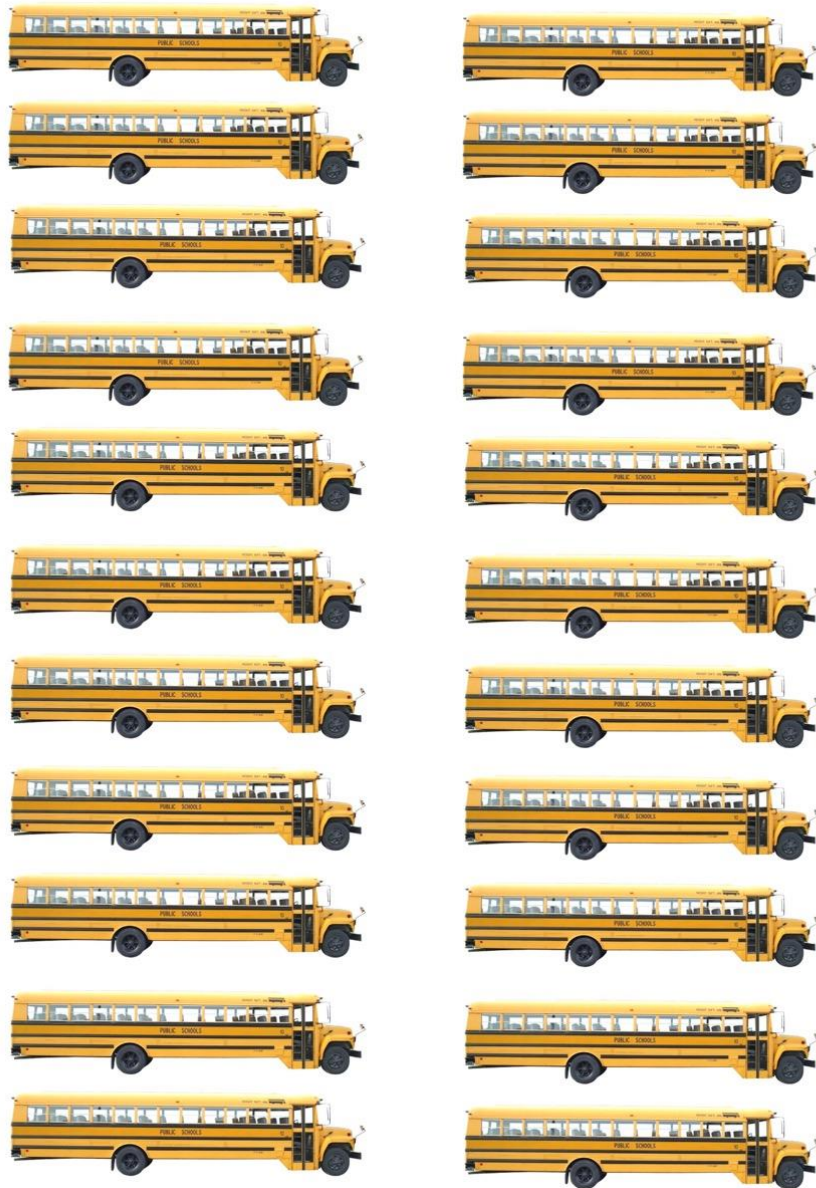


Fall 2019

Issue No. 189



*What's green and slimy and fits in 20 school buses?*

# Report on Milfoil Removal 2019

Crew chief Alex Bernardy reports they had very productive season this past summer. The crew worked primarily at Pine Point and the Robinson dam area. Through suction harvesting alone they removed **48,000 pounds** of milfoil at Pine Point. This is 4,000 pounds more than last year. In addition to this, the crew rotated 1.5 acres of benthic barriers in the Pine Point area to cover and smother a total of 3 acres of dense milfoil colonies. Alex reports that during the work at Pine Point they saw the return of many native plant species; including large-leaf pondweed, marigold, and many types of native grasses.

The crew also spent time this season working at the Pismo Beach and Robinson Dam area, hand pulling and suctioning plants. They cleared much of the area in the path of boat traffic, including the colonies that grew alongside Robinson Marina. This is especially important as boat motors will often shred milfoil, which allows it to migrate and take root in other parts of the lake.

They also surveyed the lake's high risk areas to monitor any possible spread or regrowth of milfoil. We are happy to report they did not discover any unexpected colonies in this search. Thanks to the previous work of the milfoil removal crew, Otisfield Cove, Hancock Cove, and Edwards Cove are presently free of significant milfoil colonies.

. Roughly 80% of the milfoil in Pine Point cove has been eliminated over the past 3 seasons. Our goal for next season is to eradicate the remaining 20% of the remaining colonies, as well as remove any individual plants before they have a chance to multiply. This area of dense milfoil growth, combined with its heavy boat traffic presents the biggest threat for migration of plants throughout the lake.

## What We Have Accomplished

What's green and slimy and fits in 20 school buses? How about all the milfoil that has been hand pulled or suctioned from Thompson Lake since 2008? That's right; our dive teams have removed over 337,000 pounds of this invasive plant which is over 168 tons. Just to give you an idea as to how much this is, it would take twenty school buses' to haul this away!

But that's not all...*much more of this invasive plant has been smothered by the benthic barriers over these years.* These barriers are rotated every 6 weeks, leaving the underlying ground devoid of milfoil so the native species can regrow. If you are members of TLEA or have contributed to the Capital Campaign for milfoil removal

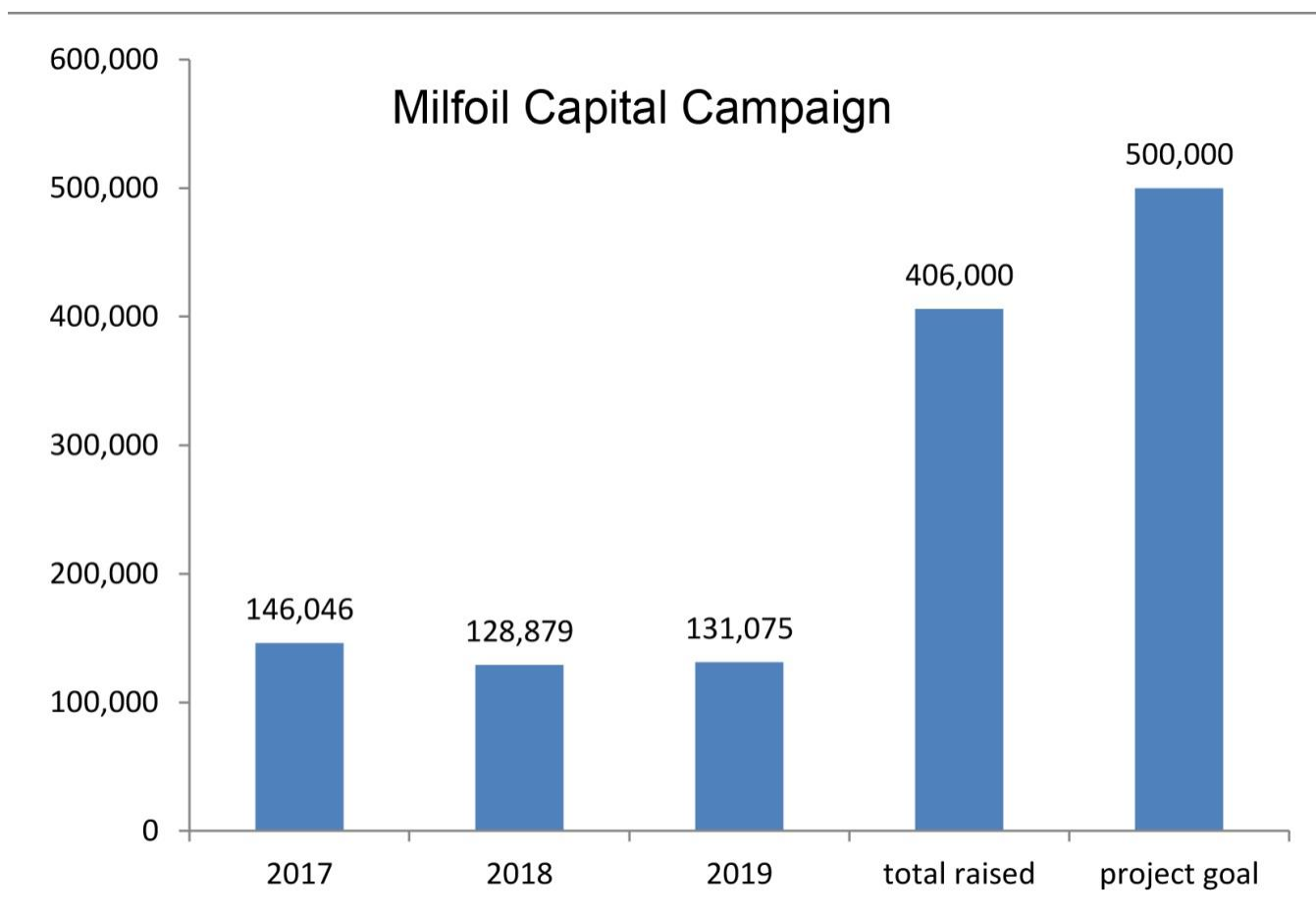
you should rest assured we have improved the natural resource of Thompson Lake and its economic value to the surrounding towns.

We are making good progress but the job is not yet done. We need your support.

## Capital Campaign

After many of years of milfoil removal from throughout the lake, TLEA started the Capital Campaign for the final phase of this program. This is to remove milfoil from the Pine Point and Pismo beach areas and then to set up a system of monitoring the regions of the lake that are at risk for infestation. As the underlying graph shows, we are well on our way to meeting our goal of \$500,000 in 4 years. The donors who have contributed in the last 3 years are listed in the Honor Roll included in this edition. We are grateful to all who have donated to this effort.

If you have made a pledge to the campaign, please check to see if your check is due. If you have made a donation, please consider another. If you haven't yet given to the campaign, now is your chance! Let's finish the job so Thompson Lake can remain the jewel it has been for many years. Donations can be sent to TLEA, P.O. Box 25, Oxford, ME 04270, or contact us at [mmtlea@gmail.com](mailto:mmtlea@gmail.com).



## **Courtesy Boat Inspection**

The Courtesy Boat Inspection (CBI) program is essential in preventing the introduction of invasive plant species in Thompson Lake. Our inspectors take shifts to inspect boats entering or leaving the main boat launches on the lake during summer weekends and holidays. In the 2019 season the courtesy boat inspection resulted in 1,236 inspections of boats entering or leaving the lake. This is up from 986 in 2018, but closer to the 1,203 inspections we did in 2017. With these inspections 9 plant fragments were found. None were invasive and most were found on water craft leaving the lake.

No new invasive plant species were reported in Maine this year. However, last year, the European Frogbit was found in Cobbosseecontee Lake. This plant species is even more aggressive and harder to remove than milfoil. We commonly have boats from Cobbosseecontee Lake entering Thompson. This shows the value of our boat inspection program and the importance of boat owners to inspect their water craft before and after you float. *We do not want any more invasive plants in the lake!*

## **Youth Conservation Corp**

We were unable to staff the Youth Conservation Corps this year. This is regrettable as this is the most important program in preserving the water quality of the lake.

YCC is important because it addresses non-point source pollution (NPS), which is basically runoff and erosion within our watershed. Controlling this runoff is the most important factor in preventing sediment and mineral deposition (especially phosphorus) into the lake which will ultimately increase the growth of algae and reduce oxygen levels in the lake.

Over the years the YCC has constructed erosion control measures such as rip-rap stabilization of shores, drainage trenches, razor bar to divert run off from drive ways and paths, as well as planting shrubbery along the shore line. TLEA has also performed watershed studies of the lake to identify sources of erosion and how to mitigate it. We have made much progress since the YCC program started but this is threatened to be undone if we don't continue these efforts. Unfortunately, erosion projects tend to "erode" over time and they must be maintained. We are committed to reviving the YCC and we ask for your help. If you, or any one you know has the skills and interest in becoming and YCC coordinator or crew leader, let us know. These will be paid positions. We are working on developing an internship with the

University of Southern Maine Environmental Studies Department and hope to have YCC up and running next year.

## **Why is Erosion Control So Important?**

Algal growth is a serious threat to lakes. Algae infested waters are ugly and no one wants to swim in them. In some Maine ponds the toxic blue green algae has bloomed which is dangerous to animals and humans. Algae eventually deplete the oxygen from a lake which damages the fisheries.

Phosphorous is the critical nutrient for the growth of algae. 1 part per billion of phosphorous is necessary for the growth of natural algae. Run off from storms and shoreline erosion is the major contributor to phosphorous deposition in a lake. If this increases by a factor of 10, a lake can transform from clear water wonder to pea soup morass. Once a lake reaches this state of algae blooms, a vicious cycle occurs. Algae produce oxygen during the day but consume it at night. When the algae die and form sediment at the bottom of the lake it will continue to consume oxygen.

As a result, the oxygen level in the bottom of the lake decreases, which causes natural iron and aluminum in the sediment to release phosphorous. So, even when the external source of phosphorous is corrected, a vicious cycle has begun. Once this happens, studies have found that 50% of the phosphorous in an endangered lake is coming from the sediment feeding the algae. Once this happens it is virtually impossible to reverse.

This problem of “non- point source” erosion will become more critical as we deal with the effects of climate change. There is an increased risk of run off into the lake with the increase in the intensity of summer storms. Also, as the summer water temperature rises and the duration of the winter ice cover decreases, the rate of growth of algae can increase dramatically. This is a problem that threatens many Maine lakes; algae blooms and even toxic algae are becoming more common.

Thompson Lake is not presently at a serious threat for an algae bloom. However, an increase in algae growth does affect our water quality and the fisheries of the lake. Our Secchi dish readings, which indicate water clarity and secondarily the level of algae, remain some of the best in Maine. Let's keep it that way.

Increased run off from shore line development and climate change has affected many lakes in Maine. Last year, as reported in the Lewiston Sun- Journal, the Lakes Association of Norway Maine performed a water shed survey of North Pond which feeds directly into Lake Pennesseewasee. Although this pond is only a mile long,

they identified 42 sites of significant erosion that were estimated to produce 37 tons of sediment into the pond per year. This was reported at the Norway Select Board meeting this past September and Chairman Tom Curtis noted that the lakes play a vital role in the town's livelihood and it's important to protect them. He commented: "the businesses, the lake, the property owners and the town, it's all intertwined...if one goes, everything goes." This is true for the surrounding towns of Thompson Lake as well.

We should all consider what we can do to prevent erosion. Think how you can decrease the runoff from your driveways, paths and boat launches. Plant a rain garden. Don't fertilize your lawns (fertilizers are high in phosphorous). Maintain your septic system. Volunteer for a water shed survey. Contribute your time and dollars to TLEA and help us get the YCC back on its feet. Let's keep Thompson Lake water clean and clear for future generations.

*Editor's note: Much of this information comes from our Co-President Marcia Matuska who attended a recent Maine DEP conference on Youth Conservation Corps and has been leading the way in restoring our YCC and reducing erosion)*

## **Oxford Dam**

The proposal from the town of Oxford to renovate the east gate of the dam and the refacing of eastern segment of the upstream dam face (37 feet of width and 16 feet of height) with concrete was approved by the state Department of Environmental Protection. This will result in replacement of the stop log east gate with a new 70 in. by 70 in. steel slide gate. The proposed concrete work is designed to seal the upstream face of the dam, eliminate and reduce leakage through the masonry, and protect the east sluice masonry from erosive deterioration. The renovations of the east gate should reduce the risk of sudden failure and uncontrollable release of water downstream.

TLEA continues to work with the town of Oxford and the Dam Committee to ensure that the environmental quality of the lake and the stability of the water levels are maintained. One of our concerns is the present lack of a fish screen at the dam to prevent the expulsion of salmon from the outlet. This is an important fishery for the recreational value of the lake and the lake receives annual stocking of land locked salmon. We have discussed this with the town and the Department of Inland Fisheries and Wildlife. They are presently working with the engineering firm for the project on a design for the fish screen.



## Schoodic Trip

TLEA is committed to the education of our future leaders on the importance of protecting our environment. Once again, the 6<sup>th</sup> graders of the Oxford Elementary School and the Otisfield Community School went on the annual field trip to the Schoodic Institute in Bar Harbor this fall. The students were educated by the teachers of the Institute on land stewardship, the national park system, navigation and preserving our natural resources. Many of these youngsters will someday be the stewards of the lake and the local area. It is also a fun time for the children that they look forward to all year. TLEA funds a touring bus (no milfoil inside) for the trip. The rest of the funding comes from grants secured by TLEA for education and fund raising by the participants.

### Briefly Noted

***Donation of Stocks***-TLEA has opened an account that will allow us to accept securities as donations. You can support our programs and receive the tax benefits.

***Membership gifts***-Surprise your family or friends with a membership gift to TLEA. They will receive all 3 issues of the Observer for a year.

For donations or membership gifts contact us at: [mmtlea@gmail.com](mailto:mmtlea@gmail.com)



*A future steward at the shores of Schoodic--Photo by Ruth Wilson*

Visit our website:

[www.thompsonlake.org](http://www.thompsonlake.org)

CONTACT TLEA: 207-539-4535

EMAIL: [mmtlea@gmail.com](mailto:mmtlea@gmail.com)

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

ADDRESS SERVICE REQUESTED

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