

HARVESTING REPORT

By AB Aquatics, Inc.

Location: Lunenburg, MA Hickory Hills Lake

Dates: From: Monday, October 09, 2017; - To: Friday, October 13, 2017

Exotic Plants: Fanwort

Diver(s): Eric Howes

Crew: Charlie Leocha, Mike Briggs

Amounts: 2,200 Total Gallons 30.0 Total hours worked

Detail report included (check): Excel spreadsheet ☒ Map(s) ☒ Other ☐

Report: The AB Aquatics, Inc. DASH crew returned to Hickory Hills Lake the week of October 9th-13th, 2017. On Monday, October 9th, the crew began harvesting within Zone 12 and remained within Zone 12 for the duration of the day's work. The crew focused in the northern portion of the zone as the planned future work areas were to the south. The diver found growth to consist of dense mature growth in concentrated areas with areas of sporadic and low growth between them. A low amount of native growth was found in the northern portion of Zone 12 and the bottom type generally consisted of silt. The small patches were found between and, in the vicinity of the marks placed within the dive area and future surveying of the area would be advised as the mission for the team was to remove large marked growth areas other than scan the area to keep volume and efficiency high.

The team concluded the northern half of Zone 12 and began to head into the southern cove of the zone on Tuesday, October 10th. Some areas to the south were found to be larger, denser, and taller than much of what had been previously harvested. Here, as well as most other locations, the diver noted the extremely brittle nature of the Fanwort growth especially for taller plants 8 or more feet tall. By the end of Tuesday, few marks remained along the southwestern shore of Zone 12.

From Wednesday, October 11th and on, the distance covered by the team was much greater than in the previous two days due to the spread out and isolated nature of the plant growth. The early morning of Wednesday's dive saw the conclusion of Zone 12 as the team harvested several clusters of smaller growth without finding any tall or dense patches. The team then progressed southeast into Zone 13, Zone 14, Zone 15, and finally ending the day in Zone 16. The crew focused on deeper water markings in the boating channel which consisted of medium sized patches with mature growth separated by larger areas of low to no growth. The growth pattern allowed the team to transition from patch to patch quickly as they removed many of the area's markers. The team concluded the day at a large patch found outside of the direct vicinity of other markers. The team placed a marker to return to the following day before concluding work.

On October 12th, directed by midweek surveying efforts the team returned to a known growth area near the rock pile within Zone 11, off of Lizard Island. The diver found mature plants to be present at and around the marker however the efforts earlier in the season appeared to have harvested the majority of the plants. To team cleared the area, removed the marker, and progressed to several markers near the open center of the lake in Zone 13. These marks indicated Fanwort more than 10-12 feet tall with a relatively large growth area. The diver was able to survey much of the growth area as the boat transitioned to the location from Zone 11. The team moved in quick

succession between many makers each indicating substantial growth in the deeper center of the lake. The diver spotted several smaller clusters of tall plants between the marks which the team stopped and harvested as they were found. Once the team concluded this area, the team returned to the previous day's end location to finish harvesting the dense patch. The marker allowed no wasted time in locating the diver's last progression into the patch and the plant growth was effectively cleared. The team continued east into Zone 16 finding no surprising or remarkably extensive patches.

On the last day present of Hickory Hills Lake, the team concluded work along the southern shore of the lake within Zone 13 and Zone 16. While mature plants were present, no extreme densities were found. As the team headed northeast towards Zone 5, the DASH stopped frequently as the diver found unmarked patches in the deep water which yielded around 20 gallons each stop. The team eventually reached the intended destination within Zone 5 and began harvesting near markers within the boating channel in deeper water. After retrieving two markers indicating fragile, tall, mature growth the diver found an unmarked patch which used the rest of the allowed time to harvest. The GPS track was ended at the patch indicating its location before the team made their way to the launch and exited the water.

By: Charlie Leocha ; Date submitted October 17, 2017

Date	Vessel Used	Harvest locations	Yield (Gal)	Bottom types	Density (1-4)	Harvest Method & Hrs.			
						ABA DASH	2nd DASH Diver	Hand Pull	Survey
Monday, October 09, 2017	20D4	Zone 12	420	Silt	4-2	6.00			
Tuesday, October 10, 2017	20D4	Zone 12 near island 1	240	Silt	4-2	3.00			
Tuesday, October 10, 2017	20D4	Zone 12	180	Silt	4-1	3.00			
Wednesday, October 11, 2017	20D4	Zone 12	20	Silt	2-1	1.50			
Wednesday, October 11, 2017	20D4	Zone 13	200	Silt	4-1	2.50			
Wednesday, October 11, 2017	20D4	Zone 14	20	Silt	2-1	0.75			
Wednesday, October 11, 2017	20D4	Zone 15	60	Silt	4	0.50			
Wednesday, October 11, 2017	20D4	Zone 16	60	Silt	4-1	0.75			
Thursday, October 12, 2017	20D4	Zone 11	20	Silt	2-1	0.75			
Thursday, October 12, 2017	20D4	Zone 13	420	Silt	4-1	4.00			
Thursday, October 12, 2017	20D4	Zone 16	130	Silt	4-1	1.25			
Friday, October 13, 2017	20D4	Zone 16	240	Silt	3-1	4.25			
Friday, October 13, 2017	20D4	Zone 13	120	Silt	4-1	1.00			
Friday, October 13, 2017	20D4	Zone 5	70	Silt	4-1	0.75			
		Total Gallons	2200			-----	-----	-----	-----
				Current week dive hours		30.00	0.00	0.00	0.00
				Carry forward: over/ under hours		0.25	0.00	0.00	0.00
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				Unbilled Hours		30.25	0.00	0.00	0.00
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				Total Dive Days		5.04	0.00	0.00	0.00
	10/14/17	<< Date Invoice Number >>	1339		Days	5.00			
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				Carry forward: over/under hours		0.25	0.00	0.00	0.00

Hickory Hills 101317

Hickory Hills 101017

Hickory Hills Lake

Week end October 14, 2017



1000 ft

Hickory Hills Lake

Hickory Hills 100917

Hickory Hills 101117

Hickory Hills 101217