

Spring 2020

Issue No. 190



*Rays of hope and comfort from Thompson Lake*

## President's Message

(Submitted by Co- President Kathy Cain)

Not too long ago, as I looked out on the frozen snow-covered lake, I anticipated the coming of spring with the warming sun, barbeques and social get togethers. Now with the onset of the Covid-19 virus our priorities are very different. Social distancing is now necessary to protect our health and that of our neighbors. This is isolating, but it also gives us a chance to reflect on what really matters— our families, friends, community and the importance of our environment.

I hope this message reaches you in good health. We will get through these difficult times. Maybe we will appreciate our health and environment even more. We can still look forward to life on the lake and making sure this resource will be available to the generations to come.

***Because of Covid-19 concerns our Annual Meeting, usually held on the first Saturday of August at the Oxford Community Center, will be replaced by a “virtual meeting”.*** This will utilize email to give updates about the lake to the membership and to hold elections for our officers. We regret that we will not be able to get together with all of you who appreciate the lake and may have questions about the future; I encourage you to communicate by email with us and to continue to support us and our efforts to protect the lake.

We are proud to say that we completed a very successful capital campaign for milfoil mitigation at the Thompson lake on April 1, 2021. Thanks to all of you who generously donated to this project. Alex and his crew will be out on the lake in full force this summer to complete the fourth year of milfoil removal with benthic barriers, harvest suctioning and hand pulling of plants. After this we will continue to monitor all parts of the lake for any new growth or resurgences of invasive species. Please consider continuing to donate to our annual milfoil removal fund, you will see a line for this on our membership letter.

This are anxious times; we are all wondering when we will get back to something like normal in our lives. We at TLEA will adjust our schedules and programs, but we are unwavering in our commitment to preserve the natural beauty and water quality of the lake. The lake is one thing that we can look forward to as a place of

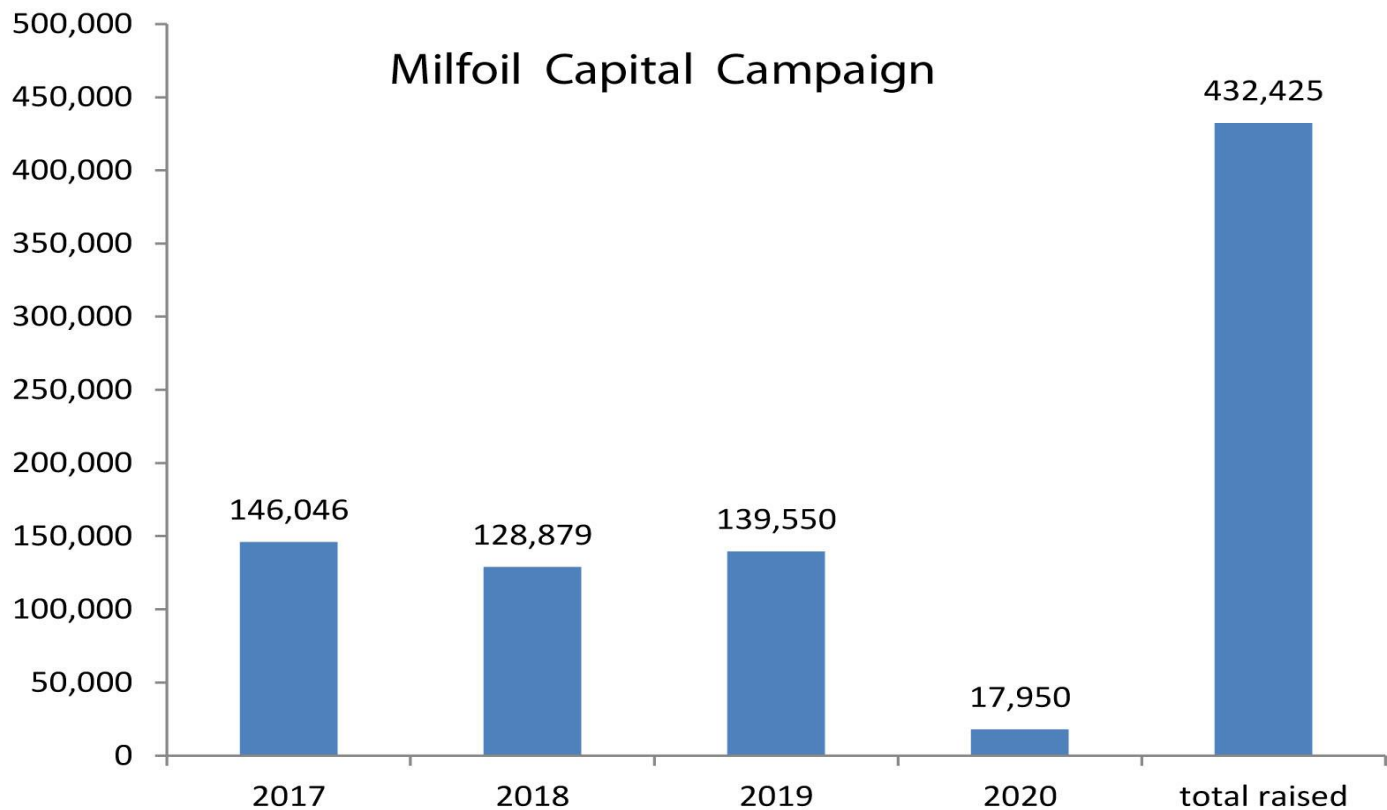
solace. Please continue to support TLEA and our programs so that we can maintain this precious resource. A lake association is only as strong as its membership. ***If you are not a member PLEASE JOIN US. If you are, please don't forget to renew.***

## **Annual Meeting 2020**

The Thompson Lake Environmental Association Annual meeting will be a “virtual meeting” utilizing email with the membership. This will take place in early August of 2020. We plan to share information about the status of the lake and our programs. We will be looking for feedback from the membership. We will also be electing members to the TLEA Board. The following names have been placed in nomination for re-election to the board (terms to 2021): Ron Armontrout, Peggy Dorf, Paul Rausch, Marcia Matuska, Stan Tetenman, Paul Cain and Tim Worden. Elections for the following positions will also be held: Co-President- Kathy Cain and Marcia Matuska, Treasurer- Jade Doyle, Secretary- Susan O’Byrne. If you have any names you would like to add to this list, please let us know. Let’s stay connected during these difficult times. We need your support to continue our programs. We hope to see you all once again at the annual meeting in 2021.

## **Capital Campaign for Milfoil Removal**

TLEA has been working to remove milfoil from the lake since 2006. By 2017 we had reduced milfoil colonies to less than 10% in 6 of the major coves of the lake. Because of dense plant growth and boat traffic, Pine Point and the Pismo beach area remained a serious threat to this effort, as fragmentation and migration of plants continued to occur. We started our Capital Campaign for milfoil removal in these areas in June of 2017 and this was completed in April, 2020. As you can see in the graph below over \$400,000 was raised; thanks to the generosity of individual donors, businesses and surrounding towns. The milfoil crew will be working at Pine Point and the Pismo Beach /Oxford dam area once again this summer, completing this 4 year project. We will continue with a management plan for invasive plant species for years to come that will monitor the entire lake and remove plants as needed. Please continue to donate to the annual milfoil removal fund that you will see on your membership forms.



***Congratulations on a successful campaign. Thanks to all who donated!***

### **Report from the Milfoil Removal Crew**

Crew leader Alex Bernardy reports that by the end of the 2019 season they had removed roughly 80% of the dense milfoil colonies from Pine Point. The tarps (benthic barriers) were repositioned at Pine Point, smothering another approximately 2 acres of milfoil. Although there was some regrowth at the previously tarped areas, the crew spent hours each week going over these remediated areas to remove any new plants that took root.

Alex expects that the 2020 will require a strong push from the milfoil crew. Most of the remaining milfoil lies in deeper water where tarping is nearly impossible. These areas will require removal by hand. Divers will work from the “Hippopotamus”, our milfoil DASH (Diver Assisted Suction Harvest) pontoon boat. Any tarps remaining at Pine Point for the 2020 season will be marked off with rope and pool noodles to prevent any boats from contacting the tarps.

The milfoil that is growing in the Pismo beach and dam area will continue to be mitigated with a combination of hand removal and tarps. Fortunately, the plants

in this area is in the deeper part of the cove and is at a lower risk for fragmentation by boat traffic.

Importantly, the crew will also continue to monitor the remaining sections of the lake for signs on invasive plant species, of which milfoil is the most common. A survey of the high-risk areas of the lake will be done in late summer.

## **Thompson Lake Water Quality Overview for 2019**

Scott Williams, Limnologist

The water quality of Thompson Lake continues to be well above the average for Maine lakes. While Thompson Lake was less clear in 2019 than the previous year, the actual concentration of planktonic algae in the lake was slightly lower than the historical average. Samples taken from the lake represent “instantaneous” conditions in the aquatic ecosystem. The critical indicators of water quality are not always in perfect synchronicity, due to a number of factors that influence the relationship between the variables.

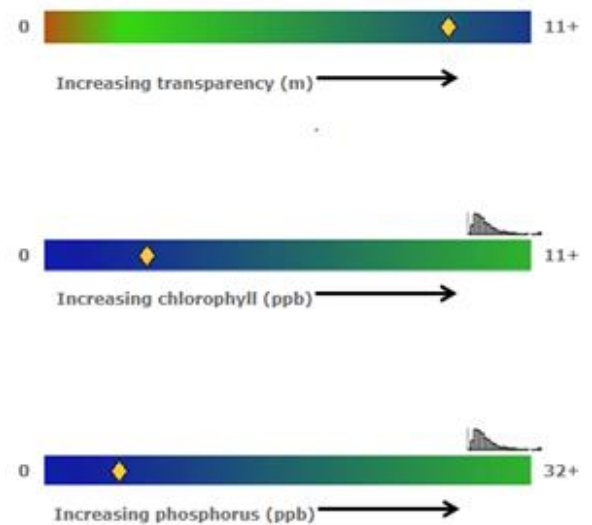
The annual characterization of the water quality of Maine lakes has always been a challenge to lake scientists because aquatic ecosystems experience a high degree of “natural variability”. One of the strongest influences on this natural process is the weather, and foremost among the many forces of weather on lakes is precipitation. Many lakes tend to be clearer during drier years, ostensibly because of reduced stormwater runoff during such periods, and stormwater runoff is the vehicle that transports phosphorus and other pollutants from watersheds to lakes. Conversely, lakes tend to be less clear during years when there is more precipitation during the period from January through the middle of summer.

Most Maine’s lakes “behave” this way. But there are exceptions to this simplistic generalization, both in the degree of variability that occurs with individual lakes, and the fact that some lakes respond the precipitation in an opposite manner; for reasons having to do with other weather influences (temperature, wind, etc.), as well as factors pertaining to the unique characteristics of individual lake ecosystems: the annual flushing rate, watershed geochemistry, bathymetry and more.

Climate warming is compounding the complexity of tracking, predicting and characterizing lake water quality. Reduced periods of ice cover; resulting in longer periods of light penetration and warmer lake water, when combined with more severe weather events during the open water season, will almost certainly have a negative effect on the health of Maine's lakes over time. Some lakes that have historically been "on the edge", as well as some that were considered stable, have experienced a significant decline in recent years. Very likely this is, in part, due to a warming climate.

Monitoring of the lake takes into account these critical indicators of lake water quality: transparency/clarity, total phosphorus, chlorophyll-a concentration and dissolved oxygen. In the accompanying graphs each color bar shows the continuum of data for Maine lakes. In each case, the long-term average for Thompson Lake is in the above average range of the bar. Note that while "Increasing Transparency" (water clarity) indicates better water quality, the reverse is true for both chlorophyll (algae pigment) and phosphorus, which is why the diamonds are nearer the lower end of the scale for the latter two indicators. Graphics are courtesy of

[www.lakesofmaine.org](http://www.lakesofmaine.org). Additional detailed information regarding Thompson lake is available through this website. In 2019, the lake was very clear, averaging approximately 8.80 meters (~29 feet) during the period from May through early October. This was only slightly less clear than the historical average for the lake (9.1 meters). The concentration of total phosphorus, which is a critical limiting nutrient in algal metabolism, was very slightly lower than the historical average. Chlorophyll-a average concentration was also very slightly lower than the historical average.



Dissolved oxygen levels in Thompson have changed very little during the past few decades. Many lakes experience significant oxygen loss during the summer months, but the lake continues to have the capacity to support a high value cold water fishery.



This is all good news. But one risk to the future health of Thompson Lake could be the perception that because no significant decline has been documented over time, the lake is safe from present and future threats. The present health of the lake is due in no small part to the longstanding and exceptional work of TLEA to protect the lake through many initiatives; including public awareness efforts, watershed surveys, the successful mitigation of problems throughout the watershed, and the development of a long-term watershed management plan. A warming climate will exacerbate many of the historical threats to lakes, making the continued work of TLEA more important than ever.

### **Courtesy Boat Inspection 2020**

Marcia Matuska reports that we hope to continue with our boat inspections this summer. We have received funding from the state of Maine, however it is not clear as to whether this activity will be recommended by the Maine CDC by summer time. At the present time, we have 2 returning inspectors, usually at this time we will have recruited 3- 4 inspectors. We cannot presently advertise for a job that may not be available when the time comes. So like many things, this is on hold.

Regardless, like many things in these challenging times, it is up to individuals to make a difference. We should all be checking our watercraft before and after we float. Remind your neighbors of this too. Let's keep ourselves and the lake safe. If you or anyone you know would be available to serve as inspector, email Marcia at [mmtlea@gmail.com](mailto:mmtlea@gmail.com). It is a great summer job (paid) for a retiree who wants to sit by the lake and read while waiting for the boaters to pull up. Hopefully we can put you to work!

### **Youth Conservation Corp**

Marcia also reports that, despite progress towards resurrecting this program, it will be put on hold for 2020. Over the fall and winter the Water Quality committee was busy recruiting a YCC administrator. They have set up an internship program with the University of Southern Maine's Environmental Science Program. Presently, with the dismissal of students from USM, we are unable to recruit interns or workers for this program. We have, however, succeeded in identifying an administrator and we look forward to reviving this program in 2021.

The YCC is very important as it addresses non-point source pollution which is the main cause of decreased water quality. Please pay attention to the runoff that occurs on your land and divert this as much as possible. Every little bit helps and together we can make a difference.

## **Oxford Dam**

As we have reported previously, the town of Oxford was planning on renovating the east gate of the Oxford dam this past winter. This was to start by installing a concrete overlay on the upstream side of the east sluice and replacing the gate with an automatically operating sliding gate. The price tag for this was originally estimated at \$270,000; however, the bids from the construction firms came in much higher. A bid for \$444,275 was withdrawn and the 2 remaining bids were \$529,400 and \$1.06 million. At their January meeting the Oxford Board of Selectmen voted unanimously to reject the bids and re-start the bidding process. Town manager Butch Asselin indicated that fall would be a better time to start the project with potentially better construction costs. Members of the TLEA board were present at this meeting and expressed the need for a comprehensive plan for not only repairing the dam but also to maintain it. We pointed out that it would cost \$50,000-\$100,000 to repair the east gate with new stop logs, giving the town time to pursue a comprehensive plan that would include the lake bordering towns of Casco, Otisfield and Poland. The renovation project has been on hold since this meeting.

A workshop for the dam renovations was then held by the Oxford Board of Selectmen on March 11. Scott Bernardy of TLEA was in attendance. Town manager Butch Asselin outlined the work done by the town of Oxford since they took over ownership of the dam in 2009. Discussion then ensued. Some Selectmen wondering if the condition of the dam was as bad as feared, despite the engineering report that indicated it was at risk. There was discussion that the town should consider replacing the dam entirely. The town manager suggested that repairs to the east gate should be cheaper in the fall, and once this was done the town could start maintenance projects for the dam that would give us some time to address some of the deficiencies of the dam listed in the engineers report of 2018.

Ultimately, the board agreed to:



- Pursue plans to repair the east gate in the fall
- Obtain bids for replacement of the dam to compare this to the cost of performing the repairs recommended in the engineering report

Scott Bernardy and Hal Ferguson of the Dam Committee spoke on the importance of involving the towns of Otisfield, Casco and Poland in this project and develop a long-term plan for maintenance.

***Here are some important facts regarding the dam:*** the inspection performed by the engineering firm MBP Consulting in 2018 assessed the overall condition of the dam to be “fair to poor”. This poor rating was due to the “very limited hydraulic capacity, numerous leaks and voids in the masonry, extensively leaking stop logs, inoperable gate, disintegration of the apron, formation of the scour pool at the dam toe and potential instability at the left retaining wall at the discharge channel.”

The report pointed out that the dam was at risk for “over topping”. This is especially true with climate change and the likelihood of increasing frequency and severity of storms. Overtopping could cause “deterioration of the structure and abutments, erosion, scour, base undermining, instability and failure of the dam.” It is reported that overtopping events constitutes about 80% of dam failures.

The center sluice sliding gate is still not fully functional and is raised or lowered using a motorized hand drill. The east gate stop logs are damaged and it is presently plated off from any outflow. The west gate has limited water capacity and outflow is controlled through stop logs.

The engineer’s report in 2018 stated that the hydraulic capacity of the west and east sluices is not considered sufficient to safely pass even a “small storm event”. If the center gate is fully restored the hydraulic capacity of the dam could handle a “10-year flood” but this is much less than the 100 year flood spillway design required.

This situation threatens our water quality, property values and the tax base of the 4 towns that border Thompson: Oxford, Poland, Casco and Otisfield. Erratic water levels could destabilize our shore land resulting in increased run off of phosphorous and sediment. This would stimulate algae growth and de-oxygenate the water which would affect the biology of the lake and diminish its recreational and economic value.

TLEA will continue to work with the Dam Committee in an advisory role to help rectify this situation.

### ***Briefly Noted:***

**Ice Out Winners:** Ice out on Thompson was officially on April 4 this year. Our ice out contest winners are Kim Talmor, Melissa and Chris Sonkoly. They each won \$196.25! Half of the proceeds of this contest goes to the programs of TLEA.

**Loon Count:** Our loon count for the lake will be held on July 18. Contact Peggy Dorf at [peggydorf@ymail.com](mailto:peggydorf@ymail.com) if you can help as a counter.

### **November Home**

*Submitted by Ro-Jean Straw*

The cheers are gone from shore and the boats have stopped their wakes.

The cottages and camps are shuttered and the lawn games and camp fires sleep.

The trees have dropped the last of their tarnished leaves  
onto the surface of the calm water as two chipmunks scurry

to collect their round rust colored treasures for their winter cupboard.

The spring birthed loons floating regally on the surface of their newly reclaimed  
hunting grounds begin to fatten for their flight to the gulf of Maine.

They chase schools of this past spring's bass, floating and dipping deep  
into the wet to pluck the darting scale-tailed speedsters from the rocks below.

The fishing duck sits preening on the float abandoned by the children who made it topple and  
dip with their shenanigans all summer.

His pointed beak, sleek neck and slim body allow him to share in the loon's bounty  
but, for now, he is content to air dry his wings in the last of the warm November sun.

The eagle passes overhead blocking the sun and catches the other bird's eye.

The cormorant slips off his man-made perch, going deep and heading outward

As the massive wings darken the rock strung shore lifting its body into the ancient fir.

His wings – all six feet of the span - catch me and my breath in wonder and homage

for I am the intruder in this scene: this is not my domain and I know it.

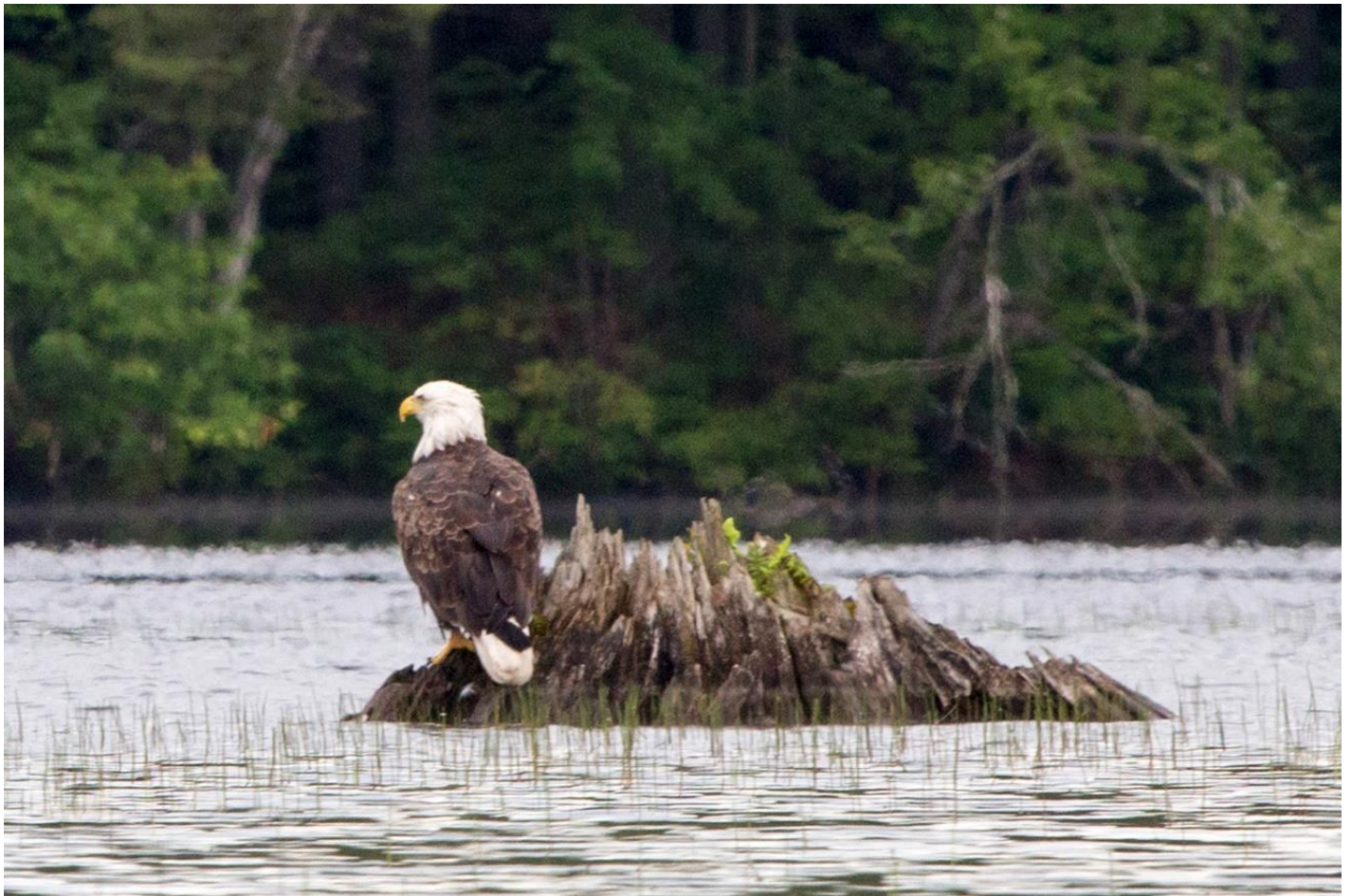
I am allowed a silent space in his world and am offered a true gift of nature

though I have to travel to the end of the breakwater to receive it.

For there, floating shoreward, is one of the eagle's big white tail feathers

enticing me to wait ,wait, wait and pluck it from his kingdom.

*Ro-Jean Straw has been visiting Thompson lake since the summer of 2002, she and her husband Mike have a camp in the Beechwood area.*



*Photo by Jim Whalen*

Any comments for the Observer please let me know at [paulcain@myfairpoint.net](mailto:paulcain@myfairpoint.net).

***IF YOUR ARE NOT A MEMBER OF TLEA, PLEASE JOIN US.*** Membership forms are available at our website: [www.thompsonlake.org](http://www.thompsonlake.org).

Visit our website at:  
[www.thompsonlake.org](http://www.thompsonlake.org)

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

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