

Year End Report: Baddacook Lake Management 2021

Jim Luening
Project Manager
Groton Great Ponds Advisory Committee

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Executive Summary:

Yearly weed harvesting continues to improve the water conditions of Baddacook Pond. Recreational use is safer, navigation is clearer, and the aquatic habitat is better suited for wildlife. The improvement, from year over year harvesting, continues to be observed in less and delayed weed growth. When harvesting began in August, most of the weeds had just reached the surface. Before mechanical harvesting was employed, mats of weeds would have already spread across the 35 acres of infested water, out of Baddacook's total 76 acres. This year 292 cubic yards of weeds were removed. Since harvesting cuts back the weeds but does not kill them, yearly harvesting will be required to maintain these gains.

There were Loons on Baddacook for the first time this year, which is a very positive indication of habitat improvement. People have also spotted Swans, Osprey, and a Bald Eagle that is well fed by ice fishermen. Baddacook users and abutters have provided very positive feedback on the continued improvement. Public boat launch usage has grown as Lake Management has improved conditions.



Figure 1: Loon (stock photo since the loons were camera shy)

The porta-potty, at the boat launch, was very actively used. The heavy usage indicating the porta-potty significantly reduces the number of recreational users relieving themselves directly in the pond and along the shore line.

Background:

Baddacook Pond is Groton's largest and deepest natural pond. Abutted by mostly conservation land, the Groton Water Department, private property, and a public boat launch. Baddacook is a year round recreational area. In the summer there is boating, swimming, fishing, and it's bordered by hiking trails. In the winter there is ice fishing and skating. It also supports a robust aquatic habitat for fish, turtles, and other wildlife. It is stocked twice a year by the state. However, there are non-native, invasive weeds that require yearly management. When these weeds were unchecked, they impaired navigation, presented a danger to swimmers, and degraded the nature habitat. For 3 years, Weed Harvesting and Hydro-raking were used to control weed growth under a Community Preservation Act [CPA] pilot program grant. Based on the those positive results, maintenance is now jointly funded between the Town and the Water Department. This is the 5th year of Baddacook Pond weed management.

Operations Summary:

This summer, weeds started to break the surface around the beginning of August. Before lake management was implemented, weeds would have been densely matted across the surface well before that. Even though the lake level was high this year, by the time that harvesting started, the weeds were

just reaching the surface and beginning to flower. This was a good time to cut since most of the weeds were at the surface but not thick yet.

Solitude Lake Management was awarded the contract for \$26,440.00. The contract was funded under the Town Weed Harvester Committee (\$16,440) and the Groton Water Department (\$10,000). As per the contract, Solitude supplied a Weed Harvester Operator, a Dump Truck, and the Truck Driver, for 104 hours of harvesting. The Groton Lakes Association provided the Harvester. The town Weed Harvester Committee prepped and launched the Weed Harvester. The DPW provided the weed composing location, at the Transfer Station. The project was managed by the Great Ponds Advisory Committee. Tom Orcutt, Groton Water Superintendent, aided throughout the process.

Operations began on 8/09/2021 and continued through 8/20/2020. Overall, operations went smoothly and the weather co-operated. Repairs this year, during operations, were nominal. There was a clogged fuel screen, a cutter bar repair and sensor repair.

In total, 73 loads of weeds were removed which was approximately 292 cubic yards. The invasive weeds were a combination of Fanwort and Milfoil. At the end, the remaining weeds were well below the surface, to the best extent possible since some areas are not accessible. Feedback from users and abutters was very positive. Based on this year's results, we will likely use the same approach next year. User and abutter feedback has been very positive.

Notable quotes from users:

"I canoe on the pond while trout fishing and have noticed the improvement with weed removal."

"My wife swims on the pond almost daily and she has notice fewer weeds and feels more comfortable swimming."

"Less weeds, less weed growth. I think the weed harvesting program is a prudent use of funds."

"Thanks goodness for the porta poti ... yes they will urinate directly into the pond... first hand knowledge."



Fig. 2 – Transferring harvested weeds