



Bristol Pond Boat Launch Stewardship Summary

June 12th – September 13th, 2020



Prepared by Matthew Gorton

Under Grant Agreement: L-2020-026 (Lewis Creek Watershed Aquatic Invasive Species Management Plan and Boat Launch Steward Initiative)
September 30, 2020

Introduction

Bristol Pond is a popular destination for anglers, recreational boaters, and wildlife enthusiasts. As of 2020, there are two known aquatic invasive species (AIS) in Bristol Pond; European Frogbit (*Hydrocharis morsus-ranae*) and Eurasian Watermilfoil (*Myriophyllum spicatum*). Therefore, Bristol Pond could function as a point of introduction for the spread of AIS in the Lewis Creek watershed and throughout the State. The purpose of establishing a boat launch steward program at Bristol Pond was to reduce the risk of spreading AIS from Bristol Pond to other waterbodies and to prevent the further introduction of AIS to Bristol Pond.

Lewis Creek Association (LCA) modeled its Bristol Pond Boat Launch Steward Program after the Lake Champlain Basin Program's (LCBP) boat launch steward program and the Vermont Department of Environmental Conservation's Public Access Greeter Program. Funding for the program was provided by the LCBP and NEIW PCC. The goal of the program was to prevent the spread of AIS by inspecting watercraft for AIS and biological materials, identifying and removing suspicious specimens, collecting data, and educating the public about AIS spread prevention.

The boat launch steward was present at the boat launch on Bristol Pond from Friday-Monday, typically from 7 AM until 12 PM, and was asked to record: the watercraft type, group size, state of the watercraft registration, if applicable, if the visitor was launching or retrieving, the time of inspection, if the visitor had any previous contact with a boat launch steward, if the visitor accepted or refused the inspection, if the visitor took any AIS spread prevention steps, what species were found on the watercraft, the last waterbody visited in the two weeks prior to the inspection, and what waterbody the visitor would go to next. The steward also collected plants that he couldn't identify, which were then identified by the QA Project Officer. The following figures and tables are a summary of the data collected at Bristol Pond from June 12th, 2020 through September 13th, 2020.

Data Summary

Over the course of the summer, the Bristol Pond boat steward interacted with 570 watercrafts. Of the 570 watercrafts, only three visitors refused to have their watercraft inspected for AIS. The most interactions with visitors occurred in July, followed by June (Figure 1). 4th of July weekend was the busiest weekend of the season, accounting for 17.5% of the visitor interactions.

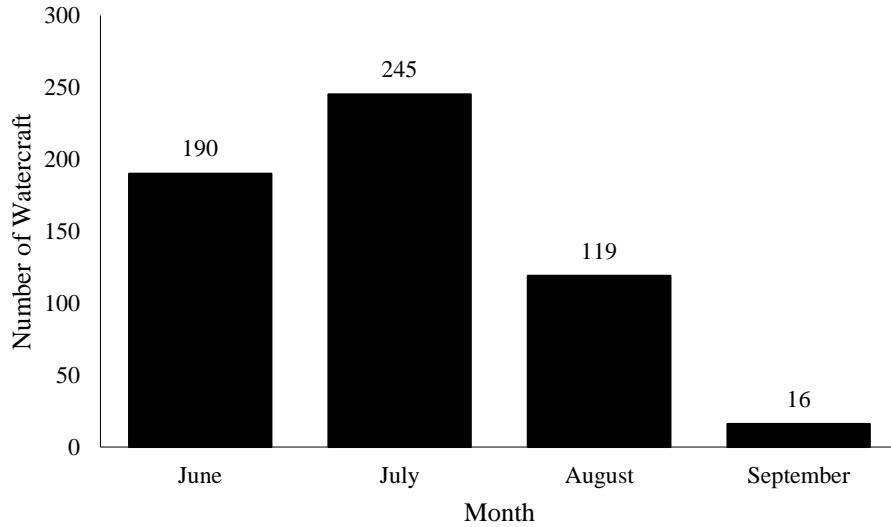


Figure 1. Number of watercrafts at Bristol Pond, Vermont by month during the summer of 2020.

LCA’s boat launch steward was typically at the launch from 7 AM until 12 PM, Friday through Monday. However, these hours and days sometimes varied. LCA’s boat launch steward interacted more frequently with visitors launching into Bristol Pond than visitors retrieving from the pond. Most visitors would launch or retrieve their watercraft between 8 AM and 11 AM (Figure 2). If the boat launch steward program was limited to the hours of 8-11 AM, we would capture around 83% of the boat launches/retrievals occurring. This would minimize the cost of running the program, while maximizing the number of boats reached in a shorter time frame.

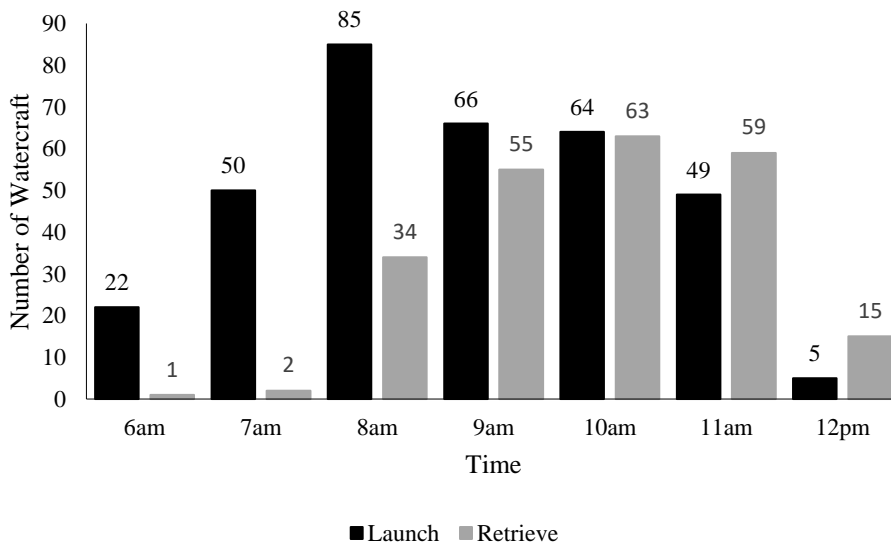


Figure 2. Number of watercrafts launching or retrieving from Bristol Pond, Vermont by time of day during the summer of 2020.

Sunday and Saturday were typically the busiest days at the boat launch (Figure 3). This was closely followed by Monday and Friday, implying that it is important to maintain all four days of boat launch stewardship at the pond. The majority of watercrafts being used at Bristol Pond were kayaks, followed by motorboats, and canoes (Figure 4). The group size of visitors ranged from one to six people per group, with one person per group occurring most frequently (Figure 5). The vast majority of watercraft that were registered came from Vermont (Figure 6).

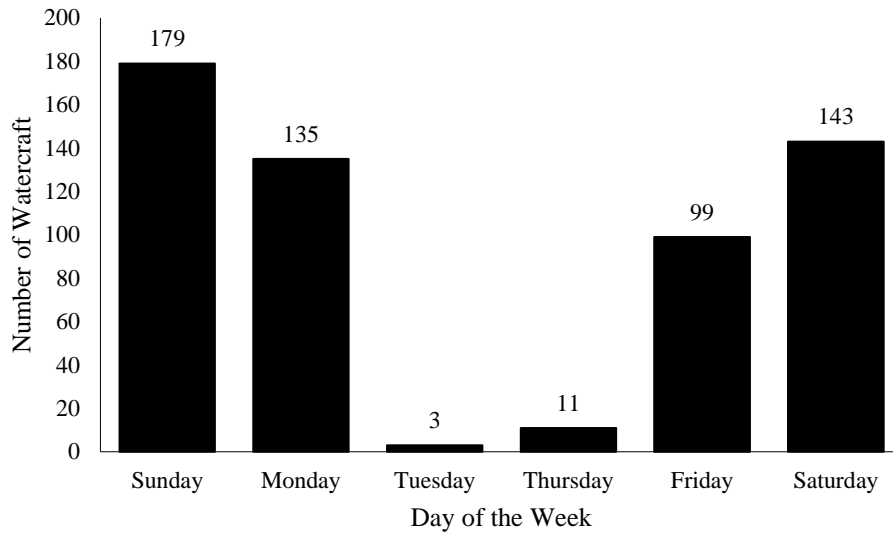


Figure 3. Number of watercrafts at Bristol Pond, Vermont by day of the week during the summer of 2020.

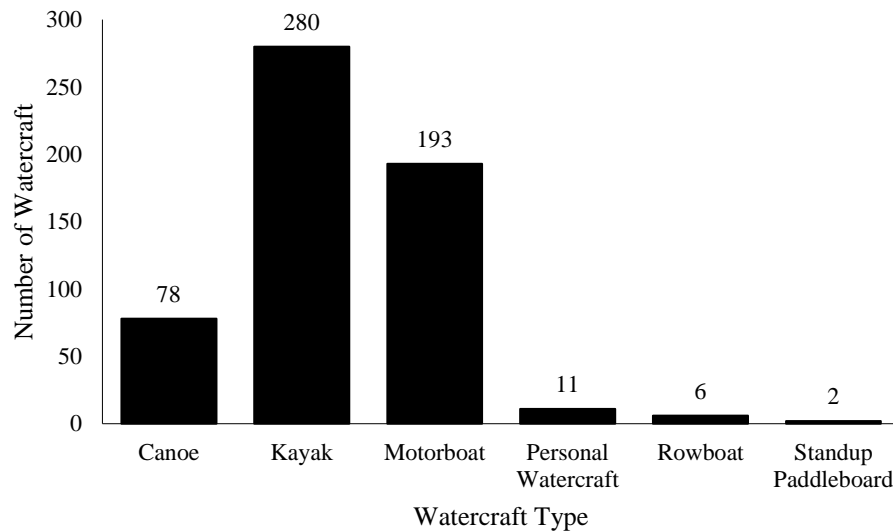


Figure 4. Number of watercrafts at Bristol Pond, Vermont by watercraft type during the summer of 2020.

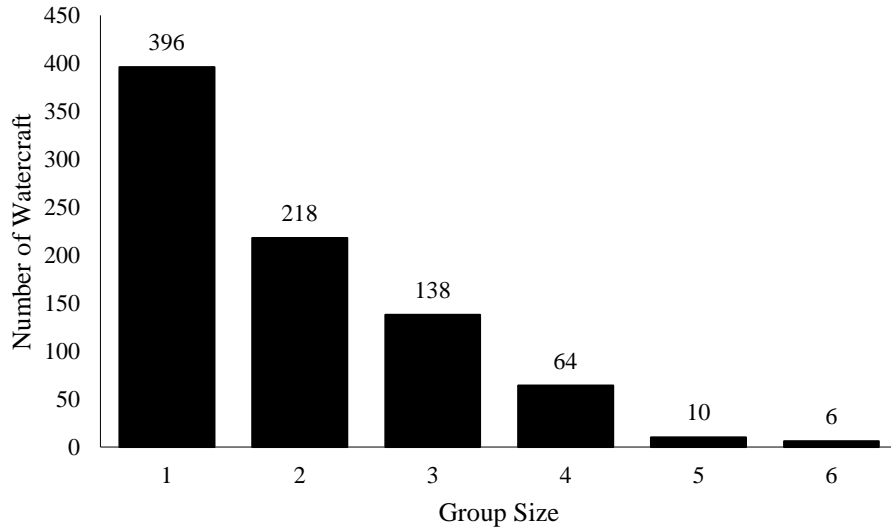


Figure 5. Number of watercrafts at Bristol Pond, Vermont by group size during the summer of 2020.

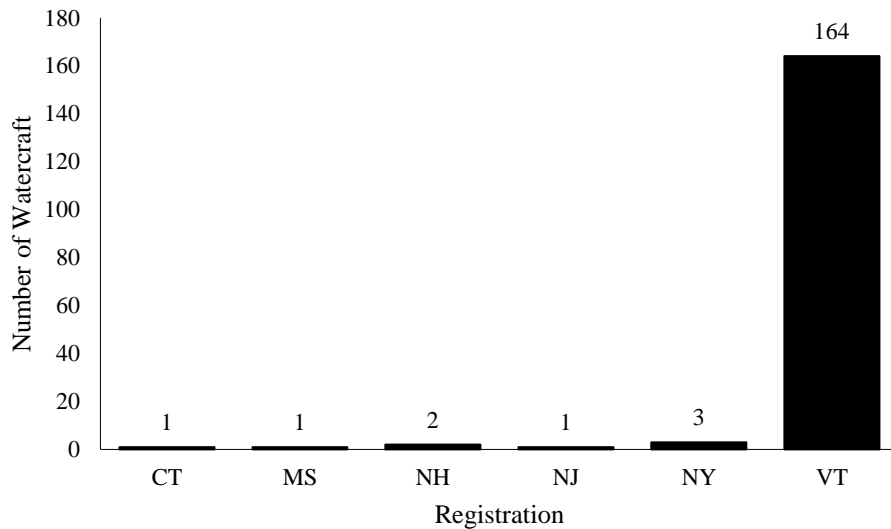


Figure 6. Number of watercrafts at Bristol Pond, Vermont by state registration during the summer of 2020. *MS denotes Massachusetts’ watercraft registration code, not Mississippi.

Most visitors visiting the pond have had prior contact with a boat launch steward, either at Bristol Pond or elsewhere (Figure 7). The boat launch steward asked each visitor if they took any measures to prevent the spread of AIS prior to each inspection. The boat launch steward determined that the visitor took AIS spread prevention measures if the visitor clearly connected their actions to preventing the spread of AIS. Approximately 62% of visitors took AIS spread prevention measures before visiting Bristol Pond, while around 38% of visitors did not (Figure 8).

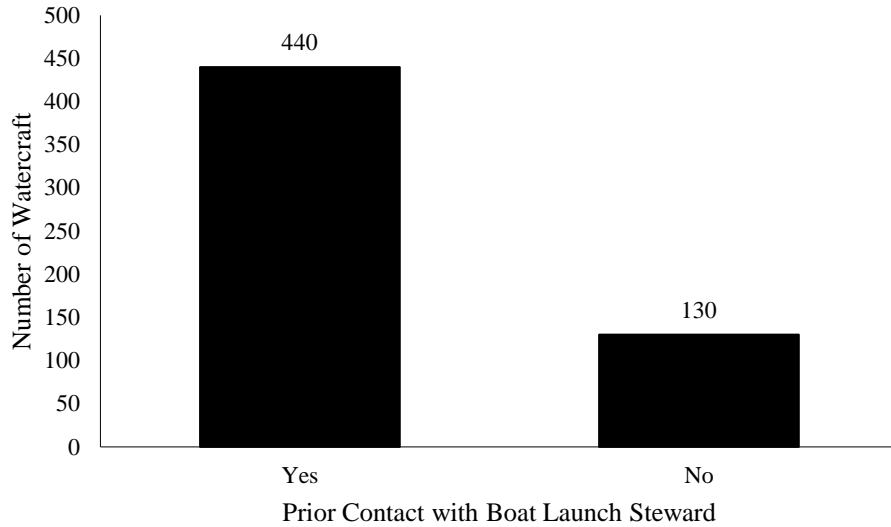


Figure 7. Number of watercraft owners who had prior contact with a boat launch steward at Bristol Pond, Vermont during the summer of 2020.

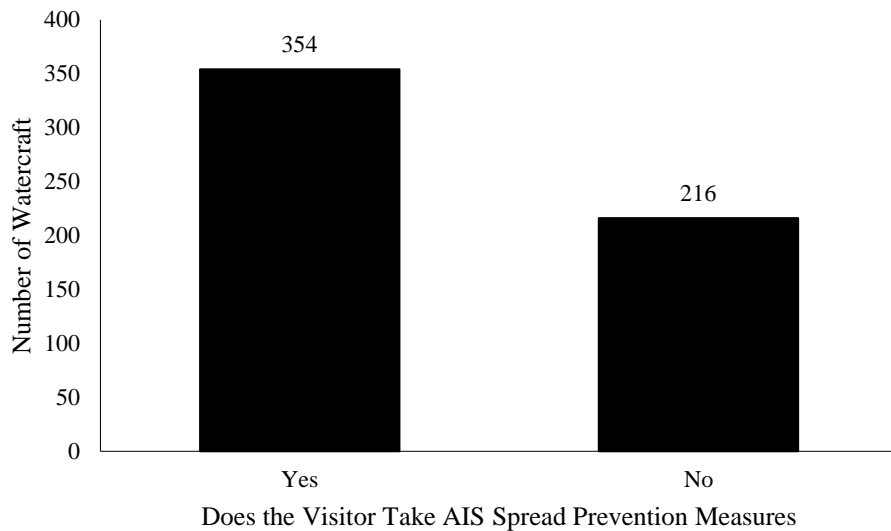


Figure 8. Number of watercraft owners who took AIS spread prevention measures before visiting Bristol Pond, Vermont during the summer of 2020.

Of the visitors who did take AIS spread prevention measures, most either washed and/or dried their watercraft (Figure 9). If the visitor did not know how to prevent the spread of AIS, the boat launch steward would educate the visitor on the various AIS spread prevention measures.

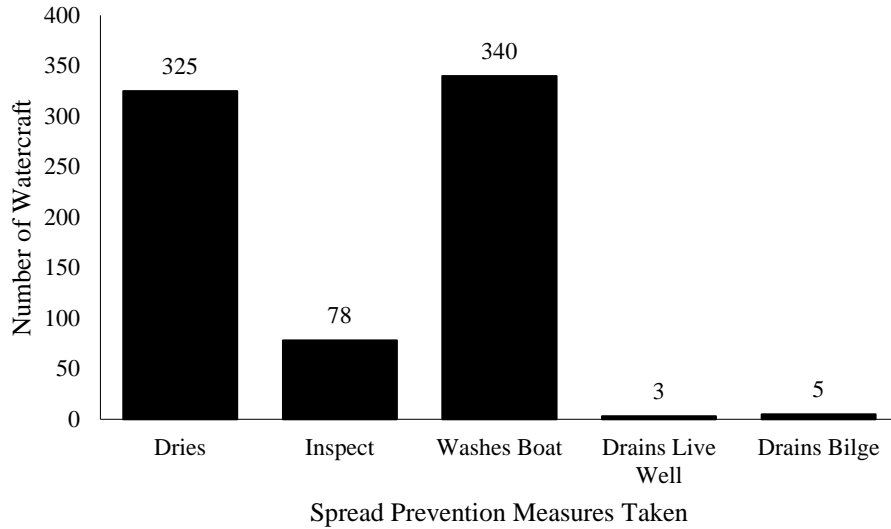


Figure 9. Spread prevention measures taken by watercraft owners at Bristol Pond, Vermont during the summer of 2020.

Most watercraft did not have any AIS on them (Figure 10). However, Eurasian Watermilfoil was the most commonly found plant on the watercraft or their trailers (Figure 11). The boat launch steward found most of the aquatic plants on motorboats, which was probably due to there being more pieces of equipment protruding into the water, compared to other types of watercraft (Table 1). If the boat launch steward hadn't intercepted the vegetation on the watercrafts launching into and retrieving from Bristol Pond, the watercraft could have served as vectors of infestation to 63 different bodies of water.

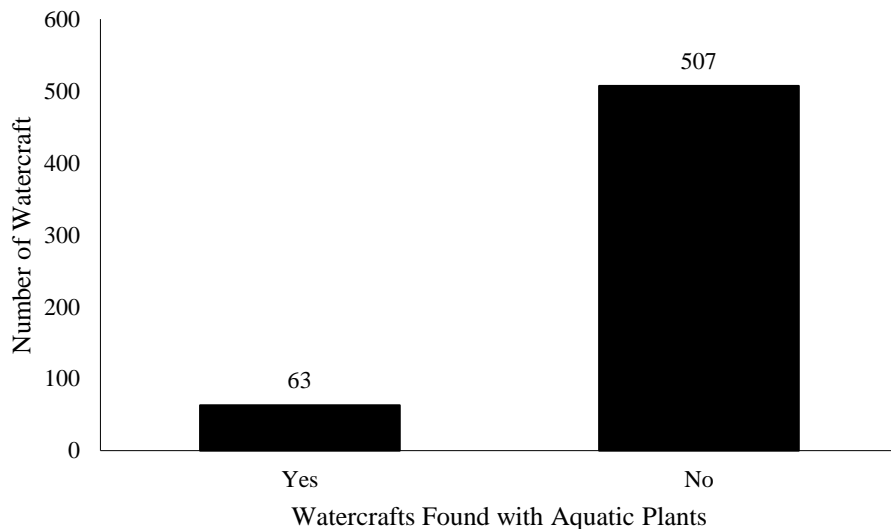


Figure 10. Number of watercrafts that had aquatic plants on them during inspections at Bristol Pond, Vermont during the summer of 2020.

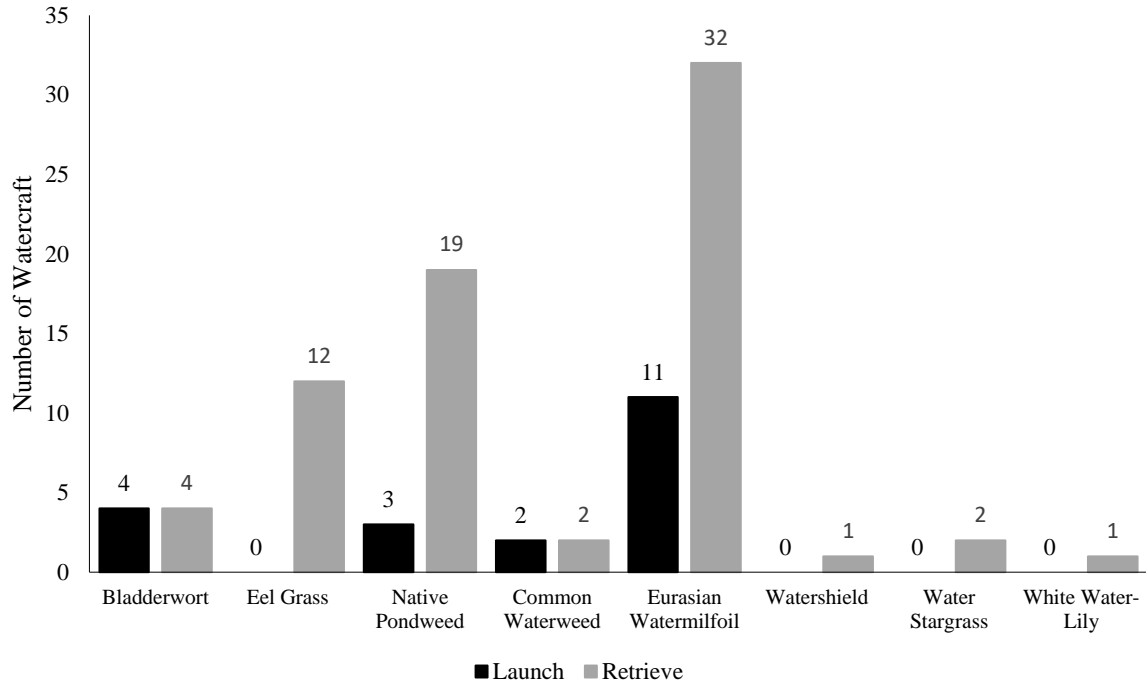


Figure 11. Species found on watercrafts at Bristol Pond, Vermont during the summer of 2020.

Table 1. Number of boats that had aquatic plants on them prior to inspection at Bristol Pond, Vermont during the summer of 2020.

Boat	N
Kayak	9
Canoe	7
Personal Watercraft	1
Motorboat	47
Rowboat	0
Standup Paddleboard	0

Watercraft launching into Bristol Pond were known to have previously been in at least 48 different waterbodies (Table 2). 51.5% of the watercraft launching into Bristol Pond had previously been in other waterbodies, while 48.5% of watercraft had previously been launched at Bristol Pond. Visitors retrieving their watercraft from Bristol Pond reported that they would be launching at a minimum of 16 different waterbodies (Table 3).

Table 2. Last waterbody that watercrafts were previously retrieved prior to launching at Bristol Pond, Vermont during the summer of 2020.

Waterbody	N
Vermont	
Berlin Pond, Berlin, VT	3
Blueberry Lake, Warren, VT	10
Bristol Pond, Bristol, VT	174
Caspian Lake, Greensboro, VT	1
Chittenden Reservoir, Chittenden, VT	6
Connecticut River, VT	1
Dead Creek, Addison, VT	3
Duck Pond, Shelburne, VT	2
Echo Lake, Plymouth, VT	1
Fern Lake, Leicester, VT	2
Gale Meadows Pond, Londonderry, VT	1
Glen Lake, Fair Haven, VT	1
Goshen Dam, Goshen, VT	1
Huff Pond, Salisbury, VT	2
Kent Pond, Killington, VT	1
Kingsland Bay, Lake Champlain, VT	1
Lake Bomoseen, Castleton, VT	1
Lake Champlain, VT	33
Lake Dunmore, Salisbury, VT	12
Lake Eligo, Greensboro, VT	1
Lake Elmore, Elmore, VT	1
Lake Iroquois, Hinesburg, VT	8
Lake Saint Catherine, Benson, VT	1
LaPlatte River, Shelburne, VT	4
Lewis Creek, VT	1
Little Lake, Wells, VT	2
Lowell Lake, Londonderry, VT	1
McIntosh Pond, Royalton, VT	1
Monkton Pond, Monkton, VT	16
Norton Pond, Norton, VT	2
Otter Creek, VT	12
Shelburne Bay, Shelburne, VT	1
Shelburne Pond, Shelburne, VT	2
South Lake Champlain, VT	1
Sunset Lake, Benson, VT	2
Sunset Lake, Brookfield, VT	1
Waterbury Reservoir, Waterbury, VT	5
Winooski River, VT	1
Other	
Connecticut River, CT	1
Indiana (Unidentified)	1
Concord River, MA	4
Lake Aziscohos, ME	1
Maine (Unidentified)	3
New Hampshire (Unidentified)	1
Lake George, NY	3
Rackett River, NY	1
Gulf of Mexico, Texas	1
Unknown	20
First time in water	4

Table 3. Next waterbody that watercraft owners reported they would launch after retrieving from Bristol Pond, Vermont during the summer of 2020.

Waterbody	N
Vermont	
Blueberry Lake, Warren, VT	1
Bristol Pond, Bristol, VT	103
Curtis Pond, Calais, VT	1
Island Pond, Island Pond, VT	1
Lake Bomoseen, Castleton, VT	1
Lake Champlain, VT	16
Lake Dunmore, Salisbury, VT	2
Lake Eligo, Greensboro, VT	1
Lake Iroquois, Hinesburg, VT	1
LaPlatte River, Shelburne, VT	1
Monkton Pond, Monkton, VT	11
Otter Creek, VT	4
Shelburne Pond, Shelburne, VT	1
Waterbury Reservoir, Waterbury, VT	4
Other	
Indiana (Unidentified)	2
Great Pond, Maine	1
Unknown	63

51.9% of the watercraft that were retrieved from Bristol Pond were reported as launching next into a different waterbody, while 48.1% of watercraft retrieving from the pond would be launched into Bristol Pond next. The vast majority of watercraft launched into Bristol Pond came from waterbodies located in Vermont (Table 4). The majority of watercraft retrieving from Bristol Pond were likely to be launched next into a Vermont waterbody (Table 5).

Table 4. Last state that watercrafts were previously retrieved from prior to launching at Bristol Pond, Vermont during the summer of 2020.

State	Kayak	Canoe	Personal Watercraft	Motorboat	Rowboat	Standup Paddleboard
VT	172	41	6	98	2	0
CT	1	0	0	0	0	0
IN	1	0	0	0	0	0
MA	4	0	0	0	0	0
ME	2	3	0	0	0	0
NH	0	0	1	0	0	0
NY	4	0	0	0	0	0
TX	1	0	0	0	0	0
Unknown	7	5	1	5	1	1

Table 5. Next state that watercraft owners reported they would launch into after retrieving from Bristol Pond, Vermont during the summer of 2020.

State	Kayak	Canoe	Personal Watercraft	Motorboat	Rowboat	Standup Paddleboard
VT	73	13	2	55	3	0
IN	1	0	0	0	0	0
ME	0	0	0	1	0	0
Unknown	13	14	1	34	0	1

Conclusion

The Bristol Pond Boat Launch Steward Program’s first year was successful in intercepting AIS and educating the public on the issues surrounding AIS. The vast majority of visitors to Bristol Pond seemed excited to have the program there and many people from the community went to the pond to see LCA’s boat launch stewards in action. Visual inspections and hand removal of aquatic vegetation has been shown to be extremely effective at preventing AIS from spreading to other bodies of water. LCA’s boat launch steward program could potentially prevent, both directly and indirectly, AIS from spreading to other uninfested waterbodies. Due to its success, the program could feasibly continue in perpetuity and expand to Monkton Pond as long as the funding is available.

Funding Statement

This project has been funded by an agreement awarded by the Great Lakes Fishery Commission (GLFC) to NEIWPC in partnership with the Lake Champlain Basin Program (LCBP). The contents of this document do not necessarily reflect the views and policies of NEIWPC, LCBP, or GLFC, nor does NEIWPC, LCBP, or GLFC endorse trade names or recommend the use of commercial products mentioned in this document.