

**LAKE GEORGE
MILFOIL PROJECT**

ANNUAL REPORT 2020

PREPARED BY:
AE COMMERCIAL
DIVING SERVICES, INC.



2020 LAKE GEORGE ANNUAL REPORT

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This project was assisted with funding provided by the
New York State Department of State under Title 11 of
the Environmental Protection Fund



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INTRODUCTION

Eurasian Watermilfoil, (*Myriophyllum spicatum* L.) is a non-native aquatic plant that has found solace in the waters of Lake George, New York. Discovered in 1986 in the lake, this invasive species, threatens the ecology and economy of communities depending on Lake George. Though it is unclear how Eurasian Watermilfoil was originally introduced to Lake George, efforts over the years have led to a multi-agency collaboration to address its management. Directed by the Lake George Park Commission, in cooperation with the Lake George Association, The Fund for Lake George, and The New York State Environmental Protection Fund, this effort has resulted in over 94 tons of Eurasian Watermilfoil being removed from the lake in 2020. AE Commercial Diving Service, INC (AECDS) has proudly served as the contractor responsible for removing the invasive plant since 2018.



Figure 1: Eurasian Watermilfoil growing in Lake George. (Photo by HK Sotak, copyright 2021)

Eurasian Watermilfoil Management Program

In 2020, approximately 94 tons of Eurasian Watermilfoil (EWM) was removed from 25 sites by AE Commercial Diving Services as directed by the Lake George Park Commission. Crew from AE Commercial Diving Services, INC (AECDS) applied a combination of techniques for removal, including Diver Assisted Suction Harvesting (DASH), and hand harvesting.



Figure 2: A diver guides uprooted Eurasian Watermilfoil into the suction hose so that it may be delivered to the boat on the surface. (Photo by HK Sotak, Copyright 2021.)

Diver Assisted Suction Harvesting (DASH)

Diver Assisted Suction Harvesting, (hereby referred to as DASH), is the process by which SCUBA divers guide a suction hose to the area of the targeted species within a body of water and, after carefully removing the roots from the substrate, deliver the stems and root ball to the suction hose. The entire plant then travels up the length of the hose to boat on the surface where it is deposited on a table and sorted by a boat tender for disposal. DASH is an effective method to reduce and control large beds of Eurasian Milfoil expediently so as to prevent it from spreading through fragmentation or seeding. AE Commercial Diving Services has developed a patent pending sorting system that allows the nutrient rich substrate to return to the bottom where it is needed to support regrowth and health of

the native species. This system also delivers the material back to the bottom in such a way as to reduce large plumes of sediment from disturbing the water column.

Hand Harvesting

Hand Harvesting is a technique usually applied to an area where the targeted species is growing sporadically. Instead of utilizing a suction hose, the SCUBA diver instead removes the target species and places it in a mesh bag carried by the diver. Once the area is cleared or the bag is full, the diver returns to the surface and hands the bag to the boat tender for sorting and disposal.

2020 Crew

In 2020, four DASH units and two hand harvesting boats were staffed and present, for a total of 25 employees. All of our divers are certified and have experience as certified scientific divers, recreational divers, commercial divers, or working divers. We were also fortunate to have one archeological diver on the team in Lake George, who returned to the project for his second season. Bringing skills from other professions, we also had two aquatic biologists, a former park ranger, and a local schoolteacher among the crew this year. The diversity of our divers' education and experience has never failed to contribute positively to the overall crew success. The team was headed by AECDS Site Supervisors Bennett Sheldon and Wesley Sheldon, who have a combined total of 36 years working in the diving industry.



Site Supervisor Wesley Sheldon inspecting a site after crews completed suction harvesting. Wesley is a Certified Commercial Diver who has been diving recreationally and commercially for almost 15 years. (picture supplied by Dave Wick, Executive Director, LGPC)



Some of the boats from AECDS moored up at Norwal Marina, Bolton Landing, including the new 24 foot Dive boat. Picture by HK Sotak, Copyright 2020 AECDS

Harvesting Fleet

A total of 4 DASH boats, 2 hand harvesting boats, and a transport barge were deployed in the lake this year. Two of these boats were new to the AECDS fleet. The first was a 24-foot hand harvesting dive boat equipped with an on-board tank fill station and surface supplied air systems. This boat was deployed to the furthest areas with hand harvesting needs due to its speed and power. It was also the designated emergency vessel in case any other boats had mechanical needs or other urgent concerns.

The second vessel was a custom-built pontoon work barge with the newest patented-pending DASH technology. This vessel was designed

specifically to handle the rough waves of the lake and carry a heavier deck load. Deployed mostly to the densest sites, this vessel proved to be vital for the more extensive site plan that was executed in 2020. These new assets and increased efforts allowed for more than twice as much milfoil to be removed in 2020 as was removed in 2019, with only 17% increase in funding. This year's funding allowed for one dedicated north harvester crew, and two mid-lake crews, (instead of one). It also ensured that several northern sites and some Huletts sites, (which have not been managed since 2017, some not since 2015), were able to receive the attention they demanded.



Disposal Efforts

Disposing of 94 tons of Eurasian Watermilfoil was a significant part of making sure the project was a success. Roger Smith, Lake George Park Commission Conservation Operations Supervisor, coordinated the disposal and dumping of strategically placed trailers sites. This sometimes required his attention several times per week. Working mostly with local transfer stations or farms to receive the biomass, Roger also coordinated with local highway departments throughout the watershed to assist.



ABOVE: A crew member from AECDS removing Eurasian Watermilfoil plants from the sorting table and disposing them into tubs to be taken to trailer disposal sites. Photo by HK Sotak, Copyright AECDS 2021



LEFT: Lake George Park Commission trailer used for Eurasian Watermilfoil biomass disposal. Picture courtesy of Dave Wick, Executive Director, Lake George Park Commission.

BELOW: The Lake George Park Commission and Lake George Association also collaborated to have AECDS remove Lake George Village 'Legacy Milfoil Mats', (also called bottom barriers, after almost 20 years of usage.



2020 FUNDING FOR REMOVAL EFFORTS

In 2020, a total of \$508,312 was spent by the project partner organizations for removal of Eurasian Watermilfoil. There were four distinct funding sources in 2020:

Lake George Association: \$103,750

Warren County/DOS Grant: \$244,562

Lake George Park Commission: \$103,750

The Fund for Lake George: \$60,000.

All payments to AECDS utilizing NYS Department of State grant funds, (\$244,562), were advanced by the Lake George Association, and this was a great assistance to this project.

In 2019, four funding sources provided a total of \$420,000 for the removal of Eurasian Watermilfoil:

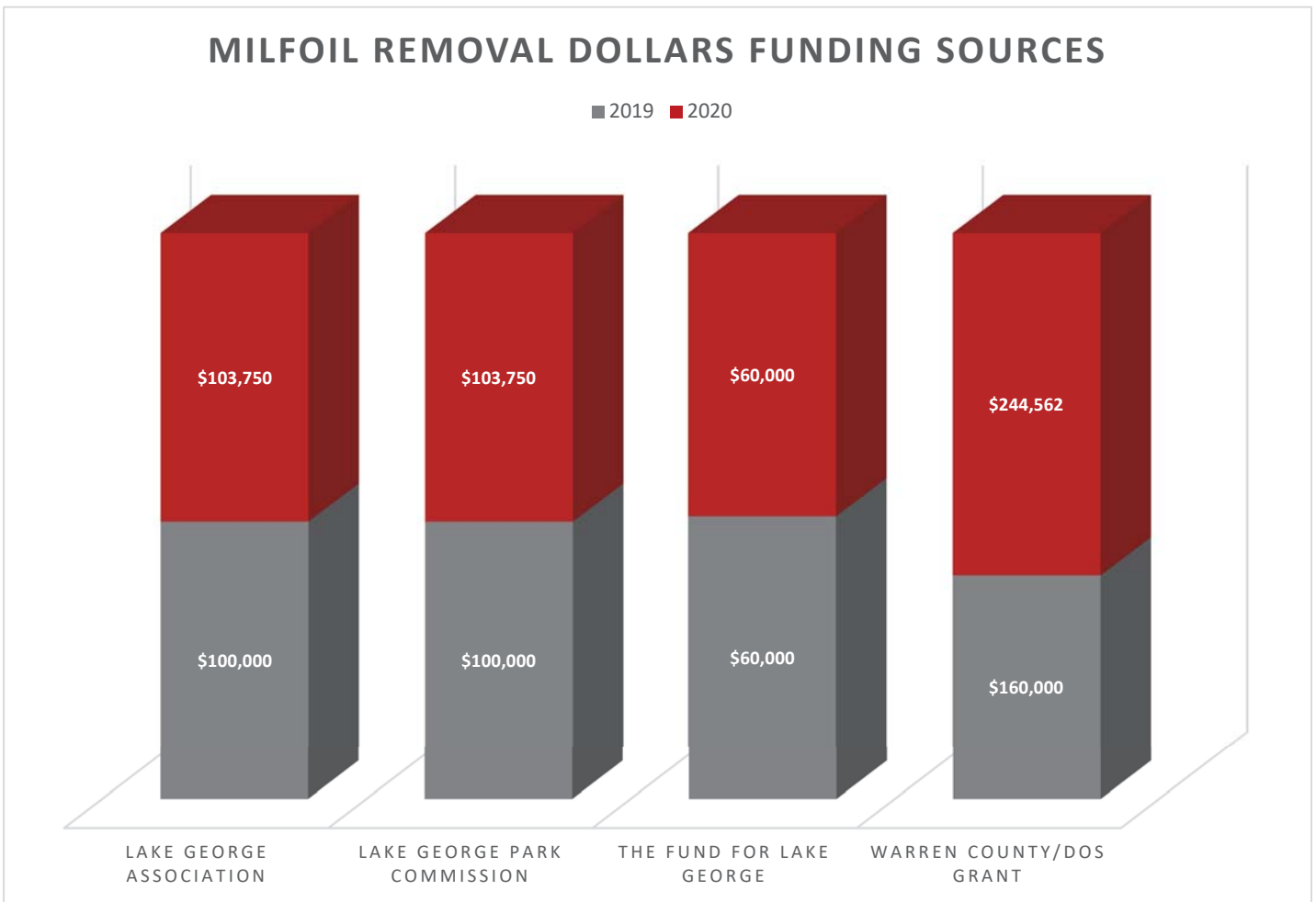
Lake George Association: \$100,000

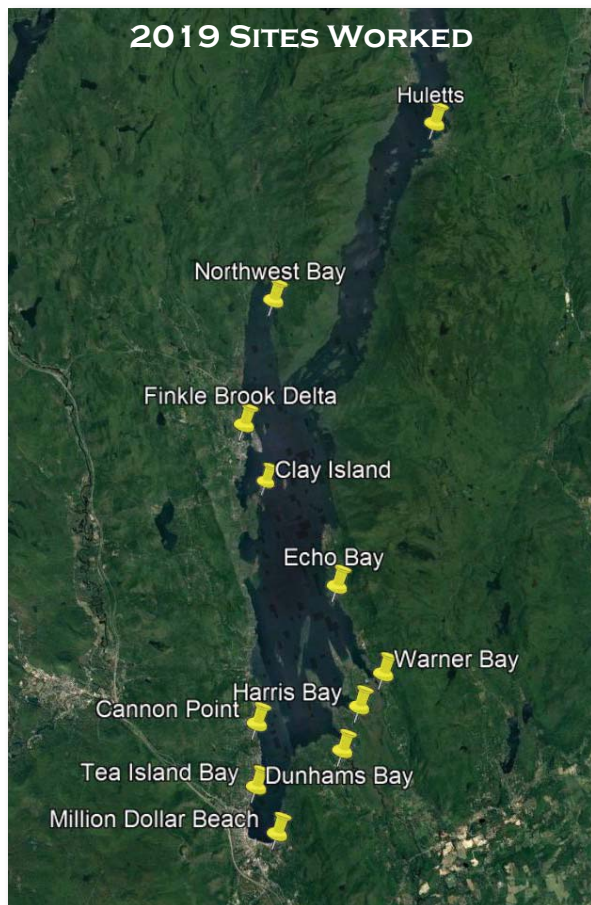
Lake George Park Commission: \$100,000

The Fund for Lake George: \$60,000

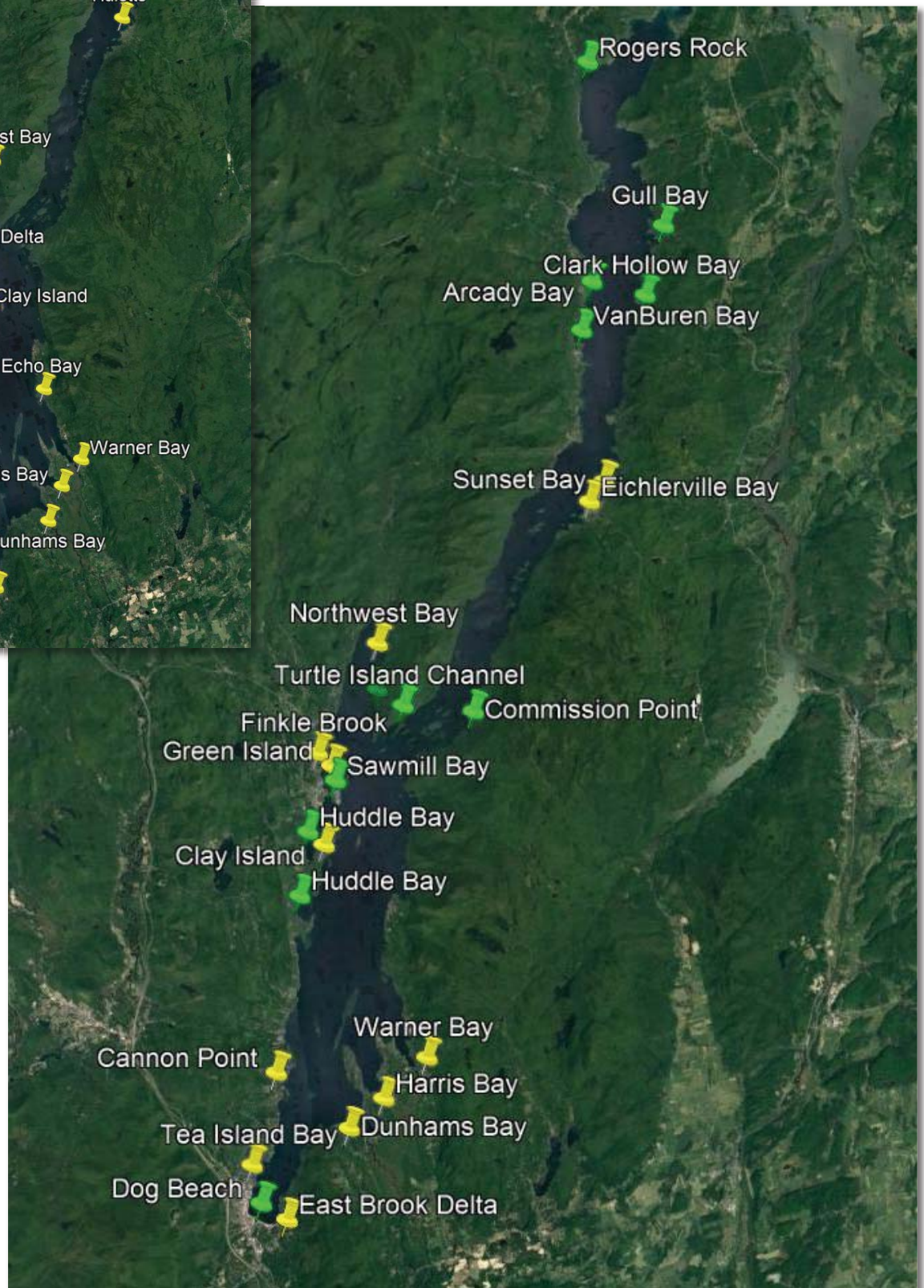
Warren County / DOS Grant: \$160,000

The total amount spent on removal of Eurasian Watermilfoil increased in 2020 from 2019 by \$88,312. This increase occurred because AE Commercial Diving Services was asked to provide additional DASH and hand harvesting boats and crews in order to expand removal efforts during the 2020 season.





2020 SITES WORKED



► **Glenburnie**

- largest site left: 2-3 acres
- very dense
- strong historical regrowth

► **Sheep Meadow Bay**

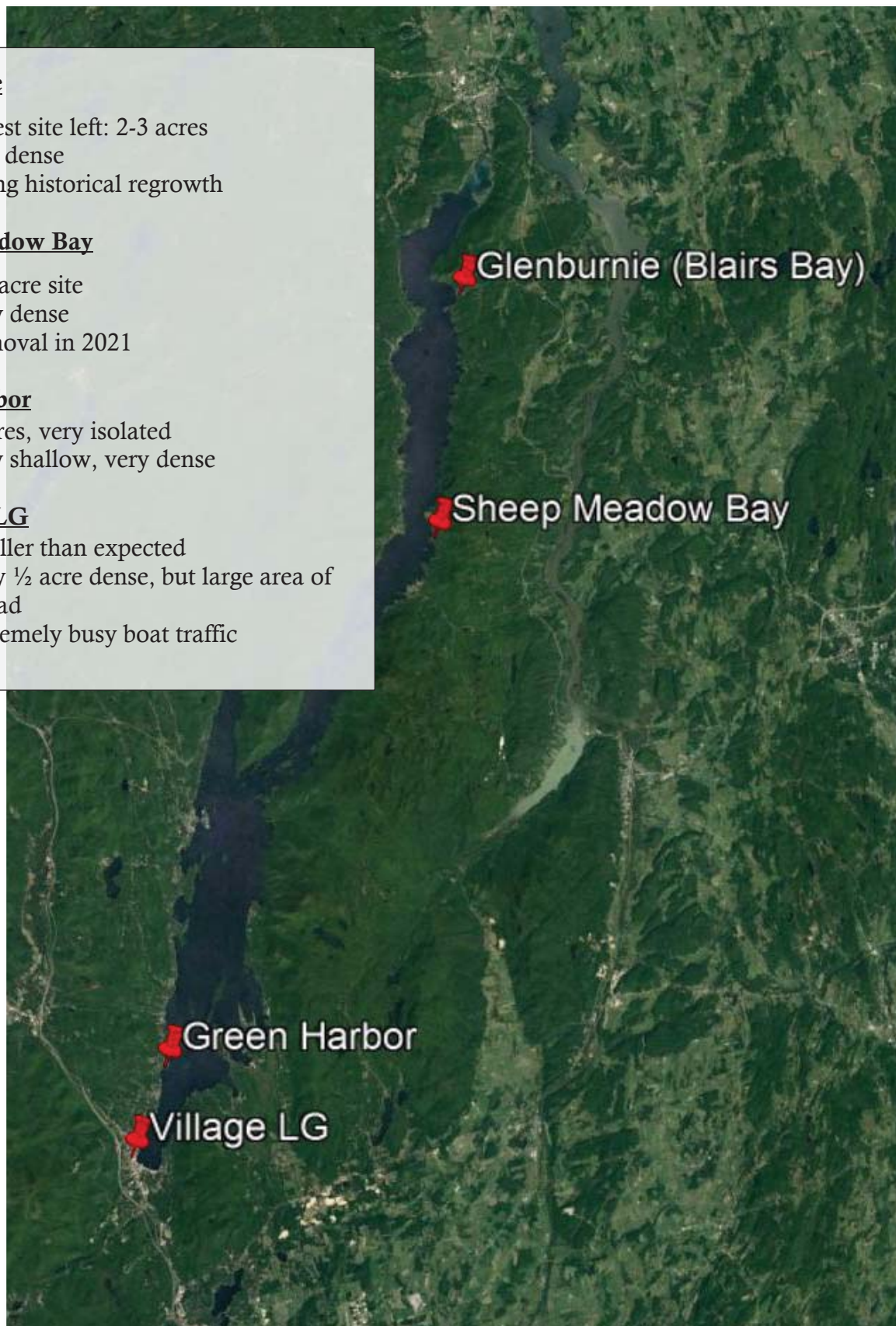
- 1/2 acre site
- Very dense
- Removal in 2021

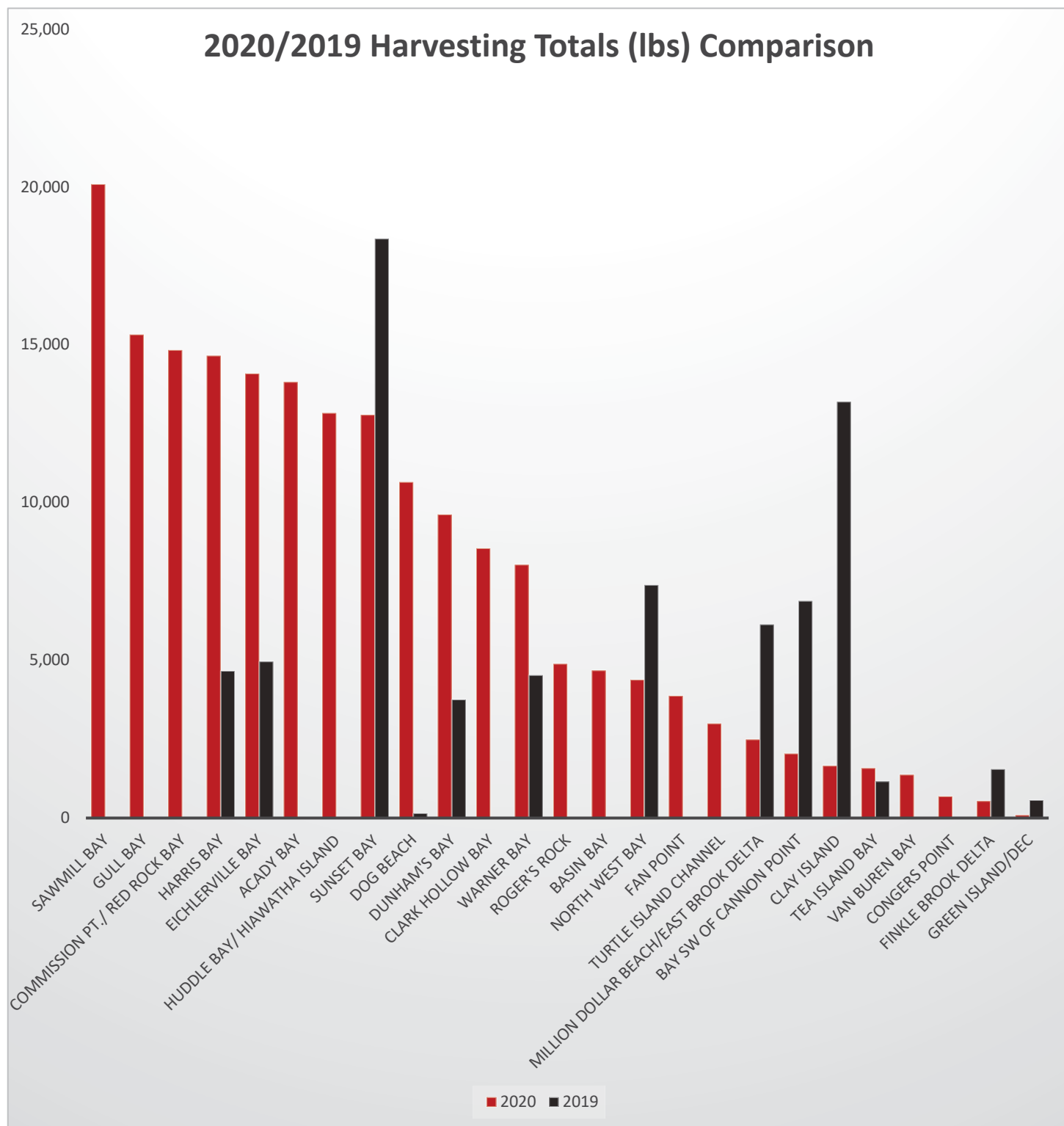
► **Green Harbor**

- 2 acres, very isolated
- Very shallow, very dense

► **Village of LG**

- Smaller than expected
- Only 1/2 acre dense, but large area of spread
- Extremely busy boat traffic





PART II: HARVESTING SITE TOTALS COMPARISON

(10 Hours = 1Day)

Site #	Site Name	2020 # of Crew Days	2020 pounds (AECDS)	2019 # of Crew Days	2019 pounds (AECDS)	2018 pounds (AECDS)	2017 pounds (AIM)
New	Sawmill Bay	35.1	20,010	-			
48	Gull Bay	20.7	15,330				2,750
128	Commission Point/ Red Rock Bay	12.5	14,850				
14	Harris Bay	21.9	14,670	12	4,665	2,820	15,169
51	Eichlerville Bay	18	14,100	12	4,970		
169	Acady Bay	16	13,830				
4	Huddle Bay/ Hiawatha Island	11.2	12,840				50
6	Sunset Bay	16.7	12,780	47.5	18,375	22,720	2,500
8	Dog Beach	22	10,650	1	150		
19	Dunham's Bay	15	9,630	12	3,765	140	200
50	Clark Hollow Bay	8	8,560				
11	Warner Bay	9	8,040	12.5	4,530	52.5	3,800
204	Roger's Rock	4	4,890				650
25	Basin Bay	3.7	4,680				2,475
1	North West Bay	10.8	4,390	19.5	7,400	36,750	5,600
New	Fan Point	3.8	3,870				
New	Turtle Island Channel	7.8	3,000				
10	Million Dollar Beach /East Brooke Delta	5.5	2,490	16.5	6,135		
26	Cannon PT	3.8	2,040	13	6,885	1,925	2,175
97	Clay Island	8.3	1,650	33.5	13,205		
30	Tea Island Bay	4.6	1590	8	1,170	700	75
New	Van Buren Bay	20	1,380				
New	Congers Point	8 hours	690				
15	Finkle Brook Delta	2.6	540	9	1,555	10,135	312
5	Green Island/DEC	1	90	1.5	570		100
Totals	265.8 Crew days	238.5	186,590 (2020 lbs)	82,960 lbs (2019 lbs)	84,333	49,706 lbs	
Sites <i>not</i> worked in 2020							
165	Basin Bay Shoal						400
43	Bolton Bay						12.5
161	East Side Speaker Heck Island						2,100
17	Echo Bay			3.5	750		
107	Elizabeth Island			6	750		250
117	Glenburnie						7,150



55	Indian Bay			21	6,570		
145	Juniper Island						12.5
46	Leontine / Clay Shoal						362.5
7	LG Village						
202	Long Island / Assembly Point			10	1,515	8580	2,950
164	N. Leontine Shoal						100
185	Oahu Island						500

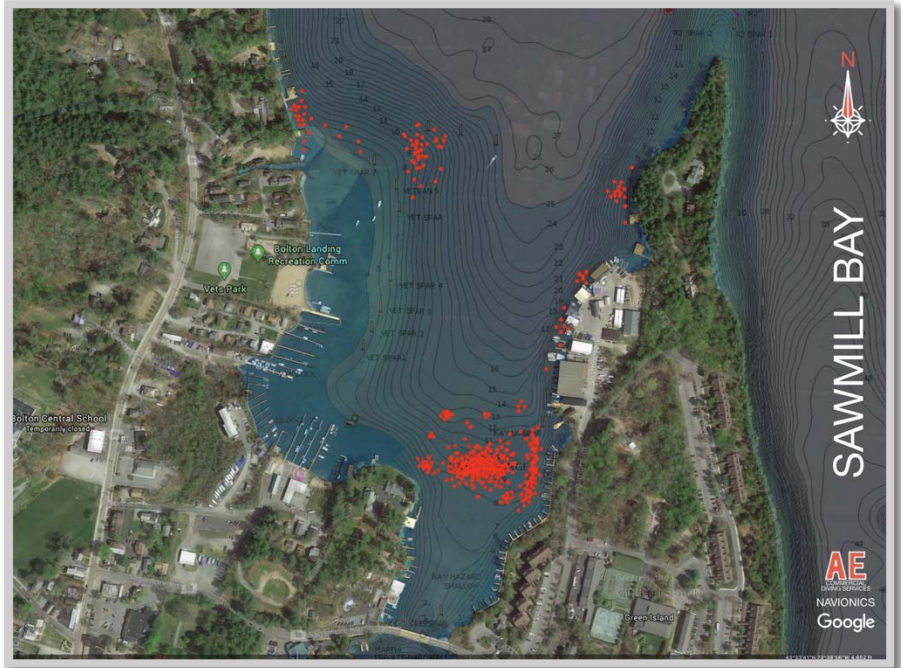
PART III: INDIVIDUAL SITE SUMMARIES

Sawmill Bay (site #)

- Total pounds: 20,010
- Days: 35.1

Summary

This area of Sawmill Bay has not been worked in the recent past. It is located between the Green Island bridge and the DEC facility on Green Island. We started with one DASH crew and quickly realized that another DASH crew would be needed to complete the area in a timely manner. The bottom composition consisted of soft sediment near Green Island, muddy sand further from shore, with woody debris and decaying plant matter scattered throughout.



MAP 1 For Sawmill Bay, Green Island DEC, and Finkle Brooke Delta

There was a mild inconsistent current present that tended to swirl in the bay and the depth of work was 8 – 12 feet. The overall area was approximately 4 acres in size with very large dense beds of Eurasian Milfoil surrounded by moderate to sporadic plants. This area had some of the densest EWM beds worked in 2020. The current made visibility challenging at times and the boat traffic is always a concern but overall, the area was not difficult to work. The close proximity to the dump site at the DEC and the Norowal Marina certainly helped also.

Recommendations:

This area has a large amount of boat dockage and therefore it has a good deal of local boat traffic as well as pass through boat traffic. Due to these factors, we feel that it is important to be vigilant in this area. Any beds of Eurasian Milfoil left unchecked will become fragmented and allowed to become larger and spread north up the west shoreline of Green Island.

Green Island / DEC (site #5)

- Total Pounds: 90
- Days: 1

Summary:

This area was completely suction harvested in 2019. Little regrowth was observed in 2020, so a hand pulling crew was sent to the area and completed the site quickly.

Recommendations:

This area should continue to be monitored due to the very large bed of EWM that was removed in the Sawmill Bay Channel this season. We believe that this site will continue to be one of the less-challenging sites in 2021.



Finkle Brook Delta (site #15)

- Total pounds: 540
- Days: 2.6

Summary

We have suction harvested the Finkle Brook Delta area consistently since 2018. The site is broken into two distinct sectors: the delta and the offshore sector adjacent to the beach park. The offshore sector was of concern due to the possibility of fragmentation from the large EWM beds in the Sawmill Bay area. Very little regrowth was found in either sector. The site was completed quickly in 2020.

Recommendations

The site has shown a drastic reduction in EWM growth over the last three seasons. With the removal of the large beds of EWM in Sawmill Bay that trend should continue. Since this site seems to have been a problem area in the past, we would recommend a survey at the start of each season. This will help us determine the level of effort needed to keep the momentum moving in the right direction.

Gull Bay (site #48)

- Total Pounds: 15,330
- Days: 20.7

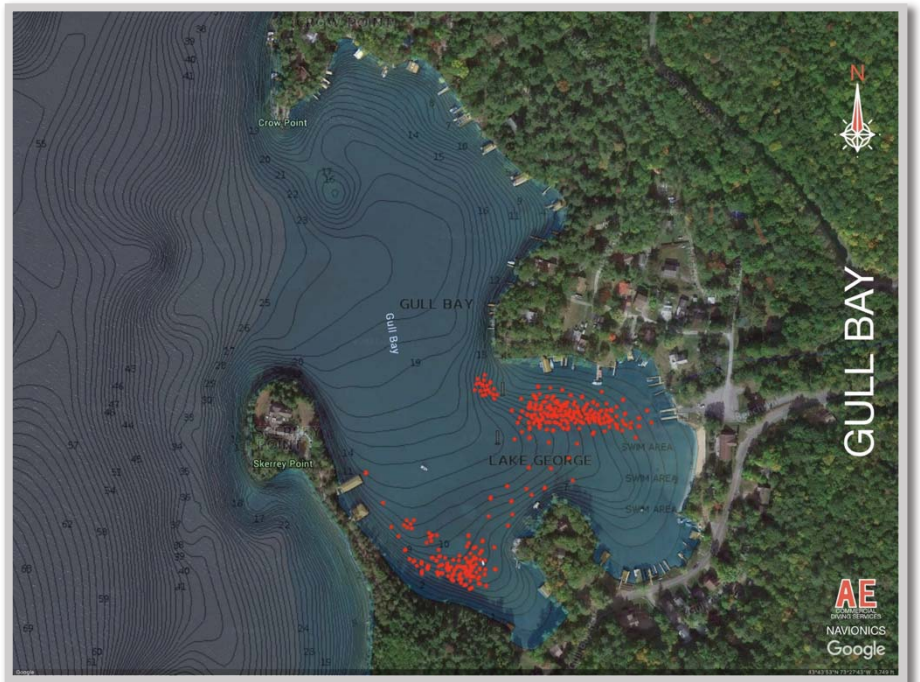
Summary

This was the first season that AECDS harvested in Gull Bay. The site was worked in 2016 and 2017 but has remained largely unmanaged for the last three seasons. The site appears to have gone back to the 2016 EWM levels after showing progress in 2017. The bottom composition was made up of sand and softer sediment and the working depth was between 10 and 18 feet.

The site contained two small dense beds of EWM with sporadic EWM plants in the surrounding area. The EWM growth was also heavy and extensive around and on top of the existing benthic bottom barriers at the site. The site was cleared in approximately 20 days of harvesting and 15,330 pounds of EWM was removed. The two small dense beds proved challenging due to the visibility in the bay. The harvesting crew bounced back and forth between the two beds to help maintain visibility and to maintain efficiency and quality control.

Recommendations

As with all the sites on Lake George this one needs to be monitored and maintained to ensure a positive trend in the right direction. An early season survey to determine the extent of the regrowth and the level of effort needed in 2021 is essential. At this point, with the sediment settling on top of the barriers which



encourages the dense growth of EWM, they have certainly lost their effectiveness. The benthic barriers need to be cleaned off and removed or they may become lost.

Commission Point/Red Rock Bay **(site # 128)**

- Total Pounds: 14,850
- Days: 12.5

Summary

This site is a new site for us in 2020. The Red Rock Bay site had only sporadic EWM growth and was cleaned up quickly. The bottom composition consisted of soft sediment and woody debris and the work was performed in 4-12 feet of water.

The Commission Point site had a very dense but isolated bed of EWM in 10-20 feet of water. The bottom composition consisted of some woody debris and soft sediment. Two DASH crews worked the site and cleaned it up quickly. The site is isolated and calm with a workable bottom composition making DASH operations efficient and productive. The DASH crews returned later in the season to clean up any regrowth and to conduct a survey of the surrounding area to find and clean up any sporadic EWM plants.

Recommendations

As with all sites we would recommend an early season survey to determine the level of effort needed in the 2021 season. Although the Red Rock site was suction harvested in 2020 it can be handled easily with a hand pulling crew in 2021. The Commission Point site will need a larger level of effort to keep it moving in the right direction.



Harris Bay (site # 14)

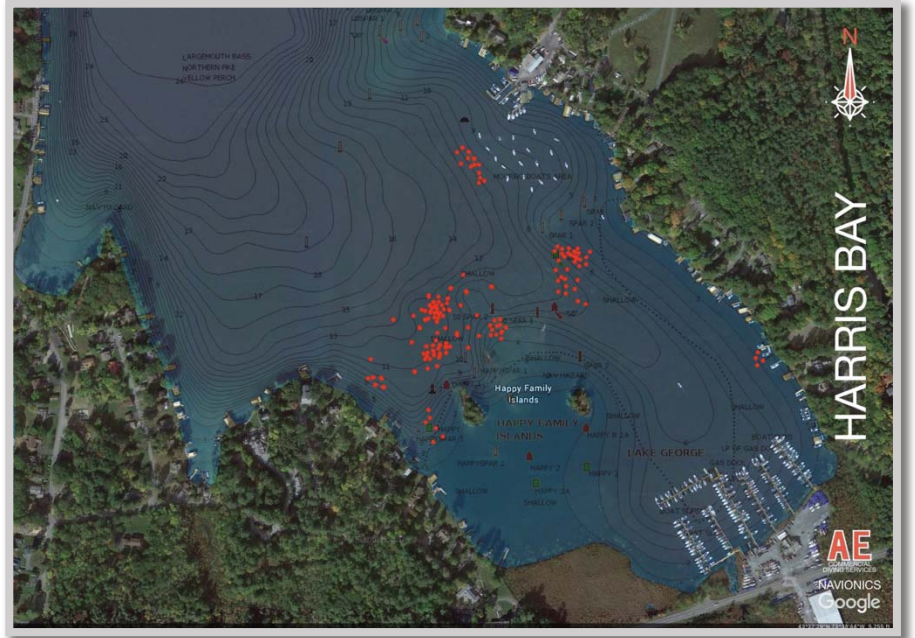
- Total pounds 14,670
- Days: 21.9

Summary

This site was completely harvested in 2019 and again in 2020. The bay has dense, moderate, and sporadic beds of EWM that are spread over a large area. The poor visibility and the heavy boat traffic are contributing factors to the overall production of the DASH crews. Harris Bay also has a variety of bottom compositions, topography, and sediment. Making it difficult to remove the plants and their roots system completely. As a result, the regrowth potential is high and will require on going monitoring. The areas of soft sediment show improvement every season and are more easily controlled while the rocky areas around the islands prove more challenging. The bay also has large flat sections where the sediment and water depth are ideal conditions for invasive weed growth. Large dense beds of EWM can quickly take over on these large “plane-like” sections if they are not monitored each season. Although the large dense bed of EWM in front of the Lake George Boat Company is significantly reduced in size and density from 2019 the bay overall appears to show an increase in EWM from 2019. Progress is being made in Harris Bay it is just taking longer than we expected due to the above factors.

Recommendations

Harris Bay is one of the more complex project sites on Lake George and will require vigilance to maintain and control. Ongoing discussion regarding the site is recommended to ensure future progress and to determine the level of effort needed each season. We would anticipate an overall reduction in the amount of EWM growth in 2021 based on this year’s production.



Eichleville Bay (site #51)

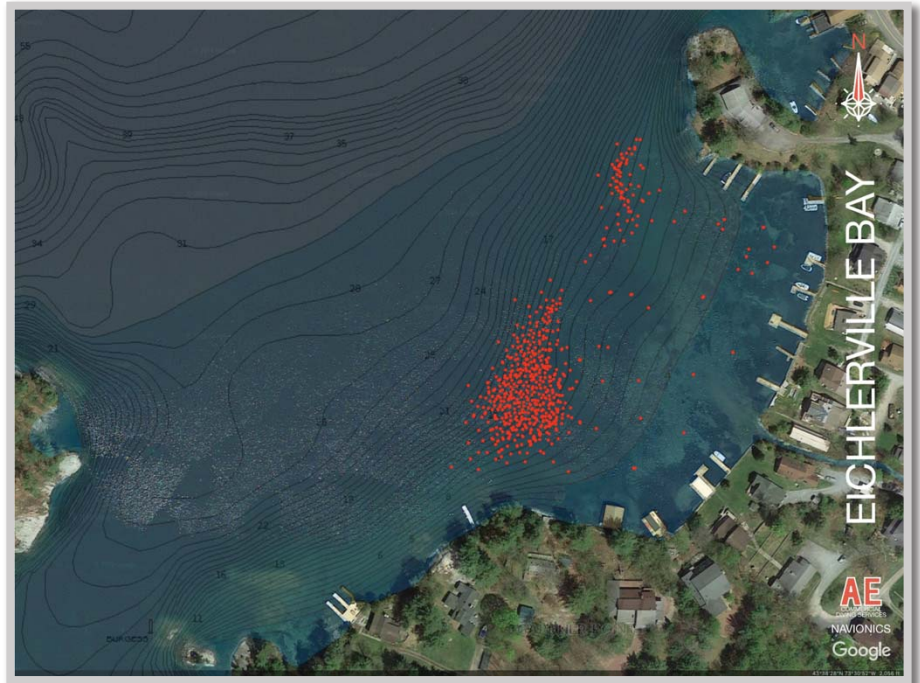
- Total Pounds: 14,100
- Days: 18

Summary

This site was completely harvested in 2019 and again in 2020. This season the DASH crew located and removed an isolated but large dense bed of EWM. The rest of the site was surveyed and sporadic EWM were also removed. The DASH crews spent approximately 12.5 days on site for the initial harvest. They returned later in the season for approximately 5 days to survey the site again and remove any regrowth present. This site is proving difficult to work due to the rocky nature of the bottom. The rocks are covered with a thin layer of sediment which makes it easy for the plants to take root through the sediment and into the rocks. Although every effort is made to remove the entire root system the outcome is uncertain.

Recommendations

The site should be surveyed and worked each season to ensure success. A second harvest each season of the sites worked is important to catch any regrowth that is found and remove it before it is allowed to grow out of control and spread. This site more so than others due to the bottom composition.



Acady Bay (site # 169)

- Total Pounds: 13,830
- Days: 16

Summary

This site hasn't been worked since 2015. During the 2015 season 30 bags (approx. 1005lbs) of EWM were removed during 2 hand harvests. The bottom composition consists of soft sediment and the working depth is 5-14 feet. The exposed nature of this site allows for high winds and heavy chop that make working this site difficult at times. The DASH crews found a few beds of heavy dense EWM growth surrounded by sporadic EWM plants in the



immediate area. Comparing the maps and production from 2015 and 2020 it appears that the EWM is much heavier now.

Recommendations

This site should be monitored and surveyed each season to determine the level of effort needed to turn the numbers around and get them moving in the right direction. The exposed nature of the site and the high winds and chop make it vulnerable to spread due to fragmentation.

Huddle Bay/Hiawatha Island (site #4)

- Total Pounds: 12,840
- Days: 11.2

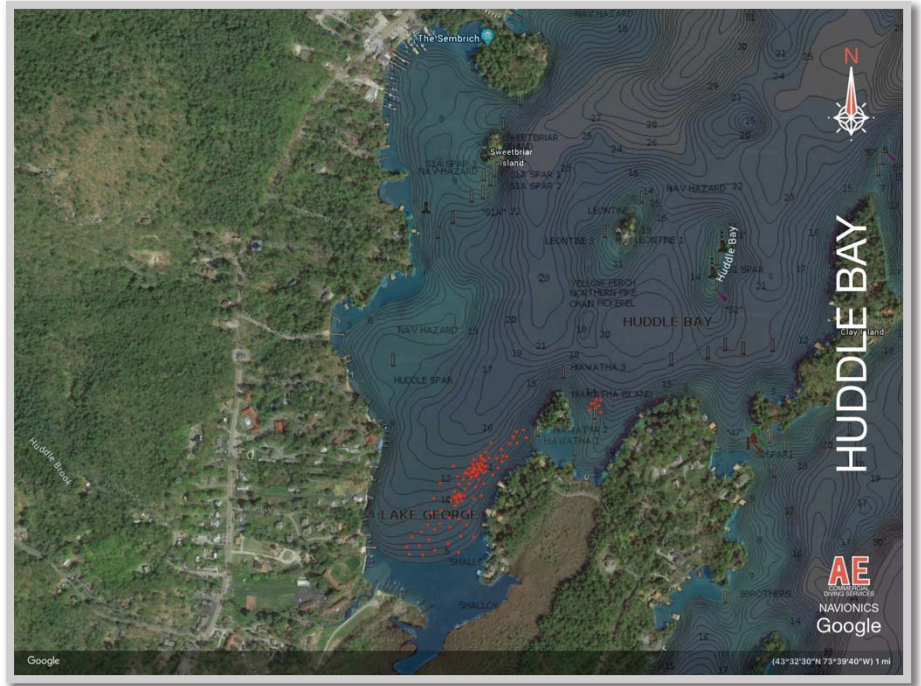
Summary

The Huddle Bay site was last worked by a hand harvesting crew in 2017 with 2 bags/approximately 70 pounds being removed. It appears from previous reports, that the bay had been showing drastic improvement over the previous seasons. In previous seasons much larger amounts of EWM had been harvested with 2015 resulting in 265 bags/approximately 9,275 pounds being removed. No harvesting in 2016. The 2020 season saw a rebound to the 2015 numbers. The DASH crew found large dense beds of EWM surrounded by moderate scattered beds. The bottom composition consists of some woody debris, soft sediment, and native plant life. The Huddle Bay work site is very fertile and covers a large area due to the bay being relatively shallow. The EWM plants tend to grow very quickly and are typically at the surface in early summer. The water depth, size of the bay, the rate of EWM growth, and the heavy boat traffic are ideal for fragmentation and dispersal of EWM throughout the bay and surrounding area.

The Hiawatha Island part of the site had sporadic EWM growth along the northeast shoreline that was removed very quickly. The bottom composition consisted of rock and soft sediment and the work site was in 8-12 feet of water.

Recommendations

The site should be surveyed early each season so a level of effort can be determined. Due to the nature of this bay mentioned in the summary above this would be a good site to survey and harvest early in the season. According to previous reports, Huddle Bay responds well to harvesting efforts. Those efforts should remain consistent to ensure future success.

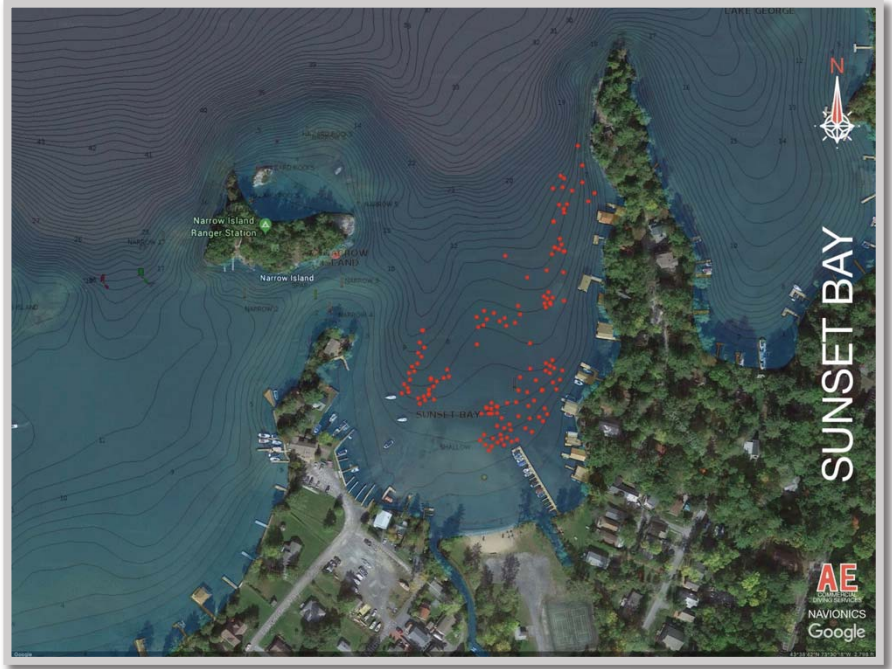


Sunset Bay (site # 6)

- Total Pounds: 12,780
- Days: 16.7

Summary

This site was completely harvested in 2018, 2019, and again in 2020. The DASH crews have put a good deal of time and effort into this site over the last three seasons and the numbers are starting to show it. The bottom composition is ideal for the removal of root systems and there is an abundance of native vegetation that can, (and often will), take over once invasive Eurasian Watermilfoil is removed. Due to this a percentage of the total removed each season is certainly unintentional native bycatch. The fact that there is so much native life in the bay makes this site very time consuming to work. Overall, we expected to see additional progress in the 2021 season.



Recommendations

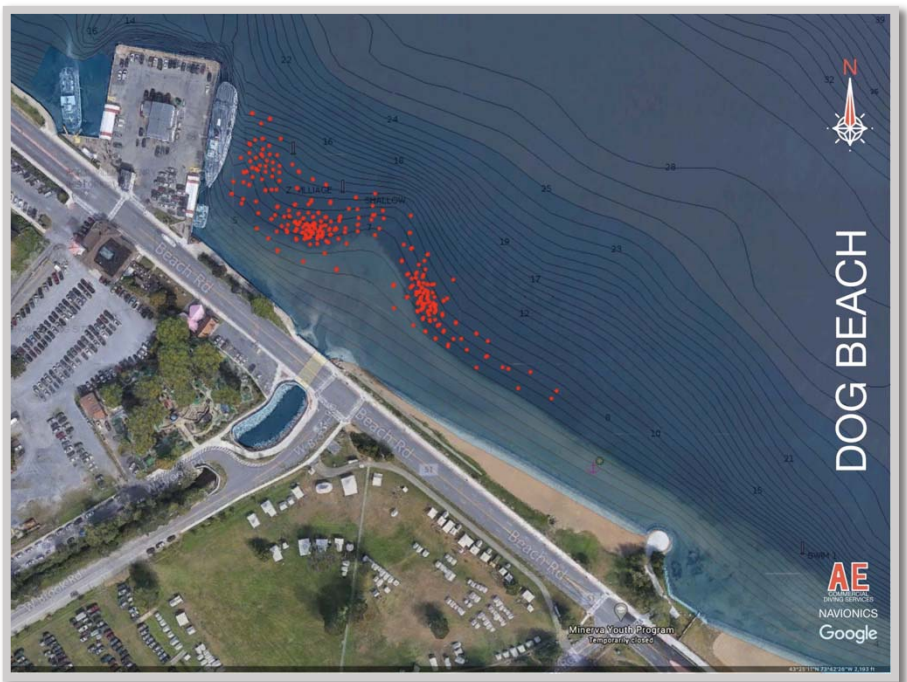
We recommend a survey of the site early in the season to determine the level of effort going forward. The native to invasive ratio certainly makes this site challenging to work but it is trending in the right direction. DASH crews on this site need to take extra care to remove as little native plant life as possible.

Dog Beach (site #8)

- Total Pounds: 10,650
- Days: 22

Summary

This site was not completed in 2019. The site proved challenging due to the steep grade at the location and the windy conditions making it difficult to anchor properly. Although the area proved challenging once again, it was completed in 2020. We felt that given its location in a high traffic area that it was an essential site to clean up. The bottom composition is a dense packed sand that makes removal slow and labor intensive. The DASH divers were supplied with hand tools to help in the removal of the larger plants due to the size of the root balls and ensure their complete removal. The overall size of the EWM



bed was not large but the density of the bottom composition made progress slow, especially in the shallower areas. We made a second visit to the site at the end of the season to clean up any regrowth. Another small bed of EWM was discovered and removed at this time also.

Recommendations

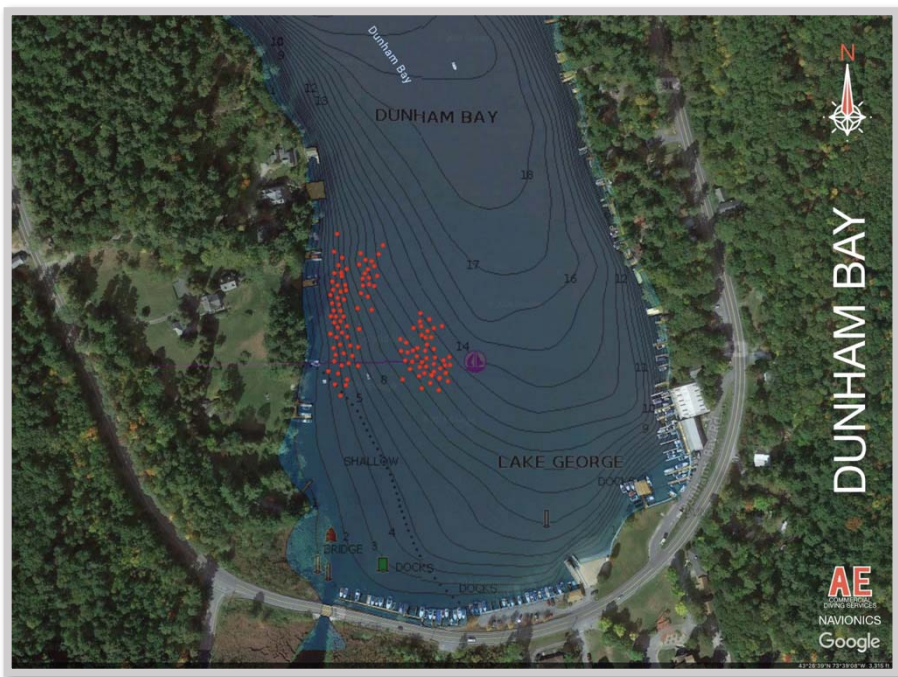
This site will continue to prove challenging but its high traffic location makes it an area of infestation essential to control and maintain. Surveys should be done at the start of each season to determine the level of effort needed going forward.

Dunham Bay (site #19)

- Total Pounds: 9,630
- Days: 15

Summary

This area was completely harvested in 2019 and 2020. Overall, Dunham's Bay looked very good. The bottom composition consist of soft sediment and the overall depth of the work site was between 5-25 feet. The eastern shoreline revealed very little growth of Eurasian Watermilfoil, with only a few plants along its entirety. As with seasons past, the western shoreline had a vein of moderate density EWM running along it. The bulk of harvesting efforts in Dunham's Bay was in the center of the bay in roughly 20 - 25 feet of water. The bed was small but dense and poor visibility made working the deeper site more challenging.



Recommendations

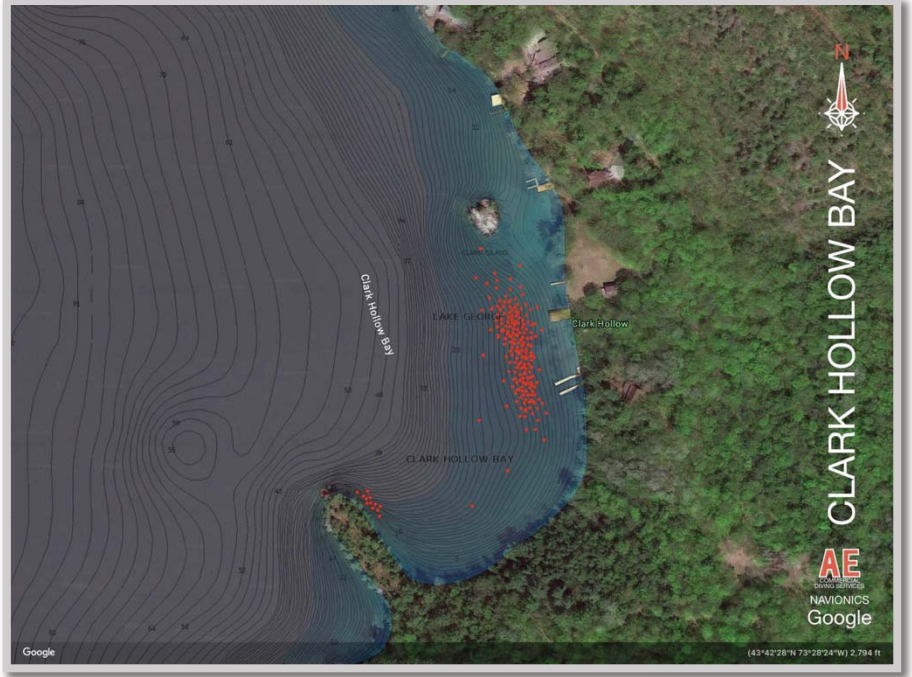
In the coming season, it will be very important to monitor Dunham's Bay, as there is a very busy marina on site. Though most of the dense growth was away from the marina, boat traffic could lead to fragmentation and spread of Eurasian Watermilfoil quickly. We recommend continued DASH as well as frequent surveys in order to keep Dunham's Bay on a trajectory towards optimum containment and control.

Clark Hollow Bay (site #50)

- Total Pounds: 8,560
- Days: 8

Summary

Eurasian Water Milfoil was first discovered at the site in 1989. Hand pulling and benthic bottom barriers have been used as a means of control to manage the site since then. The site saw an increase in EWM plants removed in 2004 and 2005 but was back to just a handful of plants by 2013. It appears from previous reports, the bay hasn't been managed in a number of years. What was 50 plants in 2013 has turned into a much larger problem. The DASH crew found a large dense bed of EWM in the bay and removed 8,560 pounds of EWM in 8 days. The bed was located in 10-15 feet of water and the slope is moderately flat, with a bottom grading from sand in shallow water to silt in deeper water.



Recommendations

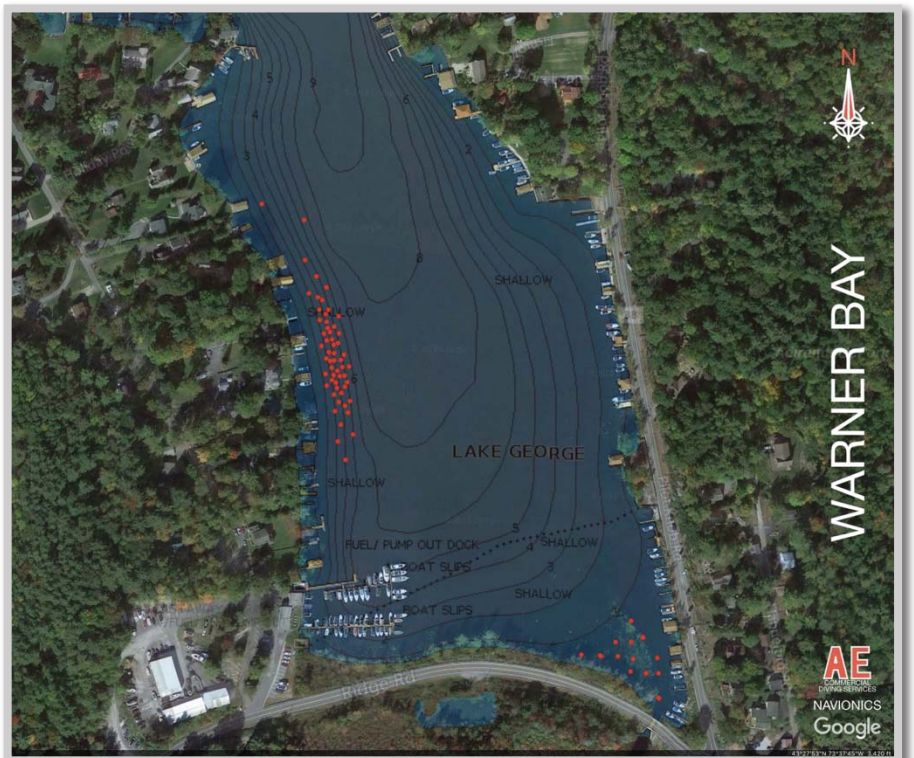
This site is clearly moving in the wrong direction. We are confident that we can turn that around and will be able to get the site back to a more manageable situation. A survey should be conducted in early summer to determine the level of effort needed.

Warner Bay (site #11)

- Total Pounds: 8,040
- Days: 9

Summary

This area was completely harvested in 2019 and 2020. In 2019 Warner Bay had moderate growth down both the east and west shorelines. The middle of the bay, (when surveyed), appeared to be free of EWM, as it has in past years. In 2020 the west shoreline was clear of EWM for the most part with sporadic EWM growth in the southwest corner and along the east shoreline. The native plant life in the bay makes it challenging and time consuming to work. Much like Cannon Point in the more sporadic



growth areas, the site is thick with native plant life that is punctuated with Eurasian Watermilfoil. Removing the invasive plant without damage or destruction of these native plants is very difficult and leads to a situation where divers are sorting through stems at the bottom of the lake and in poor visibility conditions due to the inlet and the depth of the water. As in most project sites where there is a large amount of native plant life a percentage of unintended native bycatch is a certainty and will contribute to the overall numbers each season.

Recommendations

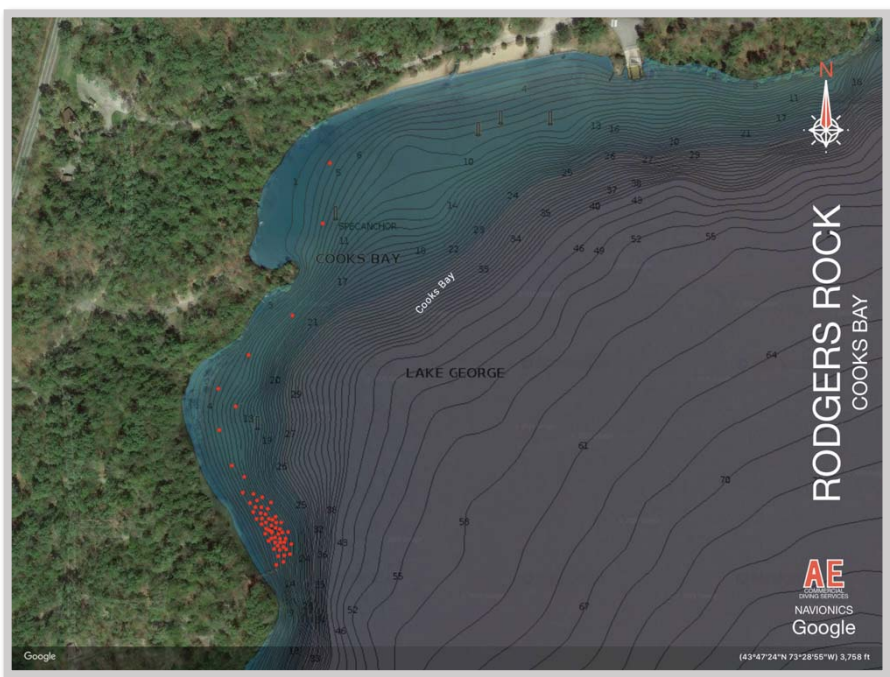
While sporadic growth can often be best addressed through hand pulling, the large, spread-out nature of the bay, coupled with visibility concerns and boat traffic, have led us to believe that suction harvesting is a more effective control method for this site. Since the entire littoral zone of the bay has potential for EWM growth sufficient time should be spent here in order to keep pace with EWM dispersal throughout the bay. We feel that early season surveys and multiple harvests throughout the season would be beneficial.

Roger Rock (site #204)

- Total Pounds 4,890
- Days: 4

Summary

This site originated around the campsite's mooring buoys along the west shore. In the past seasons, heavy concentrations of EWM along the mooring buoys had been knocked down to more manageable levels. Unfortunately, the site hasn't been managed in a number of years and clearly has gotten worse. The area around the mooring buoys was very dense with a well-established EWM bed in 5-15 feet of water. The bottom composition consisted of soft mud allowing DASH operations to quickly and thoroughly remove the infestation. Some sporadic growth was observed going north along the shoreline, but it was quickly removed also. There is a lot of area to cover and the heavy boating season makes it more challenging for the crews.



Recommendations

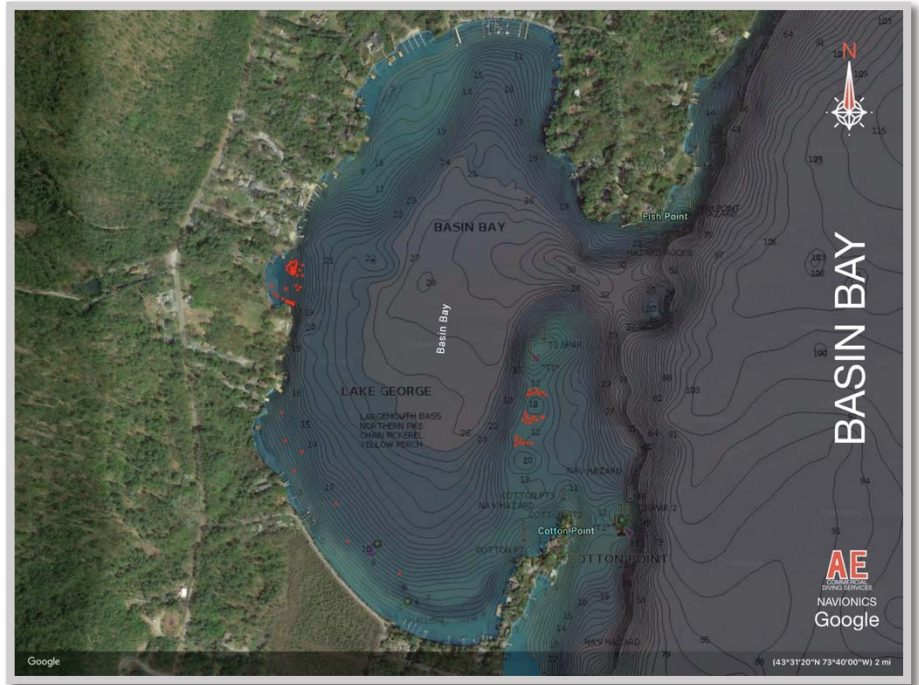
An early season survey should be conducted to determine the level of effort needed for the 2021 season. Because of the heavy boat traffic around the campground and the mooring buoys during peak season DASH efforts should be scheduled for early season or late season to ensure safety of the DASH crew.

Basin Bay (site #25)

- Total Pounds: 4,680
- Days: 3.7

Summary

Basin Bay hasn't been worked since 2017 when 99 bags or approximately 3,465 pounds of EWM was removed. The DASH crews located a number of small to moderated sized dense beds of EWM and cleaned them up quickly removing 4,680 pounds of EWM. The project map from 2017 shows more growth along the shoals and less near the east shoreline. In 2020 we found the shoals to have more moderate to light EWM growth and more growth along the eastern shoreline with some scattered EWM plants along the southern end of the bay. The bottom composition consisted of soft sediment, woody debris, and native plant life and the working depth was 5-10 feet.



Recommendations

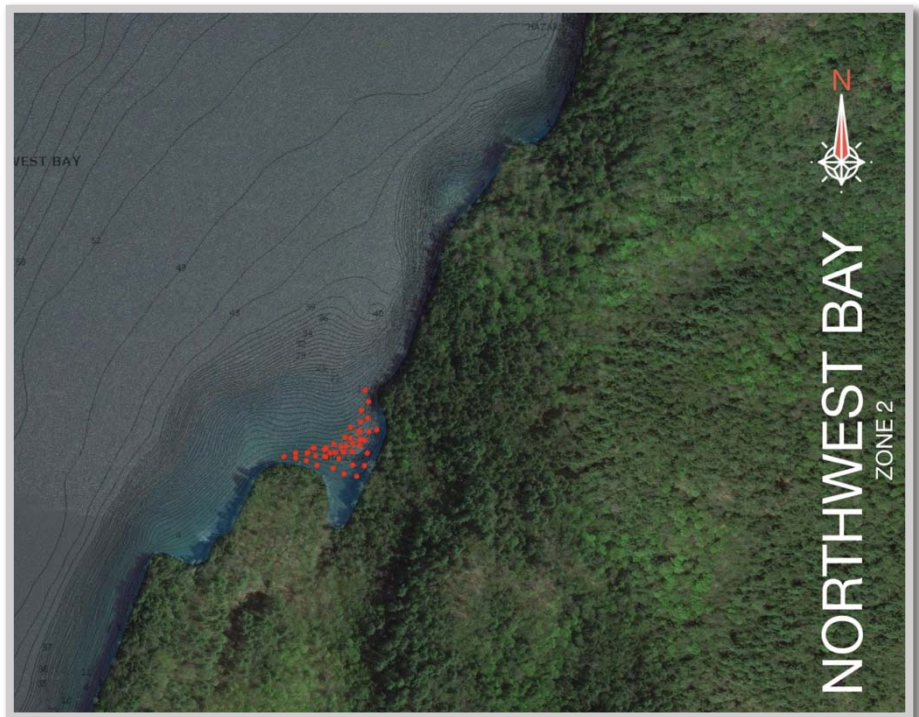
The site should be surveyed early in the season. With distinctly delineated boundaries and quick drop-offs, Basin Bay can be completed quickly. It should trend in a positive direction with minimal effort.

NW Bay (site #1 & # 24)

- Total Pounds: 4,390
- Days: 10.8

Summary

These sites were completely harvested in 2019 and 2020. The furthest point north in NWB, near the inlet, is still looking really good. The southern area has also showed progress in the right direction with hours spent and pounds removed. Both of these areas had only moderate to sporadic EWM growth present which is reflected in the overall numbers for these sites in 2020.





Recommendations

With proper management we feel that these sites will continue to trend in the right direction. Due to the many fishermen that frequent the NW Bay area, we feel it is imperative to continue to maintain these sites. This will help to keep them from moving backwards but to also ensure that the EWM doesn't spread further in the bay or into the surrounding areas.

Fan Point (site #)

- Total Pounds: 3,870
- Days: 3.8

Summary

This was the first season that AECDs worked this site. Fan Point has two sites. One site with good soft bottom sediments and other site is embedded in a long row of large angular rock, making it difficult to access the roots for removal. A few sporadic plants were scattered throughout the area which the DASH crew cleaned up quickly.

Recommendations

The site should be surveyed and monitored to ensure continued success.



Turtle Island Channel (site #)

- Total Pounds: 3000
- Days: 7.8

Summary

This is the first time that we have suction harvested this site. The area worked was a narrow strip of moderate density EWM in 5-15 feet of water along the NW shoreline. The bottom composition was made up of rock, sand, soft sediment, and lots of woody debris. The divers were able to easily maintain their visibility due to the bottom topography and the site was cleared relatively quickly. The divers had to make sure that they were removing the entire EWM root ball to ensure a limited amount of regrowth but all the woody debris made this challenging. With that being the only hinderance things ran smoothly and efficiently.



Recommendations

As with all the sites worked each season, we recommend an early survey of the site to determine the amount of regrowth present and the level of effort needed in 2021. The woody bottom composition is the primary concern for it will encourage regrowth.

Million Dollar Beach/East Brook Delta (site #10)

- Total Pounds: 2490
- Days: 5.5

Summary

This area was completely harvested in 2019 and again in 2020. This site harbored a large dense patch of EWM in 2019 that started due east of the boat launch and extended northward up the shoreline. After the 2019 season, we hoped to see a reduction in EWM growth, and in fact saw that in 2020. The was quickly cleaned up. We We made a second visit to the site at the end of the season to clean up any regrowth.



Recommendations

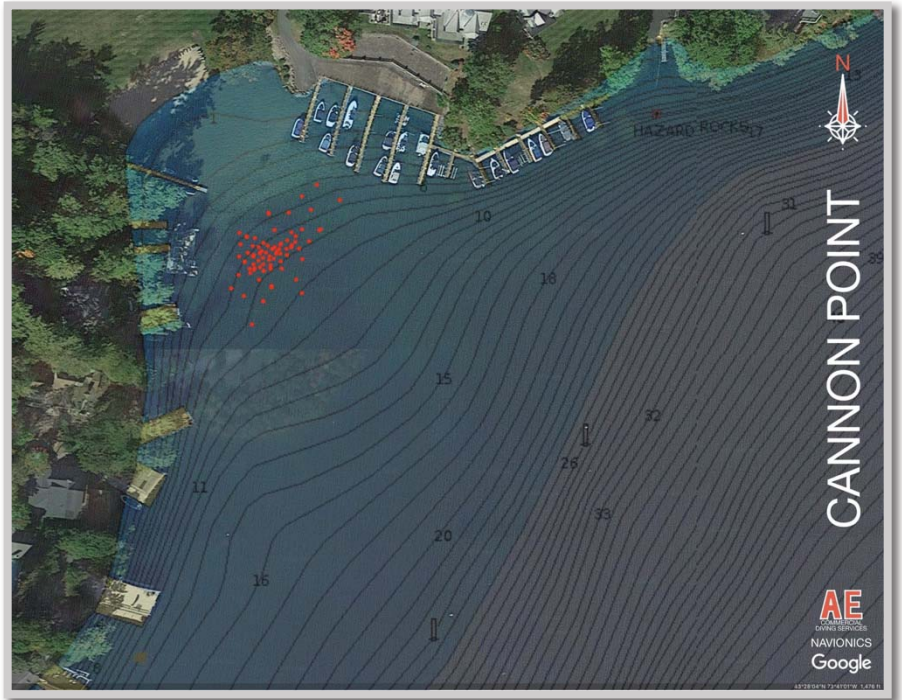
We recommend surveying and working this site early in the season due to its' proximity to a very busy boat launch. Any EWM plants not removed can become fragmented very easily and allowed to spread.

Cannon Point (site #26)

- Total Pounds: 2,040
- Days: 3.8

Summary

This area was completely harvested in 2019 and 2020. When we began work at Cannon Point in 2019, we found that it resembled how it had looked before commencing work in 2018: a dense bed of invasive Eurasian Watermilfoil was located southwest of the point, in roughly the same place as 2018, though the bed had shifted slightly to the east. During the harvesting efforts of 2020 we noticed a reduction in the amount of EWM present and level of effort needed that is reflected in the overall numbers for the site.



There are several contributing factors to why work in this area is challenging. First, the lake bottom at this site is a dense sandy base with outcroppings of ledge that encourages deep root growth. Removing the entire root ball of the invasive Eurasian Watermilfoil plants that grows here is time consuming and difficult, though clearly imperative. Next, in the more sporadic growth areas, the site is thick with native plant life that is punctuated with Eurasian Watermilfoil. Removing the invasive plant without damage or destruction of these native plants is very difficult and leads to a situation where divers are sorting through stems at the bottom of the lake in poor visibility conditions. Finally, Cannon Point is rife with boat traffic and we suspect the perpetual traffic is leading to a rapid regrowth potential through fragmentation.

Recommendations

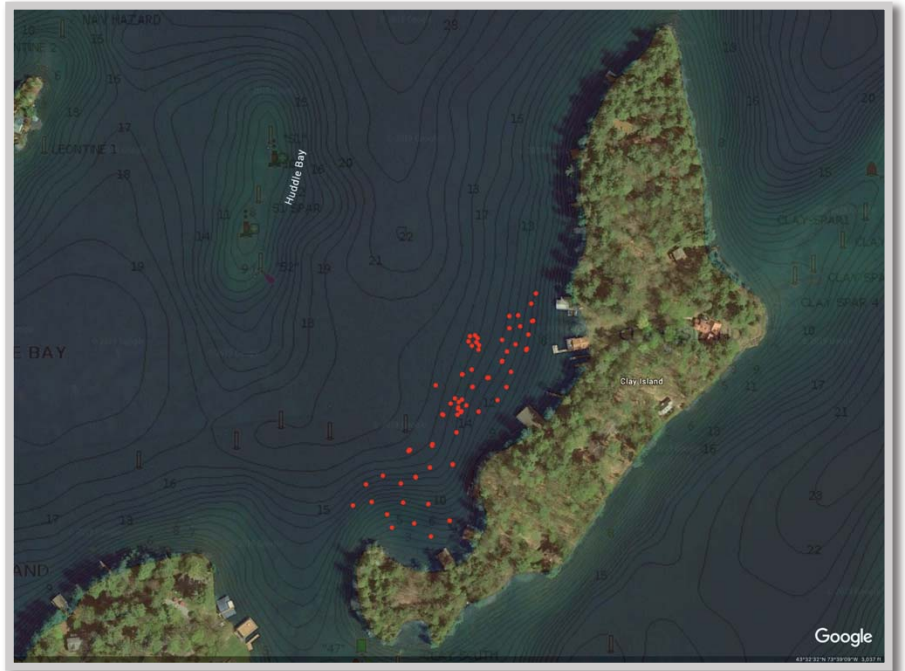
We recommend that this site received a continued strong effort in order to keep progress moving forward. It is crucial that the dense bed of Eurasian Watermilfoil be held in check to reduce movement of the bed into areas south of Cannon Point. The increase of days allotted to this site, (5 in 2018 to 13 in 2019), has allowed for a more robust removal of invasive Eurasian Watermilfoil that has paid dividends in 2020. This level of effort must continue in order to control this site's infestation.

Clay Island (site #97)

- Total Pounds: 1650
- Days: 8.3

Summary

Clay Island was completely harvested in 2019 and a large dense bed of EWM was removed along the western shoreline. Although the area appeared to hold for the remainder of the 2019 season, there was some concern that due to the bottom composition (clay and sand) that substantial regrowth was possible. Thankfully that was not the case. Clay Island shows dramatic improvement in 2020 with only two small, moderately dense beds, (approximately 36 square feet each), of EWM surrounded by some sporadic growth.



Recommendations

This site should be monitored every season to ensure continued success.

Tea Island Bay (site #30)

- Total Pounds: 1590
- Days: 4.6

Summary

This site was completely harvested in 2018, 2019, and again in 2020. This season the EWM seems to grow primarily in the shallow corner of the bay that is also dense with native plants. Large dense beds of native plants are obviously very beneficial in our efforts to keep EWM out but require a more selective suction harvesting technique to ensure only the EWM is removed. Although necessary, this technique is more time consuming and effects productivity; native bycatch is inevitable. Eurasian Milfoil was also observed under the deeper edge of the benthic bottom barriers and was removed.



Recommendations

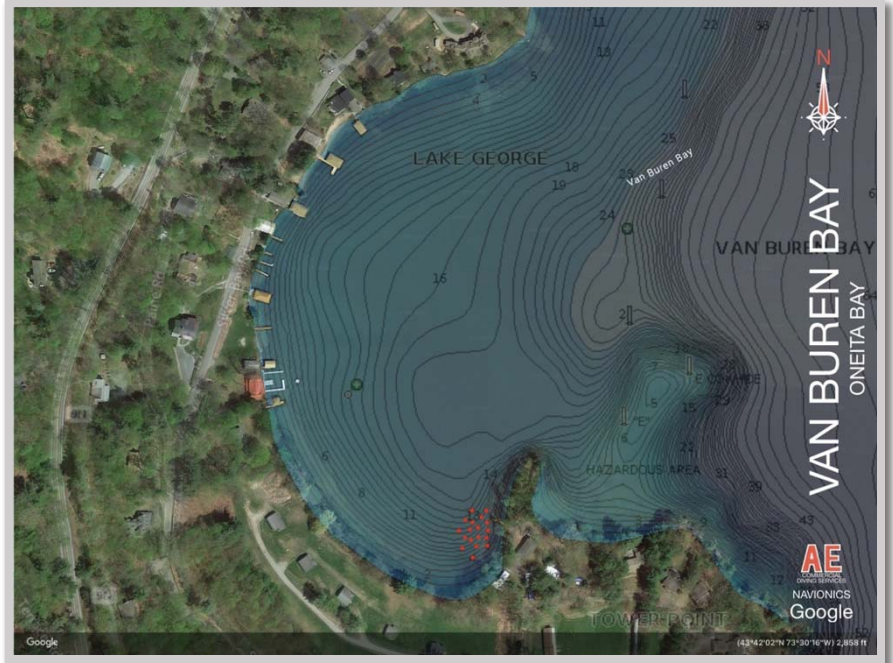
We recommend that close attention be paid to the trend of regrowth at this site in order to prevent a relapse into a denser area of infestation especially in the shallow areas and the areas of dense native growth.

Van Buren Bay (site #160)

- Total Pounds: 1,380
- Days: 2

Summary

The original site in Van Buren Bay was along the western shoreline that was around and in an old, submerged crib dock that was last worked in 2012 with only 6 EWM plants removed. It seems that the site hasn't been managed in a number of years, but the original project site appears to have remained EMW free. The new site discovered in 2020 is along the south eastern part of the bay. This new site consisted of a small but dense bed of EWM that was discovered in 8-16 feet of water. The bottom composition consisted of soft sediment, making DASH operations quick and efficient.



Recommendations

Early season survey to determine the level of effort is needed to maintain the site moving forward.

Congers Point (site #)

- Total Pounds: 690
- Days: 8 hours

(Paid for separately by the HOA)

Summary

The site consisted of sporadic plants scattered around the site in 3-15 feet of water. The bottom composition consisted of sand, rock, and fine sediment. The area was quickly cleaned up.

Recommendations

An early season survey to determine the level of effort needed in 2021.

