

Spring 2021

Issue No. 193



Better times are coming! (Photo by Ruth Kowal).

President's Message

(Submitted by Co- President Kathy Cain)

Hello to all who appreciate the beauty of Thompson Lake. We are looking forward to returning to some semblance of normal life now that we have made progress with pandemic. It has been a rough year for everyone. My heart reaches out for all of those who may have contracted COVID-19 or have lost loved ones. I hope everyone that has felt the economic impact of the pandemic will soon get back on their feet again and recover. Our thanks go out to all the healthcare givers who have worked so hard and suffered such emotional distress throughout this crisis. Thanks also to our scientists, who have guided us through this and amazingly have come up with an effective vaccine in record time. Thompson Lake is a wonderful place for our local population and guests to enjoy and recover from a difficult year. Think how nice it will be to enjoy a sunset surrounded by friends! Yahoo!

The year 2021 marks the 50th anniversary of the establishment of the Thompson Lake Environmental Association. We are appreciative of all the hard work that has been done on the past to protect this resource and we look forward to continuing this tradition. This would not be possible without the support of the TLEA membership and the dedication of the board members.

We have completed our highly successful capital campaign for milfoil mitigation at the Thompson lake in 2020. Alex and his crew will be out on the lake once again this summer to complete the fifth year of milfoil removal; surveying the lake and removing plants with benthic barriers, harvest suctioning and hand pulling. The coves of the lake will be monitored for any new growth or resurgences of invasive species. Please continue to donate to our annual milfoil removal fund with your membership dues, this is a long-term effort!

Please continue to support TLEA and our programs so that we can maintain this precious resource. A lake association is only as strong as its membership.

Annual Meeting 2021

The Thompson Lake Environmental Association Annual meeting is planned to be held at the Oxford Recreational Hall, King St., on Saturday, August 7 from 9:00-

11:00 AM. We are optimistic that COVID-19 restrictions will allow for this. We will follow the CDC guidelines for gatherings and will maintain the recommended social distancing. We will have progress reports on our programs and we will have elections for board directors. Ken Mendelson is nominated as a new director and the following are up for renewal: Kathy Cain, Sarah Rice, Jade Doyle, Sharon Rice, Susan O’Byrne, Peter Siebert and Bill Booth. Mark this date on your calendar to hear about the environmental issues involving the lake and meet up with your neighbors and friends once again.

Thompson Lake Water Quality Overview for 2019

Scott Williams, Limnologist

High profile “extreme weather” events associated with a warming climate, such as hurricanes, tornadoes and wildfires, received a lot of media coverage in 2020. Maine did not see anything like these events. But it certainly experienced extreme weather! These type of climate changes can adversely affect the water quality of Maine lakes.

In fact, much of Maine experienced two forms of unusually severe weather last year. The Portland office of the National Weather Service documented the *warmest month of July on record, last summer*. June, August, and September were also unusually warm. As a result of the intense air temperatures, lakes throughout much of Maine experienced unusually warm surface waters. Typical mid-summer lake surface temperatures for lakes in southern and central Maine are in the 75-degree F range. *However, last July, lakes throughout the area reported surface temperatures as much as 10 degrees warmer than the average! In July and August, Thompson Lake surface water was approaching 85 degrees F!* Many smaller lakes in the area were even warmer during the period.

Unusually warm lake water during the summer can have a profound effect on physical, chemical and biological processes in lake ecosystems throughout the entire year. Several Maine lakes reported yellow perch “die-offs” last summer, including nearby Saturday Pond in Otisfield. Maine fishery pathologists attributed the phenomenon to parasitic infections and weakened immune systems from the stress of warm water temperatures. Of greater concern is the potential for planktonic

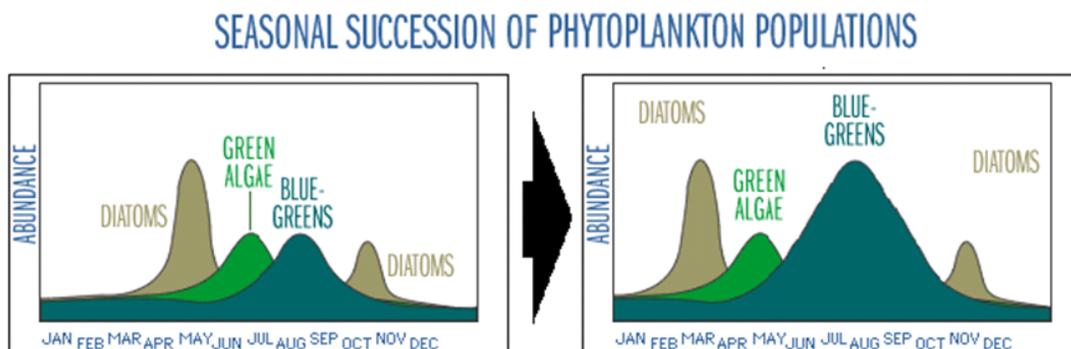
algae populations in lakes to shift to cyanobacteria (aka:blue-green algae) dominance, because these species typically flourish in warmer water temperatures. Some species of cyanobacteria produce potentially harmful toxins.

The concentration of planktonic algae/cyanobacteria typically influences lake water clarity. Last summer, Thomson Lake was less clear during the late summer than is typical for the lake, but water clarity remained relatively clear (7.85 meters, or about 26 feet on August 13), and much clearer than any threshold of concern. By September 9, water clarity had improved to 10.10 meters (about 33 feet) – very good water clarity, but less clear than Thompson has experienced during clearest recent years.

Ironically, Thompson Lake was probably spared from potentially higher algae growth last summer because of the second form of extreme weather experienced in the region: Severe drought. National Weather Service records from 2020 indicate that the period from mid-May through June was the “driest stretch of weather ever recorded” in Portland! Historical data for several hundred Maine lakes have shown that extended drought often correlates with clearer lake water, ostensibly because of reduced stormwater runoff.

If even “average” precipitation had occurred, coupled with the unusually warm water temperatures, lakes in the region could have experienced a proliferation of algae growth, reflected by much less clear water.

The graphic below illustrates a likely scenario of increasing dominance of cyanobacteria (blue-green algae) in lakes as lake water temperatures increase due to a warming climate.



Possible increase in duration and abundance of Cyanophytes under climate change scenario of increased lake water temperatures.

Over time, the effects of a warming climate, manifested in the form of extreme weather events, will be detrimental to Maine's lakes. Natural vegetated buffers continue to be one of the most simple and effective conservation practices that can offset or prevent warming lake water temperatures and protect Thompson Lake from increasing algae growth and reduced water clarity. Buffers planted, or enhanced, along shoreline and tributary streambank areas are especially effective.

Milfoil Removal 2021

Alex Bernardy and his crew will be continuing our efforts to remove milfoil and other invasive plant species from the lake. The main objectives for 2021 are:

- Manage the 1.5 acres of remaining milfoil at the north end of the lake near the Robinson Marina and the Oxford dam
- Monitor and eliminate expected regrowth at Pine Point
- Survey the previously re-claimed areas of milfoil removal in the lake

The milfoil at the northern end of the lake is spread out in small colonies, so the crew will have to use “search and destroy” tactics to find the colonies and remove them by either suction harvesting, benthic barriers and hand pulling. At Pine Point the crew will snorkel this area looking for milfoil regrowth and remove them with the same methods as described above. The crew will survey the coves of Otisfield, Edwards, Hancock and Pismo twice a month for signs of milfoil regrowth and remove them as necessary. These coves have had a return of native plant species which should inhibit regrowth of invasive plant growth.

TLEA has procured a \$18,000 grant for milfoil removal from the Maine DEP for 2021!

Our milfoil removal program has been in operation for 14 years. We are heading into the final year of our 5-year campaign to drastically mitigate milfoil in the Pine Point and the Oxford dam area, and to monitor the coves of the lake for signs of invasive plants. Over these years we have eliminated 550 tons of milfoil from the lake. This campaign was recently recognized in a column in the local newspaper, the Lewiston Sun-Journal, check it out at

<https://www.sunjournal.com/2021/02/14/paul-cain-milfoil-removal-at-thompson-lake-has-been-a-great-success/>

Courtesy Boat Inspection 2021

(Submitted by Marcia Matuska)

Courtesy boat inspections are the first step in preventing invasive plant and animal infestations. After our recent massive milfoil removal, it should be clear that it is better to prevent than it is to remediate! Maine has 6 invasive plant species and 2 identified invasive animal species (Chinese Mystery Snails and Northern Pike). Zebra mussel is a very destructive invasive species that may be heading to Maine. In 2018, a CBI inspector identified a Zebra mussel hitchhiking a ride on a boat and prevented its entry into a lake. We need to keep this species and all invasive animals and plants out of our lakes. Invasive species, especially animals, can be transported in the bilge of a boat. That is why it is so important to drain and dry your boat every time you leave a lake.

This summer, at least 3 of our 2020 inspectors will be returning (the 4th has not yet confirmed). All 4 inspectors did incredible jobs during a stressful season. TLEA is very happy to have them back this summer.

Youth Conservation Corp

(Once again, from Marcia)

TLEA has struggled to reestablish Youth Conservation Corps over the last few years. Secondary to COVID, we were unable to staff and supervise YCC for the 2020 season and we have the same concerns for 2021. We have developed a new approach to this problem with the establishment of a LakeSmart program. This program will allow TLEA members to access instruction on how to avoid erosion from lakeside property and a certification process for structures.

However, we have not given up on the YCC and we are still exploring options. There is benefit in having local students available to learn the about the erosion control along a watershed and to provide the labor for erosion control projects. Not to mention that it teaches the students the importance of protecting the environment. Unfortunately, we cannot make any promises for 2022.

LakeSmart Program

Jim Skinner of our Water Quality Committee reports that TLEA will be working with the Maine Lakes organization to offer LakeSmart training and certification to property owners along the lake. TLEA board members and volunteers will receive training from Maine Lakes so that we can offer recommendations to property owners who are interested in reducing shoreland erosion, which is the most significant contributor to non-point source pollution in the lake.

The LakeSmart program is:

- Voluntary for participants
- Free
- Not coordinated or associated with policing of lakeshore zoning laws
- Without obligation for the owner to act on its suggestions
- Each participating owner allows a volunteer evaluator to walk their property to assess its lake friendliness.
- The evaluator debriefs with the owner about the assessment and suggests methods to minimize storm water runoff (called “Best Management Practices” or “BMPs”).
- The evaluator follows up with a written report about the assessment and suggested BMPs.
- If the property is particularly lake-friendly, it will receive a LakeSmart Award with two signs. It is hoped that the owner will display one sign on her road and one at the lakeshore.

The board of TLEA is excited to offer this program to property owners along Thompson lake. For further information about this program, visit the Maine Lakes website and go to Programs>Lakesmart>Training Videos. *This program may become the most significant contributor to water quality of the lake, depending on participation.* Contact us at mmtlea@gmail.com or call (207) 539-4535 if you have questions or are interested in learning from this program.

Zebra Mussels

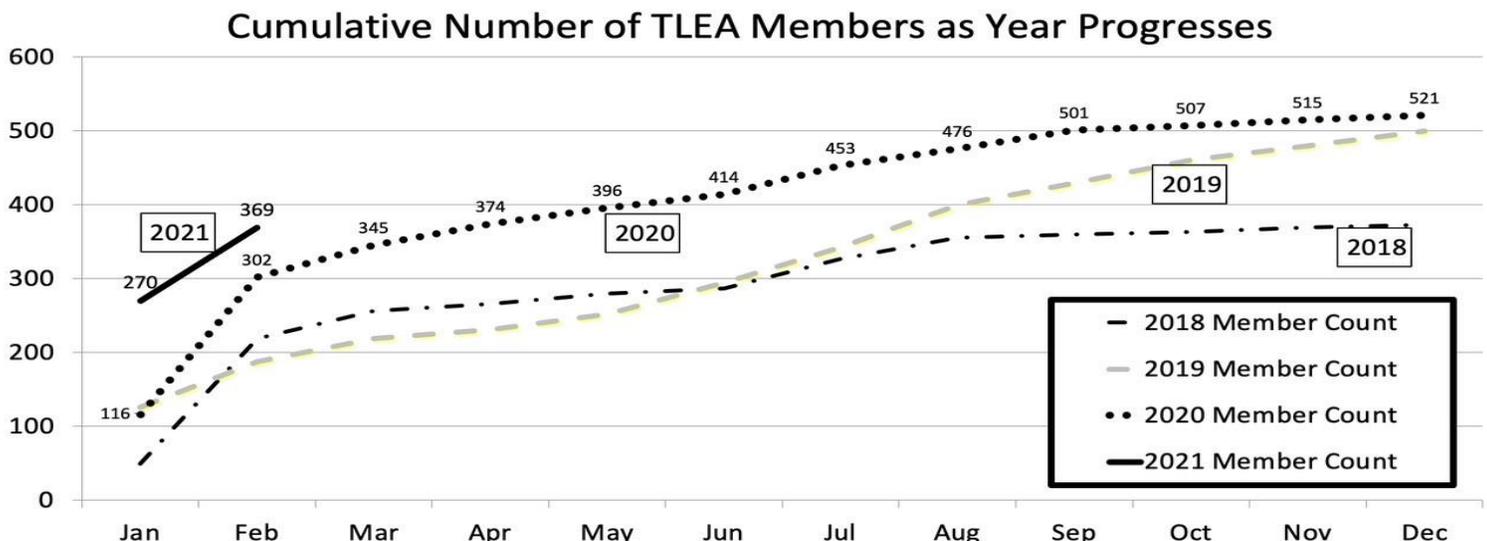
The Maine Department of Inland Fisheries and Wildlife has issued an alert regarding moss balls are often sold to aquarium owners under the name of “Betta

Buddy” to provide vegetation for aquarium tanks. These moss balls can contain Zebra mussels, one of the most destructive invasive species in North America. If you have these, they should be immediately destroyed with one of the following: Freezing- Place the moss ball in a sealable plastic bag and freeze for at least 24 hours. Boiling- Place the ball in boiling water for at least 1 minute. Bleach- Submerge the moss ball in chlorine bleach for 20 minutes. If you have placed the balls in your aquarium already, you will have to drain and clean the aquarium. This must be done properly, for details check the Fish and Aquatic Conservation website: Zebra Mussel Disposal at fws.gov, Destroy! Don’t Dump!

Zebra mussels initially were introduced in the great lakes and their infestation has spread from there. Presently there is a significant infestation as far east as Lake Champlain in Vermont.

Membership Report

Bill Booth of the membership committee reports that as of March 1, 2021, 369 members have renewed for 2021. At this time last year 302 had renewed at the same time last year. The increase is due to greater emphasis on membership renewal in our January mailing, which also acknowledges our member’s 2020 charitable contribution for IRS purposes. Over 100 Members added additional gifts for TLEA’s Courtesy Boat Inspection Program, up from 33 CBI gifts in 2020. Ice Out Contest Entrants increased from 49 in 2020, to 72 in 2021. We hope to again to end the year with over 500 members. Our progress in this effort is seen in the graph:



With over 1000 homes on the lake, we are continually working to attract more new members, especially new homeowners. If you are not a member of TLEA, please join!

TLEA Website

Our Communications Committee is at work to revise our official website. The website will have pages dedicated to informing visitors on the history of the lake and TLEA; points of interest on Thompson Lake, information about environmental programs, fishing, and upcoming events. The website will also allow for online payment of dues and donations through PayPal. We hope to have the site functional by the end of June.

Mercury Release from Power Plants

Mercury in Maine lakes has been a concern for decades. Mercury will collect in fish species, especially those at the top of the food chain. It has specific health threats to children, pregnant and nursing mothers. Presently, the Maine Department of Inland Fisheries and Wildlife recommends that pregnant mothers and children under the age of 8 years not eat fish from inland waters. Adults and children older than 8 years can safely eat two freshwater fish meals per month. For brook trout and land locked salmon, the limit is one meal per week. Other waters besides Thompson Lake may have more restrictive recommendations, these can be checked on the Maine DIF&W website.

In June of 2020, the U.S. Environmental Protection Association weakened the regulations for the release of mercury and other toxins from oil and coal-fired power plants. This could increase the levels of mercury in lakes and have serious health related consequences throughout the country, especially in the northeast, where much of the emissions from power plants ends up. Concerned citizens should contact their legislators to push for a renewal of regulations on power plants.

Oxford Dam

Butch Asselin, the town manager for Oxford, reported that as of December 9, 2020 the renovation of the Oxford dam were completed. The last phase of construction

involved connecting an actuator to the motorized metal gate at the east sluice and testing the gate in dry and wet conditions (See photo). The test showed the gate to be fully functional and essentially watertight. A fish screen has been placed at the east sluice as well. The Bancroft construction company has donated the steel plate used to temporarily block the sluice to the town. This will be valuable in the future when maintenance is performed or in an emergency.

Overall, the dam renovation project went very well, finishing on time and within budget. Mr. Asselin has stepped down from the town manager position, as of March 2021. Butch has worked hard to organize this project and made sure it was done properly and on time. Thank you, Butch, and best of luck in the future.

Further infrastructure improvements of the dam may be necessary to prevent further deterioration of the outlet retaining walls, expansion of the scour pools, and improve the water capacity at the center and western gates. Routine maintenance of the dam and monitoring of water levels will be necessary in the future. TLEA will continue to work with the town of Oxford in an advisory capacity regarding the maintenance and future renovations of the dam. We would like to engage all the towns surrounding the lake on this issue.

Briefly Noted:

Ice Out Winners: Congratulations go out to our ice out contestants Jean Guenther, Karla Frawley, Vivian Walters, Roberta Hodson, as well as Harold and Ruth Kowal. They picked the date of April 7. Ice out is officially when a boat can be navigated the entire length of the lake.

Community Partners: TLEA would like to recognize the Dead River Company and Poland Spring Bottling for their financial support over many years. Stan Tetenman, our director for fund raising, notes that they have been steady partners in assisting TLEA maintain the exceptional water quality of the lake.

Loon Count: Our loon count for the lake will be held on Saturday, July 17. This is coordinated through the Maine Audubon Society to assess the health of the loon population statewide. Contact Peggy Dorf at peggydorf@ymail.com if you can help as a counter.

Clynk Program: Support TLEA programs through our Clynk program. Your returnables can be cashed in and credited to TLEA. The pre-labeled, green Clynk bags can be picked up at the TLEA office, May- November, or at 37 Black Island Rd, Oxford, year round. The bags with empties should be brought to participating Hannafords to be scanned and credited.

Direct Asset Transfers from your IRA or 401K's: Members should know that you may be able to do a direct asset transfer to TLEA as a 501(c)3 organization. If you do, this is not recorded as taxable income. Something to consider. We are also available to accept stocks as donations. For more info contact mmtlea@gmail.com.



Oxford dam, March 2021. East gate is on the left.

Any comments for the Observer please let me know at paulrcain67@gmail.com.

Visit our website at:
www.thompsonlake.org

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