

Spring 2017

Issue No. 181



Photo by Kathy Cain

April Fool's Day on Thompson

President's Message

Here comes spring at last! It has been a long winter and it was no April fool's joke when we looked out on almost a foot of new snow on Thompson Lake the morning of April 1. The ice is still not out as we write this message, but soon the water will be open so we are making plans for our summer activities.

Our Youth Conservation Corp (YCC) is gearing up for another season of erosion control projects. The YCC crew is made up of college and high school aged workers who perform supervised erosion control projects such as drainage control, placing rip rap, planting vegetation and establishing berms to prevent run off into the lake. If you have concerns about erosion around your property you should contact our office for a consultation. It will be good for your property and the lake.

The Courtesy Boat Inspectors (CBI) will be out in full force these summer weekends and holidays, inspecting incoming and outgoing watercraft for invasive species. This program is essential in preventing the spread of invasive plants and introduction of new species into Thompson. Please be courteous and cooperative with the inspectors as they perform this important job for the lake ecology.

Our secchi disc readings of water clarity will begin in May and continue through October. These readings help monitor our water quality of the lake and are summarized in our Water Quality Report by our biologist Scott Williams.

Thompson Lake is one of the clearest lakes in Maine, thanks to erosion control and the reduced use of fertilizers.

The big news is that we will expand our Milfoil Mitigation program this year. Our goal is to dramatically reduce milfoil in the Pine Point area of the lake. This area has a high concentration of milfoil and is the primary cause of fragmentation and spread of this invasive plant to other parts of the lake. We will be kicking off a fund raising campaign for this extremely important project this summer. Despite our success in removing milfoil from many areas of the lake the threat still remains and without the removal of plants in this concentrated area we could see our work undone in the future. This project will be expensive and we will rely on donations from all of you who value Thompson Lake. Make sure to read the article about this project in this issue of the Observer.

As we flock back to Thompson this summer, let's not forget how fragile a lake can be. We must never take the water quality of the lake for granted, especially with our ever changing environment.

Annual Meeting 2017

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 5. Make sure you mark this on your calender 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: Karen Brown, Jade Doyle, Roemary Nicklaus, Kathy Cain, Pete Laverdiere, Tom Ray and Sharon Rice. Peter Siebert will be up for election as a new board member. 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 contibute to it's health. There will be baked treats as well. Don't miss it!

Help TLEA Beat Milfoil

TLEA will be launching a potentially historic milfoil removal project in 2017 that should protect the lake from this menace for many years to come. Over the past 7 years TLEA has been successful in managing milfoil in most of the areas of the lake, some of which had up to 2 acres of infestation. Native plants are now flourishing in these areas that were once crowded out by the non-native milfoil. One can now freely swim, paddle and boat through those areas that were once choked with this rapid growing invader.

The next and crucial step of this project will be to control the milfoil infestation in the Pine Point area. This will be one of the most ambitious milfoil removal projects performed in the state of Maine. No other lake in Maine has attempted to manage a continuous 10 acre area infested with heavy variable leaf milfoil. This area of the lake that is targeted is responsible for virtually all the milfoil fragments floating in our lake and each piece has the potential to take root and start new areas of infestation. We will need the help of our membership and anyone that values the health and scenic quality of the lake to make this happen.

Our plan is to place benthic barriers sequentially in the Pine Point area of the lake. The Maine DEP favors using manual methods such as benthic barriers to kill milfoil, as opposed to herbicides. 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 in the Pine Point area. *This is crucial to the health of the entire lake.*

The significant challenge of managing the Pine Point infestation is cost. 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. The other, smaller areas of infestation in the lake will also require annual management to prevent re-emergence of milfoil. The dive crew will also conduct underwater surveying of over 21 miles of susceptible shoreline in Thompson Lake. We expect to increase the milfoil removal budget for the next 4 years to \$300,000. We will be dependent on membership, lake residential home owners and businesses for financial contributions to make this possible.

Our TLEA Capital Campaign for this project will send out a letter to the membership this summer detailing this project and the funding that will be required. We are at the cross roads in our efforts to control invasive species in the lake. Let's finish the job and remove the threat of milfoil from this great lake. Please look for this letter and be generous in your support.

Report on the Water Quality of Thompson Lake, 2016

Scott Williams

From May through September, 2016, key indicators of lake water quality were sampled to determine the overall health of Thompson Lake. These measurements were used to compare our present state of water quality to data accumulated over the past 35 years. This information would not be available without the substantial stewardship of TLEA and its membership throughout these years.

In brief, 2016 was an exceptionally good year for Thompson Lake! A key indicator of overall lake health and water quality is the clarity of the water – the distance that one can see down into the lake at the deepest point (secchi disc reading). This

simple, but highly important indicator varies during the course of the five month period when readings are taken which contributes to year to year variation. *Last summer, Thompson Lake was the clearest that it has been in 13 years.* The average clarity from May through September was 10.7 meters (*about 35 feet!*). The last time that the lake was so clear was in 2003, when the average was also 10.7 meters. *Perhaps even more notable is that the lake has only been this clear twice in the 35 years of historical record!* 1987 was close, at 10.6 meters, but overall, the lake has only been at 10 meters or more in 7 of the 35 years.

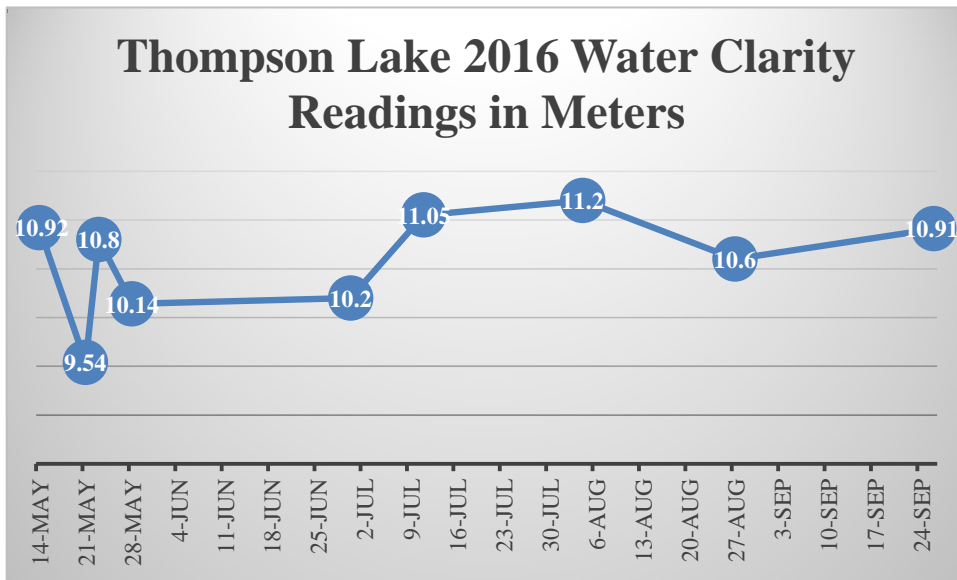
The clarity of Thompson's clear, clean water is most affected by the concentration of algae in the water, most of which are not visible without magnification. Given this relationship, we would expect that the amount of algae in the water would have been lower in 2016 than in recent years, and such was, indeed, the case. *In fact, the average concentration of algae in Thompson Lake in 2016 was the lowest that has been recorded since 1981!*

The concentration of the nutrient phosphorus, which most influences the growth of algae in lakes, was also lower than the historical average for Thompson. The combined and consistent information from these three primary indicators of lake water quality indicates that 2016 was an exceptionally good year for Thompson Lake.

Although summary data for other Maine lakes is not yet available, it is likely that many, but not all, lakes experienced overall good water quality in 2016, although few will likely compare with Thompson. A strong factor in the annual variation of lake water quality is annual precipitation, because runoff from rainfall and snowmelt transports pollutants to lakes from their watersheds. Historical records for Maine lakes clearly show a relationship between annual runoff and lake clarity. As many will recall, much of the State of Maine experienced extreme drought conditions in 2016. Weather service data indicate that 2016 was one of the driest in three decades.

From the outstanding conditions observed in Thompson Lake in 2016, we see firsthand the very significant benefit to protecting the lake from pollutants in storm water runoff. While we cannot control the weather, there are many conservation practices that can reduce runoff to lakes. For many years, TLEA has worked with landowners and towns in the Thompson Lake watershed to implement lake-friendly conservation practices. For more information on ways in which you can help

ensure that Thompson will remain one of Maine's clearest and cleanest lakes, contact TLEA!



Youth Conservation Corp 2017

Co- President Marcia Matuska reports that our Youth Conservation Corp (YCC) is gearing up for another year of erosion control projects for Thompson Lake. Non-point sources of pollution such as driveways, walks or boat ramps that drain into the lake; unstable shorelines or run off from lakeside lots are the most concerning for the long term health of the lake. The YCC crew is available to help land owners maintain their property and protect the waters of the lake.

Are you concerned about erosion or excessive runoff on your property? If you have a path, driveway or shoreline that shows evidence of erosion, YCC may be able to help. This may be in the form of placing rip rap, planting buffer plants, developing drainage systems or simply maintaining existing box culverts or other erosion controls. If you have an erosion control or drainage project in mind, the YCC can help with the planning and implementation. Send us an email at mmtlea@gmail.com with your contact information so that we can schedule a time to come out and evaluate your property.

SUMMER JOBS AVAILABLE

We are looking for local high school/college students interested in working on the Youth Conservation Corps crew and the Courtesy Boat Inspection (CBI) crew this summer. We will be hiring 2-3 crew members for YCC and 2-3 for CBI. If you or someone you know is interested please send an email with your name, address, telephone number and email to mmtlea@gmail.com.

Maine Milfoil Summit 2017

Our TLEA representatives Kathy Cain and Ron Armontrout attended the 18th Milfoil Summit on March 3, 2017, at the University of Maine, Lewiston-Auburn campus. Peter Lowell of the Lake Environmental Association (LEA) presided as the summit director and the keynote speaker was Meghan Modley, management coordinator of the Lake Champlain Basin Program for Aquatic Invasive Species. The Lake Champlain Basin Program is a federally funded, non-profit organization in partnership with agencies from NY, VT, Quebec, EPA and some local groups. They monitor and track aquatic invasive species in the watersheds of Lake Champlain, which are interconnected with canals and many waterways. The Summit included training sessions for Courtesy Boat Inspectors and invasive plant patrols. Kathy reported the following:

The focus of the summit was not only on milfoil but on invasive species in general. Meghan presented a talk entitled “Dealing with Invisible invaders - are they headed to Maine?” These invasive species: zebra mussels, quagga mussels, spiny water fleas, Eurasian milfoil, water chestnuts, alewives are known to be in the bodies of water found in the Lake Champlain basin area. Some of the pathways in which invasive species can travel are via home gardening, aquarium dumping, and transportation by boats.

The origin of invasive species is complex and far reaching. Zebra mussels originated from the Black and Caspian Seas. They were transported to US waters and have adapted to the ecosystem. They alter the natural food chain which, in turn, directly affects the food source for the native species. Both zebra and quagga mussels are encrusting historic shipwrecks at an alarming rate.

The spiny water flea, which is a ½” long crustacean with a barbed tail, originated from Great Britain and Northern Europe. They like zooplankton and therefore compete with the native species for food. There are some native species that like to eat the spiny water flea but there are of little nutritional value. Fish populations that rely on spiny fleas for a food end up malnourished and a malnourished fish is prone to poor health. Spiny water fleas were first detected in Lake Huron. They like deep cool water and are spreading eastward to the Southern Adirondack Lakes area, including Lake George. The only way to kill this species is desiccation (drying).

Alewives were introduced in Lake Champlain as a baitfish. They are aggressive and compete with smelt for food. Landlocked salmon, which are dependent on smelt as a food source, become Vitamin B deficient if they have alewives as its primary food

source. Lake Champlain has seen a big decline in native smelt, presumably secondary to competition with alewives.

Asian clams are another invasive species which were introduced in 1920 on the east coast. Its shell is distinct because of its ridged surface and there is an audible sound when you run your fingernail along the shell surface. They prefer a sandy substrate for an environment. Their growth rate is rapid; a single clam will reproduce frequently and abundantly. They are present in Lake George, and they have also been found in Lake Tahoe, California. Benthic barriers have been successful in managing this species by suffocating them. A new aquatic invasive has been found in Lake Champlain called starry stone wart, an algae with thick rings and is very dense. Starry stone wart is in their radar to be monitored and recorded

“NO SEE UM’S INVASIVES”, are the small juveniles of various species. They are often the larvae or dormant forms of species and they are not visible. To prevent the spread of these species it is critical to remove them from boats exiting or entering waterways. The mantra is “CLEAN, DRY, DRAIN” when it comes to boat inspections. Boat inspections are essential to the prevention of invasive species and boaters must be vigilant. One of the best ways to control these invisible threats is through the use of boat wash stations at launches but unfortunately this is expensive. Trained staff is required to use the power washes with 3000 PSI capacity. Boat wash locations also have to be assessed for proper runoff. The next best alternative is to flush out all boat bilges and motors using low pressure water stations. It was reported that Maine has 10 low pressure water stations. For most boat launches in Maine the routine should be: *clean, dry and drain!!*

The latter half of the summit consisted of a trade fair with demonstrations, displays and exhibits on the latest in prevention of invasive aquatic species. There was a question/answer/update session with a panel composed of John McPhendron of the Maine DEP, Lt. Adam Gormely of the DIF&W Warden Service, Roberta Hill of the Maine Volunteer Lake Monitoring Program, Maggie Shannon of the Maine Lakes Society and Peter Lowell.

Maggie Shannon talked briefly about a bill, LD559, which would protect Maine lakes and ponds from invasive species. It would require all “passive” or non-motorized crafts on inland waters to display an “invasive aquatic species sticker” which will have a onetime fee of \$5.00. The fee revenues would be distributed 50/50 with IF&W and Maine DEP.

New Board Members for TLEA

We are happy to report that TLEA has added multiple new board members. They are: Steve Arnold (Oxford), Robin Sayre (Otisfield), Dean Plaisted (Oxford) and Paul Rausch (Oxford). These volunteers have stepped up to protect the quality of the lake for generations to come. We look forward to their infusion of new ideas and energy. Anyone interested in joining our TLEA board should contact our Co-Presidents Kathy Cain or Marcia Matuska.

Maine Lake Water Quality Threatened by Proposed Budget Cuts

Consider this statement recently released from the Maine Lakes Society:

“End of Nonpoint Source Program Grants? What the proposed cut in the Federal Budget means for us is that we will lose the capacity to tackle the largest, most damaging sources of pollution to Maine lakes, streams and coastal waters. The cut eliminates the only significant funding our state gets to protect and restore Maine waters. "319" or Nonpoint Source Water Pollution Control Grants, awarded by Maine DEP to towns, watershed groups and Soil and Water Conservation Districts, corrects or eliminates sources of pollution too costly for individuals, groups or even towns and cities to handle alone. These 319 grants are funded by Clean Water Act money, distributed to the Maine Department of Environmental Protection (DEP) by the US Environmental Protection Association (EPA). They require a local match that extends the good work. The outcome will be: no funds available after 2017 and DEP would lose 9 full time staff positions dedicated to water quality protection and restoration.”

TLEA has used 319 Grant funds to finance erosion control projects in the towns surrounding Thompson Lake. We were planning to apply for a 319 Grant to address erosion identified in our recent watershed survey of Oxford. Our YCC was created through a 319 Grant and this remains a significant source of funding. Much good has resulted from these funds throughout the state and it would be a huge step backwards for Maine lakes to lose this program.

Speak out for Maine lakes and rivers! If you agree that the proposed budget reductions for the DEP will adversely affect Maine water quality for generations to come, contact your Congress person and let them know you value our water quality and ask them to oppose these cuts.

Farewell to Sue Ellis

Sue Ellis, a long time TLEA board member and former Co- President, stepped down from the board in 2016. Sue first became involved with TLEA in 1973. After years of service on the board she became vice president and worked with President Ray Potter to maintain the water quality of the lake. Sue went on to serve as Co-President with Tom Ray for 5 years, followed by 4-5 years with Kathy Cain. She has dedicated years of work to protect the water and shorelines of Thompson Lake.

Sue has a strong interest in environmental issues. She states she first got involved with TLEA to educate the public on environmental factors that threaten the lake. She wanted to get young people involved in protecting our resources. She has set an example for us all.

Sue is also very involved with her community. After 29 years of service on various local boards and committees she received the Community Service Award from the town of Poland.

Sue is a longtime property owner on the lake. She is looking forward to many more years of enjoying the scenic beauty and peace of living on the lake. She feels confident that the younger folks will do their best to protect our beautiful Thompson Lake.



Briefly Noted:

2107 Maine Lakes Conference. The Maine Lakes Society annual Maine Lakes Conference will be held at the Wells Conference Center, University of Maine at Orono from 8:00 AM to 4:00 PM. Topics will include: the role of forests in protecting lakes from climate change, lake friendly landscaping, wildlife habitat and restoration, and “supercharging” your lake association. For further info log on to www.mainelakessociety.org. Early bird tickets (\$35) are available through May 15.

TLEA Office hours: Office hours for TLEA is now by appointment only. If you would like to receive information or literature about the lake; have a question or wish to purchase some merchandise, please call our office telephone, 539- 4535 or Kathy Cain at 539-9122.

Ice Out Winners: Ice out on Thompson was officially on April 19 this year. Our ice out contest winners are James Polomsky, Ken Swan, Diane and Charles Morris. Thanks to ice out judges Kim Petersen and Jim Bauer.

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

Note: This Observer is sent to all TLEA members whether your dues are paid or not. Please check your records and if you haven't paid the dues for 2017, please do so. Support our programs for the water quality of the lake!



A summer day on Thompson. Photo by Sharon Rice.

Visit our website at:
www.thompsonlake.org

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

ADDRESS SERVICE REQUESTED

OBSERVER

Published three times annually by the
Thompson Lake Environmental Association
(207) 539-4535

Editor: Paul Cain

Non-Profit
Organization

U.S. Postage
PAID

OXFORD, ME 04270
Permit #71