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2021 Accomplishments

Your annual membership renewal, donations from dozens of supporters, and hundreds of hours of volunteer time made it possible for Three Lakes Association to complete and engage with many important initiatives in 2021. What follows is some of what we accomplished:

Eurasian Water Milfoil (EWM)

Three Lakes Association and Torch Lake Protection Alliance continue to work together to monitor and control the infestation of Eurasian Water Milfoil (EWM) on Torch Lake. Volunteers from both organizations surveyed the lake several times during the summer season to monitor known patches of EWM and to look for any new infestations. Four locations of known EWM infestation were once again treated in September to control growth and prevent spreading. The team also identified contractors for non-chemical treatment that will be further explored in 2022.



Torch Lake Plant Survey

Thanks to a generous grant from the Dole Family Foundation, Three Lakes Association and Torch Lake Protection Alliance have combined forces to complete a full-lake plant survey of Torch Lake by contracting services from Tip of the Mitt Watershed Council. This survey will confirm what native plant species are growing in the lake and help us to identify the extent of infestation of invasive plant species like Eurasian Water Milfoil.

Long-Term Water Quality Monitoring

We joined Tip of the Mitt Watershed Council's volunteer water quality monitoring program after working under the state's Cooperative Lakes Monitoring Program (CLMP) for many years. Both programs are part of Michigan's MiCorp network of water quality monitoring programs, which means we were able to seamlessly continue our multi-decade monitoring of Lake Bellaire, Clam Lake, and Torch Lake, while also being supported and networked locally through Tip of the Mitt.



Shoreline Stewardship Education

We worked closely with Torch Lake Protection Alliance and Torch Conservation Center to promote actions all lakeside landowners can take.



- We designed a yard sign that promotes no-fertilizer lawn practices for use on properties beyond Torch Lake. This *Be Wise Don't Fertilize* campaign complimented the *Keep Torch Blue Don't Fertilize* campaign initiated by Torch Lake Protection Alliance.
- Three Riparian Stewardship Postcards encouraged landowners to manage their landscaping and lawn care in ways that support healthy aquatic ecosystems.

New Membership Portal, Updated Website and New Phone Number

Ways to connect with TLA have gotten an upgrade!

- We got a new phone number this year, 231-412-7551, which will allow us to more quickly and effectively respond to your inquiries
- Our Website got a fresh and clean new design this year, thanks to our treasured volunteer tech wizard KC Babb
- We now have a new membership portal and database system to make it easier for you to manage your membership and easier for us to communicate with you. This has been a year-long process, made possible through dozens of donations which fully funded the startup and maintenance costs for the next five years. Please set up your profile and use it to renew and donate at member.3lakes.com.



Estimating the Amount of Phosphorus Entering Torch Lake

TLA estimated the total loading of phosphorus into Torch Lake over a 12-month period in 2020 and 2021 using the same methodology we used in 2005 and 2006. Sediment traps were suspended in the deep basin of the lake to collect the solids that settled from the lake water. The solids found in these sediment traps consisted of insoluble calcium carbonate particles plus an amount of phosphorus that had been adsorbed from the lake water.

The total amount of phosphorus found in the sediment traps in 2020-2021 was similar to the total amount found in 2005-2006. Although this finding suggests there was no change in phosphorus loading, several other factors known to affect phosphorus adsorption on calcium carbonate particles may have influenced the results, such as water temperature, atmospheric carbon dioxide, and the volume of rainwater flowing into the lake.



Summer Internship Program—What do Snails Eat?

TLA's 2021 Summer Internship project involved five students from four high schools within this watershed: Vivien Felker (Elk Rapids), Rebekah Campbell (Kalkaska), Anna Anger (Mancelona), Lily Brown (Elk Rapids), and Grace Robinson (Bellaire).



These five evaluated two snails native to Torch Lake as potential consumers of the diatoms associated with golden brown algae. After examining dozens of samples of snail feces microscopically, they determined that the snails do graze on golden brown algae diatoms, but they are an unlikely natural solution to this aesthetic problem because most of the diatoms found in snail feces were undigested and still alive.

This spring, the Gerrit and Carolyn Wierda family generously set up a fund with Three Lakes Association to partially support the internship program long-term, called the Gerrit Lee Wierda Memorial Internship Fund. We celebrate their recurring donation and look forward to how it will support the many students who will benefit from it.

Golden Brown Algae Investigations and Big Report!

Golden brown algae appears as a yellow-brown mat or haze on the bottom of our lakes. It is not harmful, but can be unsightly, and its appearance suggests that things are changing in our lakes. TLA has been the lead investigator of this change since the beginning, and this year we conducted additional sampling to confirm previous findings, which compared near-shore, deep basin, benthic and groundwater nutrient enrichment levels.



We also recently received a comprehensive report from Dr. Stevenson that summarizes the findings from last 5 years of data collection on GBA in our area. Our board is currently reviewing this massive document and will use it to chart our plans for GBA studies going forward.



TLA Identity Document Created

The TLA Identity Map helps us communicate with our members and the public about the value we provide to the community, assists us with strategic planning, and provides institutional memory for our evolving board membership. Visit our website to see the whole document.

Aerial Photography

Board member Art Hoadley has been systematically photographing our three lakes since 2012. This year he captured shoreline photos of Torch Lake in mid-May and mid-August, largely to track the proliferation of golden brown algae.

He also took shoreline photos of Clam Lake, the Grass River, and Finch Creek immediately after the major rainstorm that took out the culvert on Bellaire Highway. Photos like this allow us to better appreciate the relationships between land and water, and help us track short and long-term changes in our shorelines.



2022 Plans

1. Initiate a new partnership with the AuSable Institute for monitoring and managing Torch Lake
2. Develop a Grass River management plan in cooperation with the Grass River Natural Area
3. Convene a multi-organizational team to review findings laid out in Dr. Stevenson's GBA report and develop a strategy for ongoing monitoring and additional investigations.
4. Reimagine our Science Education and Outreach program to better meet our objective of seeding stewardship values into the youth of today
5. Host a Lake Education Event for our Members and the Public
6. Support another group of inspiring and talented teens through our High School Internship Program
7. Implement a stronger committee structure within TLA and complete a full bylaws review
8. Continue long-term water quality monitoring of all three lakes
9. Continue managing Eurasian water milfoil in Torch Lake
10. Continue producing quarterly newsletters, filled with pertinent lake protection information
11. Continue to engage with water protection partners on our three lakes and throughout the Elk River Chain of Lakes

The TLA Quarterly is published by the Three Lakes Association. Please direct comments or questions to:

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Join or Renew

Please join or renew your membership today and consider an additional donation to support a specific project or program.

Our watershed thanks you!

To join or make a donation, go to our new membership website at member.3lakes.com, or mail us a check:

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