



THREE LAKES  
ASSOCIATION

Serving Lake Bellaire, Clam Lake and Torch Lake since 1966

### Officers

President: Fred Sittel  
Vice President: Rick Doornbos  
Treasurer: Ed Gourley  
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### Committee Chairs

Water Quality: Rick Doornbos  
Membership: Todd Collins  
Education: Steve Laurenz  
Lake Monitoring: Cheryl Lynn Fields  
Publicity: Chris Herb

### Executive Director (January 2023)

Lois MacLean

### Administrative Assistant

Lois MacLean

### 2022 ACCOMPLISHMENTS

Members, donors, volunteers and program attendees provide the financial support, hands-on labor, and enthusiasm that make the work of Three Lakes Association possible. Here we summarize our many proud accomplishments from 2022.

#### Eurasian Water Milfoil (EWM) Activities

The Eurasian Water Milfoil Team, a combined effort of Three Lakes Association and Torch Lake Protection Alliance, had many successes this year:

- Monitoring in June revealed no regrowth of EWM at two locations where EWM has been persistent
- Milfoil was chemically treated in September by PLM Land and Lake Management with a new chemical in the Torch River Bayou and Alden Harbor
- Collaborations with state agencies have brought about new treatment and restoration possibilities
- Restoration performed in September at Butch's Marina in the Clam River through hand pulling of Eurasian water milfoil plants. We estimate that volunteers removed 95% of the invasive plants.



#### Aquatic Plant Survey of Torch Lake Story Map

The aquatic plant survey of Torch Lake, performed by Tip of the Mitt Watershed Council in 2021, is now available as an online, interactive report with maps, visuals and explanations. It illustrates how aquatic plants are distributed around the lake and shows change over time. The Eurasian Water Milfoil Team will update it regularly.

You can interact with the report here: <https://arcg.is/z4WDX>

This tool also provides a database for the Milfoil Team to track information from their regular monitoring visits, treatment types and dates, and treatment effects.



#### Golden Brown Algae (GBA) Experiments and Surveys

Investigations to determine forces that encourage and maintain growth of golden brown algae were well underway in 2022!



Dr. Jan Stevenson designed a nutrient delivery device that could test the impact of nutrient enrichment on the development of algae in Torch Lake. Do additional nutrients encourage the growth of GBA, or do they shift algal dominance to other forms of algae? Can changes in nutrients induce GBA growth in locations that do not naturally favor GBA? Experiments were performed this summer and samples will be analyzed over the winter.

GBA grows in lakes throughout northwest Michigan. This summer we began collecting water and algae samples from regional lakes to determine the factors that cooperate to encourage GBA growth. By the end of 2023, we hope to study 20 lakes in Benzie, Leelanau, Antrim and Charlevoix Counties.



#### Zebra Mussel Survey on Torch Lake

Professor Matt Ingle of the AuSable Institute and his students and student researchers conducted a zebra mussel survey on Torch Lake in summer 2022. Zebra mussel density is currently unknown, and could play an important role in nutrient distribution in the lake. The report will come out in 2023.

### Summer Internship Program

Six high school students from Elk Rapids, Bellaire, Mancelona, and Kalkaska hauled up samples from the bottom of Torch Lake and Lake Bellaire to identify and count the mussels, insect larvae, snails, and other tiny invertebrates that are living there, and compare their results to a similar study completed in 2007. They learned that invasive zebra mussels are now present in both lakes, invasive quagga mussels are now present in Torch Lake, and native Diporeia, small, shrimp-like creatures, are still present in good numbers in both lakes. The TLA Internship program is proudly supported by the Gerrit Lee Wierda Memorial Internship Fund.



### Torch Lake Partnership



We partnered with Torch Lake Protection Alliance and Torch Conservation Center to help develop a long-term monitoring plan for Torch Lake. Beginning In 2023, Dr. Dale Robertson at the United States Geological Survey will be contracted to study. TLA will continue seasonal water quality monitoring of Torch Lake in association with the Tip of the Mitt Watershed Council and we look forward to supporting USGS's future recommendations.

### Lake Monitoring

Our dedicated lake monitors on Lake Bellaire, Clam Lake, North Torch Lake and South Torch Lake took samples and made observations twice a month throughout the summer. These data track seasonal and long-term trends in basic water-quality benchmarks and also give our volunteers a chance to get familiar with the character of the lake they monitor. We wrapped up the year with a luncheon to celebrate their commitment, and the fine coordination by Tip of the Mitt Watershed Council.



### Grass River Connects

Three Lakes Association and Grass River Natural Area are developing a management plan for the Grass River with the support of a \$20,000 grant from the Michigan Department of Environment, Great Lakes, and Energy (EGLE). We are meeting with stakeholder groups to gather input so that together we can protect and restore this pristine ecosystem for wildlife and recreation.



Photo: Aaron Holznagle



Find us on Facebook! [facebook.com/3lakes](https://facebook.com/3lakes)

### Education Events on Water Levels and Climate

A three-year effort to model water levels in the Chain of Lakes was completed this year and TLA hosted a whole-community event in July to showcase the results and engage the community in next steps. Over 100 people attended to learn, socialize, and enjoy a relaxing evening in Thurston Park.

Weather and climate change held our attention at two events this year. At the annual meeting in August we learned about changing weather patterns in our region, and in October about 40 people gathered online to learn about the ways Michigan is poised to respond to the challenges of climate change.



### Education Grants Awarded



Three area schools will be able to take their students on hands-on field trips to local natural areas and education centers in 2023 thanks to education grants provided by TLA. These grants aim to develop in our youth a love for nature and appreciation for the role of humans in supporting thriving ecosystems.

### Bylaws Updated

Every few years the board does a full bylaws review to make sure our organization stays current with changing times. This year we made several updates to reflect the current possibilities for digital communication and online meetings. See the full bylaws on our website: [3lakes.com/about](https://3lakes.com/about).



### 2023 Plans

1. Investigate causes of GBA with a multi-lake comparison study and multi-site five-month survey of areas with low and high GBA in Torch Lake.
2. Develop a Grass River management plan in partnership with the Grass River Natural Area.
3. Offer specific and engaging volunteer opportunities and better promote them in the community.
4. Discuss local water quality concerns at Township board meetings on a regular basis.
5. Put fresh energy into promotion and publicity, including involvement on social media.
6. Continue engaging the community with adult education events.
7. Continue long-term water quality monitoring of Bellaire, Torch and Clam lakes.
8. Continue managing Eurasian water milfoil in Torch Lake and evaluate its presence in Clam River and Lake Bellaire.
9. Continue publishing an informative, engaging and high-quality newsletter four times per year.
10. Continue our engagement with local partner organizations in water quality protection on our three lakes and throughout the Elk River Chain of Lakes.

### Join or Renew to Make it All Possible!

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](https://member.3lakes.com), or mail us a check:

TLA, P.O. Box 689, Bellaire, MI 49615

