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## **July 28, 2024**

### **Extraction Report**

Location: Country Pond, Newton/Kingston, NH

Date(s): July 22-26, 2024

Exotic/Invasive Plant(s): Spiny/Brittle naiad

Diver(s): Sarah MacNeilage Patey, Jamie Burleigh

Support Crew: None

Total amount extracted (in gallons): 38.25

Total time worked (in hours): 34.5

Detailed report includes Extraction Narrative, Extraction Log, Map, Photos

#### **Narrative:**

Over five days, divers extracted spiny/brittle naiad from many of the points of the map provided by NH DES (see the circled areas on the map below). In all areas, divers found at least three native, non-invasive naiads in addition to the invasive, exotic spiny/brittle naiad. On the first day, they extracted from the two points on the northeast of the island, the Boy Scout camp beach and docks, and the boat launch beach. Off the northeast of the island, divers extracted a small cluster of plants. Plants were small and less than a foot tall. In the Boy Scout camp beach and dock area, divers found intermittent plants throughout the southern side, but amongst the swim docks they found a large swath of plants. The closer to the docks, the more tangled with the native plants the spiny/brittle naiad were. Plants in this area were readily seen from the surface in the shallow water and were up to two feet tall in the deeper water. Divers spent most of the day at this location, and they determined a recheck of this area would be needed. Divers had seen fragments of spiny/brittle naiad when launching the boat that morning, and at the end of the day, they searched the lily pads, reeds, and beach area in the vicinity of the boat launch. There, under the brown-black algae and decomposed matter, divers found a patch of plants. They were less than six inches long, just off to the left of the beach.

On the second day, divers extracted solely from the large field off the northwestern area of the island. Plants were found farther offshore, in the lily pads, and farther down the island shoreline in open water here. Growth here is extensive. Plants were two to four feet tall in five feet of water. Farther down the shoreline, plants became more interspersed, but in the open water near the lily pads, they are less than a foot apart. Divers were able to clear the edges of the area and some of the bulk, but they determined this area would need a second day of diving.

On the third day, divers extracted from five areas: the north-most points along a private driveway in Kingston, again from the Boy Scout camp beach and docks, and down the western side of the peninsula. Along the north-most points on the map, divers extracted from the shoreline, lily pads, and reeds. Divers scoured the area of the

single mark, but they did not find any plants. Divers returned to the Boy Scout camp beach and docks, where they extracted what little remained from the previous day's extraction. Divers began extracting from marks along the western side of the Concannon Road peninsula. In the top-most area, divers did not find the plants in the open water abutting the lilies. They extracted plants from along the shoreline and open areas within the lilies in front of the crumbling stone wall. This area was very shallow, and plants did not extend into the open water, but were contained by the edges of the lilies. The next cluster along Concannon Road was small as well, with plants covered by the densely packed lilies. Divers ended the day where Concannon Road and Wilders Grove Road meet. Divers extracted spiny/brittle naiad plants from the shoreline and in the open water between the moored boat and the floating dock. The latter being where most of the plants were. Plants along the shoreline were covered in the same brown-black algae and decomposed matter, like those extracted from the boat launch beach. Divers were unable to extract all plants from this area in one attempt and decided to return the next day.

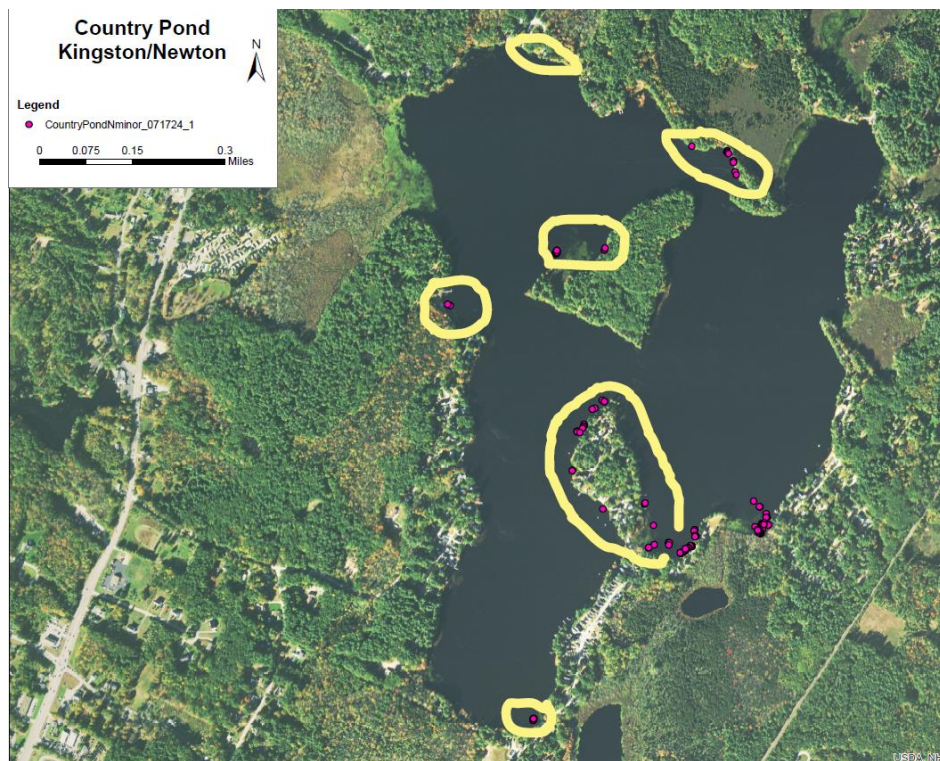
On the fourth day, divers extracted from the western side of the peninsula, the Newton boat launch, and an area on the eastern side of the peninsula. Divers began by continuing to extract from the Concannon Road and Wilders Grove Road area, where they were able to extract the remaining plants in the open water. They moved onto the Newton boat launch, where there was a small cluster of tiny plants on shore and a sizeable number of plants intertwined in the lily pads. Plants in the lilies were not in clusters, but one or two plants at a time reaching one to two feet tall. Divers determined this area needs to be revisited. Divers transited to the points of the eastern side of where Concannon Road and Wilders Grove Road meet, and they extracted from the area surrounding the blue and green topped boats. Plants were extracted from the lilies, where the mapped points were, but also from the beach of the other side of the boats and into the open water around the floating dock. Plants in the beach area and in the open water were small with much space in between them. In the lilies, plants were generally found in clusters and were no more than one and a half feet tall. At the end of the day, divers moved to the eastern Wilders Grove Road and Ridge Road area, where they left physical marks at points on the map for the next day.

On the fifth day, divers extracted from the area at the base of the eastern side of the peninsula. This area is inundated with spiny/brittle naiad. Divers found the plants at the marks on the map, but also well into the open water and around the floating docks. Plants were generally found in clusters, unless in the open water. Divers decided this area will need to be revisited as well. When divers return, they will extract from the areas needing more time and into the other areas along Ridge Road and the campground.

Log:

Diver	Date	Water Body	Vessel Used	Extraction Location	Number of Bags	Yield (Gallons)	Bottom Type
Sarah MacNeilage Patey	7/22/2024	Country Pond	16' Starcraft	Northmost points on island	1	0.25	Silt
Sarah MacNeilage Patey	7/22/2024	Country Pond	16' Starcraft	Boy Scout camp beach	2	2.50	Silt
Jamie Burleigh	7/22/2024	Country Pond	16' Starcraft	Boy Scout camp beach	2	3.50	Silt
Sarah MacNeilage Patey	7/22/2024	Country Pond	16' Starcraft	Boat launch beach	1	negligible	sand
				<b>7/22/2024 Total</b>		<b>6.25</b>	
Sarah MacNeilage Patey	7/23/2024	Country Pond	16' Starcraft	Island hot spot	3	4.50	Silt
Jamie Burleigh	7/23/2024	Country Pond	16' Starcraft	Island hot spot	3	7.50	Silt
				<b>7/23/2024 Total</b>		<b>12.00</b>	
Sarah MacNeilage Patey	7/24/2024	Country Pond	16' Starcraft	Northwest private driveway	1	less than 0.25	Silt
Jamie Burleigh	7/24/2024	Country Pond	16' Starcraft	Northwest private driveway	1	less than 0.25	Silt
Sarah MacNeilage Patey	7/24/2024	Country Pond	16' Starcraft	Boy Scout camp beach	1	less than 0.25	Silt
Jamie Burleigh	7/24/2024	Country Pond	16' Starcraft	Boy Scout camp beach	1	less than 0.25	Silt
Sarah MacNeilage Patey	7/24/2024	Country Pond	16' Starcraft	Northmost Concannon Rd	1	less than 0.25	Silt
Jamie Burleigh	7/24/2024	Country Pond	16' Starcraft	Northmost Concannon Rd	1	less than 0.25	Silt
Sarah MacNeilage Patey	7/24/2024	Country Pond	16' Starcraft	2nd northmost Concannon Rd	1	less than 0.25	
Jamie Burleigh	7/24/2024	Country Pond	16' Starcraft	2nd northmost Concannon Rd	1	1.00	Silt
Sarah MacNeilage Patey	7/24/2024	Country Pond	16' Starcraft	Concannon/Wilders Grove Rd/southwest	1	0.25	Sand, silt
Jamie Burleigh	7/24/2024	Country Pond	16' Starcraft	Concannon/Wilders Grove Rd/southwest	1	1.00	Silt
				<b>7/24/2024 Total</b>		<b>4.00</b>	
Sarah MacNeilage Patey	7/25/2024	Country Pond	16' Starcraft	Concannon/Wilders Grove Rd/southwest	1	1.00	Silt
Jamie Burleigh	7/25/2024	Country Pond	16' Starcraft	Concannon/Wilders Grove Rd/southwest	1	0.50	Silt
Sarah MacNeilage Patey	7/25/2024	Country Pond	16' Starcraft	Newton boat launch	2	1.50	Sand, silt
Jamie Burleigh	7/25/2024	Country Pond	16' Starcraft	Newton boat launch	1	3.00	Silt
Sarah MacNeilage Patey	7/25/2024	Country Pond	16' Starcraft	Concannon/Wilders Grove Rd/southeast	1	1.50	Sand, silt
Jamie Burleigh	7/25/2024	Country Pond	16' Starcraft	Concannon/Wilders Grove Rd/southeast	1	1.00	Sand, silt
				<b>Total 7/25/2024</b>		<b>8.50</b>	
Sarah MacNeilage Patey		Country Pond	16' Starcraft	Wilders Grove Rd southeast	2	3.50	Silt
Jamie Burleigh		Country Pond	16' Starcraft	Ridge Rd west	2	4.00	Silt
				<b>Total 7/26/2024</b>		<b>7.50</b>	
				<b>Total gallons extracted</b>		<b>38.25</b>	

Map:



Photos:



Spiny/brittle  
naiad plants  
under some  
lily pads  
(left), and in  
less  
vegetation  
dense areas  
(right).



Spiny/brittle naiad  
and native naiads, of  
which there were at  
least three varieties.