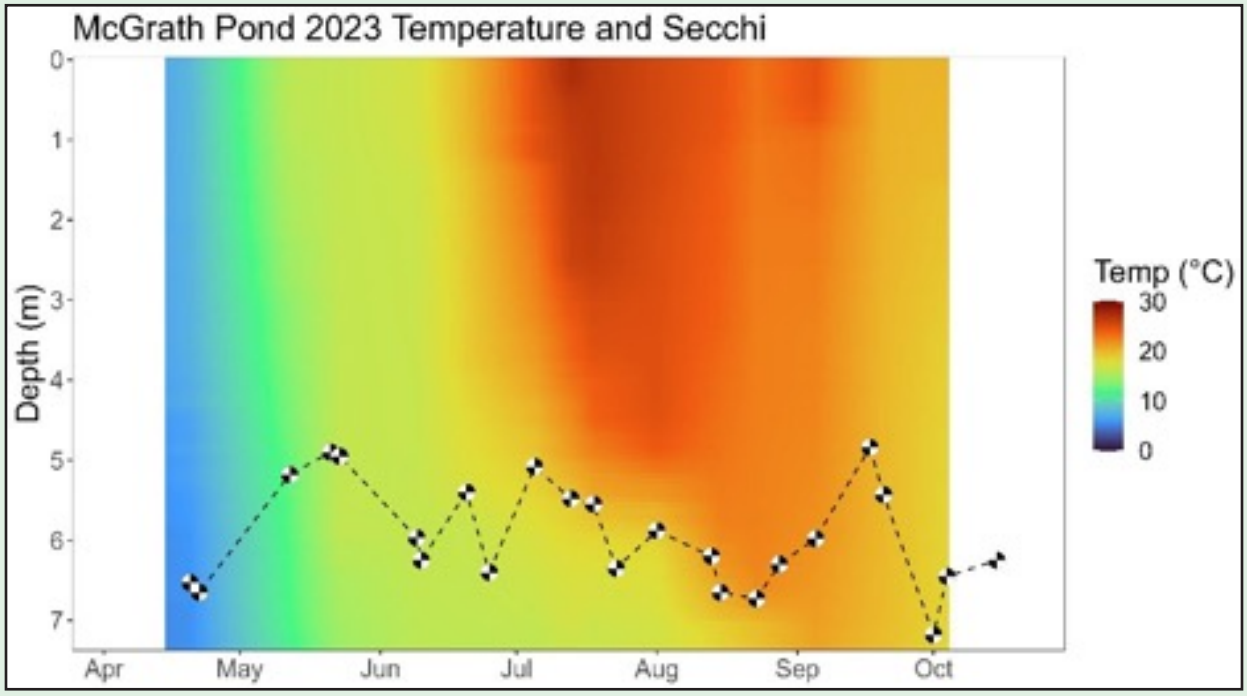


Figure 4. Temperature heatmap for the 2023 season in McGrath Pond, overlaid with Secchi depth (meters). McGrath was isothermal (uniform temperature) for much of the year, which is typical for lakes that do not stratify and remain well-mixed throughout the open water season. A short period of stratification occurred between July and August.

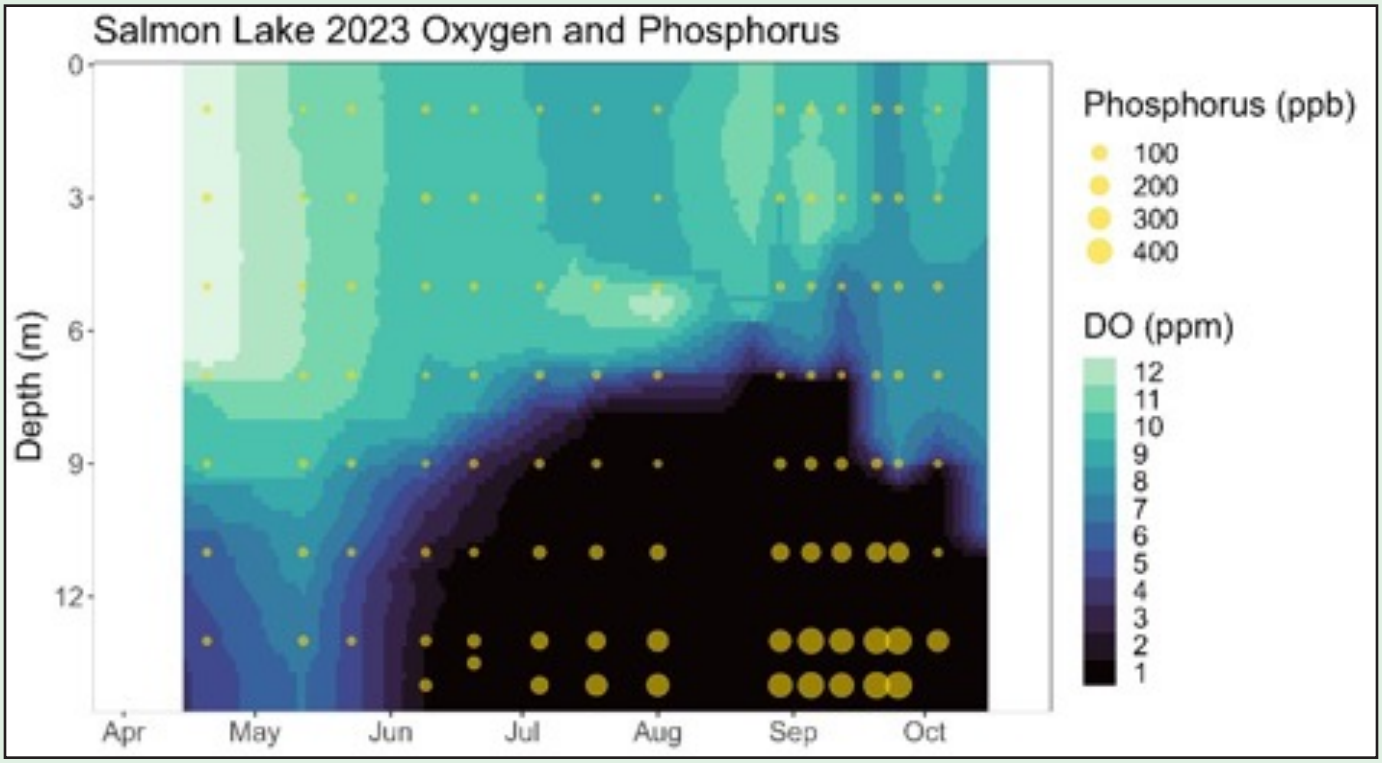


Figure 5. The green-blue and black color palette shows oxygen concentration (parts per million) and the gold dots represent phosphorus concentration (parts per billion). The onset of anoxia in Salmon Lake began 4-June, when dissolved oxygen concentration fell below 2 ppm. This process coincides with the release of phosphorus from lake sediments, and subsequent increase in phosphorus concentration. Deep water of the lake was anoxic from 4-June through 21-October, and was anoxic as shallow as 7m on 20-August.

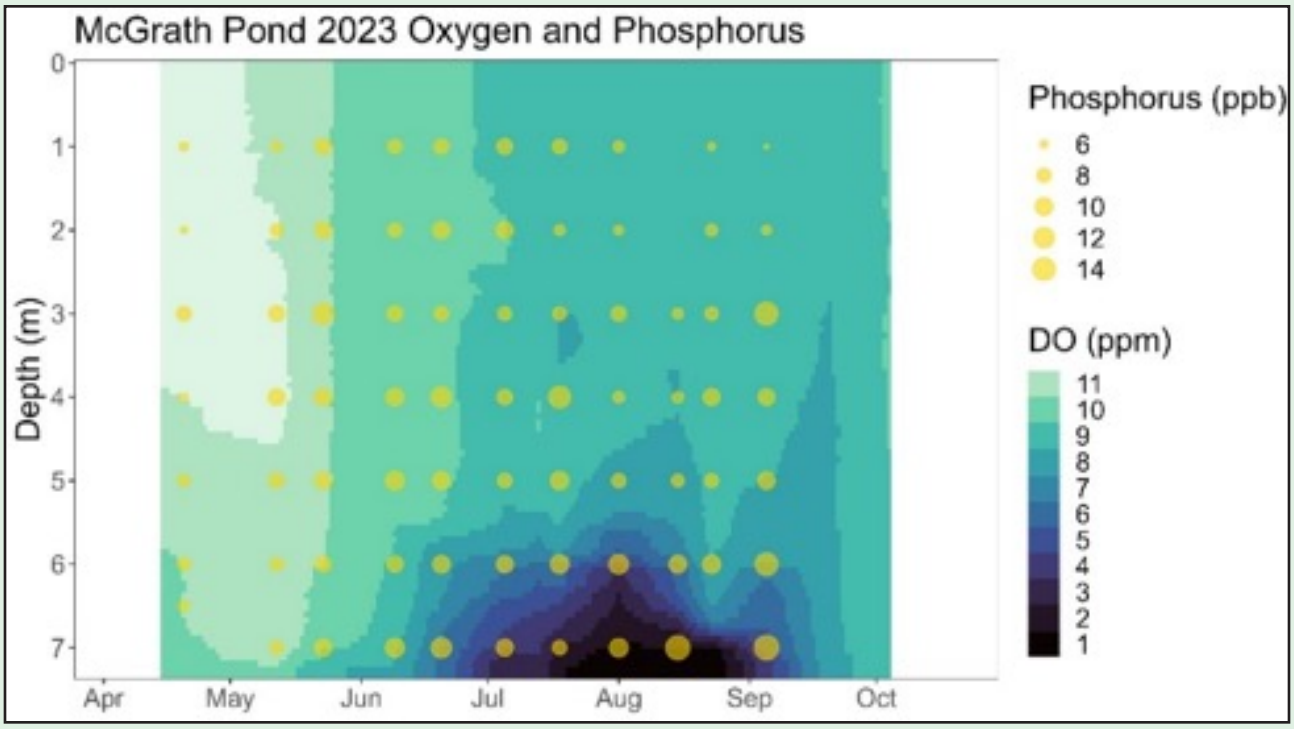


Figure 6. The onset of anoxia in McGrath Pond began 17-July and continued through 30-August. Anoxia, which describes dissolved oxygen concentration below 2 parts per million (ppm), coincides with the release of phosphorus from lake sediments, and the subsequent increase in phosphorus concentration. McGrath Pond was anoxic from 16-July to 30-August, and at 6.4 m as the most shallow depth on 1-August.

Volunteer Courtesy Boat Inspectors

By Bob and Barb Merrill

Invasive aquatic plants pose a serious threat to our ability to enjoy the waters of McGrath Pond and Salmon Lake. Many of these invasives grow to form mats so thick they become almost impenetrable, making swimming and boating impossible.

Unfortunately, we're surrounded by invasives. Variable-leaf milfoil, Eurasian water milfoil, curly-leaf pondweed, and European frogbit are all around us – to our north in East Pond, to the south in Cobbossee Lake, east in Messalonskee Lake, and west in Great Pond. And, of course, boats coming in from elsewhere in Maine as well as from out of state can bring these and other invasives to find a home in our lakes. Courtesy Boat Inspectors are our first line of defense to stop them.

Would you like to help keep us invasive-free? You can. A few volunteer hours could make a big difference in protecting our lakes.

Volunteer Courtesy Boat Inspectors (CBIs) are needed at the public boat launch on Salmon Lake to stop the spread of invasive plants into our waters. CBIs check with boaters entering and leaving the launch, inspecting boats and trailers for plant material. CBIs also educate boaters to check their own boats, helping to ensure they don't transport unwanted plants into our lakes.

The CBI program for the overall Belgrade Lakes region is managed by 7 Lakes Alliance, and their people provide short training sessions throughout the summer. The program runs from Memorial Day weekend into mid-September. CBI shifts are three or four hours, between 9:00 a.m. and 6:00 p.m.

Paid staff handles the majority of shifts throughout the summer. However, MPSLA has agreed to provide CBI coverage with volunteers on Wednesdays and to fill in when paid staff is not available.

If you could be one of those volunteers, please contact Bob at the email address below. You can work two or three shifts all summer, or a shift a week, or anything in between! It's a great way to give back to our lakes and meet more of your neighbors.

As a volunteer CBI, I (Bob) have enjoyed spending a few hours at the launch, meeting people using our wonderful lakes. In my experience, the boaters understand the CBI's role, are friendly and cooperative, and appreciate another set of eyes checking for plant material on their boats and trailers. It also gives me a chance to be outdoors enjoying nature and getting a little reading done when there's a lull in boat traffic. Join me in doing this, won't you?

Thanks

Bob & Barb Merrill

robert.merrill148@gmail.com

Additional Information:

7LA Invasives site:
https://www.7lakesalliance.org/milfoil
Maine DEP CBI site:
https://www.maine.gov/dep/water/invasives/inspect.html
CBI Handbook:
https://www11.maine.gov/dep/water/invasives/2023-CBI-Handbook- Final.pdf

CBI at work

PFAS Compounds in our Lakes

By the MPSLA Water Quality Committee

MPSLA has been monitoring McGrath Pond since 2021 because of concerns that contaminants from the capped Oakland landfill have been leaching into surface- and groundwater and reaching the lake. Maine DEP became involved in 2022 and sampled for per- and poly-fluoroalkyl substances, or PFAS – also known as "forever chemicals" because they don't break down in the environment. PFAS, which are found in many consumer and industrial products, have been linked to a variety of serious health problems, including cancer, thyroid disease, infertility, and hypertension.

During the summer of 2022, DEP found very high concentrations of PFAS chemicals in both surface and ground water near the capped landfill and at between nine and 12 parts per trillion (ppt) in the pond. Until recently, each state had its own regulations on PFAS exposure. Maine's has been 20 ppt for drinking water, so the concentration in McGrath Pond was deemed acceptable. However, as of mid-April 2024, the U.S. Government set a national standard of four ppt for the common PFAS chemical constituents PFOA and PFOS, essentially the lowest that can be measured reliably.

In addition to water, Maine DEP sampled what it calls "fish flesh." They caught five fish of a single species in one lake and took the average concentration of PFAS in the fish muscle tissue. The Maine CDC then used this information to decide whether to issue consumption advisories.

During summer '22, the concentration of the constituent PFOS in McGrath Pond was approximately 10.8 and 12.8 ppt in the flesh of black crappie and largemouth bass, respectively, leading CDC to determine that they fell within the existing state-wide mercury advisory for (non-pregnant) adults to consume no more than two meals per month for either fish.

We expected to have Maine DEP sampling data from the summer of 2023 and any resulting Maine CDC fish-consumption advisory in time to publish in this Newsletter, but we've been informed they will not be available for several more weeks. When we get them, we will send them out via email and post them on social media. We do, however, have water sampling data from work last summer by the Lakes Science staff at 7 Lakes Alliance, which was analyzed in a local lab set up for processing PFAS chemicals.

The results show the single PFAS constituent PFOA at 5.6 ppt in McGrath Pond and 3.6 ppt in Salmon Lake. With that, McGrath Pond exceeds the new allowable maximum of four ppt for a single constituent and Salmon Lake is very close to it.

Based on those results and as a preliminary advisory while we await more definitive readings from Maine DEP and Maine CDC, it would be best to avoid consuming lake water or eating fish caught in either lake. Hopefully, the more fleshed-out information will show lower levels of contaminants, but we advise using caution until more is known.

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Upcoming Events

July 4th – McGrath Pond Independence Day Flotilla
3:00 pm Pleasant Point Park

July 17th – MPSLA Barbeque & Pot-Luck Supper
5:30 pm (rain date: July 18th)
RSVP for directions: mpslassociation@gmail.com

July 29th – MPSLA Annual Meeting
James Reddoch & Jack Leunig of Look Out for Loons Program
The Maine Loon Restoration Project
6:00 pm Pleasant Point Park
July 30th – Rain Date
Notification by 3 pm on FB and email

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Paddle Inn on McGrath Pond
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McGrath Pond – Salmon Lake Association

Not a Member?

It isn't too late to join or renew!

Your name will be listed in the Fall '24 Newsletter

Members' dues help fund:

Invasive Plant Patrols
Courtesy Boat Inspections
The Youth Conservation Corps
Water Quality Work of All Kinds
Education and Outreach Programs
LakeSmart Evaluations and Programs
Maintenance of the Narrows Preserve
Matching Funds for Federal Clean Water Act Grants

MEMBERSHIP CATEGORIES

Individual – $35
Family – $50
Lake Steward – $100
Watershed Steward – $250
Lake Futurist – $500
Watershed Futurist – $1000+

To join or renew online, please go to
www.mcgrathpond-salmonlake.org/donate

If you prefer to pay by check, please see page xx for the MEMBERSHIP FORM

MPSLA is a 501(c)3 nonprofit organization

Our Mission is to protect the natural character, enhance the water quality,
and promote the responsible use of the lakes for the benefit of ALL.

MPSLA
PO Box 576
Oakland, ME 04963
www.mcgrathpond-salmonlake.org

McGrath Pond & Salmon Lake Association

Annual Membership Form

For year 20_____ Name (s)_____

Preferred Mailing Address_____

Lake Address (if applicable) _____

Email_____ Phone _____

☐ I would like a paper copy of the newsletter (available on MPSLA's website by default).

☐ I wish to be listed as "anonymous" in the newsletter.

Membership starts at $35 for individuals and $50 for families.

Business sponsorship starts at $100.
Business Sponsors are featured on our website, in our newsletter, and at the annual meeting.

Please indicate your contribution level:

☐ $35 Individual
☐ $50 Family
☐ $100 Lake Steward
☐ $250 Watershed Steward
☐ $500 Lake Futurist
☐ $1000+ Watershed Futurist

Additional contribution:

☐ Project Funding (water quality, etc.) $_____

☐ Courtesy Boat Inspection Program $_____

☐ Frances Fox Sandmel Environmental Education Fund $ _____

☐ Gift Membership $_____ For _____

Total enclosed: _____ + _____ = $_____
Membership Additional TOTAL

✓ **Make checks payable to "MPSLA" and mail to: MPSLA, PO Box 576, Oakland, ME 04963**

Please contact me about:

☐ Serving on the MPSLA Board of Directors (out-of-state residents welcome!)

☐ Becoming a Volunteer Courtesy Boat Inspector

☐ Getting my property evaluated for LakeSmart certification

THANK YOU!

MPSLA is a registered 501(c)(3) nonprofit organization.

Find us on Facebook: www.facebook.com/MPSLAssoc Email address: outreach@mcgrathpond-salmonlake.org

McGrath Pond - Salmon Lake Association
PO Box 576
Oakland, ME 04963

Our mission is to preserve and protect the natural character, enhance the water quality, and promote the responsible use of the lakes for the benefit of all.

Website: mcgrathpond-salmonlake.org
Facebook: facebook.com/MPSLAssoc
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Please send us an email if you would like to receive a paper copy of the newsletter.

Thank You!