RENNIE LAKE ASSOCIATION
TRAVERSE CITY MICHIGAN

REFLECTIONS

NEWSLETTER OF THE RENNIE LAKE ASSOCIATION

VOLUME 3, ISSUE 1 SPRING 2024

The Association is dedicated to the protection, preservation, and continued improvement of the beautiful and unique Rennie Lake and its watershed.

The RLA website contains a variety of information for your review including the Annual Report, Board meeting minutes, water quality reports, a way to contact Board members, making online dues payments, and much more. Please check out the website when you get a chance at https://rennielakeassociation.com.

President's Comments by Ralph Bednarz

Welcome to spring! While many of us are eager to start the process of getting our docks in and boats out on the lake, Mother Nature has had other plans these past few weeks with the return of winter weather conditions prior to the Easter weekend. She tricked us this year with record temperatures in the 70s in late February in the Traverse City area and early ice-out on the Forest Lakes area lakes. Rennie Lake ice-out occurred on March 3rd, a month earlier than recorded in past years. We collected the 2024 spring water quality (phosphorus) samples the week after ice-out.

As Buoy Bob reminds us at the end of the newsletter, please be mindful of the loon nesting area while you're out and about having fun on the lake. It is unfortunate that the loon pair was unsuccessful in their nesting attempts last year and no chicks were born. There are numerous factors that may have contributed to their failure to nest and produce chicks. We defer to the wildlife professionals and the scientific literature for the possible answers. The Rennie Lake Association has obtained the DNR permit to legally place loon nesting area buoys around the nest location as a cautionary marker for the 2024 mating season.

As you return to the lake this spring, please talk with your neighbors about the importance of the Rennie Lake Association (RLA) and ask them to consider joining. Membership enrollment instructions can be found on the RLA website (https://www.rennielakeassociation.com/join-us). Also, please consider participating in one or more of the RLA committees (see RLA committees and chairpersons listing). A successful lake association is dependent on a growing membership and active participation of its members.

Best wishes for a fun and safe 2024 lakes season. We look forward seeing you on the lake and at the RLA events this summer. Enjoy reading the 2024 spring issue of ***Reflections***.

SECOND ANNUAL RLA PICNIC

Last year's RLA picnic offered such a nice time for neighbors and friends to get together that we would like to do it again. So save the date — Saturday, May 25, for the second annual RLA picnic. The Woods and Water neighborhood has agreed to be the host again this year so that we can all gather on one beach to enjoy good food and good company together. The beach is located on the southeast side of the big portion of Rennie Lake. Please plan to join us from 3:00—5:00 p.m. Food (hot dogs, chips, cookies, and drinks) will be provided by the RLA Association. Please plan to attend and bring a neighbor who might want to join our association and contribute to the efforts to protect and preserve the lake.

ANNUAL RLA MEETING

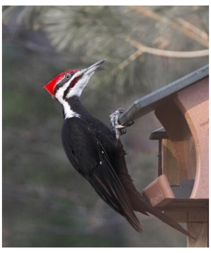
Please put June 22 on your calendar and plan to join us for the annual meeting of the Rennie Lake Association. As in previous years, the meeting will be held from 10:00 a.m. to 12:00 p.m. at the East Bay Township offices on Three Mile Road. This is an opportunity to vote for new board members, get an update on the RLA budget, and gain new information about efforts occurring to protect and preserve our beautiful lake.

RLA Nature Notes by Sandy Witvoet

Michigan Natives – Birds, Beasts and Buds

Trumpeter Swans. Somewhat unusual to visit Rennie Lake in the Spring, a few have been stopping by this year! Trumpeters are native to Michigan and thanks to reintroduction efforts are thriving. They differ from the non-native and invasive Mute Swan by their long black bills and slightly larger size. Mute Swans have a bright orange bill and black knob at the base. Mute Swans are quite opportunistic while Trumpeters tend to be shyer. Their call sounds like a French Horn. (Mute Swans, well, are mute but they do sometimes make hissing noises.) Trumpeters have had nests over on Spring Lake near Arbutus for many years. Will they nest here? We'll see.

Pileated Woodpeckers. The largest woodpecker in North America, we often hear their rattling call in the woods before we spot them. The cartoon Woody Woodpecker was created based on the Pileated. They do enjoy visiting suet feeders, but much of their diet consists of ants. Males differ from females in that males sport a red moustache.



Five-lined Skink. Just one of two lizards native to Michigan (the other is the 6-lined Racerunner, found only in Tuscola County). 5-8 inches long. As juveniles they have a distinctive blue tail. Their diet consists of crickets, moths, flies, grubs, earwigs, slugs, etc., so they can be quite helpful to our gardens! Being a lizard they like to bask in the sun, but will quickly slip away when approached. The skink in the pic was sunbathing on my chain-saw bear.

Eastern Chipmunk. These cute and precocious critters are pretty common around here. Fun to watch, but a bit of a pain when they decide to tunnel under my gardens. There is, however, a plus side: Their feces spread a beneficial fungus that enriches soil and helps plants and trees absorb water and nutrients. Chipmunks are prey for hawks, owls and fox.

Wildflowers. The best for birds, bees and other native insects. These perennials usually need a couple years to establish but are well worth it. Bloom times vary. Columbine, Bleeding Hearts, phlox are a few spring bloomers. One of my favorite summer bloomers is Crocosmia Lucifer. Hummingbirds love it. Summer/Fall blooms include daisies, coneflowers, joe pye, black/brown-eyed Susans and Asters. Anise Hyssop (Agastache) is a hummingbird magnet! It usually won't survive our winters, but will sometimes return. Most nurseries up here sell it in their annual offerings.

What do chlorophyll measurements tell us about our lake?

By Ralph Bednarz

In the 2023 spring edition of ***Reflections*** I wrote about **Lake Trophic State** and the key factors that are measured to evaluate a lake's primary productivity, or ability to produce algae and aquatic plants. I reported on one of the key factors, the element Phosphorus, in the 2023 fall edition. Another key factor is the plant pigment Chlorophyll which is a surrogate for actually measuring algae biomass in lakes. The Cooperative Lakes Monitoring Program (CLMP) Fact Sheet reproduced below explains why and how we sample for Chlorophyll in Rennie Lake.

Cooperative Lakes Monitoring Program

Fact Sheet

Chlorophyll *a*

What do chlorophyll measurements tell us about our lakes?

What is chlorophyll *a*?

Chlorophyll is the pigment that allows plants (including algae) to use sunlight to convert simple molecules into organic compounds via the process of photosynthesis. Of the several kinds of chlorophyll, chlorophyll *a* is the predominant type found in green plants and algae. Measuring chlorophyll *a* concentrations in water is a surrogate for actually measuring algae biomass, which is far more expensive and time consuming.

Why is chlorophyll important?

Algae are remarkably diverse and are naturally present in all lakes. They produce oxygen and form the base of the entire lake food web. By measuring chlorophyll *a*, we can better understand the biological community a lake can support and how a lake may be changing through time. For example, if chlorophyll *a* is increasing in a lake through the years, this may indicate there are serious nutrient pollution problems. Chlorophyll a is also the main parameter used to calculate the trophic state of a lake (Oligotrophic, Mesotrophic, and Eutrophic). Trophic state is used to classify lakes based on productivity/overall biological growth. Trophic state helps us understand many aspects of the lake from its chemical properties to the amount of fish biomass a lake can support.

What affects chlorophyll?

Algae growth, and thus chlorophyll *a* levels, are directly affected by the amount of nutrients in a lake. Phosphorus is a naturally occurring element in the sediment, water, and biota of a lake. It is the most influential nutrient in most Michigan lakes. Some lakes naturally have more phosphorus than others. However, humans often introduce extra phosphorus into a lake through poorly maintained septic systems, shoreline erosion, lawn fertilizer, and from agricultural or urban runoff. The more phosphorus inputs a lake receives, the more algae it will likely have.

Bruce Lichliter, CLMP volunteer from Big Glen Lake, prepares to lower the water column composite sampler into the lake (credit: Mike Litch).

How is it measured?

The amount of chlorophyll in an algal cell varies with algae species as well as with changing light conditions at different depths within the lake. Changing seasons also create different light and nutrient conditions that, in turn, affect the algae community. To account for some of this variability, Cooperative Lake Monitoring Program (CLMP) volunteers monitor chlorophyll *a* during five sampling events over the summer season (May through September) using a sampling technique that collects water throughout the lake's photic zone. The photic zone of the lake is the upper portion of the water column where sunlight penetrates and supports growth and reproduction of free-floating algae (aka phytoplankton). The CLMP program defines the photic zone as twice the Secchi disk transparency measurement.

Once the water sample is obtained, CLMP volunteers push a known volume of water through a filter disk, which collects the algal cells. The filter disk is frozen and delivered to the Michigan Department of Environment, Great Lakes, and Energy laboratory for analysis.

A lake is going to vary in chlorophyll *a* levels over time. Therefore, it is very important to monitor it over a long period of time to understand if levels are truly increasing, decreasing, or staying the same. Increasing chlorophyll *a* levels may indicate that management actions are needed to maintain a healthy lake.

For more information about the MiCorps Cooperative Lakes Monitoring Program, visit www.MiCorps.net

Michigan Clean Water Corps

MiCorps is funded by the Michigan Department of Environment, Great Lakes, and Energy and administered in partnership with Michigan State University Extension, Michigan Lakes and Streams Association, and the Huron River Watershed Council.

Greetings from the Nominations Committee Chair, John Moody

Hopefully you received my February 26th email requesting nominations for the election of new Board members at our June 22nd annual meeting. The deadline for submitting nominees is May 23rd. Please visit the submission link on the Nominations page of our website at https://www.rennielakeassociation.com/page-18065.

You are welcome to nominate yourself!

In case you are concerned about the time commitment involved in being a Board member, the Board meets every other month remotely for 90 minutes to conduct the business of the Association. Board members who agree to serve as Officers or Committee Chairs contribute additional time to implement the direction of the Board.

Please give this request serious consideration. The Association needs active members to fully achieve its goals.

RIPPLE REPORT from the Tip of the Mitt Watershed Council*

Septic system failures pose a serious risk to water quality, and failing and improperly maintained septic infrastructure in the State of Michigan is a significant concern.

In Michigan, an estimated 35% of residents rely on septic systems, with about 1.3 to 1.4 million on-site septic systems throughout the state. Each system generates an average of 300-400 gallons of sewage daily. Imagine: over 455 million gallons of household sewage are treated daily in Michigan alone! The majority of Northern Lower Peninsula residents depend on septic systems, so particular care and attention are required to avoid water quality degradation and negative impacts to public health.

Many scientific studies have linked septic system failure to lower water quality, but a study done in 2015 by Michigan State University found that pollution from septic systems in Michigan might be impacting more water bodies than we thought. Also, public health officials believe reported septic system failures represent only a fraction of the total failures statewide, many of which go undetected or unreported for years.

A failing or improperly maintained septic system can introduce various pollutants, including nutrients, bacteria, viruses, and pharmaceuticals to our lakes, streams, wetlands, and groundwater. The impact of a failing septic system may be especially noticeable in the form of increased plant and algae growth in a body of water's nearshore area, which can make boating and swimming undesirable. In serious cases, septic failure can also make swimming and drinking unsafe.

The good news is there are ways to help your septic system work better…and avoid expensive repairs. Here's what YOU can do:

1. **Regular Maintenance:** Schedule regular inspections and pump-outs with a professional to keep your septic system working properly.

2. **Be Careful What You Flush:** Only flush human waste and toilet paper down the toilet. Avoid flushing items like diapers, wipes, and feminine hygiene products as they can clog the system.

3. **Limit Water Usage:** Use water efficiently and avoid overloading the system. Fix leaks and install water-saving devices to reduce water usage.

4. **Protect the Drain Field:** Avoid driving or parking vehicles, heavy machinery, or planting trees and shrubs over the drain field, as compacted soil and/or root intrusion can damage the system.

5. **Educate Yourself:** Learn about the signs of septic system failure, such as slow drains, bad smells, sink or toilet backups, and wet areas in the yard, and take action promptly if you notice any issues.

6. **Keep Records:** Write down when your septic system gets checked, pumped, or fixed. This helps you keep track of maintenance and spot any problems early.

Learn more at the following websites:

Proper Septic System Maintenance: A Guide for Michigan Homeowners (https://watershedcouncil.org/wp-content/uploads/2023/09/2022-Proper-Septic-Maintenance-For-Homeowners.pdf)

Septic Regulation Success Stories in Northern Michigan (https://watershedcouncil.org/wp-content/uploads/2023/09/2022-Septic-Success-Stories-Of-Northern-Michigan.pdf)

Inland Lakes and Septic Systems (https://watershedcouncil.org/wp-content/uploads/2023/07/2005-Inland-Lakes-and-Septic-Systems-Great-Lakes-Water-Levels.pdf)

Michigan State University's Septic Education Program (https://www.canr.msu.edu/septic_system_education/)

Environmental Protection Agency's Septic Smart Materials (https://www.epa.gov/septic/septicsmart-education-materials)

*Reprinted with permission from the Tip of the Mitt Watershed Council

Freshwater Ecosystems, From the National Geographic Society

Every living thing on Earth needs water to survive, but more than 100,000 species, including our own, need a special kind of water that can only be found in certain places and is in very rare supply: fresh water. Less than three percent of our planet's water is fresh water, and less than half of that is available as a liquid; the rest is locked away as ice in polar caps and glaciers. For these reasons, freshwater ecosystems are a precious resources as highlighted in a recent National Geographic Society article[1]. As we know, there are many threats to fresh water ecosystems: pollution, overfishing, disruption of the landscape, and invasive species to name a few. One example noted in the article was the case of an invasive species, the spiny water flea, which was detected in Lake Mendota, Wisconsin in 2009. The spiny water flea was transported to the United States from Europe and Russia by cargo ships. These cargo ships traveled across the Atlantic, down the St. Lawrence River, to the Great Lakes. The species was eventually carried over land and entered Lake Mendota where it began to eat the plankton, which then allowed the green algae to grow out of control. With the algae out of control, the oxygen content of the lake was lowered, the fish began to die and the water became murky. Ten years later, the spiny water fleas are still thriving and now another invasive species, zebra mussels, are also increasing in population.

The RLA water quality monitoring program reports that these invasive species have neither been observed nor reported on the lake. We all enjoy the beauty and recreation provided by Rennie Lake. Thank you for helping to preserve and protect this wonderful resource.

Spiney Water Flea. Photo courtesy of Minnesota Department of Natural Resources

Zebra Mussell. Photo courtesy of Istock Photos.

[1] National Geographic Society, January 2024, 'Freshwater Ecosystem', www.nationalgeographic.org, (accessed April 2024)

Electronic Dues Payments are Here

At last June's Annual Meeting, a number of you requested that the Association provide the convenience of electronic dues payments.

We are pleased to tell you that you now have the option to make electronic payments through our website or our mobile phone app, and that you will not be required to join an online payment processor like PayPal. To be clear, you are still welcome to make dues payments by check.

Our website host, Wild Apricot, has teamed up with payment processor AffiniPay to provide non-profits like the Rennie Lake Association with an affordable payment portal. Payments are by credit card. You will find the experience to be the same as making an online purchase by entering your credit card details.

AffiniPay charges the RLA a small fee for providing the convenience of online payments. To offset the loss in dues available to the RLA for its work protecting Rennie Lake, $1.50 ($1.25 for Friends) is added to dues paid online.

Instructions for making electronic payments will be included in this summer's annual Dues notification.

To go to our website, follow this URL: www.rennielakeassociation.com.

To download the app to your portable device;

Apple App Store: https://apps.apple.com/us/app/wild-apricot-for-members/id1220348450

Google Play: https://play.google.com/store/search?q=wild+apricot+member+app&c=apps

Buoy Bob

Hey there Rennie Lake Association Members,

Just a quick reminder to please be mindful of the loon nesting area while you're out and about having fun on the lake. As you all know by now, the loons have returned and it would be wonderful to have baby loons on the lake again this year. And thank for your care and consideration of our beloved loons!

All the best,

Buoy Bob

A tip from the RLA Webmaster John Moody

Our website is being used to provide you with important email from the Board and its Committees. Please check your junk / spam folder and add email from RennieLake@wildapricot.org to your address book or safe mail list. It may be easiest to simply allow all email from @rennielakeassociation.com.

Thank You Members!

The RLA Board would like to thank all the members who support the efforts to protect, preserve, and maintain our beautiful Rennie Lake. We appreciate your financial support and the time you give to being involved and staying informed. Please feel free to contact any Board member with questions or suggestions about current or future events. And please share with your non-member neighbors the importance of joining the RLA so we can all be good stewards of the beautiful lake that we are so fortunate to enjoy. Have a great summer!

BOARD OF DIRECTORS

Ralph Bednarz, President
Thomas Lapka, Vice President
Bryan Gilleland, Treasurer
Chris Kristock, Secretary
John Moody, Member-at-Large

COMMITTEES

Standing Committees:
Audit, Kim Schuette, Chair
Finance, Bryan Gilleland, Chair
Membership, John Moody, Chair
Nominating and Voting, John Moody, Chair

Supplemental Committees:
Communications, Chairperson (vacant)
— Webmaster, John Moody
— Newsletter, Mollie DaBell, Editor
Water Quality & Lake Level, Ralph Bednarz, Chair
Wildlife Stewardship, Chairperson (vacant)
Community Affairs & Public Relations, Chairperson (vacant)
History, Chairperson (vacant)
Planning, Chairperson (vacant)
Water Safety and Recreation, Chairperson (vacant)
Social, Mollie DaBell, Chair