

Spring 2018

Issue No. 182



Photo by Paul Cain

Ice Going Out on Thompson

President's Message

(Submitted by Co- President Marcia Matuska)

What a winter! Cold and snowy with one Nor'easter after another. Hopefully, the snowshoeing, ice skating, ice fishing and skiing made up for all the plowing and shoveling. If not, certainly it has made us more excited about the upcoming spring and summer.

In 2018 TLEA will continue with our core programs of water quality monitoring, education, milfoil removal, courtesy boat inspections and the youth conservation corps.

In 2017 we launched our milfoil removal project for Thompson Lake. This year we will again focus on Pine Point, as this is the biggest source of plant fragments that spread to the rest of the lake. We have had a great response in our fund raising campaign, however this is an expensive project and we need your support. Contributions for this can be sent to TLEA, P.O. Box 25, Oxford, 04270. This campaign may be one of the most important things we can do to preserve the scenic and recreational quality of the lake.

This effort does not mean that our monitoring of milfoil infestation in the rest of the lake will be put on hold. This will continue to be funded through the dues and the extra monies designated for milfoil.

Courtesy Boat Inspection (CBI) will continue as usual. This year, we may introduce some volunteer inspectors. If you are interested in being an inspector, please see the article on CBI later in the Observer.

The Youth Conservation Corp (YCC) is undergoing some improvements for 2018 and the years to come. In order to reduce turnover and re-education of the lead crew member we have hired Tim Tardiff, a wonderful, long term resident of the lake to oversee YCC and the crew. This should improve communication with property owners and make YCC run more efficiently from year to year.

It is going to be a busy year as always. TLEA appreciates your support. Please let your neighbors know about us and encourage membership. You can join via our website application form or contact myself or co-President Kathy Cain and we can send you a membership form (contact info is on our website: www.thompsonlake.org). We should all work together to preserve the water quality and scenic beauty of this natural resource, it is so important.

Annual Meeting 2018

The Thompson Lake Environmental Association Annual meeting will be held at the Oxford Recreational Hall, King St., Oxford at 9:00 – 11:00 AM on Saturday, August 4. Make sure you mark this on your calendar as we will discuss environmental issues affecting the lake and will be electing new members to the TLEA Board. The following names have been placed in nomination for re-election to the board (terms to 2020): Steve Arnold, Peggy Dorf, Dean Plaisted, Paul Rausch, Stan Tetenman, Ron Armontrout, Marcia Matuska, KC Putnam and Tim Worden. Elections for the following positions will also be held: Co-President- Kathy Cain and Marcia Matuska, Treasurer- Jade Doyle, Secretary- Karen Brown. We will also have a slate of educational speakers and there will be TLEA merchandise for sale. It should be a good chance to visit with neighbors, learn about the lake and contribute to its health. There will be baked treats as well. Don't miss it!

Invasive Species Removal Update

(Submitted by Scott Bernardy)

Capital Campaign for Milfoil Removal

In 2017 TLEA started an ambitious and potentially historic program to remove milfoil from the Pine Point area of the lake and prevent its spread to other parts of the Thompson Lake. This is a 5 year program of laying down benthic barriers (tarps) throughout Pine point, hand pulling or suctioning plants as needed, and surveying problem areas of the lake to develop a long term plan to mitigate the future threat of invasive species in the lake. This is an expensive project which includes the following:

- Hiring of contract divers trained and experienced in removing invasive plants
- Construction of plastic tarps and anchors to fabricate benthic barriers for 1.5 to 2 acres
- Establishing a boat corridor in shallow water by using hundreds of yards of biodegradable tarps and anchors for the lakefront owners to access to the main part of the lake
- Replacing our 10 year old suction harvester, as well as our dive compressor, masks and regulators

- Performing underwater surveys of over 21 miles of susceptible shore land for identification and removal of invasive aquatic plants
- Annual removal of small areas of infestation throughout the lake
- Repairing and replacing older plastic tarps
- Disposal of the harvested milfoil
- Maintenance of equipment
- Courtesy boat inspections at launches

We estimate it will be necessary to sustain this high level of effort for five years before we can scale back efforts, as reduced amounts of milfoil become evident. The significant challenge of this project is the expense. It is estimated to cost \$21,000 just to fabricate 1 acre of benthic barriers and this does not include the cost of barrier placement. We estimate our costs will be \$85,000 per year. This is a 5 year project and then we will establish a long term maintenance plan.

To finance this new program TLEA launched the Capital Campaign Fund in 2017. Our goal is to raise \$500,000. Our contributions so far have been diverse, with the majority coming from lakefront property owners and local businesses. We are also approaching the towns of Oxford and Poland for annual support similar to what the towns of Otisfield and Casco already give us. We have increased our grant requests from environmental foundations in hopes of receiving 2 to 3 endorsements per year. Lastly, we will be applying for grant revenue from the Maine Department of Environmental Protection. *We are recognizing our generous corporate and municipal sponsors later in the Observer.*

The placement of the benthic barriers at Pine Point started in the summer of 2017. The barriers (tarps) will be laid down on the lake bottom in the Pine Point area 1.5 acres at a time and will be placed two times each season. The barriers will smother the plants by eliminating any sunlight. The root structure of the milfoil in this area is extremely dense, so the barriers will require more than the usual number of anchors to minimize any tenting and billowing, especially in shallow waters. We are projecting an intensive, 4 year management plan to accomplish this elimination of the majority of milfoil the Pine Point area.

The bottoms of areas of the lake that have been treated with the benthic barriers initially look barren. Within 2-3 years the native plants take root and restore the ecology of that part of the lake. These plants then thrive and help prevent further infestations. They are also more beneficial to the oxygenation of the lake and the health of the fisheries.

Invasive Plants and Property Values

There are numerous studies that show that invasive plants such as milfoil have a strong detrimental effect on lake shore property values. To quote one study from the state of Washington Department of Ecology, property values on lakes with significant milfoil infestations had a 19% decrease in value in comparison to similar properties on lakes without milfoil. Another study done by the University of Wisconsin in 2008 showed an average decline in property values on lakes with milfoil infestations of 13%. Milfoil is unsightly, disgusting to swim in and will foul paddles and propellers. It has an undeniably negative impact on the attractiveness of a lake and the value of the lakeside properties. This, in turn, negatively affects property tax revenue to the towns. Residents of the surrounding towns of Thompson Lake, as well as anyone who appreciates this natural resource, should be concerned about the threat of invasive species in all of our lakes.

Business Support for the Milfoil Project

As part of our milfoil project fund raising campaign we solicited local business and corporate entities. We established levels of giving as outlined below. TLEA is grateful for this support from local businesses. Here is our list of our sponsors for the Capital Campaign in 2018:

Eagles (\$2,000+):

Modern Woodman Insurance

Norway Savings Bank

Hawks (\$1,000- 1.999):

Hammond Lumber

Loons (\$500- 999):

Junora LTD

“Anonymous”

Mallard (\$250-499):

WJ Wheeler Insurance

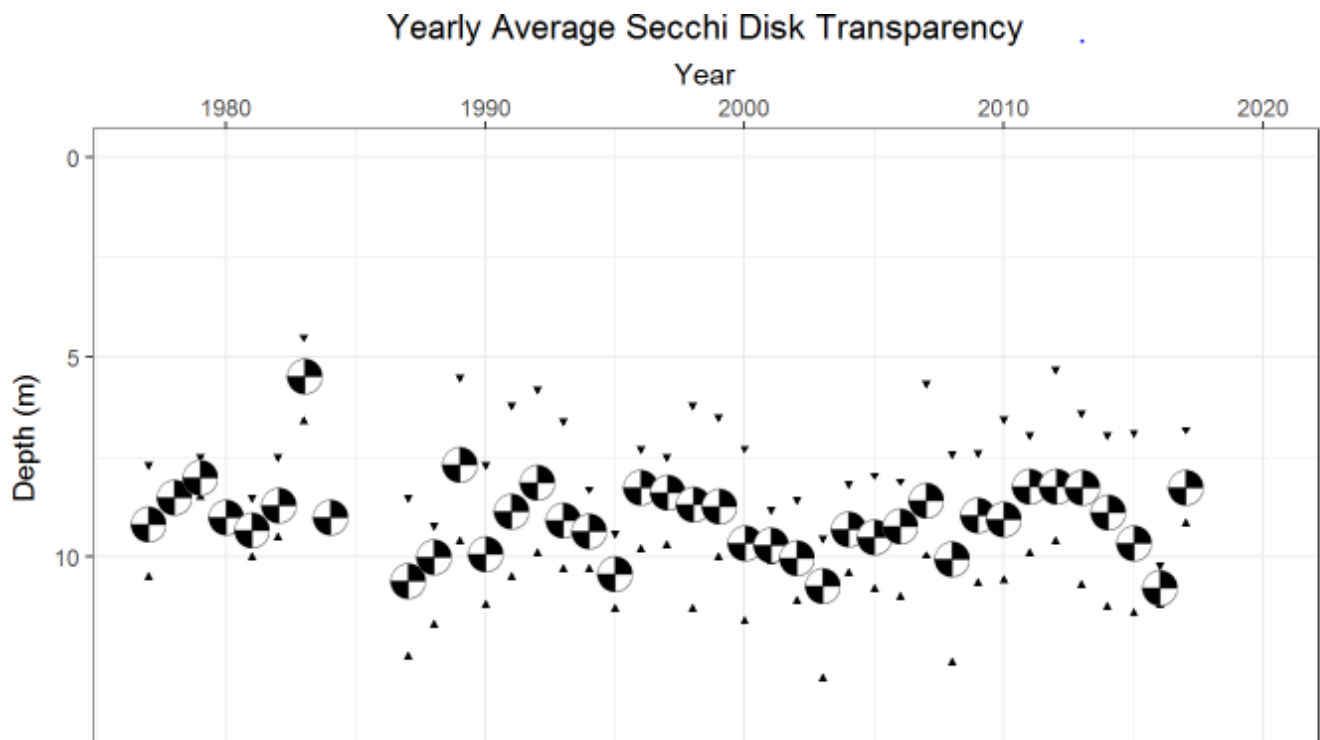
Thompson Lake Water Quality Overview for 2017

(Submitted by Scott Williams, State Biologist)

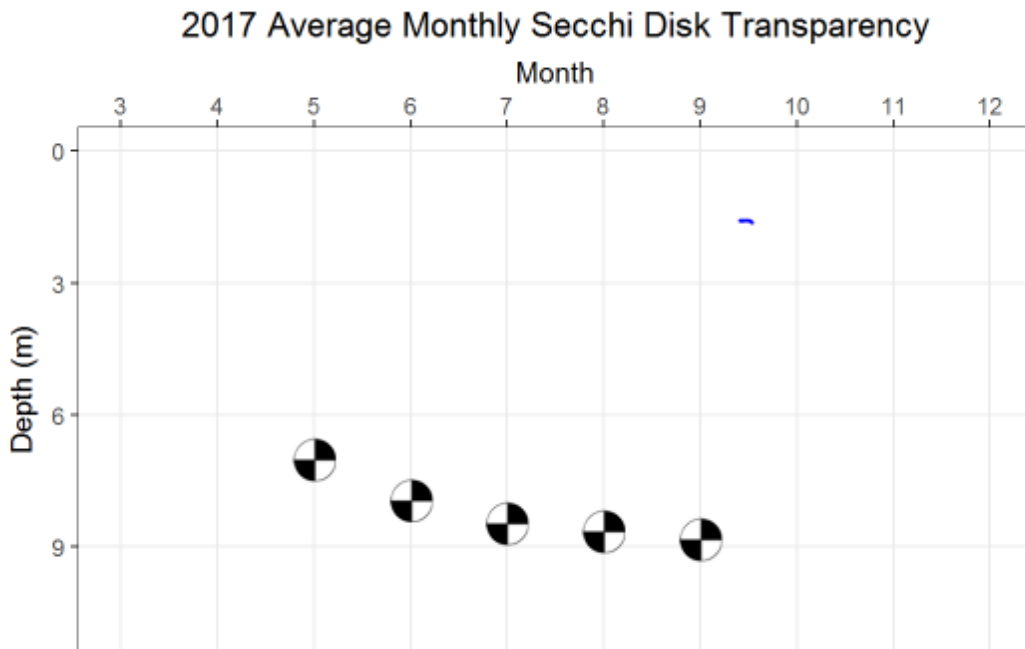
The water quality of Thompson Lake last summer (2017) varied from “average to below average”, compared to the historical average for the lake. This assessment is based on three critical indicators of lake water quality: The overall clarity of the water, the concentration of the nutrient phosphorus in the lake, and the amount of algae in the water through the period from May through September.

The lake was less clear than the historical average for Thompson, but was still exceptionally clear compared to other Maine lakes. The graphic below illustrates the degree to which the annual water clarity (aka: Secchi Disk Transparency) for Thompson Lake has varied from the 1970’s to present. The hatched disks shown on the graph represent the average depth (in meters) that one could see down into the lake for each year. The small points that are above and below each disk represent the clearest and least clear individual readings for the given year.

Through the years, Thompson Lake has been very sensitive to storm water runoff from its watershed, often responding negatively following major rain events. Severe drought conditions in 2016 resulted in the highest (clearest!) annual average in the history of monitoring the lake (clearly visible on the chart below)! The sharp drop shown here for 2017 was likely due to the heavy snow melt in the spring, combined with many rain storms in the spring and early summer.



Weather conditions changed dramatically from mid to late summer, when drought conditions reappeared, and the lake responded predictably with deeper, clearer water clarity readings during the period, as shown in the second graph below, which illustrates the monthly average transparency readings for Thompson



The cumulative effect of the previous 2016 drought, combined with a return to drought conditions late last summer was likely a strong influence on many Maine lakes in 2017. However, even though more than half of 416 lakes throughout Maine were clearer than their historical average last summer about a third (including Thompson) was less clear. This is due to a number of factors, including the natural rate at which the lake “flushes” and the level of development in the watershed.

The good news is that although in 2017 Thompson Lake was less clear than average, the concentrations of both phosphorus and algae in the lake during the course of the summer were very close to the historical average for the lake.

The average distance that one could see down into the water in Thompson Lake in 2017 was 8.2 meters, or about 27 feet. Even though Thompson’s 2017 clarity/transparency average was lower than the historical average for the lake (9.0 meters), it was still substantially clearer than the combined average for all of Maine’s lakes in 2017 (about 5.6 meters).

Weather has a very strong bearing on the variability of indicators of lake water quality. Some lakes, including Thompson, appear to be more sensitive to the effects of weather than others. Extreme weather events associated with climate change may amplify this sensitivity. Efforts undertaken throughout the watershed to

prevent soil erosion and to divert storm water runoff into stable vegetated buffers will enhance the lake's capacity for resilience in the future.

Editor's note: This report shows the importance of TLEA programs of education and the Youth Conservation Corp in helping property owners control erosion.

Youth Conservation Corp 2018

(Submitted by Steve Arnold)

The TLEA is pleased to announce the Youth Conservation Corps (YCC) will continue in 2018. The purpose of the YCC program is to provide consultation and labor to assist local property owners to control erosion. Erosion, a form of “non-point source” pollution, is the most important factor in preventing algae growth in the lake and maintaining oxygen levels. Despite the loss of funding from grants, TLEA is committed to this very important environmental program. We rely on TLEA membership dues and donations for our work.

Unimpeded water runoff from developed areas throughout the watershed can have a devastating impact on lake water quality. Often simple and low-cost solutions can be deployed to direct water flow to vegetated areas that will slow down and filter the water before it enters the lake.

Last spring many property owners experienced a significant amount of shoreline erosion due to higher than normal lake levels. Shoreline erosion not only allows unfiltered soils to enter the lake but also destabilizes the plants and trees that anchor the shoreline. Without this vegetation in place the erosion will likely accelerate. Shoreline erosion can usually be slowed by stabilizing the bank with edged stone or “rip rap.” Vegetation should also be installed whenever possible to provide filtration and further stabilization of the runoff.

We are pleased to announce that we have a new YCC coordinator this year. Tim Tardiff has been a resident on Thompson Lake for the last 22 years. In college he worked as an ATC councilor on the Appalachian Trail in Western Maine. Tim will be good mentor as he directs the YCC students in their environmental projects. Please join me in welcoming Tim to the TLEA family in what I expect will be a very busy season.

Does your property have erosion issues? Tim and I will be doing site evaluations beginning in early June. Due to time restraints, we will limit these evaluations to 2-

3 days this summer. If you think that your property (and the lake) could benefit contact us at any of the email addresses below. Lastly, I would like to thank the TLEA board and in particular Marcia Matuska for their continued support.

Contact info: *sa03842@yahoo.com, mmtlea@gmail.com, tdtardiff@gmail.com*

Courtesy Boat Inspection 2018

(Submitted by Marcia Matuska)

Courtesy boat inspections will return this Memorial Day weekend. TLEA will cover the ramps at The Marina, The Landing and Pismo Beach on Fridays, Saturdays and Sundays. Robinson's Marina will not be covered. It is very important to check your boat before entering and after leaving the lake on the days when the ramps are not staffed. We do not want any more invasive plants in our lake or other lakes.

We are considering adding volunteers to inspect boats on days when the paid inspectors are not available. Training will be provided---not that it is that complicated! If enough people are interested, an online spreadsheet will be posted and volunteers can sign up for any 2 hour shift at any ramp not staffed whenever they have a free couple of hours. It is a way to meet your neighbors and protect the lake. Much of the time will be spent sitting, waiting and simply enjoying nature. Increasing the number of volunteer hours may help us get more funding from the state. If you are interested, please email Marcia at mmtlea@gmail.com.

Summer Jobs Available

TLEA is hiring high school or college students for the Youth Conservation Corps and Courtesy Boat Inspection program.

Youth conservation corps is an active outdoor job. The worker will be with a group of high school and possibly college students constructing barriers to erosion in the lake. This will include building culverts in driveways, pathways to divert runoff, rock walls along the shore, etc. The crew will be directed by Tim Tardiff. The job is 4 days a week for 8 weeks in the summer. The student should be at least 16 years of age, enjoy the outdoors, ready for physical work and care about the environment.

Courtesy boat inspection is a more laid back job. This is very important for the health of the lake. A lot of the time is spent sitting by the lake and waiting, so there will be time for reading and enjoying the lake. The shifts are Friday and Saturday,

beginning May 26th and ending Labor Day weekend. The student should be at least 16 years of age. Apply if you enjoy being outside and interacting with people, while getting paid!

Questions? Interested?---Email TLEA at mmtlea@gmail.com

Meet Your Directors

Steve Arnold

Our director profile for this issue is Steve Arnold. In 1998, Steve and his wife Lyn rented a camp on Thompson Lake and fell in love with it. They purchased their property the same year near Trebilcock Island. Originally, the property was purchased as a weekend getaway, but now they live on the lake all summer.

Steve grew up in Portland, graduated from Southern Maine Technical College in 1982 and Franklin Pierce University in 1992. He has been employed by Verizon as a manager for over 11 years. He has three grown children, a girl and 2 boys.

In 2016, Steve joined TLEA, taking over the job of Youth Conservation Corp (YCC) director. When he is not working he enjoys boating, tennis, and riding his bike. He considers himself blessed to be able to relax on this beautiful lake and call it his summer home.



Briefly Noted:

Ice Out Winners: Ice out on Thompson was officially on April 24 this year. Our ice out contest winners are Pam and Jim Hughes. They have donated their winnings to the milfoil Capital Campaign. Thanks!

Loon Count: Our Loon count for the lake will be held on July 21. Contact Peggy Dorf at peggydorf@ymail.com if you can help as a counter.

2018 Maine Lakes Conference: The Maine Lakes Society annual Maine Lakes Conference will be held at the University of Maine at Farmington, June 23. For further info log on to www.mainelakessociety.org.

Oxford Town Meeting: A proposal to donate \$2,000 from the town of Oxford for our milfoil removal project will be presented at the town meeting on June 9, 10:00 AM at the Oxford Elementary School. Town residents are encouraged to attend and support this proposal.

Any comments for the Observer please let me know at paulcain@myfairpoint.net.

IF YOUR ARE NOT A MEMBER OF TLEA, PLEASE JOIN US. WE NEED YOUR SUPPORT TO CONTINUE OUR PROGRAMS FOR THE LAKE.

Membership forms are available at our website: www.thompsonlake.org.



The sun goes with the floe...

Visit our website at:
www.thompsonlake.org

Thompson Lake Environmental Association
P.O. Box 25
Oxford, ME 04270

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