Hello FOM Community!

My name is Kathy Moore and I am the new President. It's a privilege to serve an organization that does so much good for our beautiful lake. My camp is in Cedar Village, Oakland; I've been a Board member for about 8 years and live in Waterville.

I'd like to thank Linda Warner, the previous President, for all she has done for FOM in the past several years. She kept the organization together during COVID through Zoom meetings as well as a major office move, while also making forward strides. During her tenure, FOM undertook a Watershed Study that expanded our work beyond milfoil, into the importance of monitoring what flows into the lake. She also helped to start the July 4th Boat Parade that now has 40 boats or more. There was an excellent turn-out at the Annual Meeting in July at the Lakeside Lodge in Sidney that featured speakers Jen Jespersen, Ecological Instincts owner, and Charlie Baeder from 7 Lakes Alliance.

FOM has had a very busy and successful season. The Milfoil programs were successful in maintaining the current state of the lake and the Messalonskee Lake Watershed Protection Program, funded through a 319 DEP grant, exceeded expectations in participation. Several articles in this newsletter are dedicated to these programs. Although successful, we definitely still have some challenges with containing milfoil growth. The last article on Water Quality by Danielle Wain and Lynn Geiger, from7 Lakes Alliance, is a wake-up call about the importance of the Watershed Protection Project to our lake.

The Plant Paddles offered this summer by Mike Guarino, Maine Wilderness Tours, were well received. These Paddles will continue this year and we hope to have members of the lake community participate. We are implementing a Milfoil Survey Team to help Danielle Boutin scan the lake with GPS devices for new milfoil areas and kayaking is a good way to spot invasive plants. We are also offering several milfoil hand-pulling workshops this summer. Danielle will teach approved ways to remove and dispose of milfoil. If you'd like to know how to deal with milfoil along your shoreline, this is a great opportunity. We also hope to offer a buffer workshop with native plants for sale in mid-June. The lake has a healthy Loon population. This summer the Loon Count showed 42 adults and 4 chicks, compared to 2022 in which there were 32 adults and 3 chicks. We still have more work to do to expand public awareness about the dangers that excessive boat wakes pose to loon nests.

As a reminder, the SHOP is still open on the website. It links directly to B&B Embroidery in Oakland. Check it out! In other news, we will be changing website platforms in March. If you are looking for information that is typically on the website, you can contact FOM directly by phone, text or email.

Much of FOM's success is due to partnerships with a variety of community and state organizations such as the Towns of Oakland, Sidney and Belgrade; 7 Lakes Alliance, area businesses, area community members, RSU 18 Adult and Community Education, the Maine Department of Environmental Protection, and our dedicated FOM members.
We will continue to focus on creating strong partnerships.

Friends of Messalonskee • PO Box 532 • Oakland, ME 04963 • Phone: (207) 618-8723
Email: friendsofmessalonskee@gmail.com • www.friendsofmessalonskee.com • Find us on Facebook

FOM is Committed to Protecting our Lake and Watershed

Our New Mission, Tag Line and Vision Statements:

MISSION: "To protect and improve the water quality and natural resources of our lake and its watershed using science-based conservation methods, education, and collaborative action, for the benefit of all."

TAG LINE: Protecting Messalonskee Lake and its watershed

VISION: Our work will enhance the quality and character of the Messalonskee Lake watershed by reducing existing milfoil infestation and rates of new infestation spread, preventing the introduction of new invasive plants, reducing runoff of harmful substances into the lake, building strong community partnerships, and increasing public awareness of ways to protect the lake.

2023 FOM Board of Directors

- Kathy Moore - President
- Janna Townsend - 1st Vice President
- Kelly Smith - 2nd Vice President
- Robert Nardi - Treasurer
- Lisa Tarzia - Secretary
- JJ Jurdak - Bookkeeper
- Dr. Peter Koons
- Greg Mercier
- Gary Bennett
- Bill Tiernan
- Anne Berlind
- Doug Fischang

Office Staff
Kathy Whitney
friendsofmessalonskee@gmail.com • (207) 618-8723

<u>Picture Credits</u>

Front Page: K. Smith
Back Page: S. Phenix
Fold Over: L. Warner

Calendar of 2024 Events

June 22: Hand-Pulling, *9am* - Meet at Sidney Boat Launch - Learn to remove and dispose of milfoil properly.
Mid-June (TBD): Buffer Workshop with Native Plant Sale - Lakeside Lodge, Sidney.
July 4: Boat Parade, *3 pm* - Meet at Rock Island.
July 13: Hand-Pulling, *9am* - Meet at Sidney Boat Launch.
July 17 : Annual Meeting - Lakeside Lodge at Bangs Beach, 28 Marigold Dr., Sidney *6 - 8pm*.
July 22: Plant Paddle - Learn how to kayak and identify invasive plants; everything provided.
August 10: Hand-Pulling, *9am* - Meet at Sidney Boat Launch
August 12: Plant Paddle, *9am* - Meet at Sidney Boat Launch

Note: Sign-up for Plant Paddles and Hand-Pulling workshops through RSU 18 Adult and Community Education (www.midaine.maineadulted.org). The Winter/Spring brochure comes out in January. The website goes live at that time. Click on the front page picture to see the brochure, or email/call FOM.

Invitation to Join Friends of Messalonskee

If you love the lake and want to see it flourish and stay healthy, consider joining Friends of Messalonskee if you are not already a member. As we expand our operations, it would be great to have more lake residents join us. We have many ways to be involved! Computer skills are always needed!

To join, you can use the handy envelope in this newsletter, or you can join via PayPal on our website, www.FriendsOfMessalonskee.com.

For questions, you can contact us at friendsofmessalonskee@gmail.com or 207-618-8723.

We Greatly Appreciate ALL our 2023 FOM Members
FOM Recognizes our...

Major Donors

Tobi L. Schneider
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The Boat Medic

Benefactors

Richard Boles, The Finkels, Sharon Gallant, Charlie Giguere, Gary Hammond, Gilliam Johnston & Cathleen Morrow, Cameron McKay, Brian & Sue Phenix, Robert & Carole Ringer, Jeanne Shinay, and John C. Thompson

FOM Milfoil Program 2023

FOM's Milfoil Program consists of 3 operations: Removing milfoil by hand-pulling and laying barrier covers in the shallower waters, Diver-Assisted Suction Harvesting (DASH) in the deeper or harder to get to areas, and Courtesy Boat Inspections (CBI) to help prevent harmful milfoil fragments from both entering and leaving the lake.

FOM provided the hand-pulling and barrier laying services as usual, thanks to our expert Milfoil Coordinator, Danielle Boutin. We contracted with New England Milfoil to provide DASH services, as we have since 2019. 7 Lakes Alliance was contracted for the CBI program for the first time.

Milfoil Removal and Sq. Ft. covered in 2023:

- 343 hand-pulled bags or 17,150 pounds (1 bag = 50 lbs.);
- 6,150 sq ft of barriers laid, mostly black plastic, but also burlap;
- 6,400 DASHed gallons or 48,704 pounds;
- **Total** of 65,854 pounds or 33 tons of VLM removed this season.

Thank you to Danielle and her crew, Matix Ward, Zoie Ward, Elizabeth Boutin, and volunteers Noah Taylor and James Boutin; and Peter Koons who helped move and dispose of the hand pulled milfoil.We greatly appreciate Greg Mercier, the Boat Medic, who volunteers to keep the FOM boat and dock in the water! We also recognize the NEM divers; Donnie Porter, who is the Captain, and Bob Willette who did a great job with the DASHing.

Thank you to the friends of Messalonskee who hauled the DASHed milfoil to the Oakland Transfer Station this year (Bob Nardi, Jon Humphrey, and Kevin Gorman), and to Dylan Clark, Director of the Oakland Transfer Station, for allowing FOM to dispose of the milfoil according to DEP regulations.

The Courtesy Boat Inspectors were hard at work this year:

- Oakland Boat Launch: 1,569 inspections were performed;
- 16 fragments were found, of these, 8 were confirmed as Variable Leaf Milfoil (VLM).
- Sidney Boat Launch: 1,556 inspections were performed;
- 8 fragments were found, of these, 5 were confirmed as VLM.
- **Total** of 3,125 inspections were performed; 24 total fragments found; a total of 13 VLM fragments confirmed.

Many thanks to Sharon Mann, 7 Lakes Invasive Aquatics Director and Josie Miller, Invasive Aquatic Coordinator and the Inspectors for their efforts. FOM is very grateful for all the partnerships that have been formed to help keep Messalonskee Lake clear of masses of milfoil and prevent fragments from entering or leaving the lake. All 3 milfoil programs work together to contain the milfoil growth both on our lake and on others.

Overall, the lake is in good shape due to all the dedicated workers, and member, town, and DEP funding.

One fact is clear, however, milfoil fragments are the source of most of the milfoil in Messalonskee Lake; the source of the fragments is the Belgrade Stream. For example, we know that most of the infestation at the southern end of the lake is from fragments or seeds coming from the Belgrade Stream that are then carried by water currents and wind to the north end. Due to this situation, Messalonskee has a high rate of fragments compared to other lakes in the state. The "Belgrade Stream problem" has been on-going for many years. This is a difficult problem to solve, but if we do nothing, the lake will always tend toward a serious milfoil problem. FOM has used its resources as much as possible to contain milfoil growth, - we are in maintenance mode, but the amount of resources needed is increasing. FOM hopes to help convene a group of stakeholders and experts over the next year to brainstorm the various alternatives available to address the Belgrade Stream situation.

We have included Danielle's report to the Maine State Department of Environmental Protection (DEP). We think you will find it informative; a few pictures of the "hot spot" locations are included.

Danielle Boutin – FOM Milfoil Coordinator
DEP Report: Summary of 2023 Plant Removal

The season has been challenging due to the weather, boat issues and finding crew members. We used volunteers this season to help with the hand pulling in addition to a crew. For the work in deeper or hard to get to areas, the DIVER-Assisted Suction Harvesting (DASH) was contracted to New England Milfoil, as it has been since 2019. They were on the lake, Monday thru Thursday, from Oct. 3 to Oct 26.

This season, we found a lot of large whole plant fragments floating throughout the entire lake. We feel this is because the water has been very high and people are able to recreate in areas that are typically non-accessible (like the marsh at the south end of the lake). In addition, the Belgrade stream is completely full of large VLM plants. The large plant fragments have created the same issue (as in previous seasons) of getting caught in coves and along the Oakland Basin at the north end and rooting rather quickly. We also noticed that previous beds that have had no growth for a couple of seasons have begun to re-grow. Overall, the new re-growth of beds was small and contained. DASHing was able to eradicate some of the beds.

Property owners continued to report suspicious plants along the lake. Some have been verified as VLM and others are native plants. This has helped make the surveying process easier. We hope to continue to have more property owners involved in both surveying the lake and removing fragments (after being trained) in the future.

Overall, the number one goal of maintaining the lake and the mitigation of VLM was met again this season. Every season there are high and low points. That is the nature of the plant.

Areas worked in this year:

- **Oakland Basin/Launch & Hazard Buoys - Oakland**

New England Milfoil was able to DASH this area. FOM's crew removed five bags of fragments from this area when it was surveyed.

- **Swartz - Oakland**

New England Milfoil was able to DASH this small bed. FOM will continue to survey this area for any re-growth.

- **Blake Hz. Cove - Oakland**

FOM removed 8 bags of VLM. The small beds were growing among the lily pads. There are many native plants in this cove. We will continue to survey.

- **Flamingo Isle - Oakland**

A large bed of VLM that was identified was DASHed.

- **Willey Cove - Oakland**

The Cove itself has two large well-established beds of VLM. FOM hand- pulled 15 bags and laid 150 ft of burlap barrier near the culvert. Another burlap barrier will need to be placed in this cove. Buoys were put out to deter fishermen and the public from going into the Cove where the barriers are laid. New England Milfoil DASHed the remaining part of the Cove.

- **Blake Cove - Oakland**

The crew removed 46 bags of VLM. We moved 15 plastic barriers to the middle of the Cove where the bed has established itself again. There were lots of native plants mixed into the large VLM. Native plants found include large amounts of elodea, coontail, and water marigold.

- **Juniper/Eccles Cove - Sidney**

The crew removed 116 bags of VLM and moved 12 plastic barriers. This bed has been very well established over the years and is now moving into deeper water. New England Milfoil DASHed a large area where the VLM had moved out of the cove into the lake this year.

• Loon Cove - Belgrade

We hand pulled 10 bags of VLM and moved three plastic barriers. This has been one of our successes this season. The burlap barriers that were laid last season have done an excellent job of mitigating the re-growth of VLM.

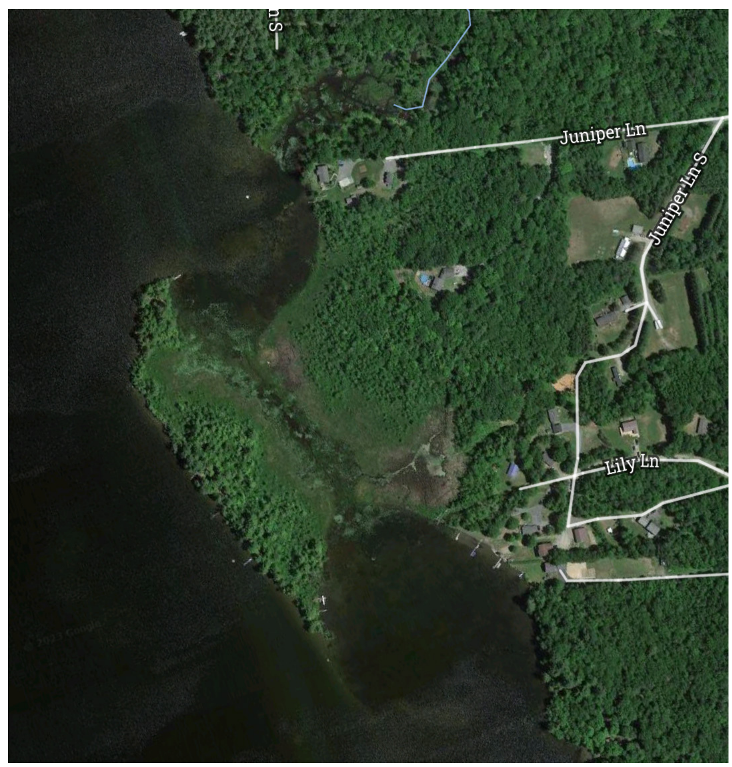
• Rt. 27 Launch - Belgrade

We have begun to hand pull this area. We hand pulled 142 bags of VLM. For the beginning part of the channel there has been a lot of re-growth of native plants, with a few milfoil plants sporadically growing in the channel. Some of the barriers held up well. There was a large section of the channel where the barriers had degraded. The VLM in this area was very dense, almost like a wall. Next season FOM will lay new burlap barriers along the entire channel from the launch to the stream.

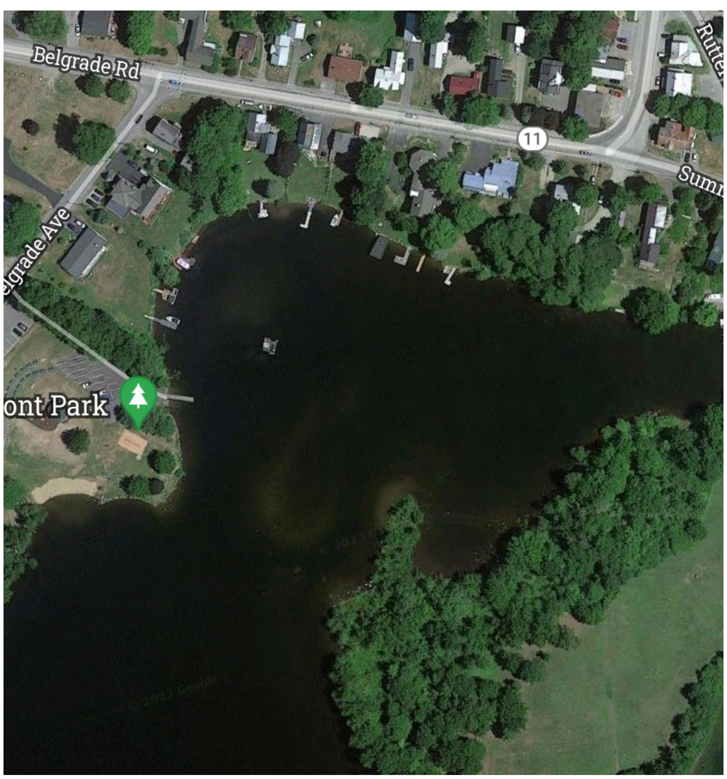
Belgrade

• Red Cedar; new reported bed & football field - Sidney

FOM surveyed the “football field” bed, reported in 2022 and a new bed reported by property owners. We removed one bag of VLM from Red Cedar cove. The days we surveyed were not the greatest for visibility. We did not notice a huge regrowth of VLM in the Football Field area. NE Milfoil did DASH this again. The new bed reported was not visible to either FOM’s crew or NE Milfoil. We will survey this area again in the beginning of the season next year, with the help of the property owners.



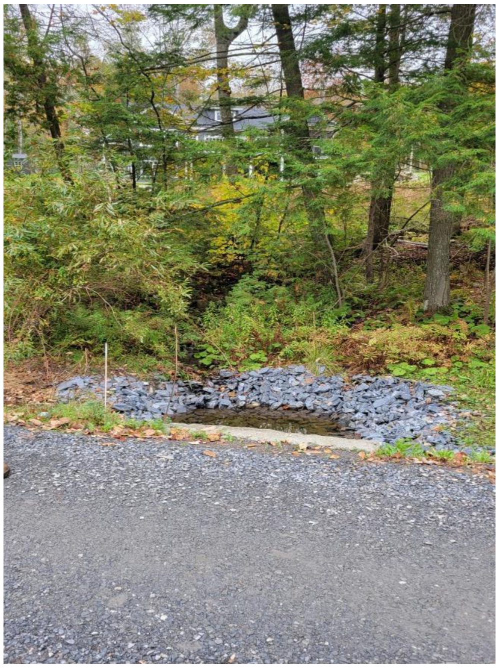
Sidney



Oakland

Friends of Messalonskee Watershed Protection Project Update

We had a very successful Year 1 of the FOM Watershed Protection Project that was funded through a $111,884 Clean Water Act 319 grant from the U.S. Department of Environmental Protection (DEP).



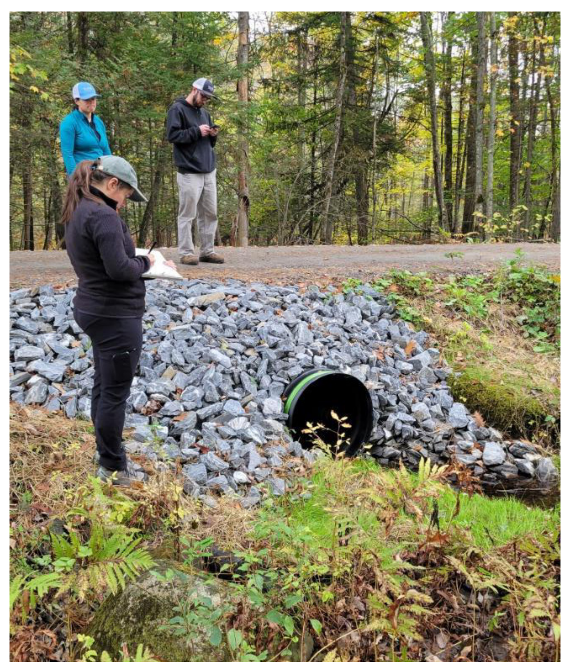
Cedar Village South – plunge pool slows down water from 3 runoff areas that runs into a ditch and directly to the lake creating a large "sand beach". Contractor Jason Stevens

The purpose of the MWPP is to identify and address areas of soil and phosphorus erosion that greatly affect water quality and can lead to green, potentially toxic algae blooms. MWPP is composed of three programs: 1) Cost share (matching) funds are provided for Road/Driveway construction projects. Individual property owners, road associations, towns and other organizations are able to access matching funds; 2) Discounts are available for residential "hard landscaping" and buffer planting through the 7 Lakes Youth Conservation Corps (YCC) program; 3) The FOM LakeSmart program helps landowners identify and remedy erosion issues at lakefront homes and camps. Best Management Practices (BMPs) are at the heart of any erosion control project. These are activities defined by the DEP as being effective in preventing or reducing pollution that results from Non-Point Sources. This is pollution that comes from various sources such as roads, lawns, driveways, and poor walkways when it rains or snow melts, and runs into a stream, ditch and, in our case, into the lake. Basically, much of it comes from our Watershed, the land around the lake.

Examples of BMPs used this summer by YCC include infiltration steps filled with crushed stone for steep walkways down to lake, planting vegetated buffers on shorelines to stabilize the banks, and Erosion Control Mulch for pathways and bare soil. For camp roads and driveways, BMPs include plunge pool installation for high runoff areas, crowning roads and installing ditches, and installing/repairing clogged or broken culverts.

In the first year:

- 12 "non-residential" Road Construction projects were matched and completed.
  - Sites include Blake Lane, Hemlock Place, Cedar Village, Orchid, Lane, Wanser Lane
  - 5 Road projects are scheduled for next year
  - 7 different area road contractors were used – many thanks to them!
- 11 YCC projects were completed; 12 site visits were completed
  - Completed sites include Mallard Ln., Sunny Shores Place, Twin Oaks Rd.,Hosta Ln N
  - Site visits include Foxglove Ln, Cathedral Pines, Aviator Place
- 12 LakeSmart visits were accomplished
  - Residences include Red Cedar Lane, Blethen Rd., Gardenia Ln., Crocus Ln., and Thistle Hill Ln.
- Free landscape planning assistance is available from FOM's LakeSmart Program.



Rocky Shore Ln. Culvert replacement . Contractor D. Dubois

Across all three projects, 35 different sites around the lake received some type of improvement or service that will slow down the runoff into the lake.

FOM fully funded and participated in the implementation of the Watershed Survey, the development of a Watershed Protection Plan, and the writing of the 319 grant. Although many people contributed to the success of this endeavor, a great reason for our success is the expertise of our consultant, Jen Jesperson of Ecological Instincts, an environmental consulting firm. She, her colleagues, and the DEP organized the Survey, developed the Protection Plan and wrote the grant with input from FOM and 7 Lakes Alliance. FOM thanks 7 Lakes Alliance (7 Lakes) for their willingness to manage and participate in this project, especially Charlie Baeder, Stuart Cole, and Lynn Geiger. Their hard work is greatly appreciated.

Blake Ln. Road recrowned, side drainage. Contractor R. Labbe

Call FOM at 207-618-8723 or email us at friendsofmessalonskee@gmail.com with any questions. The 319 Clean Water Act grant program is administered by the Maine Department of Environmental Protection in partnership with the Environmental Protection Agency.

Be LakeSmart for the Sake of Messalonskee Lake!

It's been a very successful FOM LAKESMART 2023 summer. LakeSmart Awards were granted to Ron Fluet & Anne Berlind in Belgrade, David Gould and brothers, and Greg Mercier in Sidney. Commendations recognized Lynn Choate and Bill & Lorraine Morin in Oakland, Shelly Alvarez in Sidney, and Janet and Carl Croce in Belgrade for their efforts to become LakeSmart.

LakeSmart is an education and outreach program that rewards lakefront homeowners who manage their land to protect water quality. The program is free, non-regulatory, and voluntary. Participating homeowners receive individualized suggestions for keeping pollutants from stormwater out of lake waters.

Along with phosphorus loading from upstream lakes, a primary threat to water clarity in Messalonskee Lake is polluted runoff or nonpoint source (NPS) pollution. Stormwater runoff from rain and snowmelt picks up soil, nutrients, and other pollutants as it flows across the land and washes into the lake. The FOM Messalonskee Watershed survey results showed that 51% of Messalonskee's polluted runoff comes from the properties surrounding the lake, particularly with lawns! If each of us expands a vegetative buffer along the shoreline, we can create cleaner, healthier water, abundant wildlife, and maintain high property values.

The most effective buffers are deep, wide and continuous with only a narrow path or other small breaks to the lake. They have many layers of vegetation, including tall trees (canopy), short trees (mid story), shrubs, perennials and ground cover. A layer of duff, twigs, fallen leaves, pine needles) accumulate within the buffer. Roots help anchor the soil and absorb water and nutrients, duff and other plants defer raindrops reducing runoff into the lake.

Take 1 of these actions! Instead of cutting down the trees in your view, let trees frame your view! Create a meandering path that diverts runoff from the waterfront. Reduce your lawn with native gardens and mow less! Go native! Native plants have deeper roots that help protect the lake. My new favorite is the blue flower Gentian.

Janna Townsend, FOM LakeSmart

Email/call for your free LakeSmart visit: friendsofmessalonskee@gmail.com • (207) 618 - 8723

Messalonskee Water Quality Update

Dr. Danielle Wain, Lake Science Director, 7 Lakes Alliance
Lynn Geiger, Erosion Control Policy Manager, 7 Lakes Alliance

Data from the 7 Lakes Alliance – Colby Water Quality Initiative

Average water clarity on Messalonskee (measured by Secchi Disk Transparency) averaged 15 ft this year, which is the worst it has been since the intensive monitoring of the 7 Lakes-Colby Water Quality Initiative began in 2015 (Figure 1). This is 3 ft worse than 2022 and just 2 ft shy of crossing the poor water quality threshold (indicated by the red dashed line). This decline in water clarity is almost certainly due to the rainy summer we had in the Belgrades. Messalonskee, like Great Pond and Long Pond, appears to be very sensitive to the amount of rainfall we receive in a given year. More rain creates more erosion, which washes more sediment and phosphorus into the lake, which both reduce water clarity.

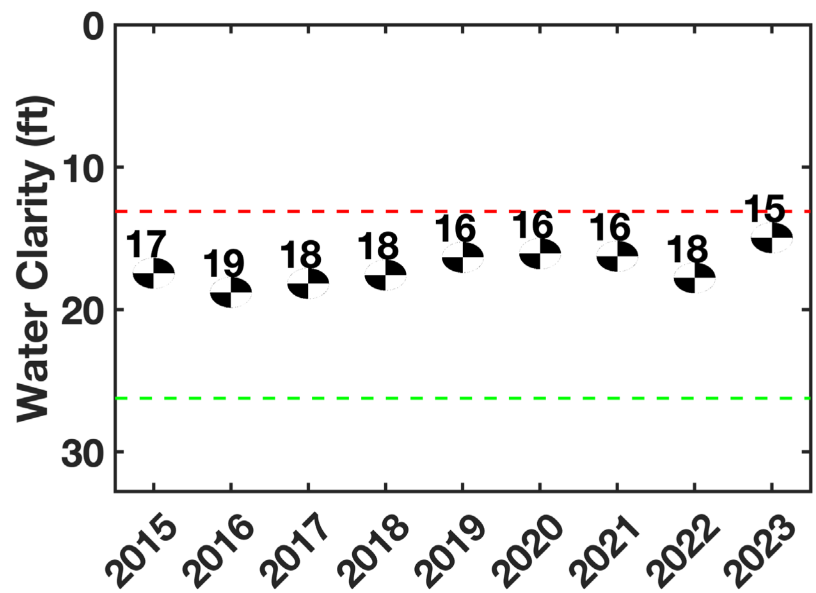


Figure 1: Yearly average Secchi disk transparency for 2015-2023. Above the red dashed line is poor water quality conditions; below the green dashed line indicates good water quality.

From 2021-2023, the 7 Lakes Alliance and FOM volunteers conducted stream sampling across the Messalonskee Lake watershed to measure phosphorus entering the lake through streams. In total, 17 sites around the lake were sampled, in addition to 10 sites on Belgrade Stream. From the recently completed Messalonskee Lake Watershed Protection Plan, we can identify areas of the watershed that might be prone to erosion and high contribution of phosphorus to the lake. In Figure 2, we present the average phosphorus from all the sampling combined with the identified erosion sites from the protection plan. In this graph, the circles represent the locations where these measurements were taken. The size of the circles reflects the number of samples at that location (smaller for fewer samples and larger for more). The darker colors of the circles indicate higher levels of phosphorus found at that site. The watershed areas that contribute to specific streams are shaded in different colors. Finally, the location and severity of all the Non-Point Sources of phosphorus (runoff from roads and lawns) identified in the Watershed Survey are marked by triangles, with red triangles indicating the worst sites for erosion issues. Hot spots with high concentrations of phosphorus are scattered around the lake, typically at sites where there is significant upstream development. Sanford Brook, which enters Belgrade Stream, was also a hot spot for phosphorus entering from the watershed.

The reduction in water clarity during this rainy year has emphasized the importance of addressing the watershed sources of phosphorus entering the lake. Contact FOM for a LakeSmart evaluation to ensure your property is not contributing to the problem!

Many thanks to Danielle and Lynn for this sobering article. The results underscore the importance of all three Watershed Projects; Road Construction, YCC, and LakeSmart. We will make this map available on the website so it can be enlarged.

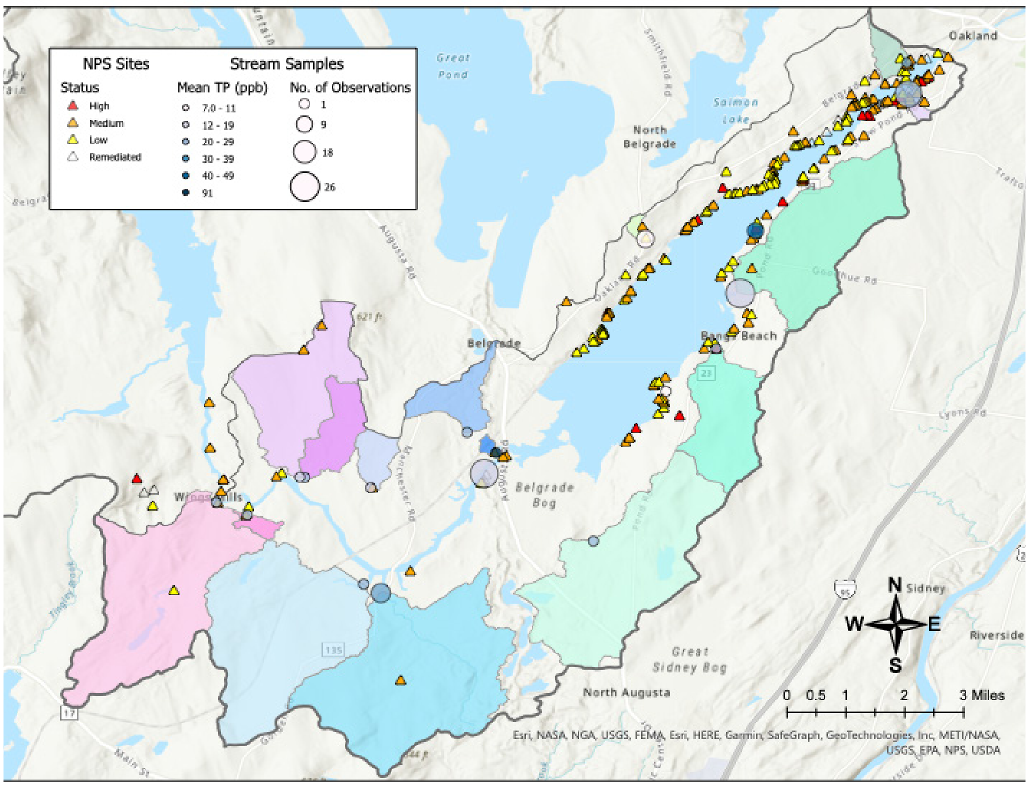


Figure 2: Stream sampling sites, phosphorus levels, and potential erosions sites identified by the watershed survey (created by Lynn Geiger, 7LA).

Best Wishes for a Happy New Year!

Newsletter designed and printed by SBS/Carbon Copy, Waterville, ME

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