2018 Fish Creek Aquatic Invasive Species Management Project Report

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

Invasive Solutions Dive Company, Divers at Fish Creek Pond -2018

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

Acknowledgements

This project is made possible through funding from the Upper Saranac Foundation with the assistance of the Upper Saranc Lake Association and through a grant from the NYSDEC Adirondack Aquatic Invasive Species Spread Prevention Program. The narrative and results presented in this report were produced by Guy Middleton, Upper Saranac Foundation Lake Manager and Paul Smith's College Adirondack Watershed Institute. Underwater harvesting efforts were completed by Invasive Solutions Dive Company, LLC. And Aquatic Invasive Management, LLC.

Table 1: Abbreviations List.

Abbreviation	Complete Text
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 (AIS) pose a significant threat to the Adirondack environment and economy. For more than a decade, the Upper Saranac Foundation (USF) has worked to address invasive species on Upper Saranac Lake (USL) through coordination, prevention, education, detection, and management initiatives. The USF has had unprecedented success in managing AIS and could arguably be considered the leader in AIS management techniques.

The Fish Creek Aquatic Invasive Species Management Project (FCAISMP) is part of a larger watershed protection program, recently developed by the USF, that uses a combination of AIS prevention, monitoring, control activities and education to inhibit AIS spread. The USF is committed to the long-term success of maintaining the water quality of the Watershed.

The intent of this program is to combat invasive species to improve water quality and maintain native species in their natural habitats, ensuring the sustainability of our natural public resources for future generations. The program protects economic value through recreation, tourism, sportsmanship and second home ownership by providing clear waterways. Removal and control of AIS in the USL watershed at Fish Creek protects downstream waters from infestation and help prevent the export of AIS to non-infested waters. This report can be summarized in the following key points:

1. Two AIS found and targeted for removal in the waterbodies of the NYSDEC Fish Creek Campground is Eurasian watermilfoil (Myriophyllum spicatum) and Variable-leaf milfoil (Myriophyllum heterophyllum). New York State ranks Eurasian watermilfoil and Variable-leaf milfoil as the top AIS in the State based on their ecological impacts, biological characteristics, and distribution.

2. Two separate surveys inventorying native and invasive plants provided the data for a report that outlined the extent of the invasive infestation, and a cost estimate for harvesting. The reports estimated it would take 18 weeks of hand harvesting by divers, over a three-year period, to bring the campground to a sustainable and maintainable level similar to the success as seen on USL.

3. The USF developed a plan to manage AIS in Fish Creek Campground and seek funding to cover the estimated cost. The goal was to restore the 108 acres of littoral campground waterfront, in addition to preventing AIS from infesting downstream and regional waters, and to prevent new AIS from establishing in the waters in the project area.

4. In 2016 the USF initiated a four-week pilot program to determine practicality and feasibility of the FCAISMP. The intent was to demonstrate the degree of the infestation and the viability of management to support prospective funding. The Pilot Program substantiated prior surveys, estimating a total cost of $160,000 for the first three years of the intensive management period.

5. To implement the FCAISMP, a fundraising campaign initiated by the USF raised over $60,000 in donations. Additional funding was awarded to the USF in the amount of $100,000 from the NYSDEC Invasive Species Rapid Response and Control Grant.

6. The USF contracted Adirondack Watershed Institute (AWI) at Paul Smith's College to provide independent monitoring, evaluation and reporting of AIS control efforts in Fish Creek Campground through the establishment of 33 underwater monitoring sites. The transect sites were surveyed by AWI divers prior to the initiation of the FCAISMP in August 2017 and again in October of 2018 following two years of the harvesting effort. This 2018 survey indicated an average AIS stem density level decrease of 83%.

7. Under the direction of the USF's Lake Manager, divers removed 3 ¾ tons of the invasive milfoil plant from within the campground's waters in 2018. From the beginning of the harvesting program, 41,464 lbs. or 20.73 tons of the nuisance plant has been removed. To date a total of 1,400 diver hours have been put into this effort and all 108 littoral acres has been harvested.

8. Each year of the FCAISMP there has been fewer signs of AIS infestation with significantly less milfoil harvested. The Fish Creek project is following a similar trend as to the accomplishments seen on USL. It is estimated that there is just over an 80% yearly reduction in plant density.

9. Watershed Stewards stationed at the Campground boat launch inspecting boats being retrieved have found significantly less AIS. With comparable Stewardship coverage days, the amount of boats found to have AIS being retrieved in 2017 was 60, in contrast, in 2018 only 12 boats leaving the water were found to have AIS, an 80% decrease.

10. There is continued indications that management efforts are effective; through camper's comments relative to the reduction of nuisance aquatic vegetation, and with the reduction of material found and removed from year to year.

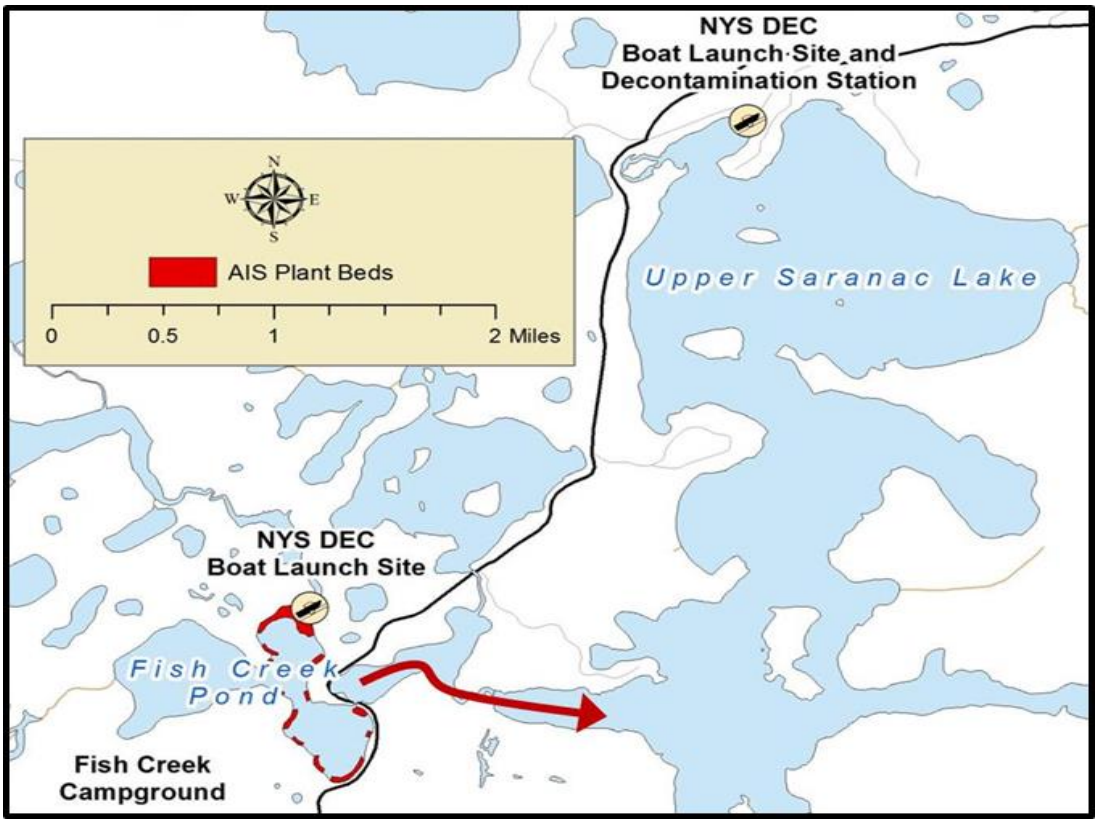
11. As estimated in the preliminary surveys and plans, the intent for 2019 will be to reduce the dive time needed to harvest the entire littoral zone. 2019 will conclude the initial intensive harvesting portion of the project, as well as the associated grant funding.

Introduction:

The Upper Saranac Foundation's mission is to preserve, enhance and protect the natural beauties, environmental quality and recreational enjoyment of the USL watershed. This goal is consistent with tasks delineated in the proposed Fish Creek Aquatic Invasive Species Management Project (FCAISMP). The FCAISMP will address the threat of AIS and protects citizens' investment in public owned lands by expanding USF's successful AIS hand harvesting program for the Saranac watershed into the NYSDEC campground at Fish Creek.

Project Location

The NYSDEC Campground at Fish Creek has been a significant source for spreading AIS throughout the region. The Campground, with 355 campsites is the most used public campground in the State, averaging 120,000 annual visitors. The water bodies, Fish Creek and Square Ponds are located in the headwaters region of the Saranac River watershed in the Adirondack Park of northern New York. The Saranac River is one of six major drainage basins in this region and is located within the greater Lake Champlain basin. With all campsites having direct water access, campers enjoy the opportunity for water based recreation. Return visitation is predicated on weed-free thoroughfares. Fish Creek Pond Campground offers a natural pristine, sandy shoreline accessible to both motorized and non-motorized boats. From Square Pond and Fish Creek Pond, recreational users have direct access to miles of open water on Upper Saranac Lake. A trailered boat launch with a parking area is located within the Campground. Non-motorized boating opportunities are also accessible directly from the Campground.



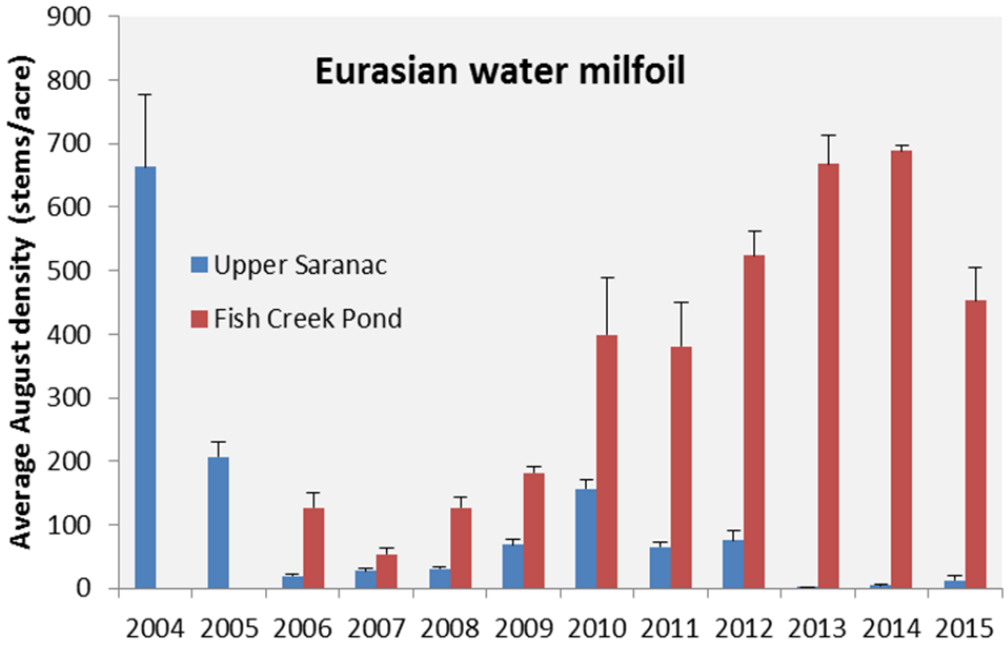
Map of project area showing location of NYS DEC boat launch sites, campground, and AIS plant beds in Fish Creek Pond. Red arrow shows direction of water flow. Channel between Fish Creek Pond and Upper Saranac Lake is navigable with large motorboats.

The USF has been working cooperatively on AIS management projects in the watershed since 2004 and has established a clear track record of sustaining this type of project. The USF has reduced a one-time prevailing AIS problem to infrequent occurrences on USL. With over 47 miles of shoreline and 1,200 acres of littoral zone, the USF in 2004 removed 18 tons of milfoil at a cost of $450/littoral acre on USL. This is a dramatic contrast from 2018, when just over 300 pounds were found, and the cost was reduced to $91/littoral acre.

Plant Monitoring Program: A program funded by the USF was initiated in 2004 to monitor aquatic vegetation. The plant surveys are performed by the Adirondack Watershed Institute. This program was implemented to provide data on the efficacy of the Eurasian water milfoil management strategy being employed on Upper Saranac Lake. AWI established 588 underwater monitoring segments sites across USL in 2004, and 36 in Fish Creek Pond in 2006 to measure milfoil densities. At each site a transect line method was used to analyze current and historical native and invasive species plant growth. The unmanaged Fish Creek locations acted as a comparison to USL that is being managed for AIS's.

From 2006 - 2015 Eurasian watermilfoil in Fish Creek Campground had a significant increase in density in contrast to adjacent USL where hand harvesting AIS management methods were being deployed. In 2015 the average milfoil density across all locations on Upper Saranac Lake was 10.2 stems/acre, substantially lower than the 600 stems per acre that existed in 2004, the first year of the intensive USL management effort. Just prior to the initiation of management efforts in Fish Creek Camp Ground, the average Eurasian water-milfoil density was 517 stems/ acre.

Variable-leaf milfoil was first detected at the Fish Creek Pond transect locations in 2009. From that time, until the initiation of the FCAISMP, variable-leaf had exhibited a significant increase in its frequency of occurrence by approximately 4% per year (Laxson, 2016).



Density of EWM Comparison Between USL and Fish Creek USL Milfoil Monitoring Program: Project Update, Year 2015 Report, 4-15-2016, Corey L. Laxson and Daniel L. Kelting, Paul Smith's College Adirondack Watershed Institute:

Fish Creek Invasive Species Harvesting Feasibility Study: In 2015, two comprehensive surveys inventorying native and invasive plants were completed within the Campground. One was completed by the APIPP's Adirondack Aquatic Regional Response Team. The other by Aquatic Invasive Management, LLC and the USF's Lake Manager. These surveys provided the data for a report that outlined the extent of the invasive infestation, and a cost estimate for harvesting. The reports determined there were a total of 108 littoral acres within the campground. Of this, 24 acres had substantial AIS growth, EWM and VLM of varying densities (7 acres in Square Pond and 17 acres in Upper Fish Creek Pond). The report also estimated it would take 18 weeks of hand harvesting by divers, over a three-year period, to bring the campground to a sustainable and maintainable level similar to the success the USF had on Upper Saranac Lake (Middleton, Lewis, 2015).

Consequently, the USF developed a plan for managing AIS in Fish Creek Campground. The intent was to mimic the Foundation's accomplishments on USL and seek funding to cover the estimated cost for 18 weeks of divers to hand harvest for an initial three-year intensive start-up. The USF, who is committed to the long-term sustainability of this project, would support AIS management efforts beyond the initial start-up period, ensuring prolonged results. Continued maintenance efforts would be funded through the USFs annual budget.

The long-term outcome for the FCAISMP is to restore the 108 acres of littoral campground waterfront, in addition to preventing AIS from infesting downstream and regional waters, and to prevent new AIS from establishing in the waters in the project area. These outcomes will be achieved through project activities such as removal of AIS, inspection and decontamination of boats, and public education leading to reduced spread of new AIS from boats. Acres harvested and pounds of AIS material removed will be tracked. Success in the project period will be defined by year-to-year decline in total acres and amount of plant material removed. Longer-term success will be defined as sustained low density and low harvest removals during the maintenance period. An annual report will be produced reporting plant density.

Pilot Program:

In early 2016, in preparation for implementation of the FCAISMP, permits were obtained from the NYSDEC and the Adirondack Park Agency to perform underwater hand harvesting of AIS. Later that fall, working in collaboration with AIM and the AWI, the USF initiated a four-week pilot program to determine practicality and feasibility of the FCAISMP. The intent was to demonstrate the degree of the infestation and the viability of management to support prospective funding. Funding for this Pilot Program was provided through the USF, USLA, APIPP and a Crowdfunding campaign sponsored by the Adirondack Foundation.

Prioritization of management areas for the Pilot Program focused on dense infestations and high traffic areas to reduce the likelihood that boaters would fragment and transport invasive material to non-invaded sections of the lake or surrounding waters. The management operation occurred mid-week, Monday – Thursday, with the majority after the busy summer season, post Labor Day. The total four-week operation yielded just under 9.5 tons (18937.5 lbs.) from 6.13 acres of littoral zone.

To quantify the feasibility of the FCAISMP, data from the 2016 Pilot Program and the 2015 surveys were compared in relation to the overall estimated cost of harvesting, relative to time and acreage. The results were within a small margin of error. The expected cost for diver harvesting expenses for the Fish Creek Campground project (Square Pond and Upper Fish Creek Pond) was estimated to be $132,000 for 18 weeks of operation. Additional expenses including an ongoing plant inventory and monitoring program, administration, equipment and operating expenses, brought the total anticipated cost for the initial three years to be $160,000.

Knowing the potential outcome with unmanaged AIS, its economic and environmental impact and the potential to spread, as well as understanding the scope of the project, the USF is confident that harvesting AIS from Fish Creek Campground is not only practical but a necessary investment. Furthermore, the USF is confident that once the initial three year harvesting project is complete upkeep will be sustainable through the USF's yearly maintenance program.

Implementation:

The FCAISMP developed a technique mimicking the success of the USL effort from a decade prior where a "front-load" method was utilized. Meaning, the majority of funding and effort will be used in the first two years of the project in order to suppress large, dense milfoil beds and bring them under control. In the third year of the project, the amount of diver time would be reduced. Management would focus on regrowth of areas already harvested. This would transition into the management phase of the project in year four. The results would be a reduction in expenses over time, bringing the treatment area into a more easily manageable task.

Funding: As a requirement to match grant funds, a fundraising campaign was initiated by the USF. Through support of the USLA and the Upper Saranac Lake Community, the USF raised over $60,000 in donations. Subsequently, funding was awarded to the USF in the amount of $100,000 from the NYSDEC Invasive Species Rapid Response and Control Grants. This grant was made possible through donations that required the Foundation to match 50% of the award.

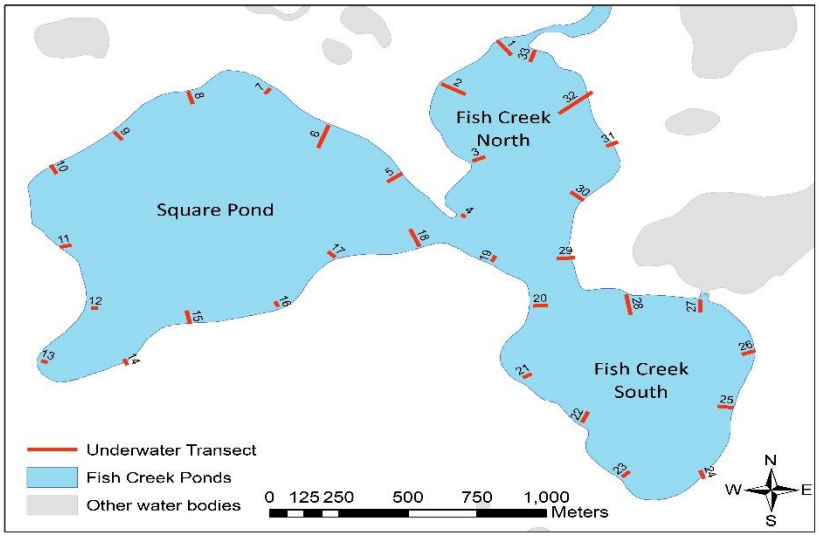
Adirondack Park Invasive Plant Program: As part of APIPP's commitment to preventing the spread of AIS, the Adirondack Aquatic Invasive Response Team was deployed in 2016 and again in 2017 to an area near the Fish Creek Boat Launch. The Fish Creek Campground launch was a known vector for transporting AIS from boats being launched and retrieved. The intent of the Response Team was to reduce the densities of AIS in and around the launch, thus reducing the number of AIS being transported

to other water bodies. In the two years of the Rapid Response team's efforts, the Rapid Response team invested 120 hours of dive time and harvested 4,600 lbs. from an area of less than one acre.

2017 Harvesting efforts: AIS harvesting began shortly after the AWI transect survey in the fall of 2017. Efforts focused on revisiting known AIS sites that were harvested in the 2016 Pilot Program and expand harvesting to cover the entirety 60-acre littoral zone of Upper Fish Creek Pond. Divers from Aquatic Invasive Management (AIM), under the direction of the USF's Lake Manager began their harvesting efforts September 11 and concluded October 13. A total of 960 hours of dive time was invested over a five-week period by AIM. At times there were as many 7 divers in the water with two top water personnel. The total investment for AIM divers in 2017 was $54,880. A total of 15,050lbs or 7.5 tons of EWM and VLM were removed from an approximate area of 60 acres of littoral zone in Upper Fish Creek Pond.

Watershed Stewardship: As a result of managing AIS from Fish Creek Campground, the amount of invasive species found on boats being retrieved from the Campground launch was significantly reduced. Watershed Stewards stationed at the boat launch inspecting boats being retrieved have found significantly less AIS. With comparable Stewardship coverage days, the amount of boats found to have AIS being retrieved in 2017 was 60, in contrast, in 2018 only 12 boats leaving the water were found to have AIS, an 80% decrease. This indicates a successful trend towards eliminating a AIS transportation hub.

Independent Monitoring and Evaluation:
In 2017 the USF contracted AWI to provide independent monitoring, evaluation and reporting of AIS control efforts in Fish Creek Campground. In doing so the AWI established 33 underwater monitoring sites delineated by Global Positioning Systems. At each of the 33 sites a combination of the line intercept method and fixed plot method are used to monitor the presence and abundance of aquatic plants, native and invasive. Both of these methods have been used for over 100 years in forest ecosystem studies, and have since been adopted as standard methods in aquatic ecosystem studies. The transect sites were surveyed by AWI divers prior to the initiation of the FCAISMP in August 2017. In October of 2018, a second survey was completed following two years of the harvesting effort. Data collected measured the abundance of aquatic vegetation and is used to assess and measure the effectiveness of control and eradication efforts for AIS, as well as monitoring restoration of native aquatic habitat. This method of monitoring will continue into the maintenance period of the program.



Adirondack Watershed Institute Fish Creek Campground Transect Survey Locations

The number of transects where Eurasian water milfoil was encountered did not change between 2017 and 2018; however, the stem density decreased by 99% in Fish Creek Pond North and by 65% in Fish Creek Pond South. AWI did not encounter any Eurasian water milfoil in Square Pond during either survey.

The number of transects with active Variable leaf milfoil infestations decreased between 2017 and 2018 for Fish Creek Pond North and Square Pond. In addition, the stem densities AWI encountered on active transects decreased by 96% at Fish Creek Pond North, 80% at Fish Creek Pond South, and 78% at Square Pond.

Eurasian Water Milfoil

Time Frame	Basin	Total number of transects	Percent of transects active	Mean density on active transects (stems/acre)
August 2017	Fish Creek North	10	10%	2,497
	Fish Creek South	9	33%	677
	Square Pond	14	*none*	*below detection*
October 2018	Fish Creek North	10	10%	20
	Fish Creek South	9	33%	237
	Square Pond	14	*none*	*below detection*

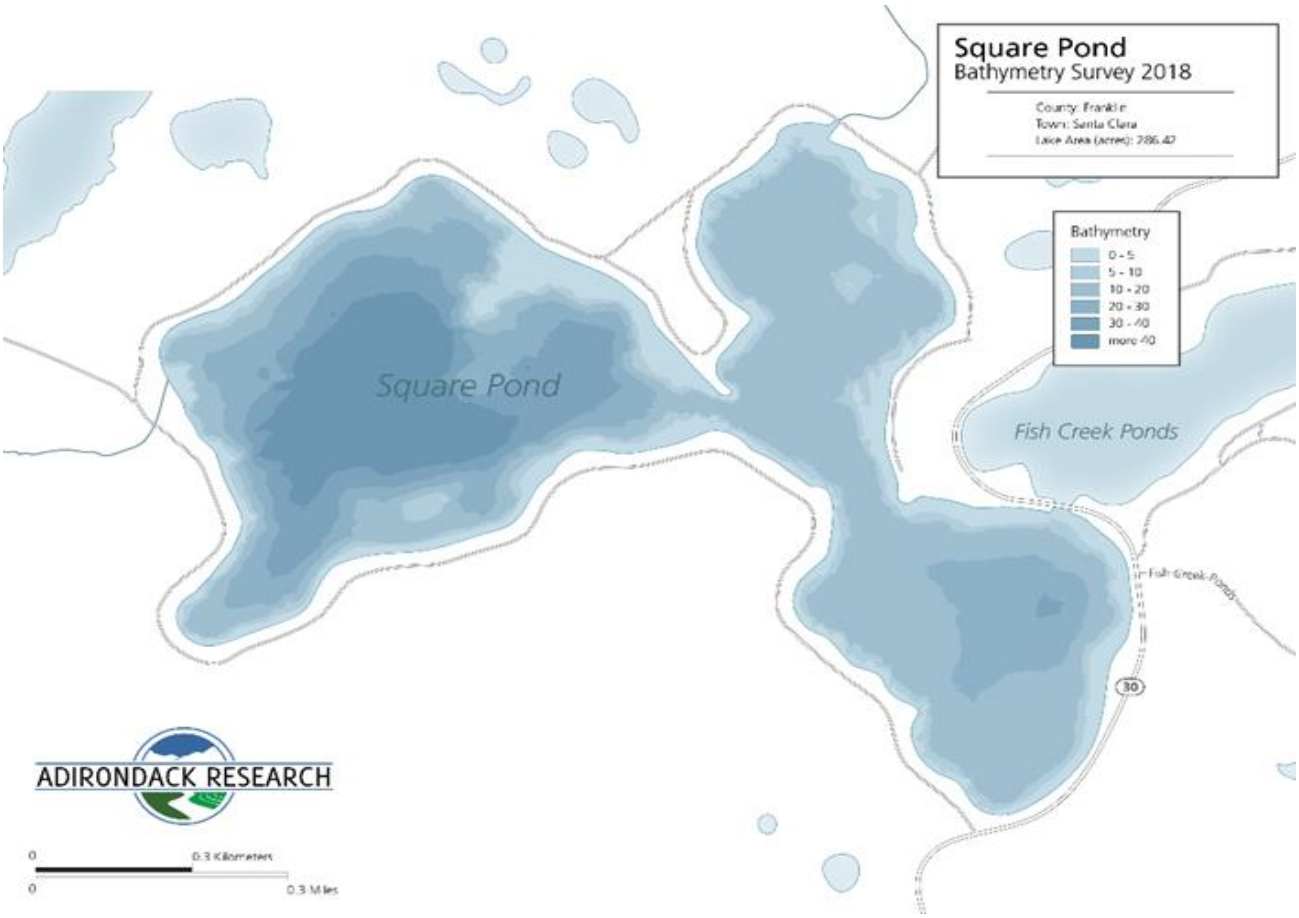
Table 2. Occurrence of Eurasian water milfoil (*Myriophyllum spicatum*) on the underwater transects of the Fish Creek Ponds study area, 2017 and 2018. The percent of active transects refers to the proportion of transects where the invasive plant was encountered. Provided by the Adirondack Watershed Institute.

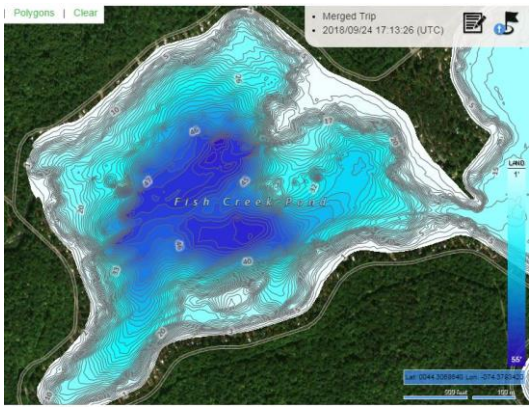
Variable Leaf Milfoil

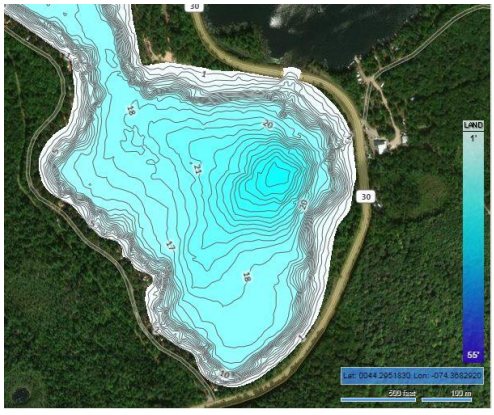
Time Frame	Basin	Total number of transects	Percent of transects active	Mean density on active transects (stems/acre)
August 2017	Fish Creek North	10	50%	2,949
	Fish Creek South	9	22%	220
	Square Pond	14	14%	169
October 2018	Fish Creek North	10	33%	119
	Fish Creek South	9	22%	43
	Square Pond	14	0.7%	36

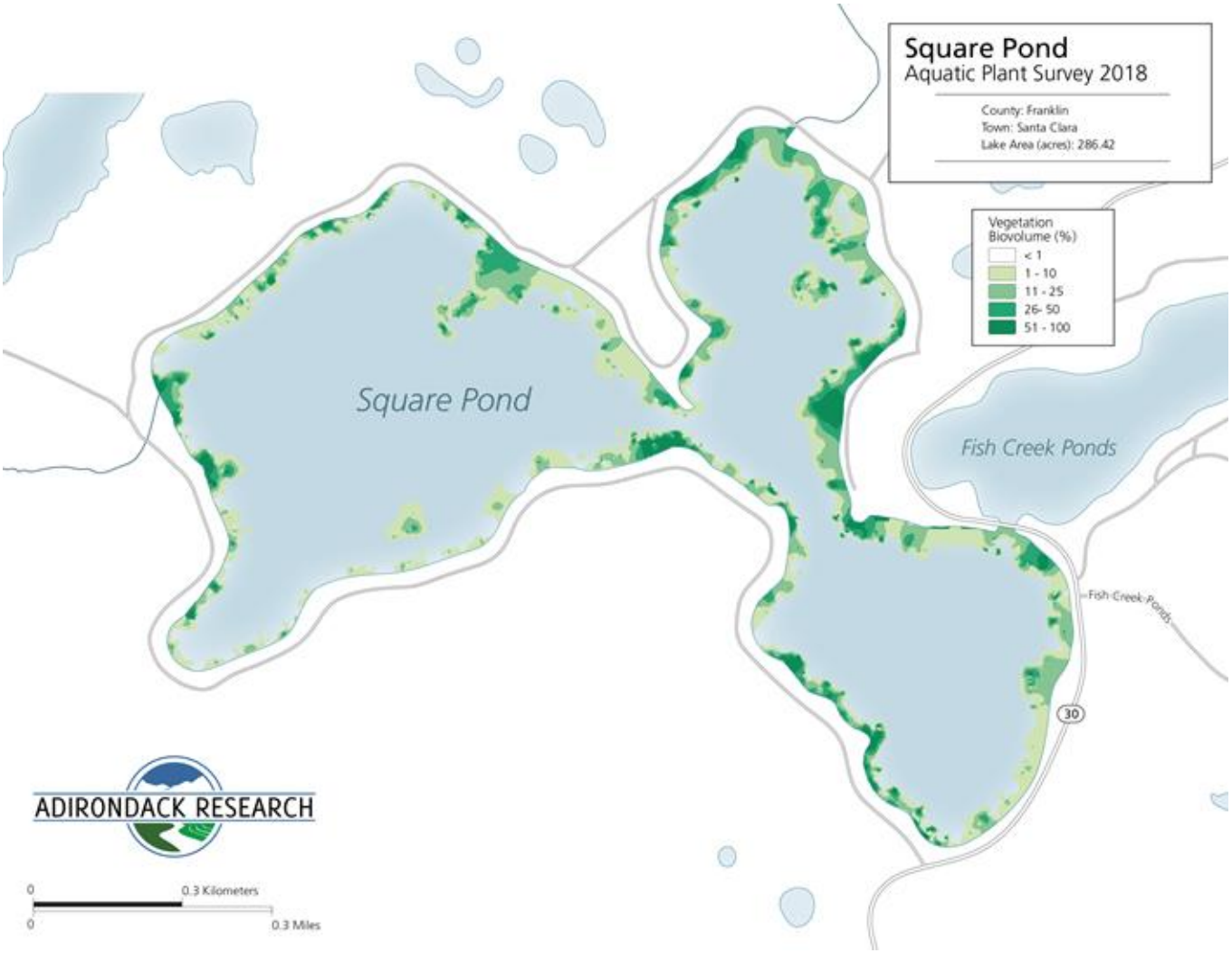
Table 3. Occurrence of Variable leaf milfoil (*Myriophyllum heterophyllum*) on the underwater transects of the Fish Creek Ponds study area, 2017 and 2018. The percent of active transects refers to the proportion of transects where the invasive plant was encountered. Provided by the Adirondack Watershed Institute.

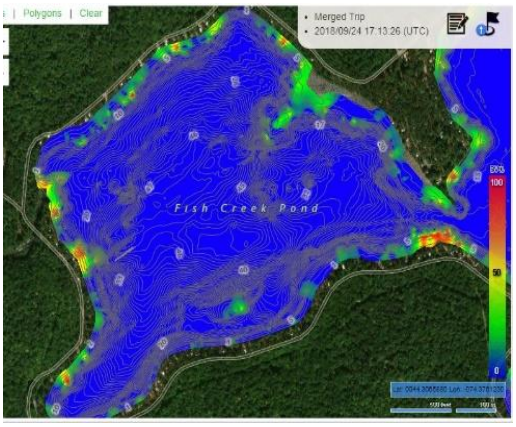
Lake Bottom Mapping: To get a better understanding of the characteristics of the bottom of Fish Creek and Square Ponds, the Upper Saranac Foundation utilized BioBase, an aquatic habitat sonar mapping technology. Data was compiled into bathymetric, aquatic vegetation and bottom hardness maps. This information developed a baseline that can monitor changes over time, measuring the waterbodies response to the FCAISMP.

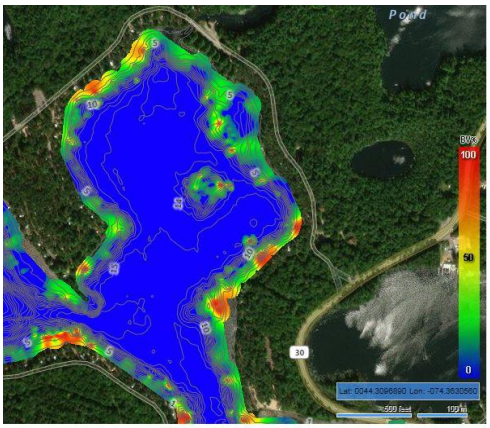


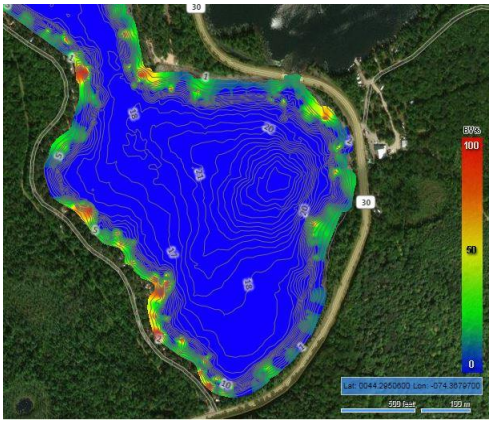


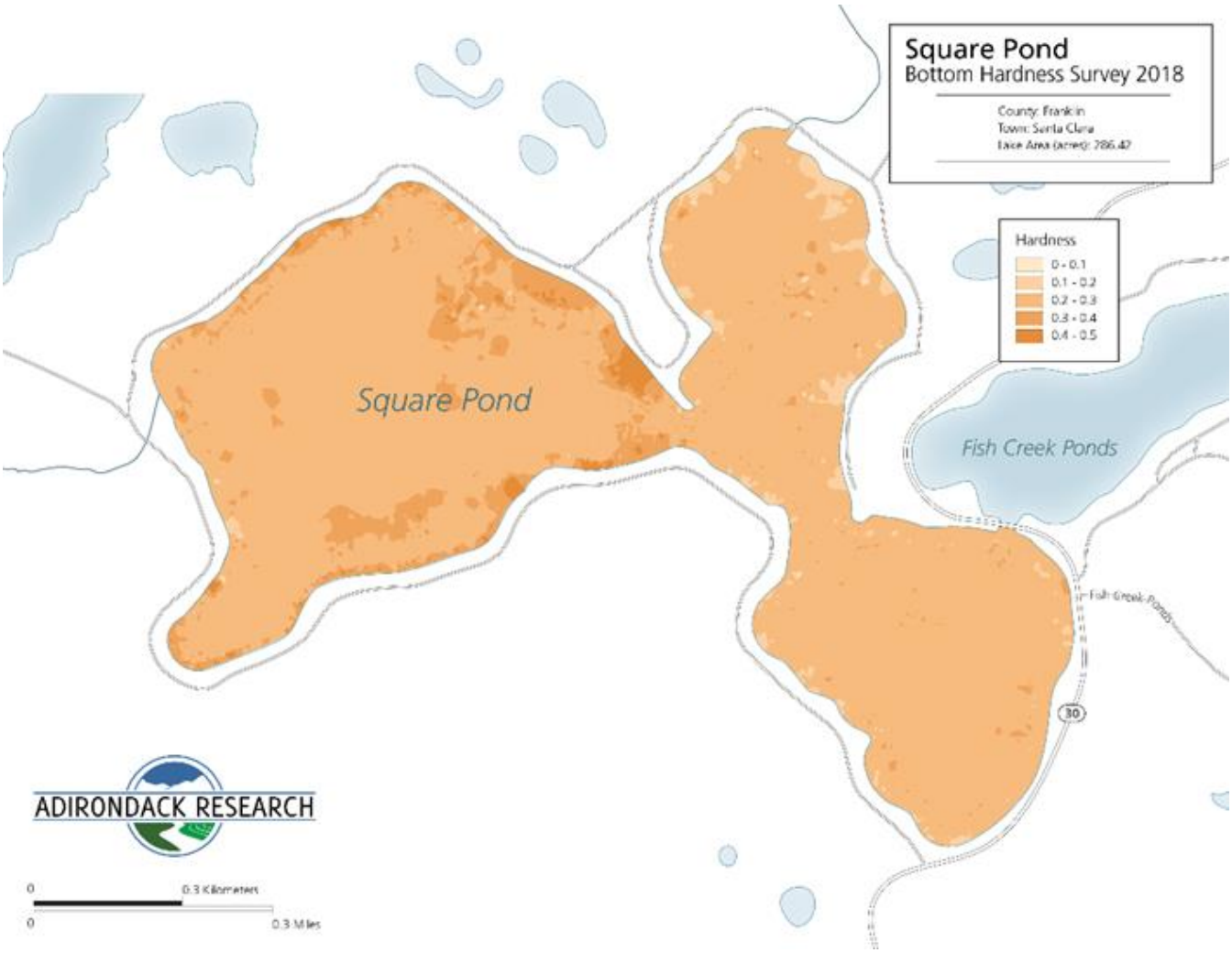


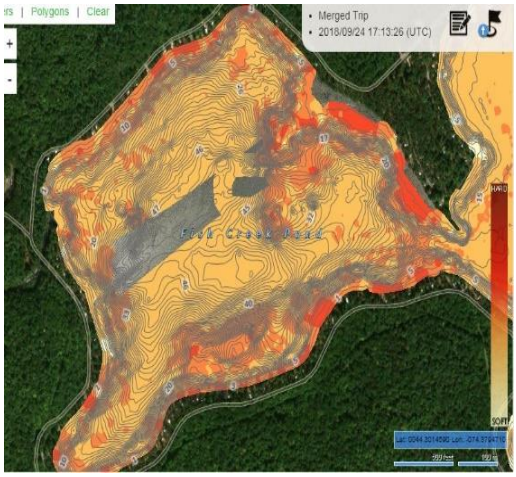

Square Pond
Aquatic Plant Survey 2018
County: Franklin
Town: Santa Clara
Lake Area (acres): 286.42
Vegetation Biovolume (%)
< 1
1 - 10
11 - 25
26- 50
51 - 100
Square Pond
Fish Creek Ponds
Fish Creek Ponds
30
ADIRONDACK RESEARCH
0
0.3 Kilometers
0
0.3 Miles

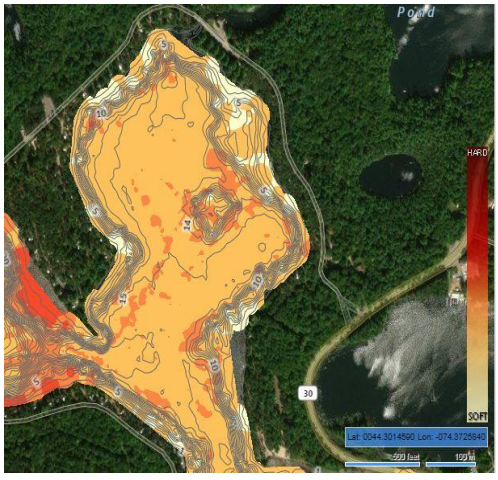

Merged Trip
2018/09/24 17:13:26 (UTC)
Fish Creek Pond
BV%
100
50
0

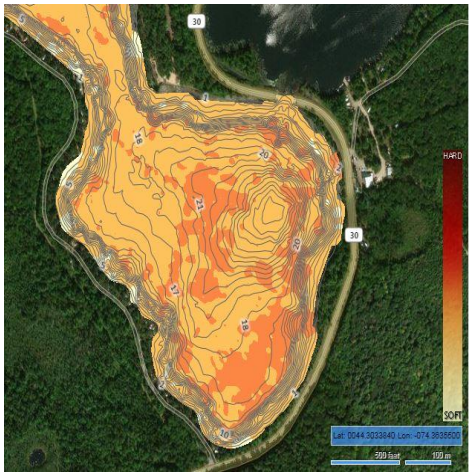

Pond
30
BV%
100
50
0


30
BV%
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


Pond
30
HARD
SOFT


30
HARD
SOFT

Harvesting Methodology:

The harvesting project, similar to USL's, utilizes a Hooka Dive System. Each Hooka air compressor system allows two to three divers to hand harvest simultaneously. The invasive plants, both EWM and VLM were removed from the sediment by hand, including the root system and then bagged. An additional team member remained on the surface to retrieve plant fragments, notify boaters that divers are underwater and collect filled bags. Traditional "diver down" flags were deployed as well as additional safety navigation buoys which were strategically placed. A sediment curtain was utilized to assist in preventing fragments from floating outside the management area. Harvest periods are scheduled around the busy tourist season, traditionally following Labor Day which reduce dangerous operating conditions due to high boater traffic. To reduce any user conflict issues with campers, the dive operation and use of the Hooka air compressor is focused in areas where campsites are unoccupied in the early morning hours.

Harvesting Outcome:

In 2018 the USF hired a new invasive dive company, Invasive Solutions Dive Company (ISDC). Divers began hand harvesting following the Labor Day weekend on September 4th and concluded one month later on October 4th. A total of 840 diver hours were invested and 299 bags of invasive plants or approximately 7477 lbs. were removed from both Square Pond and Upper Fish Creek Pond. 2018 was the first year of the FCAISMP that the entire littoral zone within the Campground was harvested. The USF invested $48,650 in direct diver expense in 2018.

From the beginning of the harvesting program, 41,464 lbs. or 20.73 tons of the nuisance plant has been removed. To date a total of 1,464 diver hours have been put into this effort and all 108 littoral acres has been harvested.

Each year of the FCAISMP there has been fewer signs of AIS infestation with significantly less milfoil harvested. The Fish Creek project is following a similar trend as to the accomplishments seen on USL. It is estimated that there is an 80% yearly reduction in plant density.

Fish Creek Campground Yearly AIS Harvesting Totals				
Year	Dive Hours	Acres Cleared	Pounds	tons
2016	480	6.13	18937	9.47
2017	984	44.25	15050	7.53
2018	840	108	7477	3.74
Total	1464	108	41464	20.73

Table 4. Yearly dive hours in relation to area cleared and AIS removed.

The trend of finding and removing less AIS each year mimics the success as seen on Upper Saranac Lake. When compared to efforts on the main lake that began in 2014, the FCAISMP is moving in the right direction.

Average AIS Lbs / Day Harvested		
Year	USL	FCCG
2016	6.11	1183.59
2017	6.07	456.06
2018	5.27	267.04

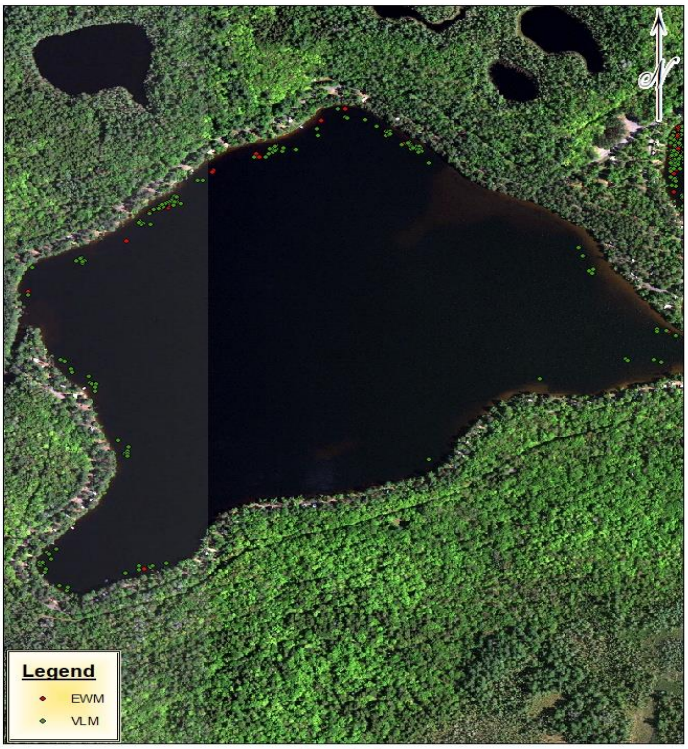
Table 5. Average AIS removed per day comparing Upper Saranc Lake to Fish Creek Campground over the last three years.

There is continued indications that management efforts are effective; through camper's comments relative to the reduction of nuisance aquatic vegetation, and with the reduction of material found and removed from year to year.

Project Overview

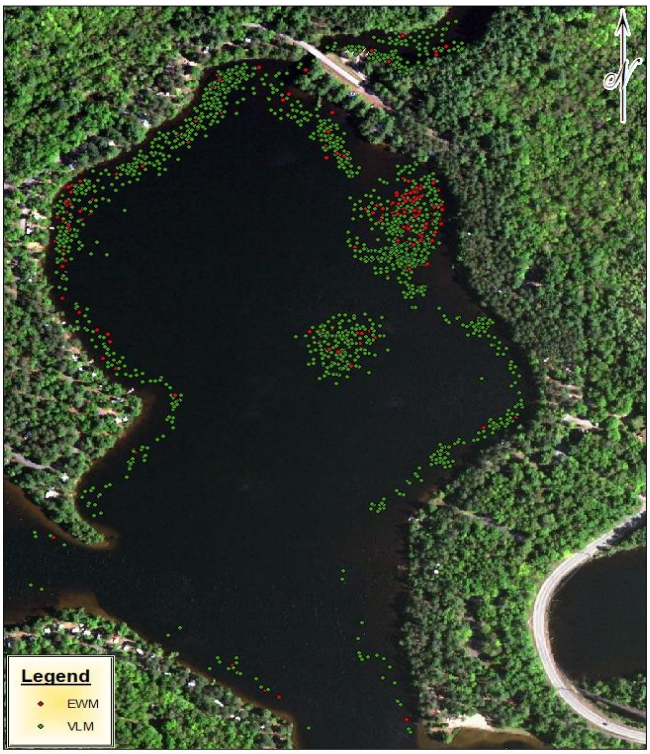
Dots on the maps indicate points crews extensively harvested in 2018. Green dots = VLM and red dots = EWM. Map provided by ISDV.

2018 Fish Creek AIS Management Project



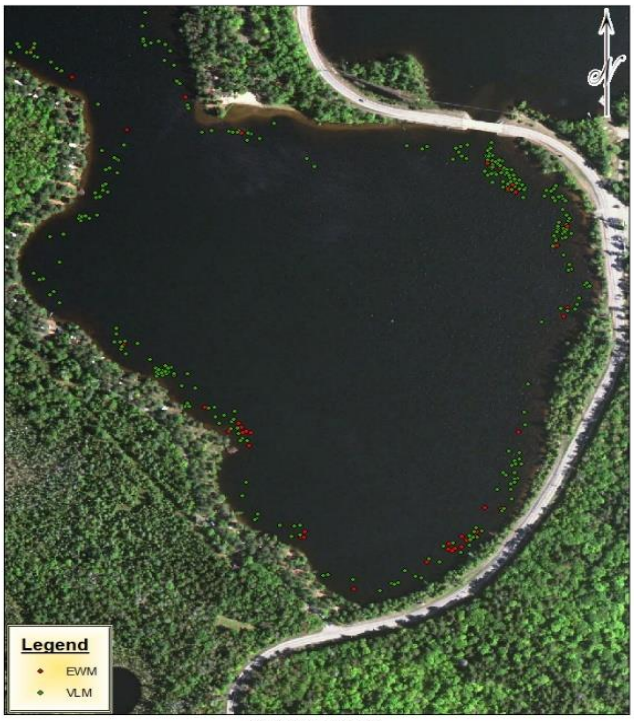
Square Pond

2018 Fish Creek AIS Management Project



Fish Creek Pond north

2018 Fish Creek AIS Management Project



Fish Creek Pond south

Conclusion:

The FCAISMP uses a combination of AIS prevention, monitoring, and control activities to inhibit further AIS from establishing and spreading in the Watershed. This conclusion summarizes the monitoring and control methods of managing AIS through hand harvesting within the Fish Creek Campground. A report detailing additional AIS spread prevention measures, ***2017 Upper Saranac Lake Watershed Stewardship Program Report*** can be found separately on the Upper Saranac Foundation's web page at: www.usfoundation.net

After a successful four-week (480 dive hours) Pilot Program in 2016, where 9.5 tons of Milfoil was harvested from Fish Creek Campground, in 2017 and 2018 the full implementation of the FCAISMP was put into motion. An additional 1824 dive hours was invested over two years and another 11.27 tons of Milfoil was removed from within the campground. With still one year remaining in the initial intensive management portion of the Project, 20.73 tons of Milfoil has been removed from the Campground.

The entire 108-acre littoral zone of Campground has been harvested with an estimated average efficiency rate of 80%. Meaning, while nearly 100% of the plants have been hand harvested it is estimated that there is a 20% regrowth rate each year due to extensive root systems that were not fully retrieved or through upstream plant fragmentation establishing new plants. Sustained harvesting efforts transitioning from the three-year initial intensive period into the maintenance phase will continue to reduce the impacts of AIS.

There is already an indication that management efforts are effective. First, by comments made from campers relative to the reduction of nuisance aquatic vegetation and recreation value. Secondly, by the decrease in material removed, 9.7 tons in 2016, 7.5 tons in 2017, down to 3.7 tons in 2018. Even with similar dive hours invested in 2017 and 2018, there was a reduction of 3.8 tons of material found and removed in 2018. This follows a similar trend that occurred on USL during the initial intensive harvesting period. In addition, independent plant monitoring conducted by the Adirondack Watershed Institute indicates an average AIS stem density level decrease of 83% from 2017 to 2018.

The intent in 2019 is to continue with the third and final year of the intensive harvesting effort with another four to five weeks or 480-600 dive hours. The focus will be to continue "clean up" by harvesting the entire littoral zone with a focus to control any regrowth.

Transect monitoring by AWI, in collaboration with the USF's Lake Manager surface spotting inventory, will dictate the requirements for location and harvesting need. The USF will continue to monitor the results of the Project, documenting and tracking yearly declines of invasive plant growth.

After the initial intensive harvesting project is completed, bringing the Campground to a manageable level, the USF, who is committed to the long-term sustainability of this Project, will support AIS management efforts, ensuring prolonged results. Continued maintenance efforts will be funded through the USF's annual budget. The long-term outcome for the FCAISMP will improve water quality and maintain native species in their natural habitats, ensuring the sustainability of our natural public resources for future generations.

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