2024 Fish Creek Aquatic Invasive Species Management Project Report

Upper Saranac Foundation
It still is, and always will be, about Water Quality

Upper Saranac Foundation - Aquatic Invasive Divers in Fish Creek Campground

Contact Information:
Guy Middleton
Upper Saranac Foundation
P.O. Box 564
Saranac Lake, NY 12983
lakemanager@usfoundation.net

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Abbreviations List:

Abbreviation	Complete Text
AID	Aquatic Invasive Divers – USF Dive Crew
AIM	Aquatic Invasive Management, LLC
APIPP	Adirondack Park Invasive Plant Program
AWI	Paul Smith's College Adirondack Watershed Institute
EWM	Eurasian watermilfoil
FCAISMP	Fish Creek Aquatic Invasive Species Management Project
ISDC	Invasive Solutions Dive Company, LLC
NYSDEC	New York State Department of Environmental Conservation
Steward	Adirondack Watershed Institute Steward
USLA	Upper Saranac Lake Association
USF	Upper Saranac Foundation
VLM	Variable-leaf watermilfoil

Executive Summary:
Aquatic Invasive Species Management in the Adirondacks: A Decade of Success
Aquatic invasive species (AIS) pose a significant threat to the environment and economy of the Adirondack region. For over a decade, the Upper Saranac Foundation (USF) has been at the forefront of combating AIS in Upper Saranac Lake (USL). With remarkable success, the USF has established itself as a leader in AIS management techniques.

The Fish Creek AIS Management Project
The Fish Creek Aquatic Invasive Species Management Project (FCAISMP) is a key component of the USF's comprehensive watershed protection program. This initiative combines AIS prevention, monitoring, management, control efforts, and public education to inhibit the spread of invasive species. By prioritizing long-term water quality and ecosystem health, the USF aims to sustain the watershed for future generations.

The program also safeguards the region's economic value by preserving opportunities for recreation, tourism, sportsmanship, and second-home ownership. Clear waterways not only enhance enjoyment but also help prevent the downstream spread of AIS and reduce the risk of exporting invasive species to non-infested waters.

Key Highlights of the FCAISMP:

1. **Targeted Species:** Two AIS species—Eurasian watermilfoil (*Myriophyllum spicatum*) and Variable-leaf milfoil (*Myriophyllum heterophyllum*)—were identified and targeted for removal in the NYSDEC Fish Creek Campground. Both species rank among New York State's most ecologically harmful invasives due to their biological characteristics, distribution, and impact.

2. **Management Plan Development (2016):** The USF devised a comprehensive AIS management plan for Fish Creek Campground in 2016 and sought funding to address an estimated initial project cost of $160,000. The primary objectives were to restore the 108-acre littoral campground waterfront, prevent AIS infestation downstream and regionally, and block the establishment of new AIS in the area.

3. **Pilot Program Success:** In 2016, the USF launched a four-week pilot program to evaluate the feasibility of the FCAISMP. This effort confirmed prior surveys, highlighting the infestation level and demonstrating the practicality of management strategies. The pilot provided the foundation data to securing future funding. From 2016 to 2019, $165,720 was invested, supporting 2,904 diver hours during the intensive management phase.

4. **Funding and Support:** To implement the FCAISMP, the USF raised over $60,000 through community donations. An additional $100,000 was secured via the NYSDEC Invasive Species Rapid Response and Control Grant, ensuring the project's financial sustainability. The initial intensive management period supported through this funding concluded in 2019.

5. **Implementation and Transition:** The initial intensive management phase spanned three years (2017–2019). 2024 marked the fifth year of the maintenance phase of the project. In 2022, the USF transitioned from contracting external dive teams to employing its own divers. This shift reduced costs and improved management efficiency by allowing the USF to directly oversee operations.

6. **2024 Harvest Operations:** Increased AIS densities and expansion prompted a larger effort than past years. Divers logged 357 hours removing a total of 2,970 lbs. of AIS (20 lbs. EWM and 2,951 lbs. VLM).

7. **Fish Creek and Square Ponds Nine-Year Summary (2016–2024):** Over the past nine years, divers have spent 4,196 hours, at a cost of $233,383, removing over 52,800 pounds (26.4 tons) of AIS from Fish Creek Campground (Upper Fish Creek and Square Ponds). Despite significant reductions in AIS acreage and density achieved during the early Intensive Management phase, the persistent and growing influx of AIS coming from upstream tributaries continues to pose challenges and strain management resources.

8. **Containment Booms:** In 2019, AIS containment booms, funded through a grant from the Cloudsplitter Foundation were installed just upstream of the Fish Creek Campground boat launch. These booms were strategically placed to intercept fragmented invasive plants, preventing their introduction into managed areas within the campground and further downstream into Upper Saranac Lake. Since their installation, an estimated average of 3,000 pounds of milfoil is removed annually from the booms.

9. **Upstream AIS:** With support from a $19,000 Parks & Trails New York grant in 2020 and 2021, the USF successfully expanded the FCAISMP upstream of the campground bridge to the AIS containment booms. Beginning in 2022, the USF began funded for AIS management efforts for this area. An additional $10,050 was invested in 201 diver work hours to remove 3,216 pounds of

milfoil in the Fish Creek tributary in 2024. Over a five-year period, a total of $60,884 has been dedicated to 1,119 diver work hours to remove 18,742 pounds (9.37 tons) of milfoil.

10. **Boat Retrieval:** The Adirondack Watershed Institute (AWI) Watershed Stewards stationed at the campground boat launch have observed a significant decline in AIS on watercraft being retrieved. Over a nine-year period, there has been a 90% reduction in AIS detected on boats leaving the launch. In 2024, only three boats retrieved at the campground launch were found to be carrying AIS, reflecting the success of ongoing prevention and management efforts.

Introduction:

Preserving the Upper Saranac Lake Watershed: A Collaborative Approach to AIS Management
The Upper Saranac Foundation (USF) is dedicated to preserving, enhancing, and protecting the natural beauty, environmental quality, and recreational value of the Upper Saranac Lake (USL) watershed. This mission aligns with the objectives outlined in USF's, Upper Saranac Watershed Management Plan.

As part of this mission, the Fish Creek Aquatic Invasive Species Management Project (FCAISMP) addresses the critical threat of aquatic invasive species (AIS). By expanding USF's successful AIS hand-harvesting program into the NYSDEC Fish Creek Campground, the project aims to safeguard public investments and New York's natural resources.

Enhancing Watershed Protection: AIS management at Fish Creek Campground strengthens USF's comprehensive watershed protection program, which integrates prevention, detection, monitoring, control, and community education. This holistic approach:

- **Protects native species** and preserves the natural ecosystem.
- **Prevents downstream AIS migration** and limits the spread to non-infested waters.
- **Safeguards economic benefits** tied to recreation, tourism, and sportsmanship in the region.

Through hand-harvesting, a mechanical control method, this project systematically reduces infestations of Eurasian watermilfoil (*Myriophyllum spicatum*) and Variable-leaf milfoil (*Myriophyllum heterophyllum*)—the only two AIS plants identified in the campground.

Long-Term Commitment to Sustainability
The project's success depends on sustained funding for management efforts. The USF remains committed to ongoing AIS control and native habitat restoration, ensuring the long-term ecological health and enjoyment of the watershed's natural resources for generations to come.

A Grassroots Model for Collaboration
The USF's approach highlights the power of collaboration. Partnering with non-profit organizations, advocacy groups, academic institutions, and state agencies, the USF has developed an effective grassroots model for addressing invasive species. Key collaborators on the FCAISMP include:

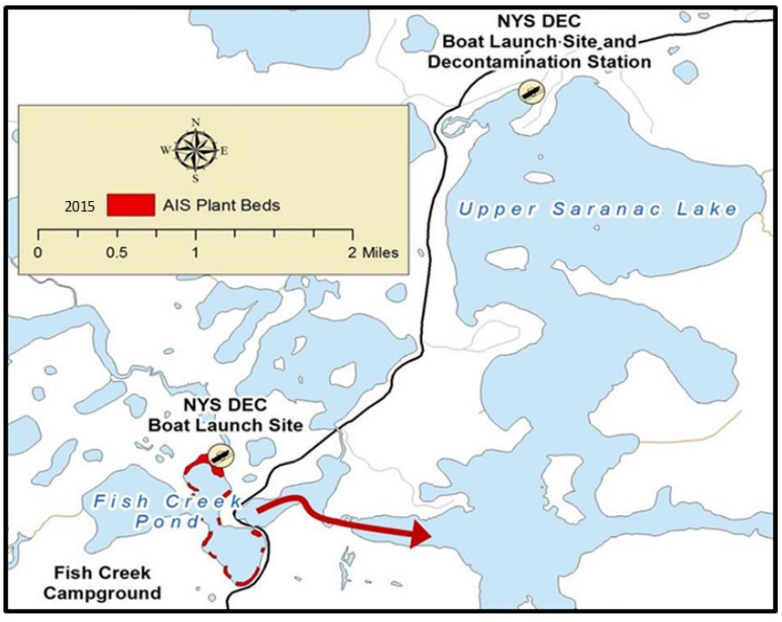
- **Adirondack Park Invasive Plant Program (APIPP)**
- **Adirondack Watershed Institute (AWI)**
- **NYS Department of Environmental Conservation (NYSDEC)**
- **Adirondack Park Agency (APA)**

Project location: The Fish Creek Aquatic Invasive Species (AIS) Management Project focuses on the 287-acre Upper Fish Creek and Square Ponds, which feature 4.5 miles of shoreline entirely within New York State's Fish Creek Public Campground. Managed by the Department of Environmental Conservation (NYSDEC), Fish Creek Campground is the most popular NYSDEC public campground, attracting over 96,000 visitors annually.

The campground offers extensive water-based recreational opportunities, including fishing, swimming, waterskiing, tubing, and canoeing. Nearly all of the 355 campsites provide direct shoreline access to miles of open water in the Upper Saranac watershed.

The NYSDEC describes Fish Creek Campground as "the finest and most attractive of all Adirondack campgrounds," with natural sandy shorelines and exceptional boating opportunities. A trailered boat launch within the campground sees steady use throughout the camping season, complemented by additional access from nearby public and private launches.

Fish Creek Campground, located in the Town of Santa Clara, Franklin County, is upstream of and connected by navigable waters to the 5,500-acre Upper Saranac Lake. It is surrounded by the Adirondack Forest Preserve, Saranac Lake Wild Forest.



Pre-management data from the Adirondack Watershed Stewards at the Fish Creek Campground boat launch identified the campground as a significant source of AIS spread in the region. Located at the headwaters of the Saranac River watershed within the greater Lake Champlain Basin, the campground's popularity and direct water access heighten the risk of invasive species spread region-wide.

Map of project area showing location of NYS DEC boat launch sites, campground, and 2015 AIS plant beds in Fish Creek Pond. Red arrow shows direction of water flow. The channel between Fish Creek Pond and Upper Saranac Lake is navigable with large motorboats.

Plant Monitoring Program: In 2004, the USF launched a plant monitoring program, funded by the Foundation and conducted by the Adirondack Watershed Institute (AWI), to assess the effectiveness of AIS management strategies. The program established 588 underwater monitoring segments on USL in 2004 and 36 additional segments in Fish Creek Pond in 2006. Using a transect line method, AWI analyzed native and invasive plant growth to provide data on current and historical trends.

Fish Creek Pond, which was unmanaged at the time, served as a comparison to USL, where AIS management was actively underway. Between 2006 and 2015, Eurasian watermilfoil densities in Fish Creek Campground increased significantly, in stark contrast to USL, where AIS management methods had been successfully deployed. By the time management efforts began in Fish Creek, the average Eurasian watermilfoil density had reached 517 stems per acre.

Variable-leaf milfoil (*Myriophyllum heterophyllum*) was first detected at Fish Creek Pond in 2009. Between 2009 and the initiation of the Fish Creek AIS Management Project, the frequency of its occurrence increased significantly, at an estimated rate of 4% annually (*Laxson, 2016*).

Fish Creek Invasive Species Harvesting Feasibility Study: In 2015, two comprehensive surveys of native and invasive aquatic plants were conducted within Fish Creek Campground by the Adirondack Park Invasive Plant Program (APIPP) and Aquatic Invasive Management, LLC, in collaboration with the USF Lake Manager (*Middleton, 2015*). These surveys identified 108 littoral acres within the campground, 24 of which exhibited significant infestations of Eurasian watermilfoil (EWM) and Variable-leaf milfoil (VLM) (7 acres in Square Pond and 17 acres in Upper Fish Creek Pond). Based on this data, it was estimated that 18 weeks of diver hand harvesting over a three-year period would be required to achieve sustainable AIS management levels, similar to those successfully implemented by the USF on Upper Saranac Lake.

Following the surveys, the USF developed a comprehensive plan to manage AIS at Fish Creek Campground, mirroring its successful efforts on Upper Saranac Lake. The plan included an intensive three-to-four-year start-up phase, supported by funding to cover diver hand harvesting costs, followed by a long-term maintenance program to ensure sustainability.

Pilot Program: In 2016, the USF obtained permits from the NYS Department of Environmental Conservation (NYSDEC) and the Adirondack Park Agency (APA) to conduct a four-week pilot program, designed to evaluate the feasibility of the Fish Creek AIS Management Project (FCAISMP). Conducted in collaboration with Aquatic Invasive Management (AIM) and the Adirondack Watershed Institute (AWI), the program targeted areas with dense infestations and high boat traffic to minimize the risk of AIS fragmentation and spread.

The pilot program took place after Labor Day, during off-peak camping season, with harvesting operations conducted mid-week. Over the four-week period, divers removed 9.5 tons (18,937.5 lbs.) of AIS material from 6.13 acres of the littoral zone. Results from the pilot were compared to 2015 survey data, confirming the estimated cost and scope of the full project.

The pilot program demonstrated the practicality and necessity of AIS harvesting at Fish Creek Campground, underscoring the economic and environmental risks of unmanaged AIS infestations. Confident in its approach, the USF is committed to sustaining AIS management in the campground.

Funding: In 2016, the Upper Saranac Foundation (USF) launched a fundraising campaign to meet a grant-matching requirement for the Fish Creek AIS Management Project. With generous support from the

Upper Saranac Lake Association (USLA) and the local community, the campaign successfully raised over $60,000. This effort enabled the USF to secure an additional $100,000 in funding through the NYSDEC Invasive Species Rapid Response and Control Grant, which required a 50% match.

At this time the USF commitment to the long-term sustainability of this project by pledging to continue AIS management efforts in Fish Creek beyond the initial intensive harvesting phase. Following the conclusion of the start-up period, 2020 marked the beginning of the maintenance phase, ensuring ongoing protection and preservation of Fish Creek's ecosystem.

Methodology: Project data is collected, maintained, analysed and displayed to accurately document, evaluate, and interpret AIS management. Documentation of locations and amounts of AIS removed provides a better longitudinal understanding of AIS management. Through this evaluation, the USF continues to adapt and improve to advance management techniques and reporting methods.

The USF, working together with our divers, the NYSDEC, and the APA, developed protocols that limits impact to users during the project, while providing long lasting impacts.

Aquatic Plant Surveys: Survey and monitoring data are used to evaluate the effectiveness of hand harvesting by comparing abundance levels in management areas before and after intervention. These efforts map milfoil distribution, identify emerging invasive species, and establish a qualitative baseline for historic aquatic plant community records. The aggregated data guides long-term management strategies, tracks progress, and assesses the efficacy of management techniques, ensuring consistency in planning and monitoring.

Comprehensive plant surveys are conducted throughout the growing season. Visual assessments are performed using surface-spotting techniques from a motorboat or stand-up paddleboard, supplemented by sonar detection with a Lowrance ELITE-7Ti Chartplotter sonar unit.

Survey observations are conducted using either grid search patterns or traveling in a serpentine pattern, beginning from the shoreline to a depth of 18 feet. Using these techniques, maps are produced indicating locations of AIS using a GPS. Weights and lobster buoys mark milfoil locations to assist divers in pinpointing plants.

Lobster Buoy marking milfoil plant location

Harvesting Operation: The Fish Creek AIS Management Project employs a Hookah Dive System air compressor, which enables two to four divers to hand-harvest invasive plants simultaneously. Divers carefully remove AIS by hand, ensuring the root systems are extracted, and then bag the plants for removal. A surface support team plays a crucial role by retrieving plant fragments, collecting filled bags, and maintaining diver safety by notifying boaters and monitoring operations. Safety measures include the deployment of traditional "diver down" flags and strategically placed navigation buoys.

To minimize conflicts with recreational activities, harvesting is scheduled outside peak tourist seasons—before July 4th and after Labor Day—and focuses on unoccupied campsites during early morning hours to avoid disruption to campers.

The USF meticulously tracks the effectiveness of its AIS management efforts by recording the poundage of plants removed daily, weekly, and annually. Plant locations are mapped and documented using GPS waypoints. Bagged plants are weighed using a standardized system, where each filled bag is approximately 25 pounds. This consistent methodology aligns with regional AIS harvesting practices.

In 2022, the USF transitioned to employing its own dive team, significantly reducing operational costs and enhancing management efficiency. Previously, AIS removal was managed by contracted companies such as Invasive Solutions Dive Company (ISDC) and Aquatic Invasive Management (AIM). Additionally, the USF expanded its operations by contracting its dive team to other waterbodies outside the Upper Saranac Lake watershed, further offsetting costs and supporting broader AIS management initiatives.

Diver locating and removing Eurasian watermilfoil plant– Photo: Meg Modley

Harvesting Summary

Fish Creek Campground (Square Pond and Upper Fish Creek Pond):

2017: In the fall of 2017, AIS harvesting commenced shortly after the AWI transect survey. Efforts focused on revisiting areas targeted during the 2016 pilot program and expanded to encompass the entire 60-acre littoral zone of Upper Fish Creek Pond. Under the supervision of the USF Lake Manager, divers from Aquatic Invasive Management (AIM) worked intensively from September 11 to October 13, dedicating 984 dive hours over a five-week period. The team, which included up to seven divers and two surface support personnel, achieved remarkable results by removing 15,050 lbs. (7.5 tons) of EWM and VLM. This effort was funded with a $54,880 investment from the NYSDEC grant.

2018: Invasive Solutions Dive Company (ISDC) began harvesting on September 4, following Labor Day, and concluded October 4. This marked the first year the entire littoral zone of both Square Pond and Upper Fish Creek Pond was harvested. Divers logged 840 hours, removing 7,477 lbs. (3.74 tons) of AIS. USF invested $48,650 in direct diver expenses as part of the NYSDEC grant.

2019: Harvesting began September 9 and ended October 10, totaling 600 diver hours. Divers removed 5,806 lbs. (2.9 tons) of AIS, including areas slightly upstream of the campground's boat launch that had not been managed previously. This was the second year of full littoral zone harvesting within the campground. The USF invested $34,750 in direct diver expenses to conclude the NYSDEC grant subsidy.

2020: This marked the start of the AIS harvesting maintenance period where USF took over management expenses. Efforts were divided into early (June) and late (September) sessions to avoid conflicts with campers. The entire littoral zone was surveyed at least once during the season. Divers logged 300 hours, removing 675 lbs. of AIS over 10 days, with an investment of $17,375.

2021: In the second maintenance year, harvesting occurred in September to minimize camper conflicts. Consistent methods, including surface spotting and underwater surveys, were employed. Divers logged 210 hours, removing 213 lbs. of AIS over seven days. The entire littoral zone was also surveyed by underwater diving at least once throughout the season. USF invested $12,162 in the effort.

2022: USF transitioned to employing its own dive team, reducing costs and increasing efficiency. The management period was divided into early (June) and late (September) sessions. Surface spotting replaced full-littoral dives, and known infestation sites were targeted repeatedly. Divers logged 220 hours, removing 994.5 lbs. of AIS (33.25 lbs. EWM and 961.25 lbs. VLM) over eight days. The total cost to the USF was $10,026.

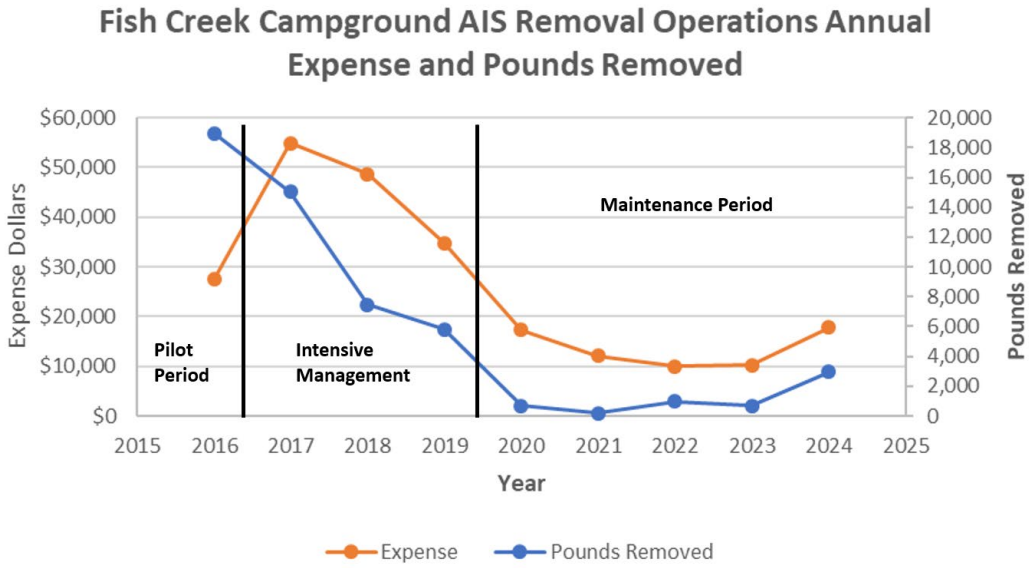
2023: Initial efforts focused on removing AIS fragments washed ashore in downwind coves, likely flushed downstream from upstream sources. However, dense AIS patches along the northern shore of Upper Fish Creek Pond near the Fish Creek inlet were not fully addressed due to time constraints. Divers logged 205 hours, removing 709 lbs. of AIS (15 lbs. EWM and 694 lbs. VLM). The USF invested $10,250 in the effort.

2024: Harvesting periods were again divided into early (late May/early June) and late (September) sessions. Increased AIS densities and expansion prompted a larger effort, with divers logging 357 hours at a cost of $17,850. The area near the Fish Creek outlet produced the majority of removed AIS, with Square Pond contributing minimally. A total of 2,970 lbs. (20 lbs. EWM and 2,951 lbs. VLM) was removed.

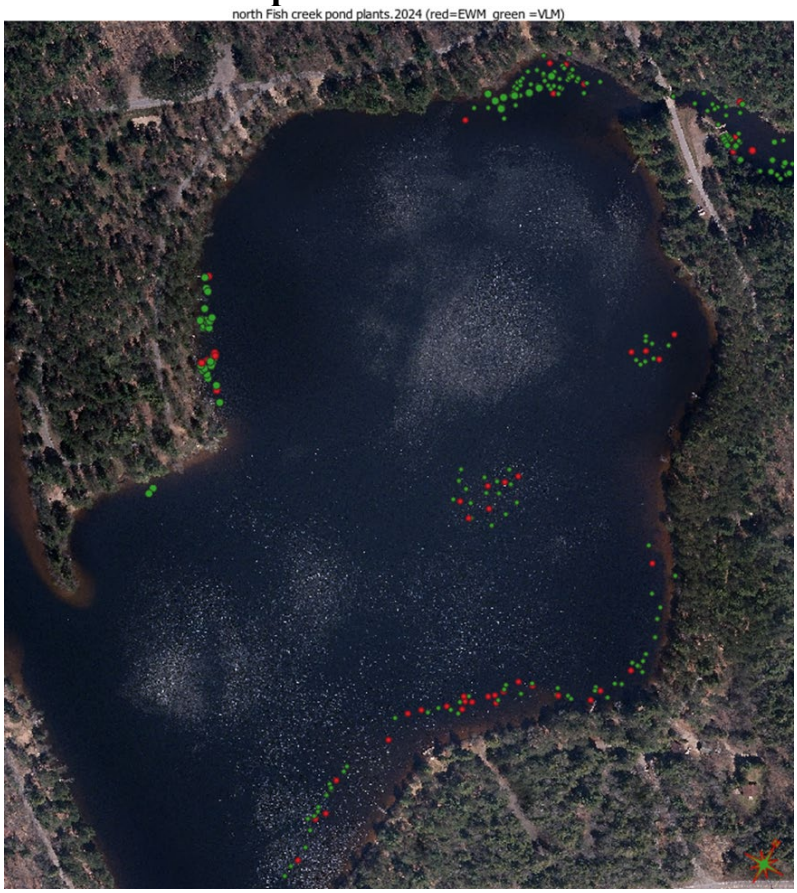
Nine-Year Summary (2016–2024)

Over the past nine years, divers have spent 4,196 hours, at a cost of $233,383, removing over 52,800

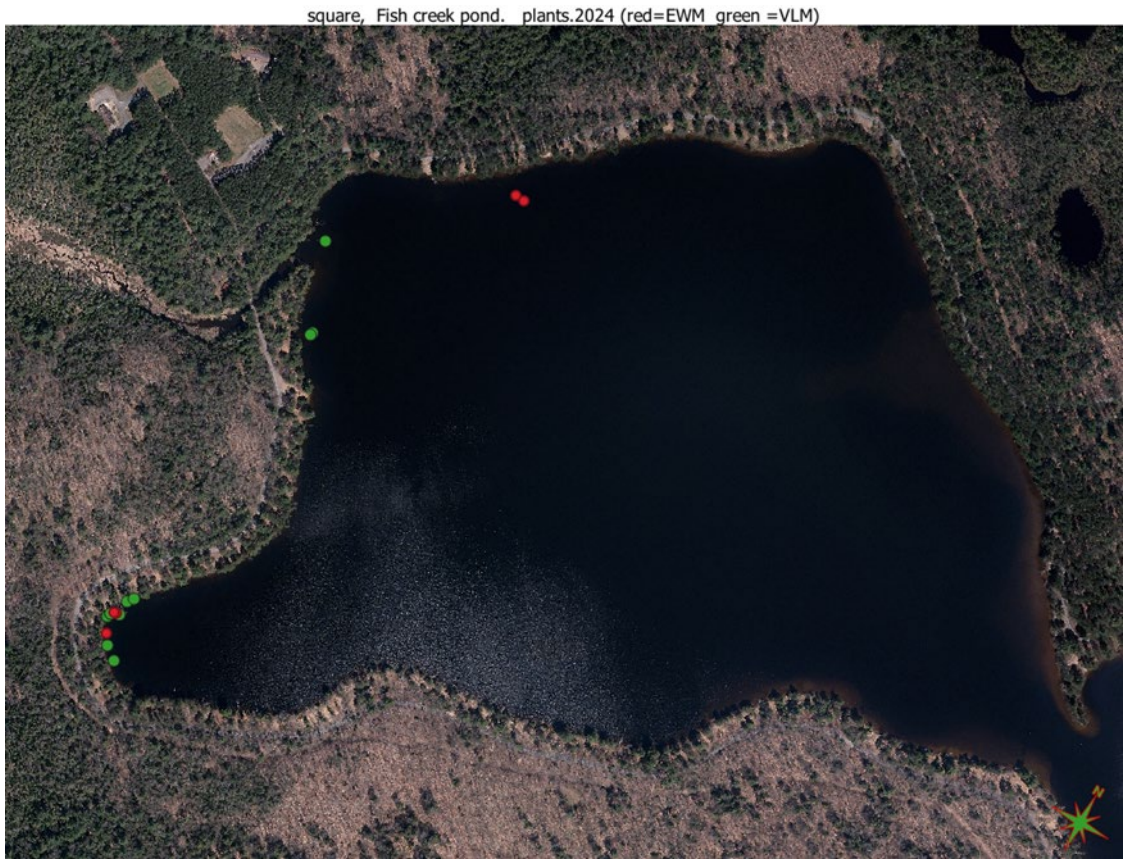
pounds (26.4 tons) of AIS from Fish Creek Campground. This effort underscores the USF's unwavering commitment to controlling invasive species in the region. Despite significant reductions in AIS acreage and density achieved during the early Intensive Management phase, the persistent and growing influx of AIS from upstream tributaries continues to pose challenges and strain management resources.



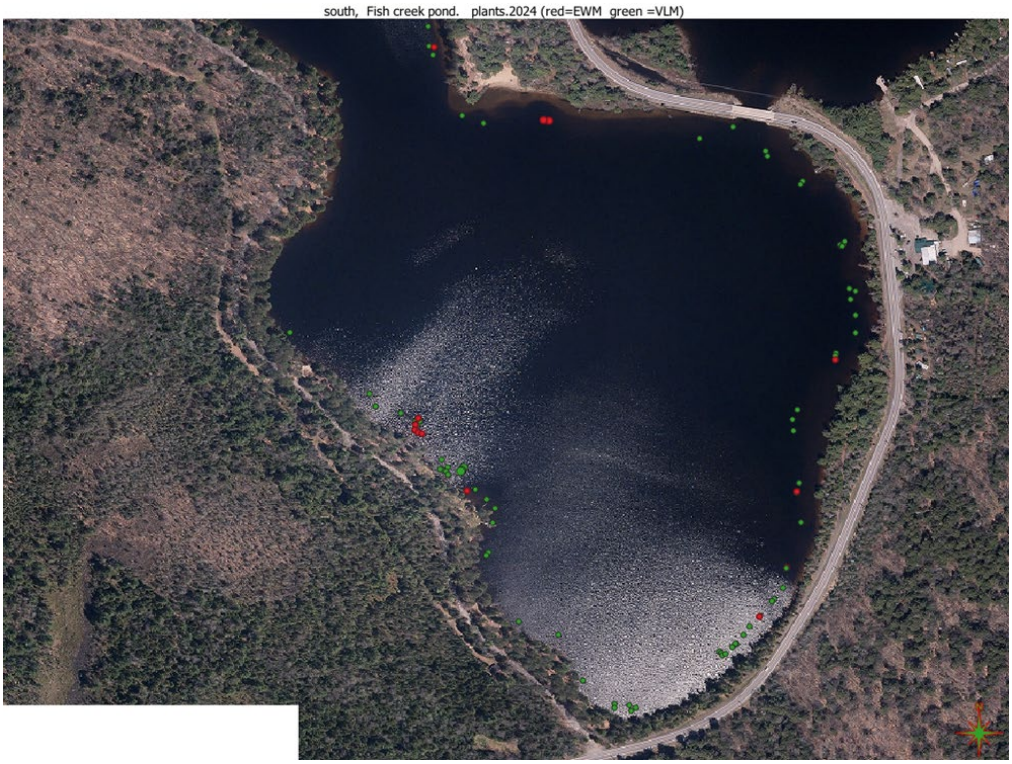
2024 AIS Harvest Location Maps:



Fish Creek Campground – North Upper Fish Creek Pond



Fish Creek Campground – Square Pond



Fish Creek Campground – South Upper Fish Creek Pond

Containment Booms: In order to achieve the FCAISMP long term goal of preventing new growth of AIS there was a need to limit new AIS introductions from the upstream Fish Creek tributary. Upstream waters above the campground boat launch has a high-density level of AIS.

In 2019, USF received funding from a Cloudsplitter Foundation grant for the purchase of AIS containment booms. The containment booms, placed just upstream of the Fish Creek Campground boat launch, prevent fragmented invasive plants from floating downstream, reducing the occurrences of introduction into managed areas within the campground and further downstream into Upper Saranac Lake. The series of three seasonally placed alternating booms extend from shore to just past the center of the channel. The booms allow non-motorized watercraft traffic to pass while plant fragments are stopped on the upstream side of each boom.

The booms are installed immediately after ice out and removed in the late fall. Since the booms were installed it is estimated an average of 3,000 pounds of milfoil is removed annually.

With milfoil propagating through fragmentation, each plant stopped by the booms is potentially one less infestation downstream in the watershed. The booms provide a needed advantage to AIS harvesting efforts within the campground. The majority of the plant fragments removed occurs when the currents were fastest. AIS yields decreased as the water dropped.

Invasive Species Containment Booms – Fish Creek Ponds tributary -Photo Guy Middleton

Fish Creek tributary (Upstream of the campground bridge):

With the assistance of a $19,000 grant from the Parks &Trails New York in 2020 and 2021 the USF expanded the FCAISMP upstream of the campground bridge to the AIS containment booms (Approximately 1,000 feet upstream of the bridge). Harvesting methods were consistent to methods deployed elsewhere by the USF. Management periods were divided into an early (May /June) and late season harvests (September) to avoided camper user conflicts. Variable-leaf milfoil is the prominent invasive plant found above the bridge. A total of $10,050 was invested in 201 diver work hours to remove 3,216 pounds of milfoil in 2024.

Over a five-year period, a total of $60,884 has been dedicated to 1,119 diver work hours to remove 18,742 pounds (9.37 tons) of milfoil from the Fish Creek tributary.

Watershed Steward Data: As a result of managing AIS from Fish Creek Campground and the Fish Creek tributary, the amount of invasive species found on boats being retrieved from the Campground boat launch has been significantly reduced. Adirondack Watershed Institutes, Watershed Stewards stationed at the launch inspect watercraft looking for AIS on boats being launched and retrieved. Over a nine-year period, there has been an 90% reduction in AIS on watercraft leaving the launch. This decrease is a strong indicator to the success of this project, reflecting the reduction of AIS in the management area and decreasing the likelihood of AIS being transported to regional uninfected waterbodies.

Occurrence of AIS on watercraft being retrieved from Fish Creek Campground Boat launch

Fish Creek Campground Boat Launch (Watercraft exiting the launch - Retrieval)									
Year	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	2024
Inspections Performed	403	914	822	1104	611	786	785	570	453
Boats Transporting AIS	29	56	11	12	7	5	4	2	3
% Boats Transporting AIS	7.2%	6.1%	1.3%	1.1%	1.1%	0.6%	0.5%	0.4%	0.7%

AWI - Adirondack Watershed Steward at Fish Creek Campground Boat Launch

Lake Bottom Mapping: To get a better understanding of the characteristics of the bottom of Fish Creek and Square Ponds, the Upper Saranac Foundation utilized BioBase, an aquatic habitat sonar mapping technology. Data was compiled into bathymetric, aquatic vegetation and bottom hardness maps. This information assisted our crews to understand AIS location probability of AIS growth. Additionally, it developed a baseline for monitoring changes over time, measuring the waterbodies response to the FCAISMP (Appendix A).

Conclusion:

The Fish Creek Aquatic Invasive Species Management Program (FCAISMP) employs a comprehensive approach combining prevention, monitoring, and control measures to limit the establishment and spread of aquatic invasive species (AIS) within the watershed. This summary highlights the monitoring and control strategies employed, including hand harvesting within Fish Creek Campground (Upper Fish Creek Pond, Square Pond, and its tributary in area of the campgrounds boat launch).

Sustained harvesting efforts have transitioned from the initial intensive phase to a maintenance phase, effectively managing the level of returning plant growth. Additionally, AIS containment booms installed upstream of the Fish Creek Campground boat launch are helping to prevent the downstream introduction of new invasive species from the Fish Creek tributary.

Over the past nine years, divers have dedicated 4,196 hours and $233,383 to removing more than 52,800 pounds (26.4 tons) of AIS from Fish Creek Campground. While significant reductions in AIS acreage and density were achieved during the early Intensive Management phase, the continued and increasing influx of AIS from upstream tributaries remains a challenge, straining management resources.

Evidence suggests that Upper Saranac Foundation efforts are effective. Campers have reported a noticeable reduction in nuisance aquatic vegetation, enhancing recreational value, and annual removal data reflects the impact of these management activities.

However, approximately 13 acres of dense milfoil growth directly upstream of the containment booms continues to expand each year, serving as a significant source of AIS fragments that propagate downstream into the campground. Unlike contained waterbodies where eradication or reduced maintenance is achievable, the recurring influx of unmanaged upstream AIS necessitates rigorous and ongoing management at Fish Creek Campground. As long as upstream infestations persist, Fish Creek Campground will require higher maintenance efforts compared to other waterbodies managed by the Upper Saranac Foundation (USF).

The Upper Saranac Foundation remains committed to the long-term sustainability of this project and intends to support the FCAISMP as long as financial resources allow. The program's ultimate goal is to improve water quality, preserve native species in their natural habitats, and ensure the sustainability of these public natural resources for future generations. However, with current maintenance efforts funded solely through the USF's annual budget, securing supplemental funding from external sources will eventually be necessary to sustain these efforts and protect the campground's resources for years to come.

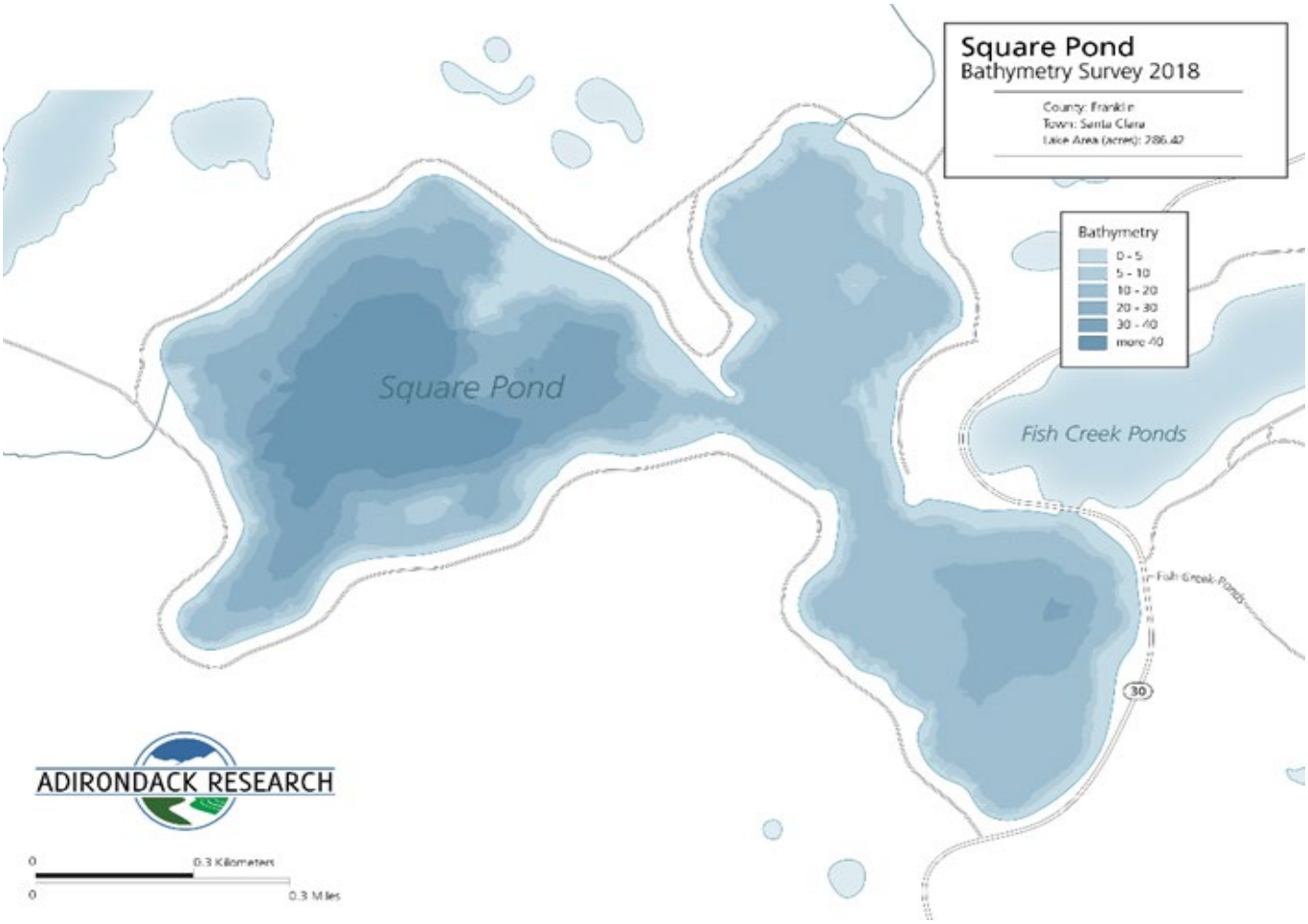
Literature Cited:

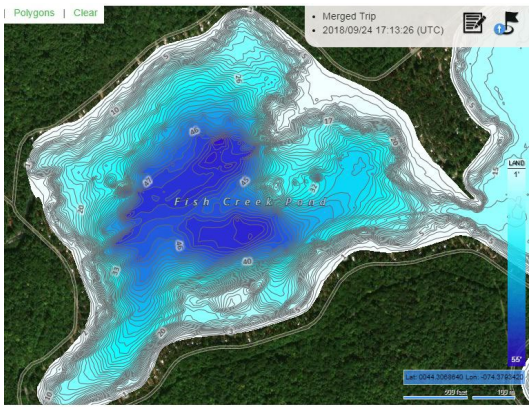
Laxson, C.L., Yerger, E.C., Regalado, S.A., and D.L. Kelting. 2017. Upper Saranac Lake: 2016 Watershed Report #: PSCAWI 2017-06.

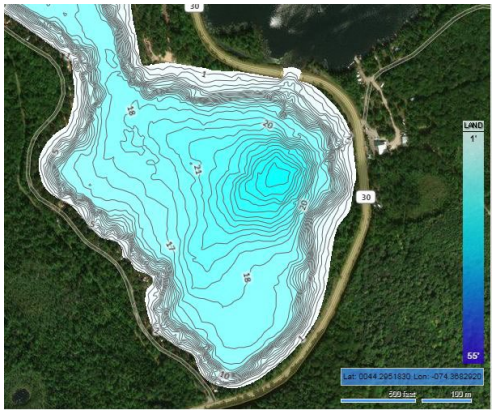
Middleton, G, Lewis, A, 2015 Fish Creek Pond West and Square Pond Survey

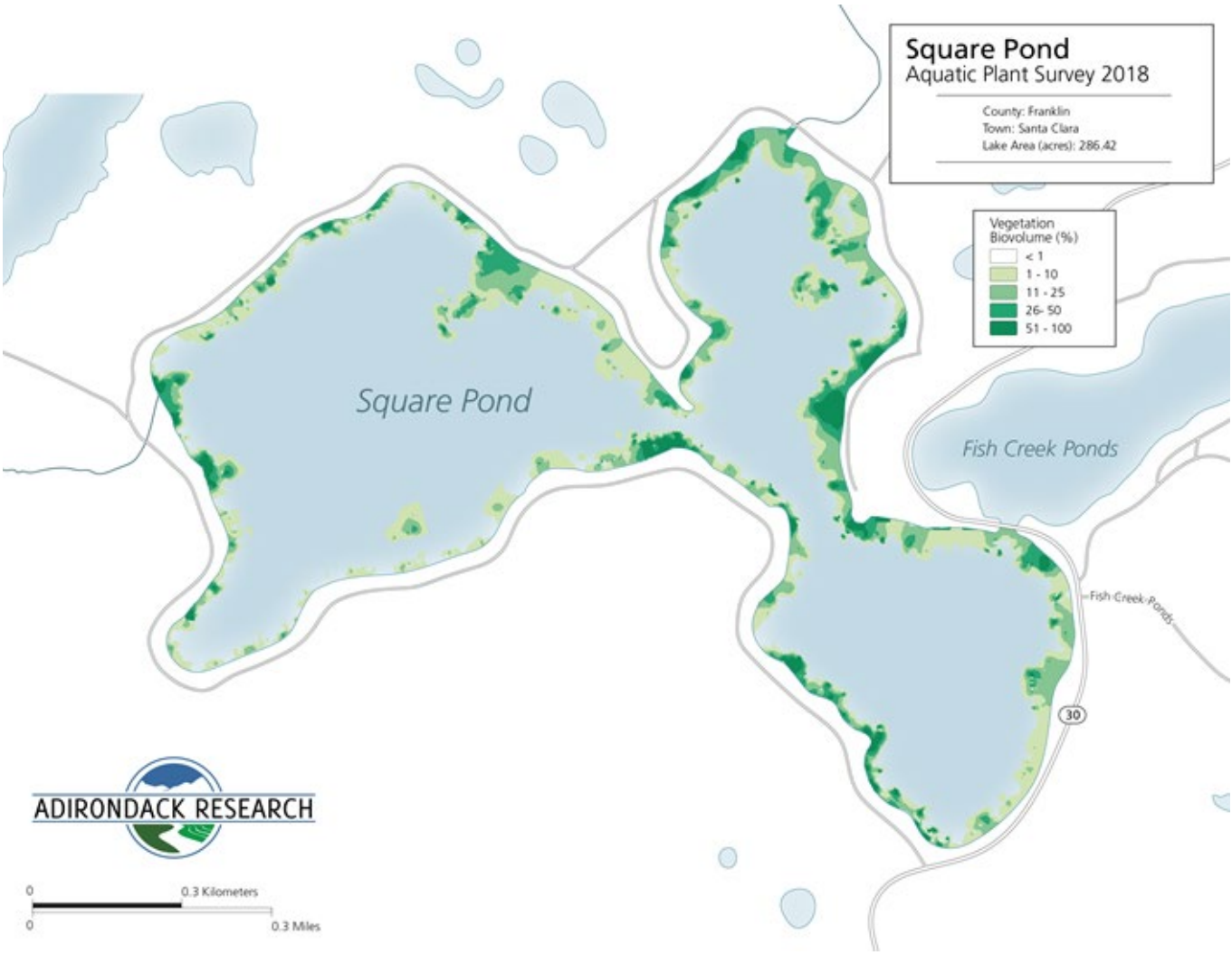
In Memory of Steve Dvorak

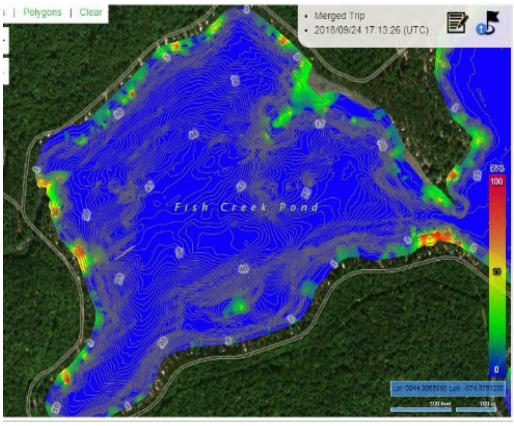
APENDIX A: Lake Bottom Mapping

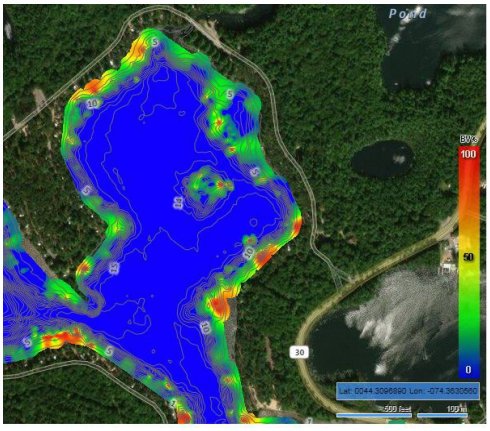


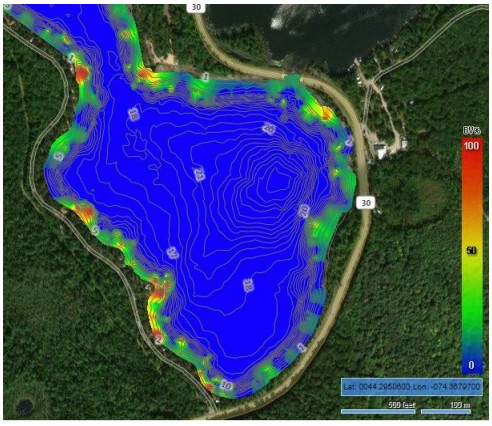


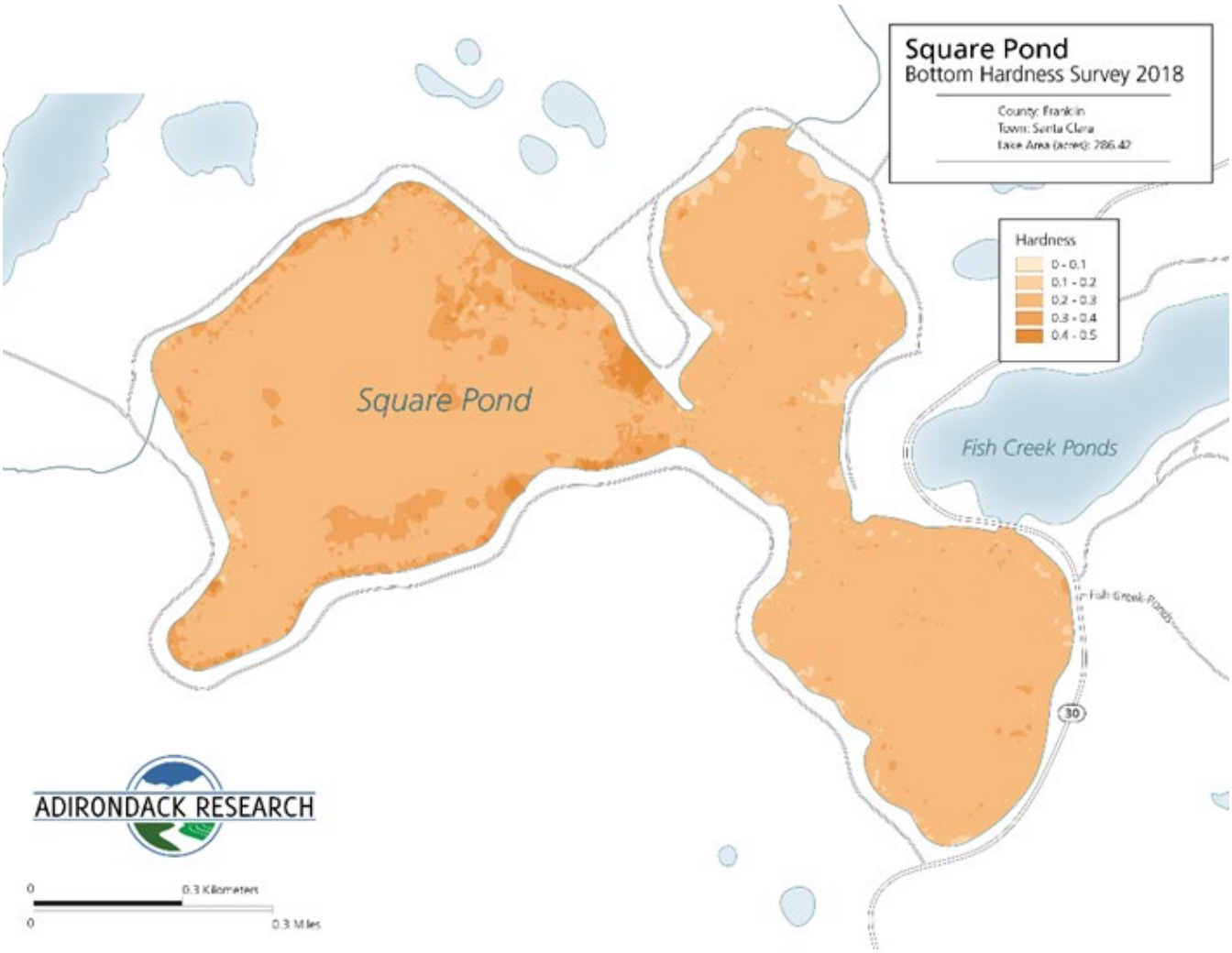



Square Pond
Aquatic Plant Survey 2018
County: Franklin
Town: Santa Clara
Lake Area (acres): 286.42
Vegetation Biovolume (%)
< 1
1 - 10
11 - 25
26- 50
51 - 100
Square Pond
Fish Creek Ponds
Fish Creek Ponds
30
ADIRONDACK RESEARCH
0
0.3 Kilometers
0
0.3 Miles

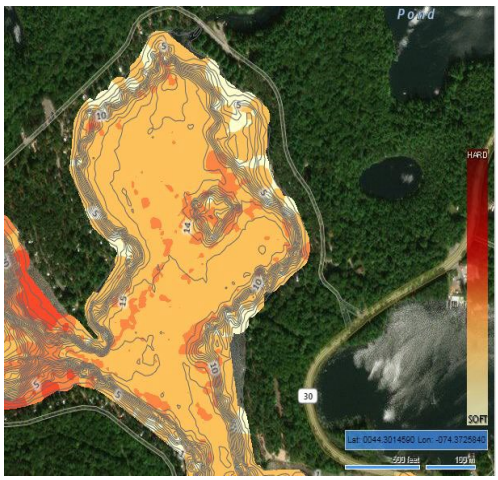

Merged Trip
2018/09/24 17:13:26 (UTC)
Fish Creek Pond
BVs
100
50
0

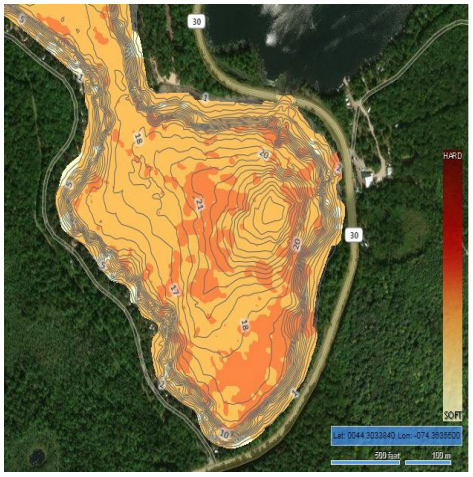

Pond
30
BVs
100
50
0


30
30
BVs
100
50
0


Square Pond
Bottom Hardness Survey 2018
County: Franklin
Town: Santa Clara
Lake Area (acres): 786.42
Hardness
0 - 0.1
0.1 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.5
Square Pond
Fish Creek Ponds
Fish Creek Ponds
30
ADIRONDACK RESEARCH
0
0.3 Kilometers
0
0.3 Miles

Polygons
Clear
Merged Trip
2018/09/24 17:13:26 (UTC)
HARD
SOFT


HARD
30
SOFT


30
HARD
30
SOFT