



Milfoil Team Introduction 2022

Neil Santos

4/3/2022



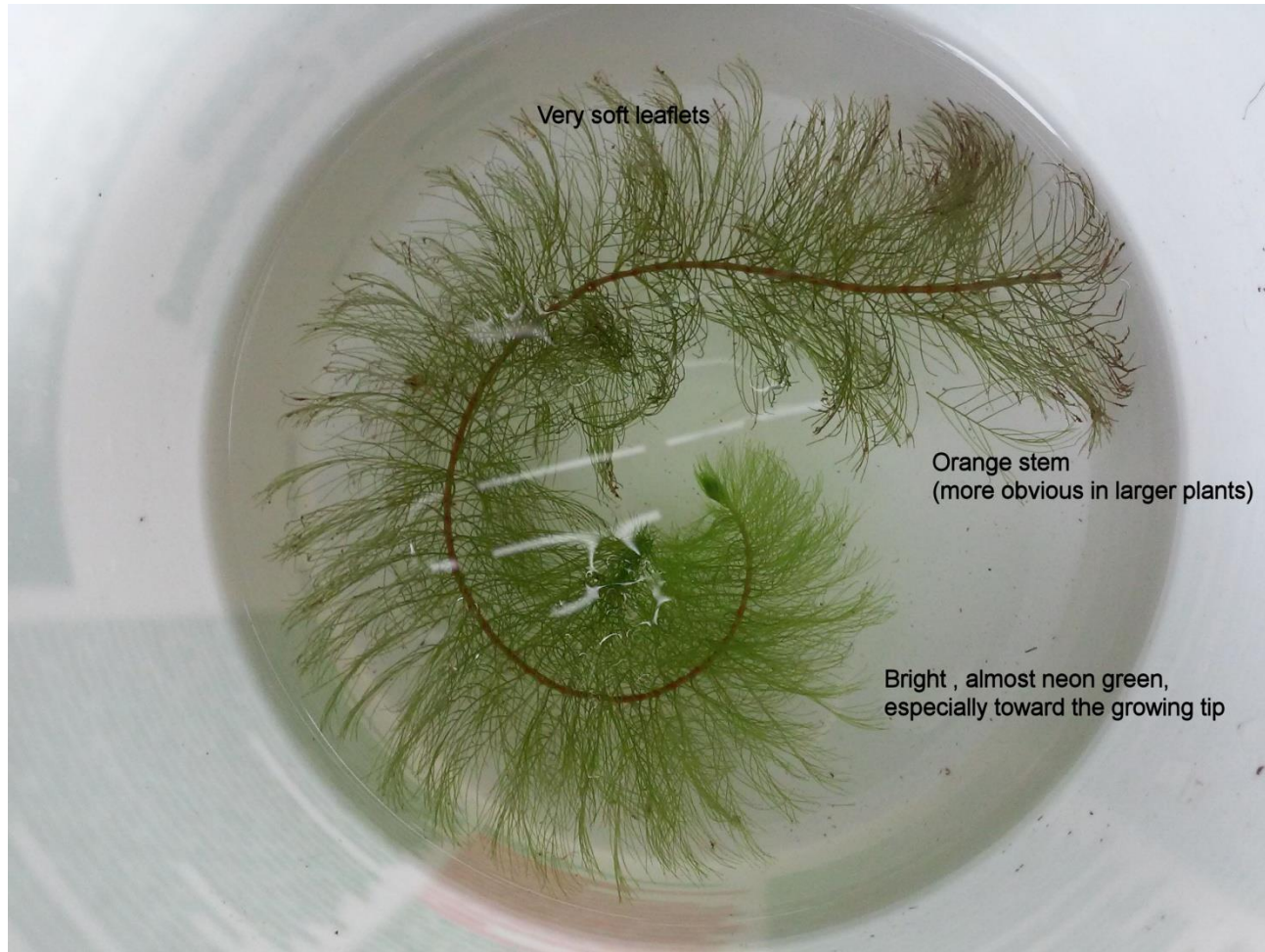
Team Basics

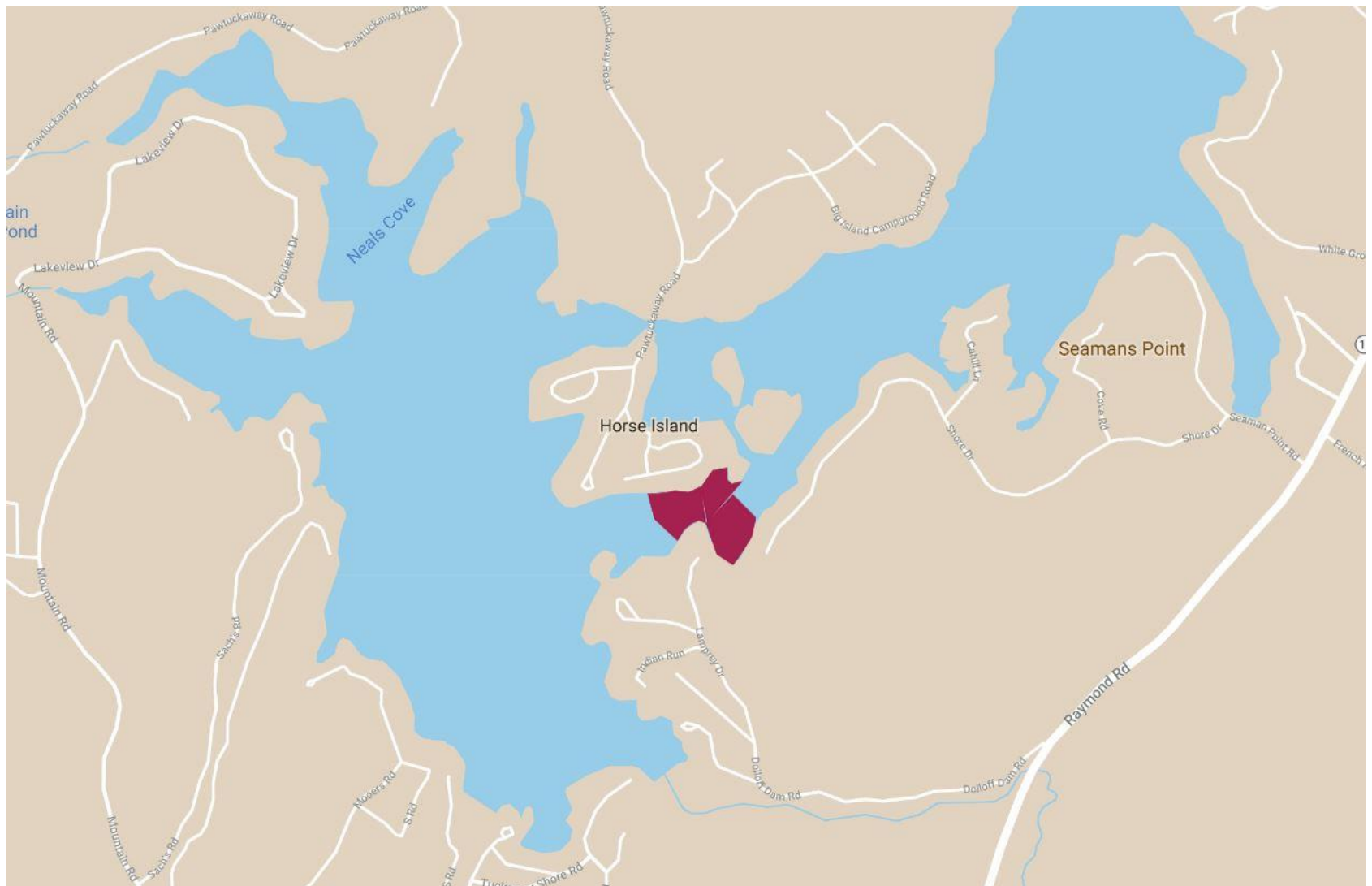
- Formed in 2015 when variable milfoil first discovered
- Consists of Support Kayakers, Divers, and Weed Control Divers
- Goals
 - Investigating reports of suspicious underwater growths in new areas
 - Locating and removing underwater invasives from known areas
 - Variable Milfoil
 - Chinese Mystery Snails
- Depend on Weed Watchers and Lake Users to report new areas of infestation and suspicious vegetation

Why is Milfoil Bad?

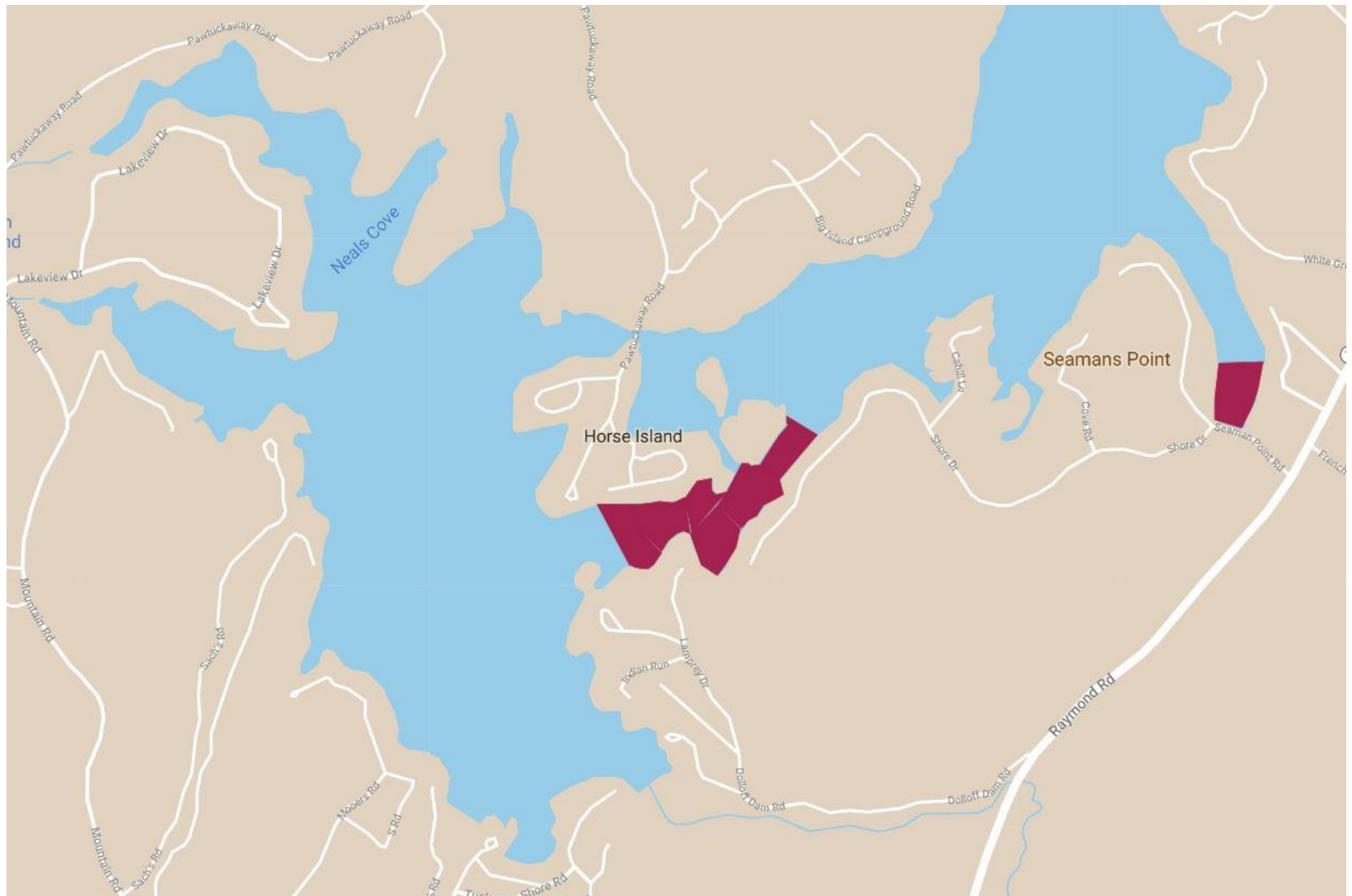


Variable Leaf Milfoil

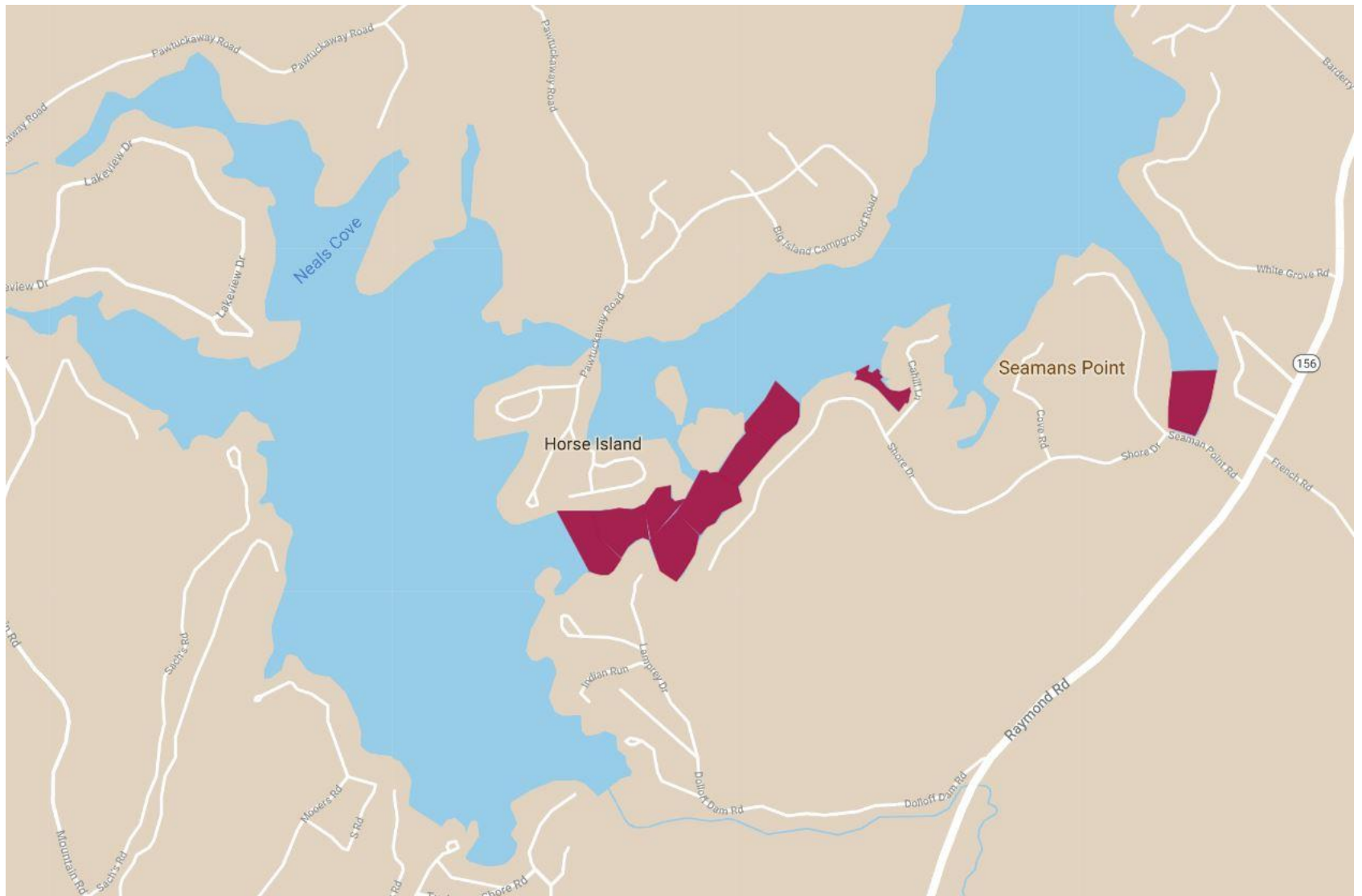




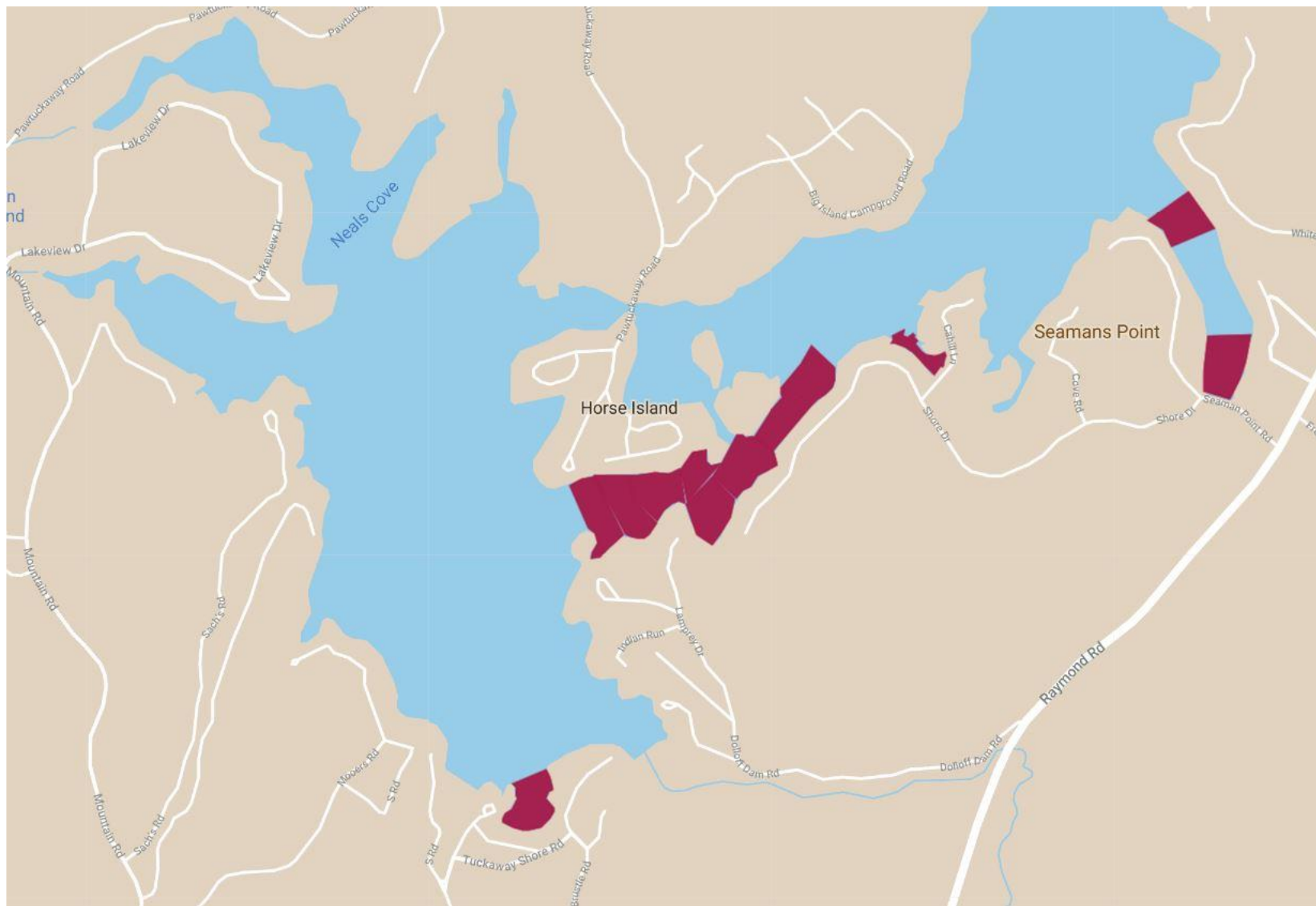
Milfoil 2017



Milfoil 2018



Milfoil 2019



Milfoil 2020

Milfoil Amounts by Year

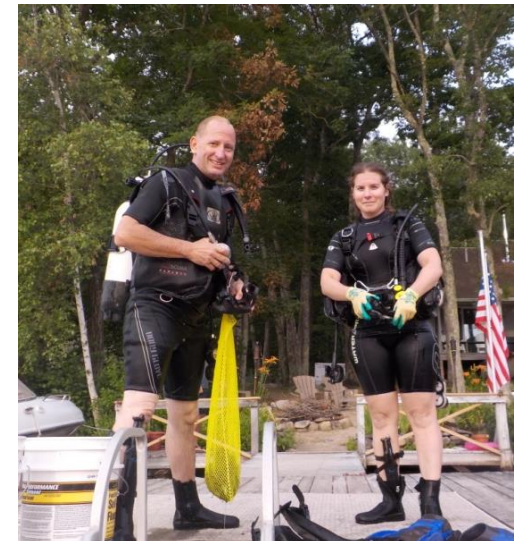
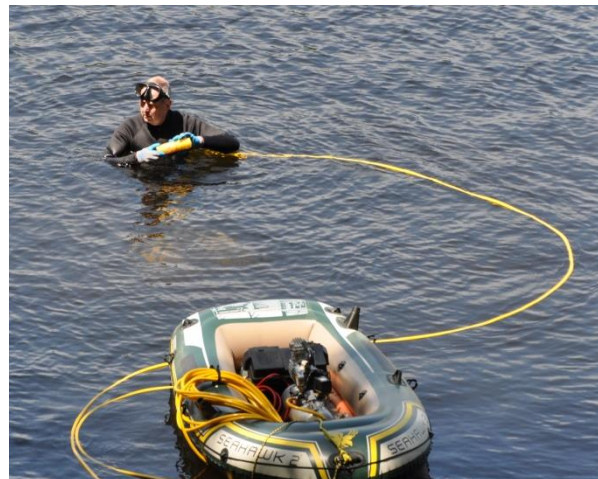
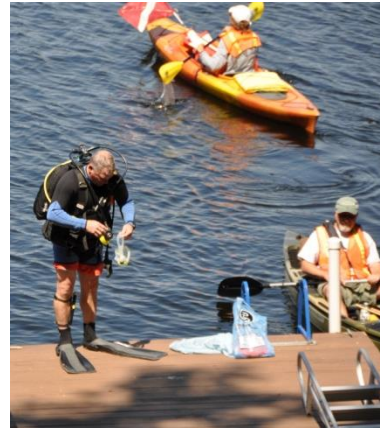
- 2015 35 gallons
- 2016 25 gallons
- 2017 15 gallons
- 2018 11 gallons
- 2019 132 gallons
- 2020 74 gallons
- 2021 318 gallons
 - State Park Camp Store 65 gallons (1.5 acres)= 43.3 gal/ac
 - Gove's Cove 121 gallons (13 acres)= 9.3 gal/ac
 - South Channel 102 gallons (28 acres)= 3.6 gal/ac

Gove's Cove, Dike End



Milfoil Team

- All volunteers
- Need to provide personal gear
- 2 Surface Supplied Air (aka Hookah) rigs, up to 4 divers
- 6 search divers
- 6 certified Weed Control Divers (WCD)
- 18 support kayakers
- 954 volunteer hours in 2021
- 58 separate dives
- Divers currently search over 60 acres for milfoil several times per season



Milfoil Team



Scuba Diver

Requirements and Responsibilities

- Open water dive certification
 - PADI, NAUI, etc
- Provide own equipment
 - Tank fills, insurance, collection bags paid by PLIA
- Responsibilities
 - Participate in team milfoil searches/removals

SSA Diver

Requirements and Responsibilities

- Must have snorkeling or diving experience
- Complete SSA Training
- Provide own basic equipment
 - Mask, fins, weights, wet suit
- Responsibilities
 - Participate in team milfoil searches
 - Coordinate diving with Team Leader

Weed Control Diver

Requirements and Responsibilities

- Open water dive certification
- Weed Control Diver certification
- Provide own equipment
- Responsibilities
 - Participate in team milfoil searches before doing any removals
 - Dive and remove only with kayak support and prior notification
 - Provide data to team leader for NHDES reports

Support Kayaker Requirements and Responsibilities

- Comfortable in operating kayak near divers and boaters
- Capable in handling kayak under a variety of weather conditions
- Responsibilities
 - Keep divers safe by managing boat traffic
 - Provide logistical support
 - Provide and retrieve markers
 - Guide search divers
 - Empty milfoil collection bags

Operations

- Dives conducted every Sunday
- Weekday dives scheduled when sufficient people available
- One support kayaker for every diver
- Dive duration 1 - 2 hours
- Milfoil plants marked with floats
 - Try to remove plants as soon as marked and mapped

Milfoil Markers

- Orange Floats mark known milfoil locations
- Green Floats used during search operations
- Purple markers used by Weed Watchers



Search Procedure

- Search Areas divided into several acre sections
- Generally one area searched per dive session
- Searches done by parallel passes across search area



Search Procedure

- One kayaker per diver
- Kayaker equipment
 - Safety Vests
 - Safety Whistles
 - Diver Flags
 - Extra Markers
 - Garbage bags and nets for removal operations

Search Metrics

- Searching is labor intensive
 - 1 acre per diver per hour
 - 10:1 ratio of searching to removal
 - Estimated coverage 50-75%
- Biggest team need is more divers for searching

Additional Current and Potential Search Aids

- Aerial Drone
 - Very useful in detecting large milfoil plants just after ice out when lake level is low
- Sonar
 - Used to sweep large areas to find potential additional areas of infestation
- Underwater Drone
 - Evaluating potential for future use
- Underwater Lights
 - Will be evaluating this summer

Additional Information

- Contact Neil Santos
 - neilsantos@comcast.net
 - Cell 603 548-1701
- Milfoil Team Procedure Manual
 - Posted on the PLIA website
 - <https://pawtuckawaylake.com/programs/milfoil-management/>