

Fall 2018

Issue No. 186

Invasive plant species have become a common problem in many lakes in Maine. This issue of the Observer will report on TLEA's efforts to remove the threat of milfoil and other invasive plant species from Thompson Lake.



Photo: Variable leaf milfoil

The History of Invasive Plant Mitigation on Thompson Lake

Variable leaf milfoil was first recognized in Thompson Lake in the 1980's and was undoubtedly transported here by watercraft carrying fragments of the plant. What started as a small infestation spread within 30 years to 9 locations throughout the lake, with colonies varying from a few hundred square feet to those of over 10 acres. In 2005, volunteers from the Otisfield and Edwards Cove area recognized the threat of milfoil to their area and fabricated and deployed several 30' x 30' benthic barriers. This had good initial success, although on a relatively small scale. At the request of these volunteers, the TLEA took over the project in 2007. TLEA acquired a second hand pontoon boat and suction harvesting equipment to advance the program, while networking with other lake associations to learn the best techniques for milfoil management. To fund this effort TLEA started applying for environmental grants and made direct appeals to lakefront property owners. Contract divers were hired to do the dirty work of removing milfoil from its waters on an annual basis. A management plan was put in place to reduce, if not eliminate, milfoil from the lake.

By 2016 there were no milfoil in Serenity Cove, only small isolated milfoil plants interspersed with native plants in Edwards and Otisfield Cove, and in Hancock Cove there is less than a half-acre remaining. However, because of the size and density of the infestation at Pine Point the best we could do here was to create a plant free channel for boats to avoid fragmentation and spread of the milfoil. This 10 acre area of infestation is the primary source for migration of milfoil to the rest of the lake.

Invasive Plants and Property Values

There are numerous studies that show that invasive plants such as milfoil have a detrimental effect on lake shore property values. A study from the state of Washington Department of Ecology showed that property values on lakes with significant milfoil infestations had a 19% decrease in value. 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 undeniable negative impact on the attractiveness of a lake the value of the properties surrounding it. 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 the natural resource, should be concerned about the threat of invasive species in all of our lakes.

The Threat of Milfoil in Thompson Lake

Many lakes in Maine have experienced invasive species infestation with resultant loss of recreational value and the closure of boat launches. Each year the TLEA dive crew snorkels the shallow, soft bottom areas of the lake to survey for new milfoil growth. As described above, we have been actively removing milfoil from most of our coves and shallow areas throughout the lake. *The orange areas on the map on the last page show the areas of the lake that are prone to milfoil and where new growth was found and subsequently removed.*

Our Courtesy Boat Inspection program (CBI) monitors the boat launches at the lake to check watercraft entering or leaving the lake for invasive plants. We also educate the boat owners on the importance of these inspections on trailers and boats.

The dive crew has identified a new area of milfoil that has rapidly grown near the Pismo beach area, at the northern edge of the lake. This area of growth is especially challenging as it is in roughly 15 feet of water and the roots are intertwined with old tree trunks. This makes the use of tarps nearly impossible and hand pulling is limited by obstructed access. Currently Maine's environmental laws will not allow submerged tree trunks to be removed mechanically and they are too big to be removed by hand.

Despite our progress in combating milfoil and other invasive plants, all this work will be undone in the years to come if the infestation at the Pine Point area is not reduced. Since it took only 25 years for one single milfoil plant to turn into 15 acres of heavy infestation throughout the lake, we know we have to take on this challenge to preserve the future quality of the lake. We also need a long term plan to prevent a resurgence of these invasive plants. *In view of this, TLEA has developed a management plan to:*

- **Markedly reduce the infestation at Pine Point;**
- **Continue sustained management of the other areas of infestation**
- **Conduct annual underwater surveys of over 400 acres of vulnerable lake bottom**

Capital Campaign for Milfoil Removal

In 2017 TLEA started this ambitious 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

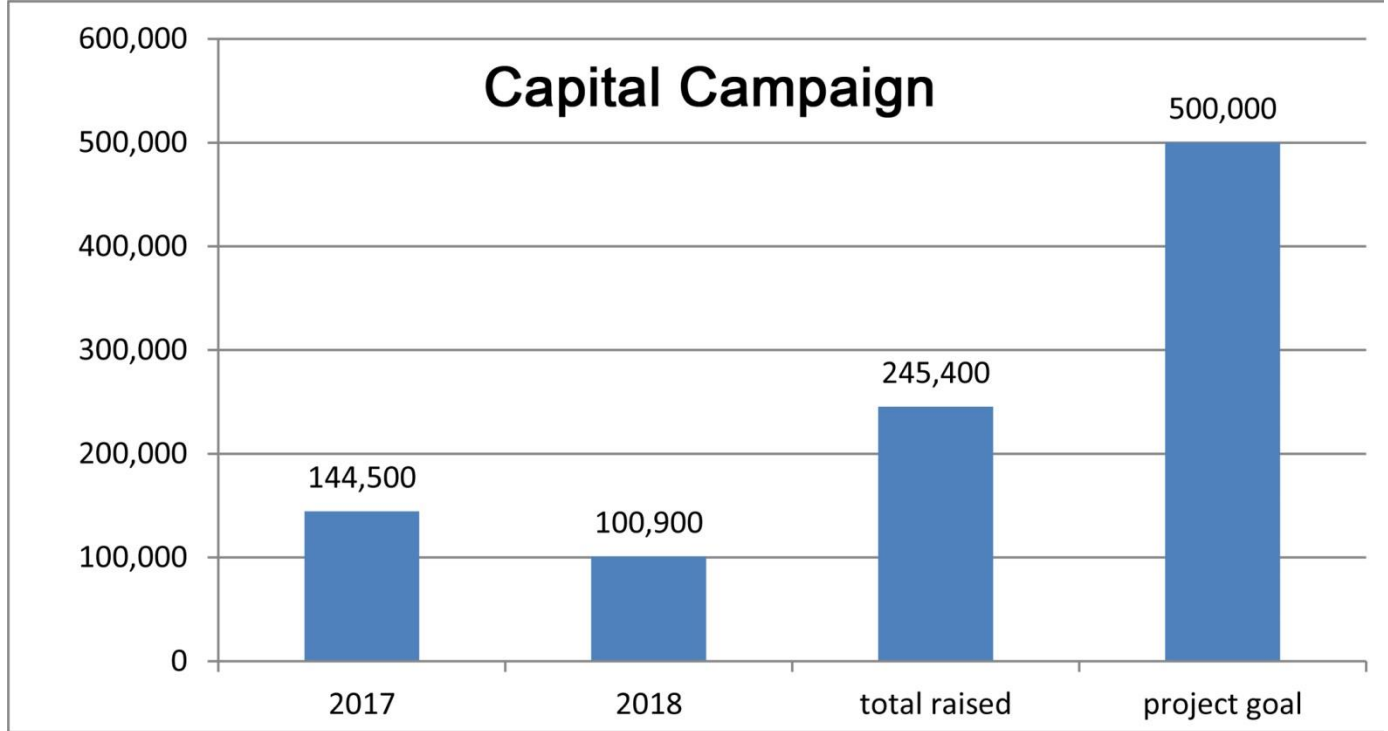
future threat of invasive species in the lake. This is an expensive project and the budget will need to allow for:

- Hiring of contract divers trained and experienced in removing invasive plants
- Construction of plastic tarps and anchors and 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 fabricate biodegradable 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 a minimum of 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, not including 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 have received support from the towns of Oxford, Poland, Otisfield and Casco. We have increased our grant requests from environmental foundations in hopes of receiving 2 to 3 endorsements per year. Lastly, we have applied to receive significant grant revenue from the Maine Department of Environmental Protection.

If you would like to contribute to the Capital Campaign for this historic project contact Kathy Cain at kathryncain@myfairpoint.net. We are a 501(c) 3 organization and your donation is tax deductible.



What We Have Accomplished

The placement of the benthic barriers at Pine Point started in the summer of 2017. The barriers have been placed on the lake bottom in the Pine Point area 1.5 acres at a time and so far we have covered close to **5 acres of milfoil growth**. The barriers smother the plants by eliminating any sunlight. 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.

Our crew has also replaced the old sections of the burlap at the boat channel at Pine Point that were decomposing. The section between the boat channel and property owner's docks has been dredged and scanned for any regrowth from the previous year.

Milfoil along the shoreline between Pismo beach and the Robinson dam is being monitored and pulled on a weekly basis. Our main focus at this time is balanced between this section of Pismo Beach and Pine Point.

Native plants have repopulated the areas of Edwards and Otisfield coves. The crew frequently returns to these areas to pull and remove any new growth of milfoil. They also continue to return to the cove across from Pismo beach and Hancock Cove to pull and remove any new growth.

44,000 lbs. of milfoil was pulled or suctioned from the lake in 2018.

TLEA Classifieds

We are in urgent need of support for our most important programs to preserve the beauty of the lake. The Youth Conservation Corp (YCC) is our most effective program to prevent erosion and preserve water quality. It is in danger of closing down if we cannot fill these positions. We are always in need of inspectors for Courtesy Boat Inspection program. We need your help!

Wanted: Project Coordinator for the Youth Conservation Corp (YCC).

This position will be responsible for planning, estimating, invoicing of erosion control jobs; as well as hiring, training, and coordinating of the YCC crew for the 8 week summer season. Hours are flexible and the pay is \$20/hr. We are looking for a mature, organized person who will return in future summers.

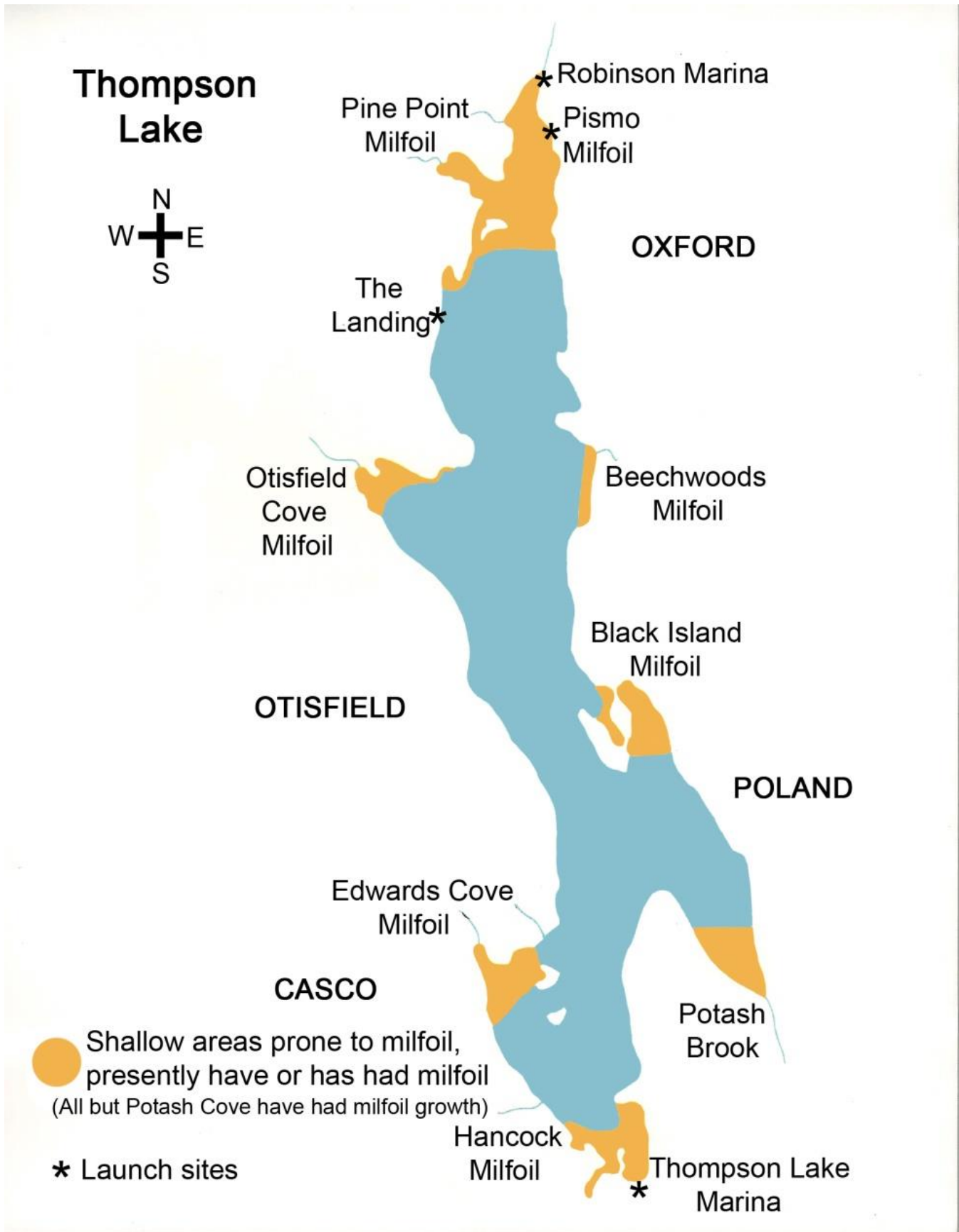
Wanted: YCC Crew Leader. This person will be responsible for the direct supervision of our YCC crew as they perform the erosion control projects around the lake during the 8-9 week period of school summer vacation. This person would be supervised by and report to the Project Coordinator. Pay is \$20/hr.

Wanted: Courtesy Boat Inspectors. This program is essential in preventing the introduction of invasive plant species in Thompson Lake. The inspectors take shifts to inspect boats entering or leaving the 3 main launches on the lake during summer weekends and holidays. The inspectors will be trained; an important aspect of the job is to educate boat owners on the importance of inspecting and draining their watercraft. The applicant should have an appreciation of the natural resource of the lake and enjoy relaxing by the water.

Full job descriptions can be found at our TLEA Website, www.thompsonlake.org. If you are interested in these positions or would like more information contact Marcia at mmtlea@gmail.com.

Also Wanted: Used pontoon boat for milfoil removal. Our 24 foot "Hippo" pontoon boat days are numbered. This watercraft is crucial to the invasive species removal program. Do you have a used pontoon boat that you could donate to TLEA? This donation would be tax deductible. If you are interested, please contact Kathy at 539-9122 or Marcia at mmtlea@gmail.com.

Threat of Milfoil in Thompson Lake



Visit our website:

www.thompsonlake.org

CONTACT TLEA: 207-539-4535

EMAIL: mmtlea@gmail.com

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