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Extraction Report

Location: Monomonac Lake, Rindge, NH

Date(s): June 25, 2026, June 26, 2026, June 29, 2026, June 30, 2026, July 7, 2026, July 8, 2026

Exotic/Invasive Plants: Variable milfoil

Diver(s): Sarah MacNeilage Patey, Jamie Burleigh

Support Crew: None

Total amount extracted (in gallons): 366.50

Total time worked (in hours): 46.5

Detailed report includes: Narrative, Maps, Log, Photos

Narrative:

Divers began extraction at Heron Point cove where variable milfoil plants riddled the shallow cove. Plants ranged in size from one to five feet tall in water no more than four feet deep. Most plants had shallow, readily extractable roots. Plants with more substantial roots were in the lily pads along the built-up shoreline. As these variable milfoil plants were in shallow, well-lit water, many had roots growing from the fronds. Divers extracted until these were silted out. Divers transited to the mouth of the cove where a single point marked a cluster of three variable milfoil plants. Two were large and visible from the surface, and one was small plant, in water seven feet deep. The large plants were quite voluminous with roots growing on the fronds. Divers moved onto the points in the long narrow cove just north of the mouth of the cove. In water six feet deep, about a dozen, three-foot-tall plants grew along and in the lily pads. Divers ended the day back in Heron Pond cove. There they extracted more plants and fragments as the silt had settled.

The next day, divers began by marking the field on the west side of Swan Point cove. Variable milfoil plants on this side of the cove were large but with very shallow, readily extractable roots. Plants were in water five to six feet deep and nearly reached the surface. Most plants were visible from the surface, but there were plentiful smaller plants seen once underwater. Divers were able to clear the plants from this shoreline. Divers transitioned to extracting from the super massive flowering and self-fragmenting variable milfoil plant near the center of the cove. Divers collected the broken off self-fragmenting fronds from the surface around the plant. This plant spanned at least thirty feet wide and one hundred feet long and was very densely grown. Innumerable plants grew in the area beyond it.

Divers returned for a third and fourth day the following week with the original aim to extract as much of the super massive plant in Swan Point cove as possible. On the third day, divers returned to the Swan Point cove and discovered a floating dock had been moved into the super massive flowering and self-fragmenting plant over the weekend. Divers educated the resident of the large green house about variable milfoil, which she said they swam through over the weekend. Divers collected fragments from the surface and assessed the plant. As the lack of wind was favorable, divers decided to transit to the far side of the lake to take care of the variable milfoil found in

two spots. Divers navigated to the three points off East Monomonac Road. One medium size plant and half a dozen single frond plants were rooted with the native milfoil. Plants did not reach the surface in water less than three feet deep.

Divers crossed the southern part of the lake to the point where a potential variable milfoil-native milfoil hybrid was marked. At this point, divers found a large, voluminous, hefty-looking plant with lots of branching stems nearly reaching the surface. One flowering frond was present. In the area around this plant, another five plants of similar appearance but much smaller in size were found. These smaller plants looked the same as the potential hybrid plant and barely amounted to anything once extracted. The stems themselves appeared like those on a very mature variable milfoil plant. The most mature roots were black at the base. The potential hybrid plant itself yielded seven gallons. Divers ended the day back at Heron Point cove, where the silt had settled from the previous day. A second cluster of variable milfoil plants were found at the mouth of the cove, not visible the previous day. About ten small plants were found in the cove, visible in the afternoon sun. Divers silted out again before they could complete extracting all the plants. Divers determined to return the next day for those plants.

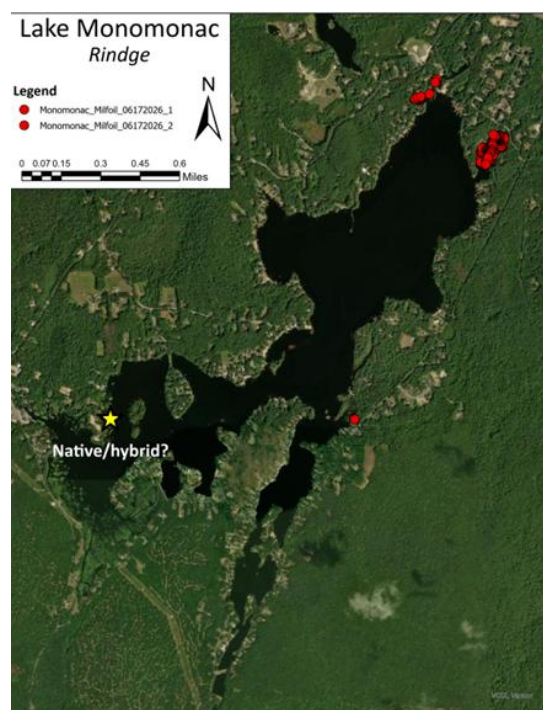
Divers started the fourth day back at Heron Point cove and extracted the plants they could see now that the silt was once again laying down. Divers relocated to Swan Point cove, where they continued to extract the super massive plant, focusing on the area around the floating dock. Plant stems are very thick, and roots are very well established. Fronds were laying over on the surface in water five to six feet deep. The fronds at the surface, be it the tip of the frond or farther down the stem, flowered. At the center of the field a three-foot swath of fronds flowered. Self-fragmenting fronds readily broke off the plants.

In further efforts to manage the variable milfoil from Heron Point cove, divers returned on the morning of the fifth day. They marked one plant in the mouth of the cove and a further nine inside. All plants in the cove were small. The plant marked in the mouth of cove was actually three once underwater, and another three small plants were found. They were in water six feet deep. Divers returned to Swan Point cove to continue extracting from the large mass in the center of the cove. Divers were able to complete extraction from the area directly around the floating dock, to its south towards the mouth of the cove, and to the western side. Divers returned to Swan Point cove on the sixth day of extraction and focused solely on that cove. They extracted the rest of the southern side of the large mass. At the end of the day, the remaining variable milfoil spread across the northern center side of the cove. Divers noted that past the mass remaining in the center of the cove, variable milfoil density became sparser. Plants were growing in abundant bladderwort, lily pads, and native milfoil.

Log:

Diver	Date	Water Body	Vessel Used	Extraction Location	Number of Bags	Yield (Gallons)	Bottom Type
Sarah MacNeilage Patey	6/25/2026	Lake Monomonac	16' Starcraft	Heron Point cove	3	12.00	Silt
Jamie Burleigh	6/25/2026	Lake Monomonac	16' Starcraft	Heron Point cove	3	16.00	Silt
Sarah MacNeilage Patey	6/25/2026	Lake Monomonac	16' Starcraft	Heron Point cove mouth	1	2.00	Silt
Sarah MacNeilage Patey	6/25/2026	Lake Monomonac	16' Starcraft	Far north long cove	1	1.00	Silt
Jamie Burleigh	6/25/2026	Lake Monomonac	16' Starcraft	Far north long cove	1	3.00	Silt
				6/25/2026 total		34.00	
Sarah MacNeilage Patey	6/26/2026	Lake Monomonac	16' Starcraft	Swan Point cove	9	23.00	Silt
Jamie Burleigh	6/26/2026	Lake Monomonac	16' Starcraft	Swan Point cove	10	40.50	Silt
				6/26/2026 total		63.50	Silt
Fragment pickup	6/29/2026	Lake Monomonac	16' Starcraft	Swan Point cove	1	1.00	Water
Jamie Burleigh	6/29/2026	Lake Monomonac	16' Starcraft	East Monomonac Road	1	1.00	Silt
Sarah MacNeilage Patey	6/29/2026	Lake Monomonac	16' Starcraft	Hybrid plant	1	0.50	Silt
Jamie Burleigh	6/29/2026	Lake Monomonac	16' Starcraft	Hybrid plant	1	7.50	Silt
Sarah MacNeilage Patey	6/29/2026	Lake Monomonac	16' Starcraft	Heron Point cove	1	2.50	Silt
Jamie Burleigh	6/29/2026	Lake Monomonac	16' Starcraft	Heron Point cove	1	2.50	Silt
				6/29/2026 total		15.00	
Sarah MacNeilage Patey	6/30/2026	Lake Monomonac	16' Starcraft	Heron Point cove	1	1.00	Silt
Jamie Burleigh	6/30/2026	Lake Monomonac	16' Starcraft	Heron Point cove	1	1.00	Silt
Sarah MacNeilage Patey	6/30/2026	Lake Monomonac	16' Starcraft	Swan Point cove	10	34.50	Silt
Jamie Burleigh	6/30/2026	Lake Monomonac	16' Starcraft	Swan Point cove	11	59.00	Silt
				6/30/2026 total		95.50	
Sarah MacNeilage Patey	7/7/2026	Lake Monomonac	16' Starcraft	Heron Point cove	1	0.50	Silt
Jamie Burleigh	7/7/2026	Lake Monomonac	16' Starcraft	Heron Point cove	2	3.00	Silt
Sarah MacNeilage Patey	7/7/2026	Lake Monomonac	16' Starcraft	Swan Point cove	4	16.00	Silt
Jamie Burleigh	7/7/2026	Lake Monomonac	16' Starcraft	Swan Point cove	6	25.00	Silt
				7/7/2026 total		44.50	
Sarah MacNeilage Patey	7/8/2026	Lake Monomonac	16' Starcraft	Swan Point cove	11	40.00	Silt
Jamie Burleigh	7/8/2026	Lake Monomonac	16' Starcraft	Swan Point cove	12	74.00	Silt
				7/8/2026 total		114.00	
				Total gallons extracted		366.50	

Map:



Photos:



Top left: The potential hybrid milfoil at the surface. The plant dried out quickly.

Top right: The stems of the potential hybrid milfoil were dark brown, nearly black, and very thick.

Bottom left: The potential hybrid milfoil plant underwater. Fronds and leaves were both very long and brown in color. The fronds were extremely fragile.

Bottom right: The flowering top of a frond from the potential hybrid milfoil plant which had reached the surface but was underwater when divers were extracting. The plant was in the path of a docked pontoon boat.



Top left: The potential hybrid milfoil plant. Its long fronds laying over.

Top right: The tall variable milfoil plant from the mouth of Heron Point cove. Fronds grew plentiful roots.

Bottom left and right: Variable milfoil plants from inside Heron Point cove. Plants were smaller but with fronds of varying lengths, from one foot to four feet or more. Fronds had green tips, but were generally brown from the silt.



Top left: A very large, long mass of flowering and self-fragmenting variable milfoil in the middle of Swan Point cove. Fronds readily reached the surface and were laying over towards the north of the cove.

Top right: One of the flowering fronds from the Swan Point cove variable milfoil.

Bottom left: Variable milfoil in Swan Point cove surrounding the floating dock.

Bottom right: One of the large variable milfoil plants in Swan Point cove not attached to the large mass, but like most of the plants, it reached the surface.



Another photo of the large mass of flowering and self-fragmenting variable milfoil in Swan Point cove.