

**LLA Annual Meeting  
August 27, 2022**

**L**  **NG**  
**LAKE**

[www.LongLakeAssociation.com](http://www.LongLakeAssociation.com)



# Agenda [Meeting Time 120 Minutes]

- Call to Order
- Acceptance of Minutes/Presentation from 2021 Annual Meeting
- Presidents Message – Brent Schnell
- Treasurer's Report
- LLA Audit Report
- Long Lake Foundation Update
- Committee Reports
  - Lake Management Update
    - Water Quality
    - Eurasian Watermilfoil Treatment
    - Zebra Mussel
  - Water Safety/Road Clean Up Update
  - Island Maintenance Update
  - Fishing/Loon Update
  - Membership Update
  - Communications/Long Range Planning
  - Community Affairs Update
- Announce New Board Members, Retirements and By-law Updates (if applicable)
- Questions and Answers Session
- Adjourn



# President's Message

**A "shout out" to our current members for your continued support of the Long Lake Association (LLA) through these challenging times!** We will continue to strive to accomplish our main mission "to preserve Long Lake as a natural resource and recreation area through protection and prudent use of its environs." As part of this mission, we continue to have great success in controlling the levels of Eurasian Watermilfoil (EWM) thanks to your support. We will strive to evolve our treatment program to take advantage of all possible control measures to create a hybrid approach including benthic barriers, new treatment types, etc. For example, we will be conducting a pilot of a new state-of-the-art treatment for EWM in Mickey Lake in 2022 and are planning a benthic barrier pilot in 2023. In 2022, we fully reinstated the NMC intern program to assist us in our water quality studies.

Based on the discovery of zebra mussels in Long Lake, we created a new committee in 2021 to track the presence of this invasive species and provide education to our members. In 2021, our sister organization, Long Lake Foundation (LLF), created the "LLF Invasive Species Defense Fund" to help fund the study and remediation of both aquatic and terrestrial invasive species in and around Long, Mickey, and Ruth Lakes. Contributing to this LLF fund at this link represents another way for you to support our invasive species remediation efforts: <https://www.longlakefoundation.org/donation-form.html>. Please put "LLF Invasive Species Defense Fund" in the comment section.

In 2022, the LLA membership approved by-law changes to change to a calendar fiscal year, update notification methods, and increase the annual LLA dues to \$45. This info was included in the ballot that was sent to LLA members prior to the August meeting. Please check out our website as we will continue to provide pertinent information regarding issues involving our lakes at: <https://longlakeassociation.com/>.

I would like you to encourage your friends and neighbors that are not currently LLA members to join for the annual membership fee of \$45 to help us in our mission to protect our lakes. I would sincerely like to thank our partners: Oleson Foundation, Long Lake Township, Long Lake Foundation, and NMC for their ongoing support!

Sincerely,

Brent Schnell



# Budget Summary - Income

FY 2020-21 [September 1, 2021 through July 31, 2022]

## INCOME

	<u>Budget</u>	<u>Actual as of 07/31/22</u>
Contributions and Gifts	\$ 6,000.00	\$ 7,126.50
Grants:		
Long Lake Township	\$ 12,000.00	\$ 2,014.70
Long Lake Foundation	\$ 2,500.00	\$ 1,164.16
Oleson Foundation	\$ 2,500.00	\$ 1,164.16
Logo Product Sales (tumblers/flags)	\$ 1,370.00	\$ 715.00
Membership Dues	\$ 15,000.00	\$ 11,441.00
Riparian Subscriptions	\$ 700.00	\$ 678.00
Total Income	<u>\$ 40,070.00</u>	<u>\$ 24,303.52</u>
Less Cost of Goods Sold	\$ 1,370.00	\$ 549.50
Net Income	<b>\$ 38,700.00</b>	<b>\$ 23,754.02</b>



# Budget Summary - Expenses

FY 2020-21 [September 1, 2021 through July 31, 2022]

## EXPENSES

	Budget	Actual
Administrative & Financial (Brent Schnell, Janice Moy, Wendy Wares )	\$ 3,753.00	\$ 3,566.90
Communications (Rick Kiehle)	\$ 2,000.00	\$ 1,894.05
Membership/Nominating (Becki Watson)	\$ 4,525.00	\$ 4,716.39
Lake Management (Brent Schnell, Rick Dahlstrom)	\$ 21,740.00	\$ 13,624.43
Lake Science Committee: (Len Klein)	\$ 5,580.00	\$ 3,414.50
Fishing and Wildlife (Terry Motley)	\$ 200.00	\$ -
Island Maintenance (Adam Adamczak)	\$ 800.00	\$ -
Water Safety (Mark Cerny)	\$ -	\$ -
	<b>\$ 38,598.00</b>	<b>\$ 27,216.27</b>



# Budget Summary – Fund Bal.

FY 2020-21 [September 1, 2021 through July 31, 2022]

Beginning Fund Balance	9/1/2021	27,587.44	
Fund Balance Change / Net Income - Expenses + \$50 Petty Cash		(3,462.25)	\$ (3,462.25)
Reconciliation Summary register balance as of	7/31/2022	24,075.19	





# LLA Audit Results

## Cherry Capital Accounting

4446 Bridlewood Dr., Traverse City, MI 49685

August 19, 2022

Long Lake Association Inc.  
PO Box 257  
Interlochen, MI 49643

To whom it may concern,

At the request of Janice Moy, I have reviewed the attached Long Lake Association, Inc. financial documents. Based on my 39 years' experience as an accountant, I have found the statements are free from material error. My review should not be construed as a forensic audit, which is used to derive fraudulent evidence.

The balance sheet as of 7.31.22 accurately reflects the cash basis banking records (Honor Bank) provided. The fund balance per the records is \$24075.19 plus \$50.00 petty cash. It was noted that there was one check no 2157 for \$708.00 issued in July that was outstanding as of July 31<sup>st</sup>. In addition, the Paypal deposit of \$37.00 on 7.30.21 was in transit at the end of July & should have been credited to the bank account in August 2022.

The Statement of Income, Expenses and Fund Balance for 9.1.21– 8.31.22 (actual ending date is 7.31.22) accurately reflects the cash basis bank documents or disbursement records provided as of July 31, 2022. Total actual income reported is \$24,303.52, net income is \$23,754.02 and total actual expenses reported is \$27,216.27.

No individual deposits were reviewed or compared to the statement of income. I was able to trace randomly selected vendor invoices to the statement of expenses. Lastly I was also able to trace the ending fund balance to the bank statement provided for 7.31.22.

My review was also conducted on the records as provided, which were essentially the cash basis Honor Bank documents and the Paypal account documents. No review was conducted of receivable balances due or any outstanding disbursement invoices to be paid. No review was conducted of budgeted information as compared to fiscal year-to-date actual spending.

Thank you for the opportunity to provide you the financial services requested. If there are any questions or concerns, feel free to contact me at 231.632.5627.

Cordially,

Brian Crouch – Cherry Capital Accounting



# Long Lake Foundation Update

- Benzie Boat Wash Demonstration provided by the Benzie Conservation District at Crescent Shores boat launch on Saturday, September 3, 2022, 9:30 am-3:30 pm. Previous boat wash demos were conducted on Friday, May 27, Saturday, May 28 and Saturday, July 2, 2022.
- Development of new signage in cooperation with the GTRLC for our lake islands to educate the public on how to prevent the introduction of invasive species and protect the lake.
- LLF has launched an improved website for preserving and protecting the Long Lake Watershed.



HOME ABOUT DONATE LEARNING CENTER LAKECAMS



TO PRESERVE and PROTECT  
the LONG LAKE WATERSHED

You Make All the Difference





# Lake Management – Water Quality Report 2022

## Len Klein - Chair

Presented by: Sarah Cole & Kelsey Mills





# Our Mission

Analyze the health of Long Lake, Mickey Lake, and Ruth Lake through the collection of physical, biological, and chemical data.

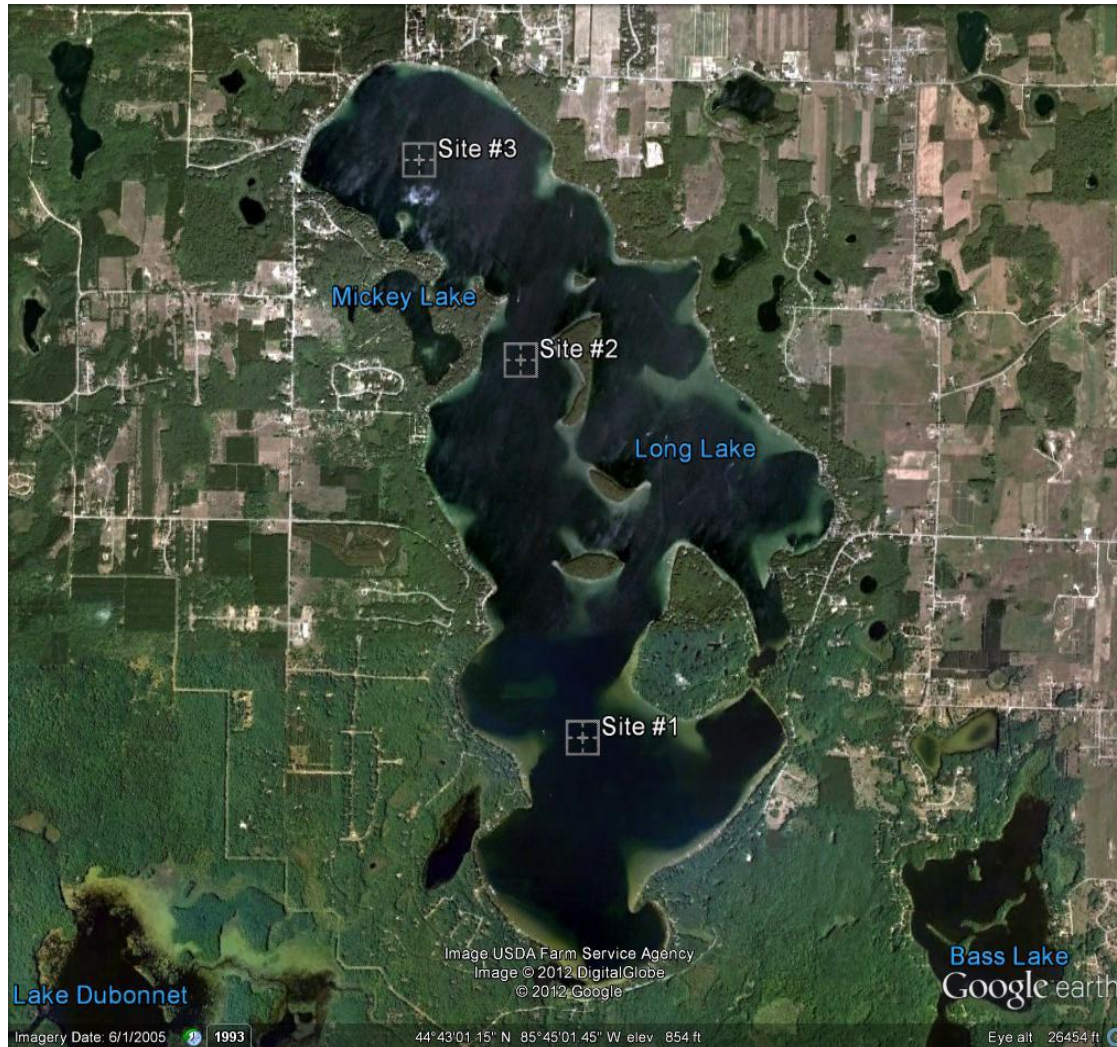
Report and share our findings to inform lakefront property owners and the community.







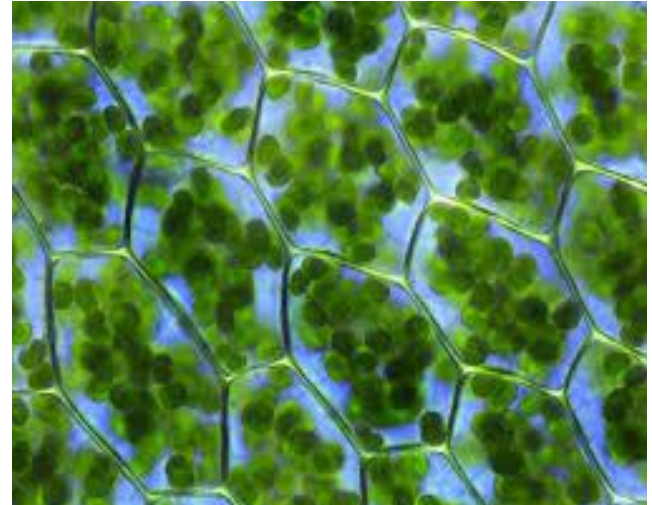
# Our Lakes: Sampling Sites





# Parameters Measured

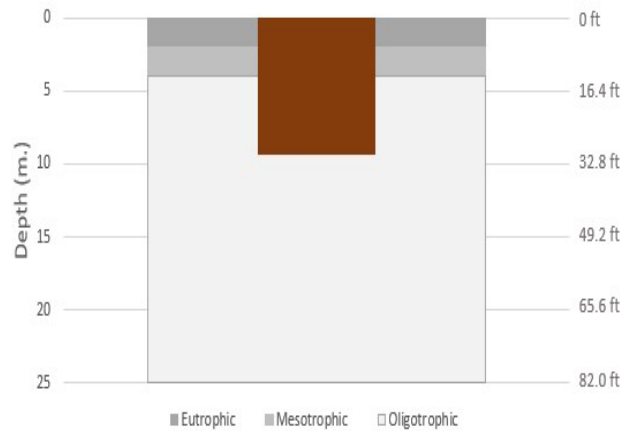
- Chlorophyll- A
- Nitrate/Nitrite
- Phosphorus
- Calcium
- Transparency
- Temperature
- Dissolved Oxygen
- pH
- Conductivity





# Average Secchi Depths

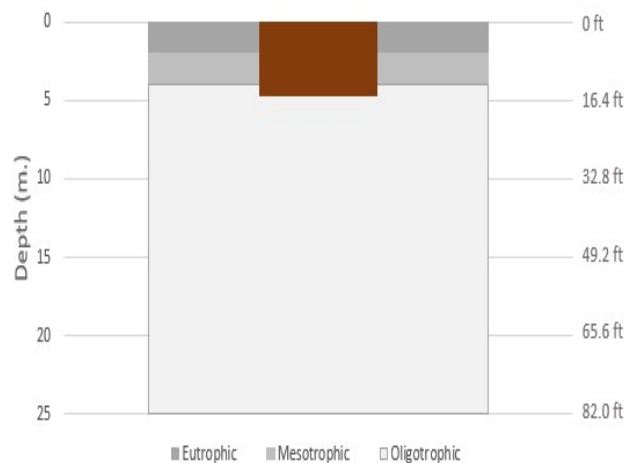
Summer 2022 Long Lake Average Secchi Depth



Summer 2022 Ruth Lake Average Secchi Depth



Summer 2022 Mickey Lake Average Secchi Depth







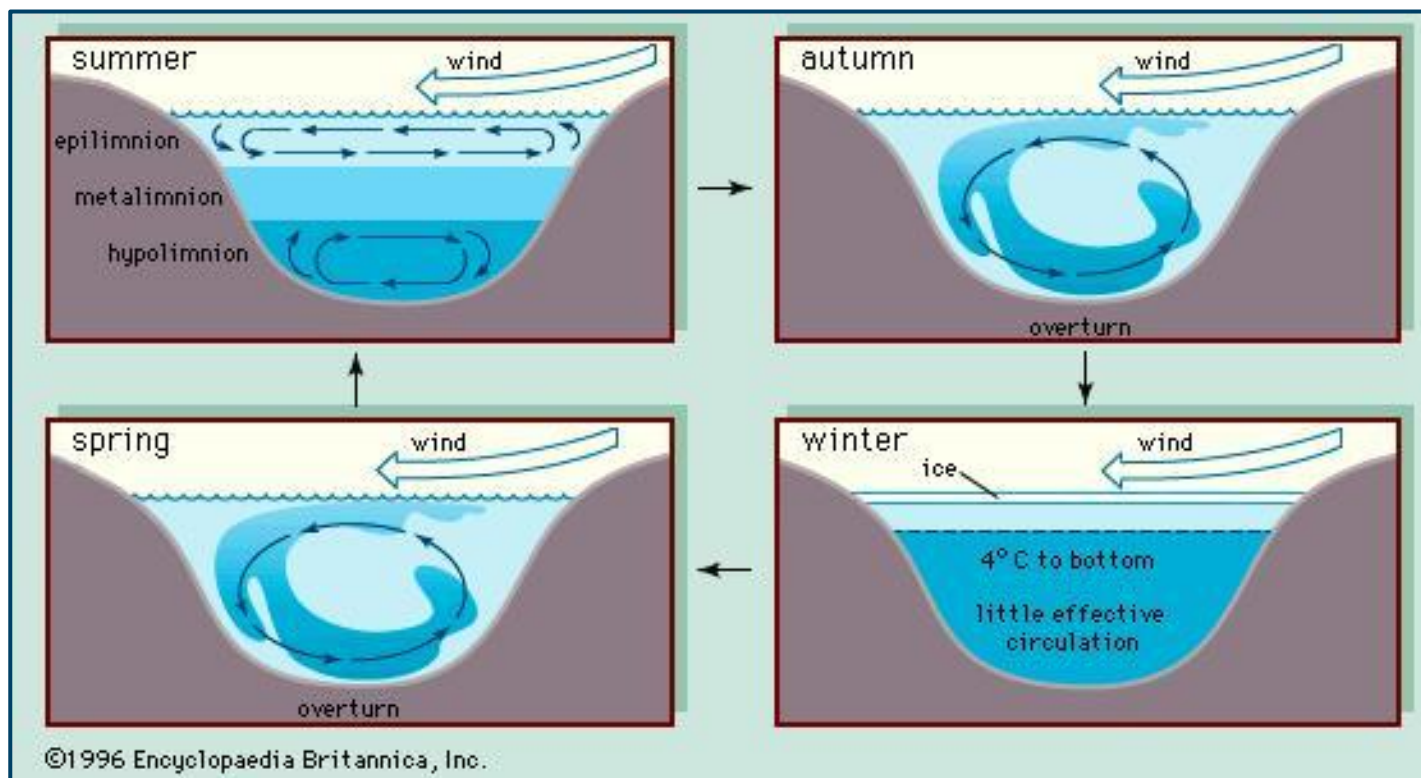
# Secchi Disk Transparency: Things to Know

- Measures water clarity: water color, algae, sediment, etc.
- Productivity of lake
- Oligotrophic ➡ Mesotrophic ➡ Eutrophic
- Indicates natural & human changes



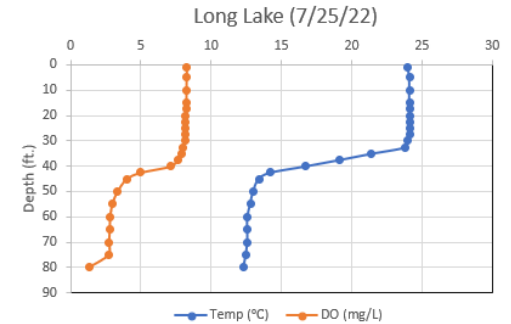
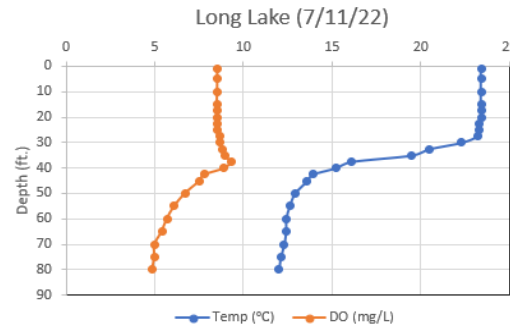
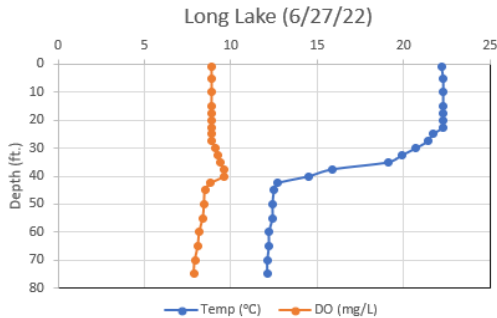
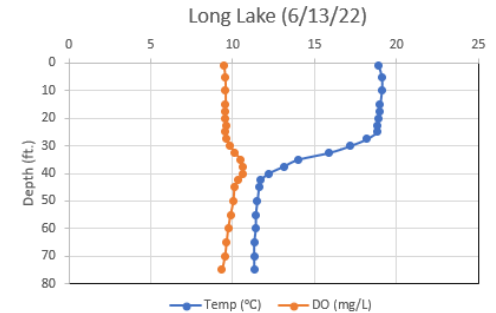
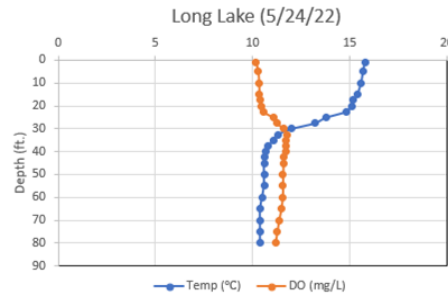
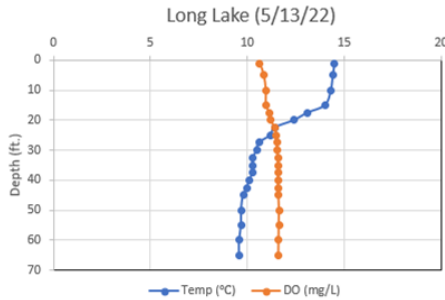


# Lake Level Stratification





# Lake Stratification: Long Lake Site 2

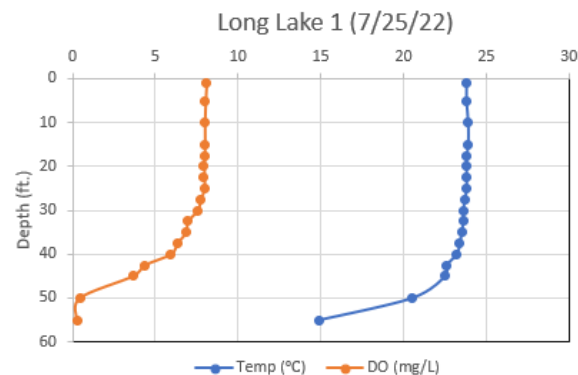
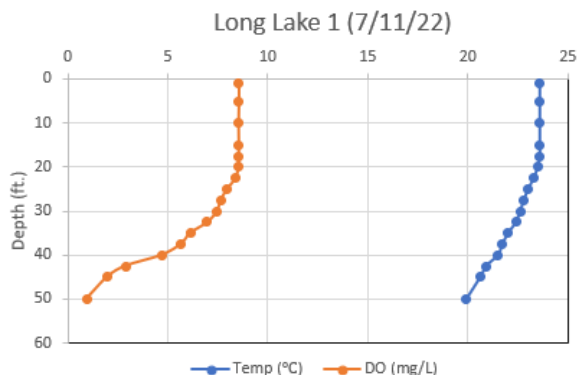
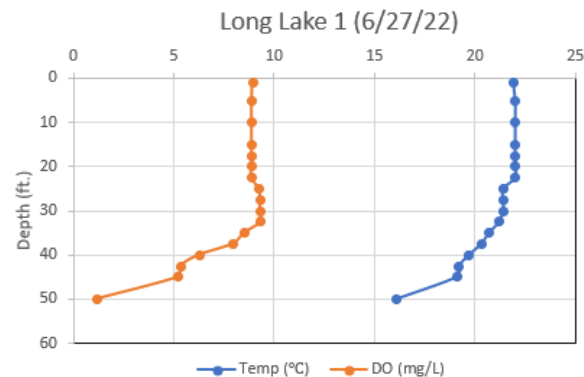
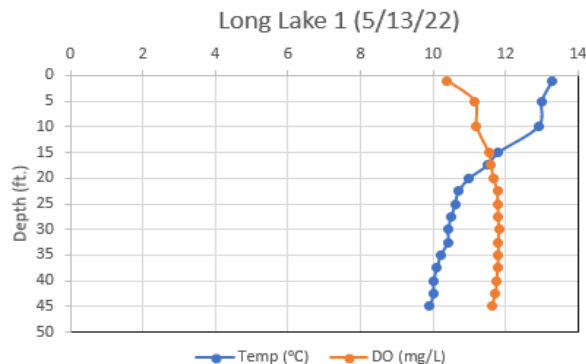


Horizontal Axis: Temperature in Celsius and Dissolved Oxygen in ppm.

↑ In water temperature = ↓ In dissolved oxygen levels



# Lake Stratification: Long Lake Site 1

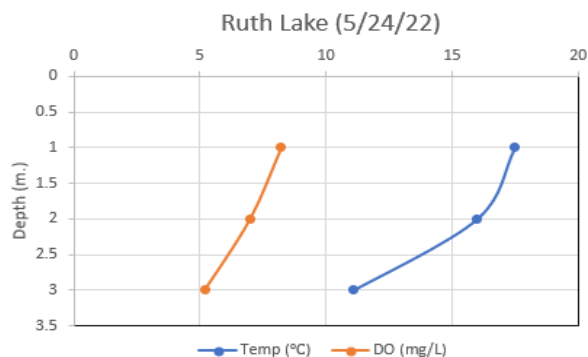
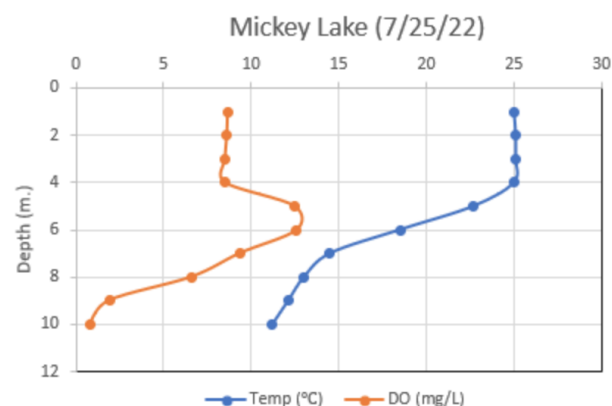
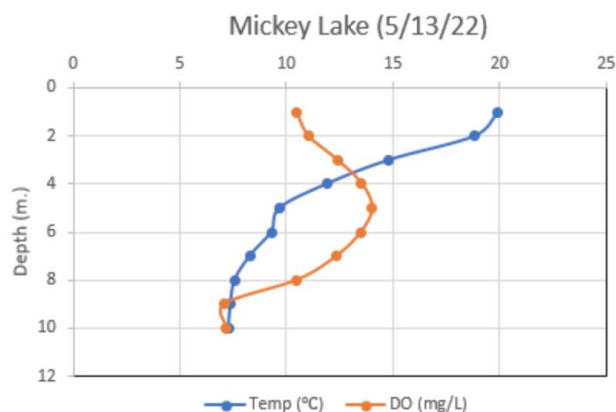


Horizontal Axis: Temperature in Celsius and Dissolved Oxygen in ppm.

↑ In water temperature = ↓ In dissolved oxygen levels



# Lake Stratification: Mickey & Ruth Lake



Horizontal Axis: Temperature in Celsius and Dissolved Oxygen in ppm.

↑ In water temperature = ↓ In dissolved oxygen levels





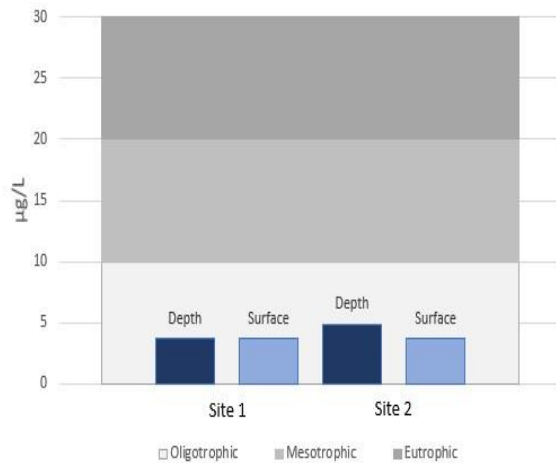
# Lake Stratification: Things to Know

- Lake turnover- when the lakes are uniform in both temperature and density. Extremely important for replenishing dissolved oxygen into the deepest parts of the lake.
- Healthy lake water should contain Dissolved Oxygen levels of at least 6.5 to 8.0 mg/L. We have happy fish!
- During the summer when Dissolved Oxygen approaches zero at the bottom of the lake, Phosphorus is released from the sediment.  
    \*\*Currently doing sediment testing for Phosphorus\*\*
- The majority of aquatic creatures prefer a pH range of 6.5-9.0, though some can live in water with pH levels outside of this range. Our lakes' pH ranges from 6.4 - 8.6.

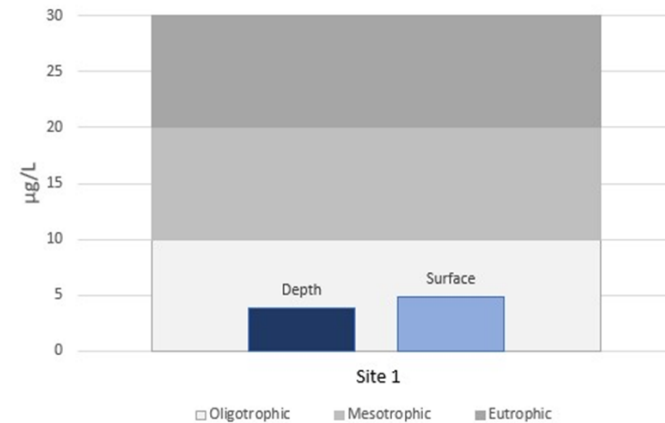


# Total Phosphorus Levels

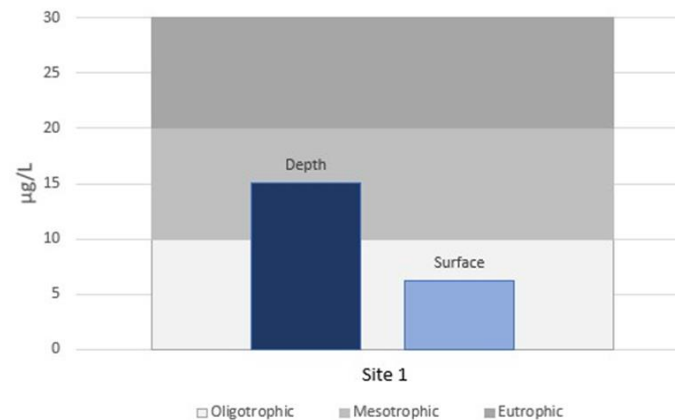
Long Lake Total Phosphorus 5/13/22



Ruth Lake Total Phosphorus 5/24/22



Mickey Lake Total Phosphorus 5/13/22





# Total Phosphorus: Things to Know

- Phosphorus limits production: more phosphorus=more plant growth
- Common ingredient in fertilizers
- Causes Eutrophication, which increases growth of plants and algae, and decreases dissolved oxygen levels in water.

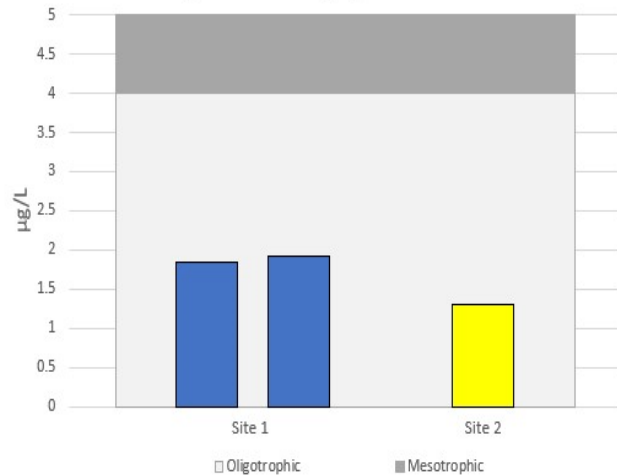
## What you can do:

- Testing soil to reduce waste of fertilizers that are needed for your yard
- Cleaning grass clippings and pet waste from nearby areas
  - \*\*Never rake leaves or dump Christmas trees into the lake\*\*
- Practice proper maintenance of septic systems
- Use natural vegetation as a buffer to collect excess nutrients from entering waterways

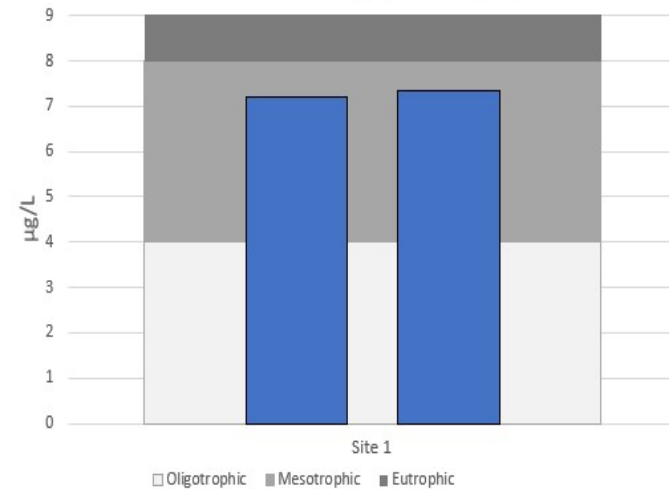


# Chlorophyll A Levels

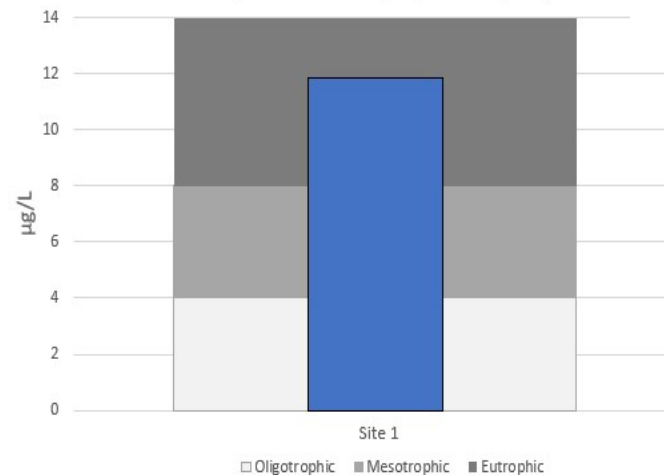
Long Lake Chlorophyll-A 5/24/22



Ruth Lake Chlorophyll-A 5/24/22



Mickey Lake Chlorophyll-A 5/13/22





# Chlorophyll-A: Things to Know

- Measures the health (trophic status) of a body of water
- Chlorophyll-A: a nutrient in algae and plants that give the ability to absorb sunlight for photosynthesis
  - More Chlorophyll-A=more plant growth
- When fertilizers are added to the mix, this encourages even more production of plants and algae
- Too much of a particular growth may cause problems:
  - Example: Cyanobacteria (Blue Green Algae):  
Can grow fast, be odorous, be harmful to humans, and leaves little oxygen left for other organisms to survive

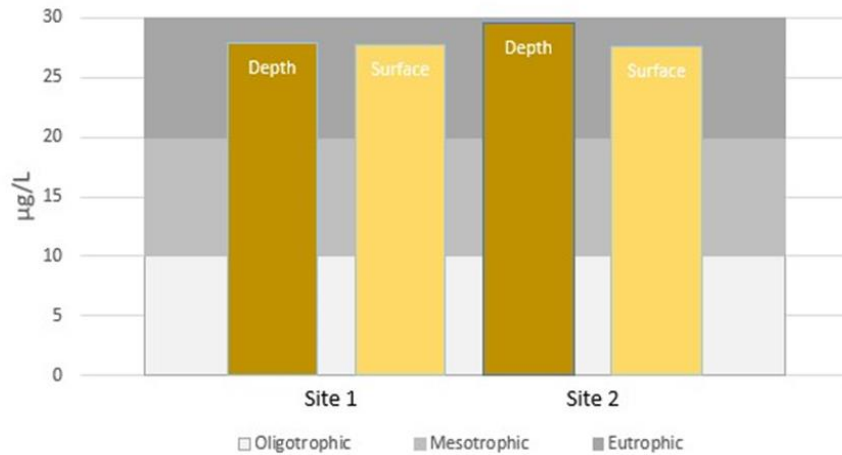




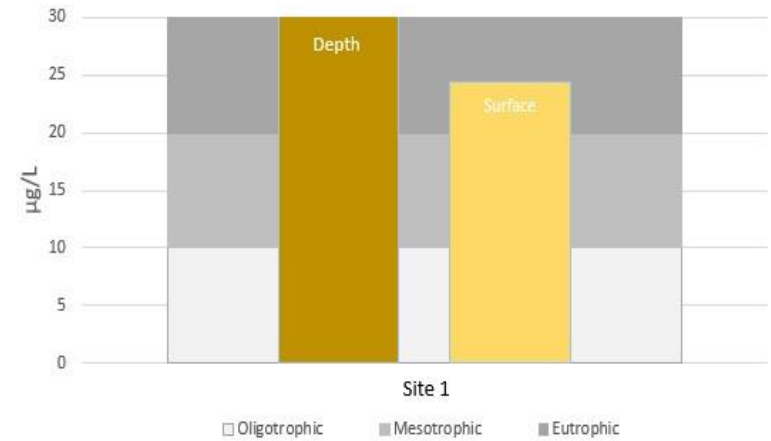


# Nitrate/Nitrite Levels

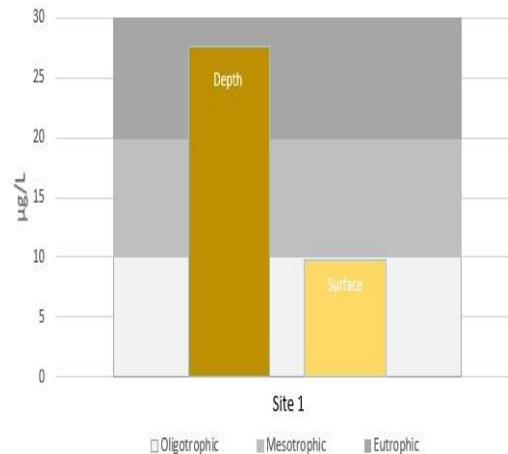
Long Lake Nitrate/Nitrite 5/13/22



Mickey Lake Nitrate/Nitrite 5/13/22



Ruth Lake Nitrate/Nitrite 5/24/22





# Nitrate/Nitrite: Things to Know

- Nitrates enter the water supply through agricultural run-off, industrial waste, the use of fertilizers and herbicides, and from leaking septic tanks and burst sewage systems.
- Naturally occurring bacteria found in soil can also metabolize nitrogen into nitrate deposits in the earth.
- Nitrates are essential plant nutrients.
- If there are too many nitrates, just like phosphorus, it can accelerate eutrophication. (Algal blooms)
- If the nitrate levels are too low, organisms that depend on dissolved oxygen will die.

 In nitrates =  In dissolved oxygen.



# Trophic Status



- Water is clear
- Little aquatic plants
- High oxygen content
- Low nutrients

- Water is murky
- Many aquatic plants
- Low oxygen content
- Excessive nutrients



# Trophic Status of Our Lakes

## Long Lake

Is **Oligotrophic**.

How do we know?..

- Deep secchi depth (Water is clear)
- Has little aquatic plants
- Lake profiles indicate high dissolved oxygen levels.

How do we know?..

- Secchi depth is moderate
- Has some aquatic plants
- Lake profiles indicated moderate dissolved oxygen.

## Mickey Lake

Is **Mesotrophic**.

## Ruth Lake

Is **Eutrophic**.

How do we know?..

- Small secchi depth (Water is murky)
- Many aquatic plants. (Lily Pads)
- Our lake profile indicated low dissolved oxygen

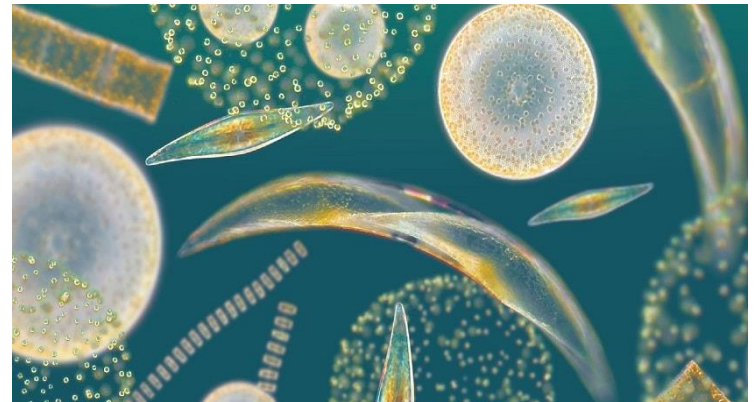


# Plankton

- **Zooplankton**: plankton consisting of small animals and the immature stages of larger animals.
- **Phytoplankton**: plankton consisting of microscopic plants.
- No new types of plankton have been observed so far this year.

– Zooplankton observed include: Rotifers, Cladocera, and Coepodia.

– Phytoplankton observed include: Blue Green Algae, Diatoms, Dinoflagellates, Chrysophyta, and Green Algae.





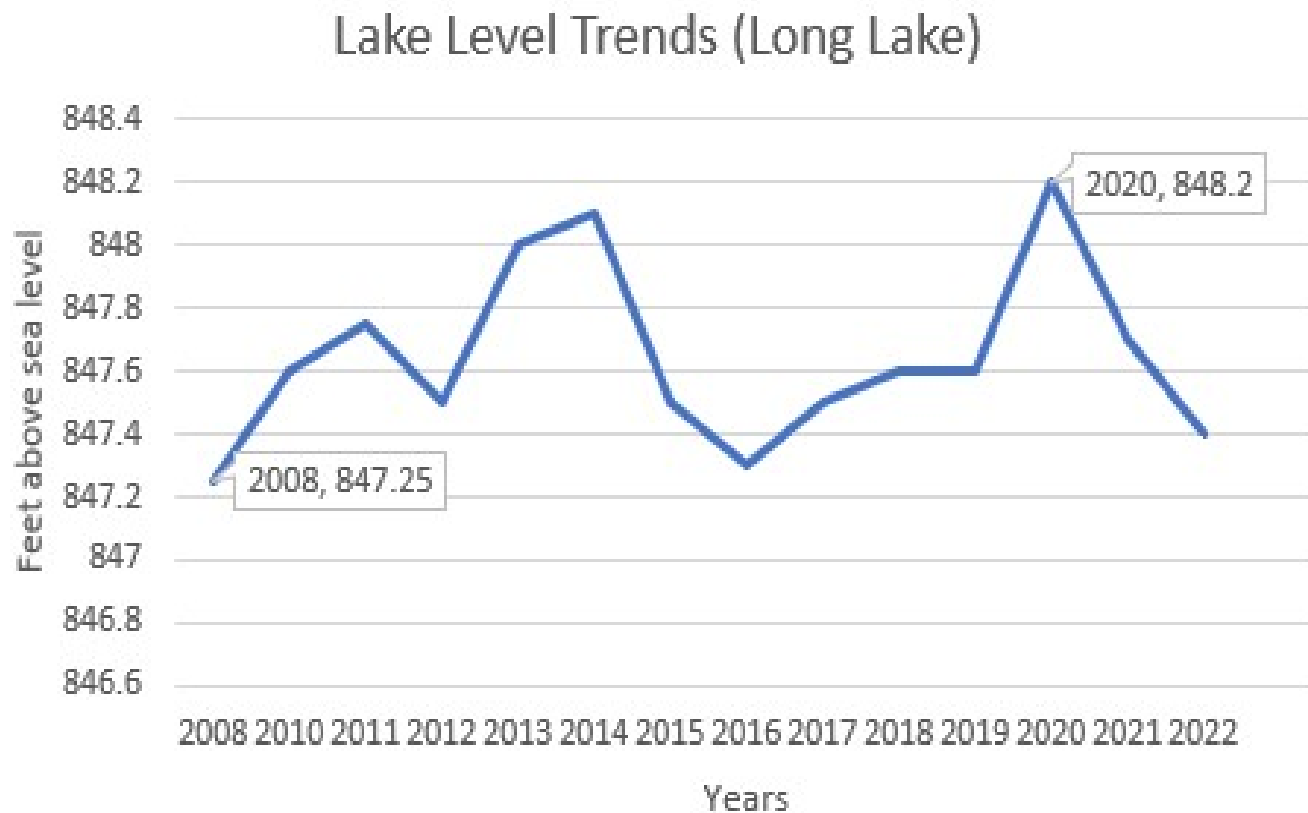


# Calcium Levels and Things to Know

- **Calcium** is necessary for plant and animal life.
- **Calcium** occurs naturally in lake waters due to leaching of rocks like Limestone.
- **Zebra Mussels** are believed to need a Calcium level of at least 21.0 mg/L to colonize.
- North America and Europe studies have shown that Calcium levels are decreasing.
- Spring Calcium levels in our Lakes appear to be fairly constant in our lakes over the last few years:
  - Long Lake around 23 mg/L
  - Mickey Lake about 22 mg/L
  - Ruth Lake Calcium around 8.0 mg/L



# Lake Levels (July)



Since 1993; Lowest Level: July, 2000 846.1 ft

Highest: May 2020 848.7 ft



# New Zealand Mud Snails

- Discovered in Michigan in 2015:
- Found in the Boardman River
- Mostly found in rivers
- Invasive species that is harmful to aquatic ecosystems:
  - Hard for fish to digest
  - Overcrowds native species





# Prevent the Spread of Invasives

- Cleaning your watercraft and all equipment exposed
- Drain and dry
- Limit visiting multiple locations in a day







# Bryozoans (*Pectinatella magnifica*)



- Native freshwater microscopic invertebrates
- Form jelly like clumps (colonies)
- Only found in clean, healthy aquatic environments
- Filter feeders - eat algae and other very small creatures
- Some folks refer to them as “alien brains”!!







# Acknowledgements

– Long Lake Association

– Mentors: Len Klein, Phyllis Lane, Dr.  
Richard Roeper

– Long Lake Foundation

– Long Lake Township

– Oleson Foundation

## Thank You!





# Lake Management –Treatment

## *Co-Chairs / Brent Schnell & Dave Baker*

- Controlling Eurasian Watermilfoil (EWM) is an important activity to maintain the quality of Long Lake for boating and other activities plus to allow native aquatic plants to thrive.
- In 2022, Long Lake Association and our partners Zero Gravity (the drone company) and Clear Water Lake Management (our targeted herbicide applicator) conducted Eurasian Watermilfoil treatments on June 22nd and July 27th.
- In 2022, 12 acres including 19 sites were treated in June. **This represents only about 0.40% of the total area of Long, Ruth and Mickey lakes combined.** The mapping technology allows us to precisely target areas where EWM is currently present greatly reducing the amount of chemical added to the lakes.
- The ProcellaCOR pilot on Mickey Lake was very successful! This allowed us to reduce the July overall treatment area to only 6 acres since only one treatment of Mickey Lake was needed this year.
- Long Lake Association membership dues and cash gifts are an essential part of our funding to continue treating the lakes.



# Lake Management–Zebra Mussels

## *Chairperson / Rick Dahlstrom*

- We've received over 20 reports of zebra mussels being found in Long Lake
- The reports are coming in from every area of the lake's shoreline
- Unfortunately, the quantities being found in a specific area has increased significantly over last year. One 2 ft wood branch had over 100 mussels attached to it.
- Please continue to remove and destroy them. Also, ask friends and family that may be bringing a boat onto the lake to clean boat, trailer, bilge and ballast before putting it in the lake
- It is clear we have a growing problem with invasive zebra mussels







# Lake Management–Zebra Mussels

## *Chairperson / Rick Dahlstrom*

### Zebra Mussel & Quagga Mussel Comparison



Zebra Mussel

Quagga Mussel



# Water Safety

## *Chairperson / Mark Cerny*

### **2022 Water Activity on Long Lake**

as Reported By Ian Ferguson of the Grand Traverse Sheriff

# No report for 2022





# Water Safety

## *Chairperson / Mark Cerny*

- Long Lake Township has hired a part-time attendant for the boat launch at Crescent Shores.
- Swimming safety reminder - Dangers of attempting to swim from islands to shore
- Marine Patrol - 231-922-2112. Try to get the MC number when reporting incidents.
- If you witness a natural resource violation (e.g. loon harassment, poaching, etc.), contact the DNR REPORT ALL POACHING (RAP) line at 800-292-7800 (CALL OR TEXT). The RAP Center is staffed 24 hours a day, 7 days a week.
- Please take pictures/video, if possible. Video is highly preferred! Please provide the MC number of the offending watercraft when reporting incidents. Otherwise, no action can be taken.
- Central Dispatch Non-Emergency - 231-922-4550.



# Road Cleanup

## *Chairperson / Mark Cerny*

- The road cleanup date for 2022 was May 7th this year. LLA board members and other volunteers picked up trash along the northern edge of Long Lake along North Long Lake Road.
- There is an additional road cleanup date scheduled for September 24, 2022





# Island Maintenance

## *Chairperson / Adam Adamczak*

- Removal of trash is a must and any trash that can be taken off is appreciated. Clean islands are a must for everyone to enjoy.
- Before Labor Day activities:
  - Trail clearing if storms bring trees down over trails.
  - Clean and stock outhouses
  - Litter pick up
- After Labor Day activities:
  - Bring docks in for winter.
  - Move picnic tables away from waters edge.
  - Litter pick up



# Fishing & Loons

## Chairperson / *Terry Motley*

- There are four Loon families and five chicks on the lake this year.
- Thank you to the folks that continue to manage the Loon nesting sites each year. Your efforts are having a great impact on the Loon population on Long, Mickey and Ruth Lake.
- Please look out for the Loon families while boating and keep your distance.
- Here are the DNR contact numbers for support and reporting Loon harassment:
  - For harassment; call RAP: 800-292-7800
  - For an Injured Loon contact: 231-922-5280





# Fishing & Loons

## Chairperson / *Terry Motley*

- Fishing for walleye and bass has been good with improved fishing for perch this summer.
- Fishing habitat, food and spawning on the lake continues to be very strong, supporting a vibrant fishery.







# Membership Update

## *Co-Chairs / Becki Watson & Rick White*

### Annual Membership Stats Summary\*:

(Calendar Year/# Members)

2012-2013: 373 members

2013-2014: 386 members

2014-2015: 426 members

2015-2016: 426 members

2016-2017: 443 members

2017-2018: 434 members

2018/2019: 455 members

2019/2020: 417 members

2020/2021: 446 members

2021/2022: 468 members



\*Based on number of ballots distributed per year to paid LLA members



# Communications/Long Range Planning *Chairpersons/ Rick Kiehle/Cam Corteggiano*

- Mailchimp LLA Subscriber List: 491 contacts 474 of them are subscribers.
- Join Now – Continues to increase
- Voting Online – Continues to increase
- Facebook Reached over 1,245 followers
- Facebook total page likes 1,182
- Long Lake Association and Long Lake Foundation are working together to raise funding for preserving and protecting the Long Lake Watershed and will share communications tools and lists to reduce expenses



# Community Affairs Update

## Update on short term rentals within Long Lake Township

- At this time there are 90 short term certificates issued for this year.
- There are about 10 additional applications in process to make the year to be around 100 issued certificates.
- Last year there were around 100 certificates issued but 10-12 multi units were included in the total.
- Therefore, the total number of certificates are about the same as last year, however the number of single units has grown approximately 10%.



# Announce New Board Members and by-law updates per 2022 LLA Ballot

## 2022 LLA Ballot Results:

### One Year Term:

**PRESIDENT:**

**VICE PRESIDENT:**

### Nominee/Name

**Brent Schnell**

**Rick Dahlstrom**

**REELECTED 138 votes**

**REELECTED 135 votes**

**BOARD MEMBERS:** *(term expires in 2025)*

### Three Year Term:

### Nominee/Name

**Cam Corteggiano (1st term)**

**Len Klein (3rd term)**

**Adam Adamczak (2nd term)**

**ELECTED 135 votes**

**REELECTED 139 votes**

**REELECTED 134 votes**

**Ballot initiatives: BOTH INITIATIVES APPROVED**

1) Approve a new Long Lake Association annual membership dues rate of \$45/year

**129 Yes votes/12 No votes**

2) Approve change to a calendar fiscal year & other by-law changes as defined at:

**<https://longlakeassociation.com/by-law-updates-2022/> 126 Yes votes/6 No votes**



# Retiring LLA Board Members

A special thanks to the LLA board members that are retiring from the board:

- Rick Kiehle
- Mark Cerny
- Rick White







# Q&A Session

**Please ask any questions you  
may have for the LLA board  
members and any specific  
questions regarding the  
committee updates.  
Thank you!**

**Adjourn**

**THANK YOU!**

**LLA Annual Meeting  
August 27, 2022**

**L**  **NG  
LAKE**

[www.LongLakeAssociation.com](http://www.LongLakeAssociation.com)