



Bristol Pond and Monkton Pond Boat Launch Stewardship Summary June 24th – September 24th, 2023



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Launch Steward, and Lewis Creek Knotweed Initiative)
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Introduction

Bristol Pond and Monkton Pond are popular destinations for anglers, recreational boaters, and wildlife enthusiasts. As of 2023, there are three known aquatic invasive species (AIS) in Bristol Pond: European Frogbit (*Hydrocharis morsus-ranae*), Eurasian Watermilfoil (*Myriophyllum spicatum*), and Brittle Naiad (*Najas minor*) (discovered by the boat launch stewards in 2021 at Bristol Pond) and there are two known AIS in Monkton Pond: Eurasian Watermilfoil and Curlyleaf Pondweed (*Potamogeton crispus*). Therefore, Bristol Pond and Monkton Pond could function as points of introduction for the spread of AIS in the Lewis Creek watershed and throughout the State. The purpose of establishing boat launch steward programs at Bristol Pond and Monkton Pond was to reduce the risk of spreading AIS from Bristol Pond and Monkton Pond to other waterbodies and to prevent the further introduction of AIS to Bristol Pond and Monkton Pond.

Lewis Creek Association (LCA) modeled its 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. This was the fourth year the Boat Launch Steward Program occurred at Bristol Pond and the third year it occurred at Monkton Pond. Funding for the program was provided by the LCBP and NEIW PCC. The goal of the program is 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 stewards were typically present at the boat launches at Bristol Pond and Monkton Pond from Friday-Sunday, from 7 AM until 1 PM on Fridays and from 7 AM until 2 PM on Saturdays and Sundays. The boat launch stewards were asked to record: the watercraft type, group size, if the visitor was launching or retrieving, the time of inspection, if the visitor was familiar with aquatic invasive species (AIS), if the visitor accepted or refused the inspection, what species were found on the watercraft, and the last waterbody visited in the two weeks prior to the inspection. The steward also collected plants that they 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 and Monkton Pond from June 24th, 2023 through September 24th, 2023.

Compared to previous years, the boat stewards began an average of two weeks later compared to the past three years that the program has been running, which could have contributed to lower total numbers for data collection. Vermont state removed some questions from their survey this year, so these data were not collected this year.

Data Summary

Over the course of the summer, the LCA boat launch stewards interacted with 195 watercraft at Bristol Pond and 64 watercraft at Monkton Pond. At Bristol Pond, 2 visitors refused to have their watercraft inspected for AIS. One visitor refused to have their watercraft inspected at Monkton Pond. 63.0% of the watercraft that the boat launch stewards interacted with at Bristol Pond were launching their boats. 70.8% of the watercraft that the boat launch stewards interacted with at Monkton Pond were launching their boats. The most interactions with visitors occurred in July (Figure 1).

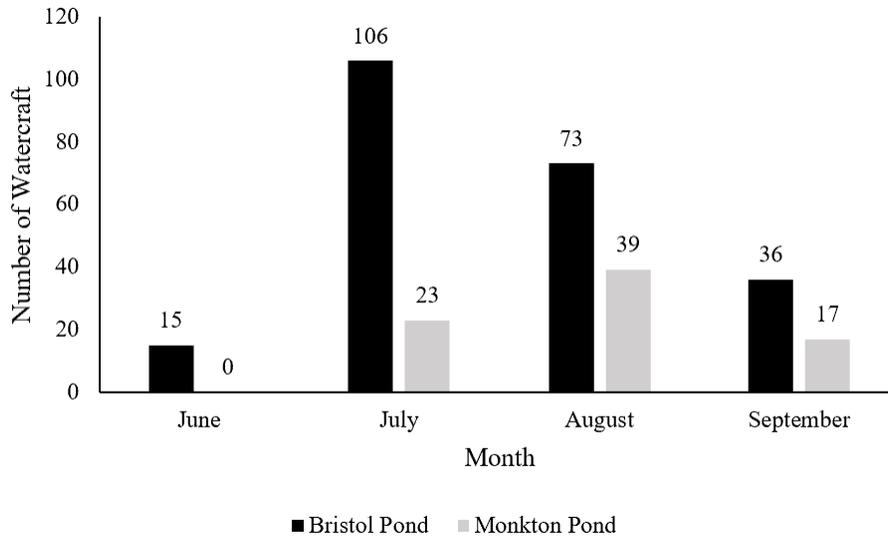


Figure 1. Number of watercrafts at Bristol Pond and Monkton Pond, Vermont by month during the summer of 2023.

LCA's boat launch stewards were typically at the launch from 7 AM until 1 PM on Fridays, and from 7 AM until 2 PM on Saturdays and Sundays. However, these hours and days sometimes varied. LCA's boat launch stewards interacted with most visitors between 10 AM and 12 PM at both Bristol Pond and Monkton Pond (Figure 2). 66.1% of visitors that the boat launch stewards interacted with at Bristol Pond occurred between 10 AM and 12 PM, while 79.7% of visitors that the boat launch stewards interacted with at Monkton Pond occurred between 10 AM and 12 PM.

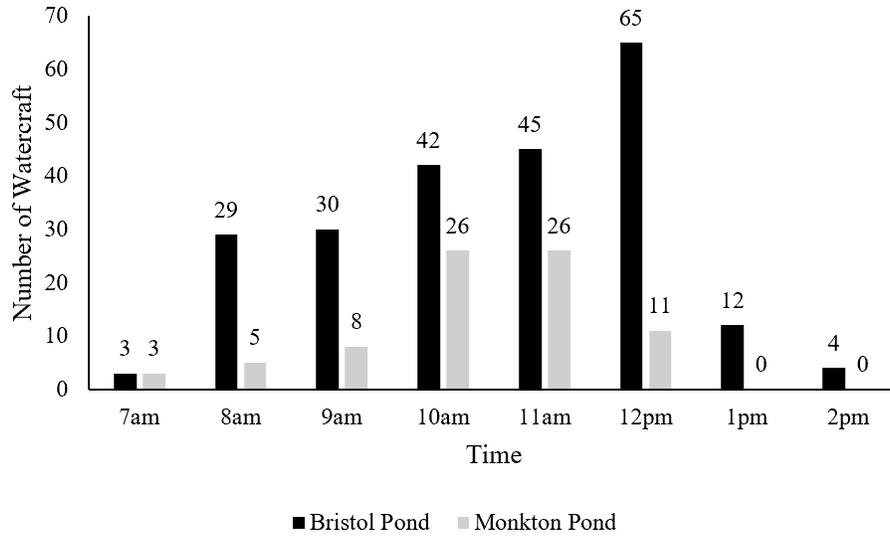


Figure 2. Number of watercrafts launching or retrieving from Bristol Pond and Monkton Pond, Vermont by time of day during the summer of 2023.

70.0% of interactions at Bristol Pond occurred on Saturdays and Sundays, whereas 48.1% of interactions at Monkton Pond occurred only on Saturdays (Figure 3). The majority of watercraft being used at Bristol Pond and Monkton Pond were kayaks, followed by motorboats, and canoes (Figure 4). The groups size of visitors ranged from 1 to 4 people per group, with 1 person per group occurring most frequently at both Bristol and Monkton Ponds (Figure 5).

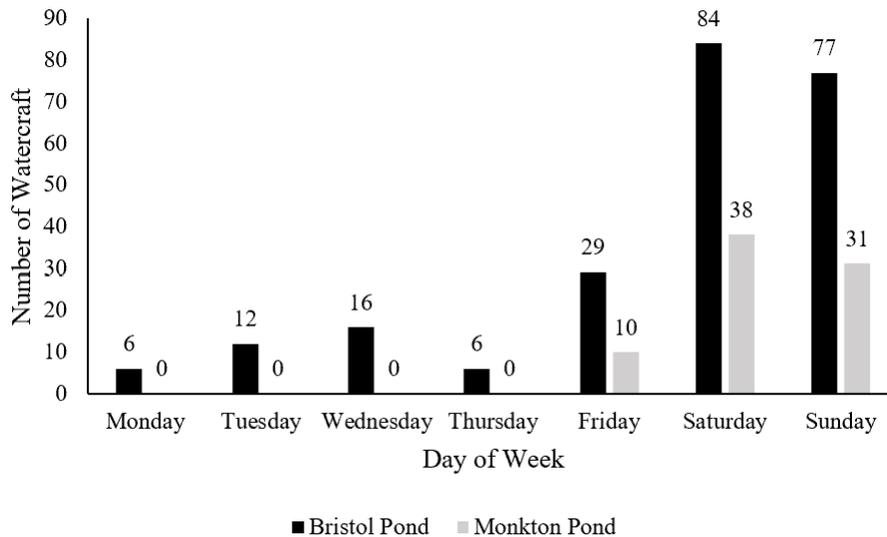


Figure 3. Number of watercrafts at Bristol Pond and Monkton Pond, Vermont by day of the week during the summer of 2023.

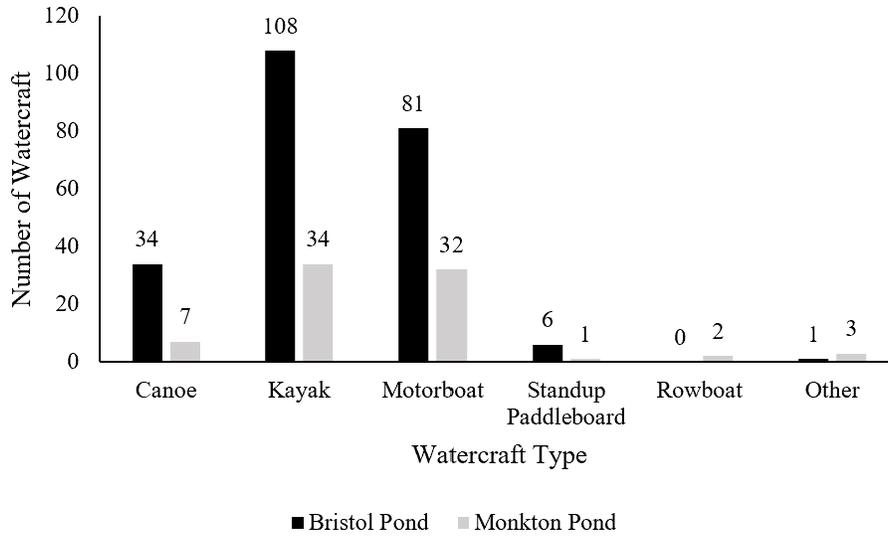


Figure 4. Number of watercrafts at Bristol Pond and Monkton Pond, Vermont by watercraft type during the summer of 2023.

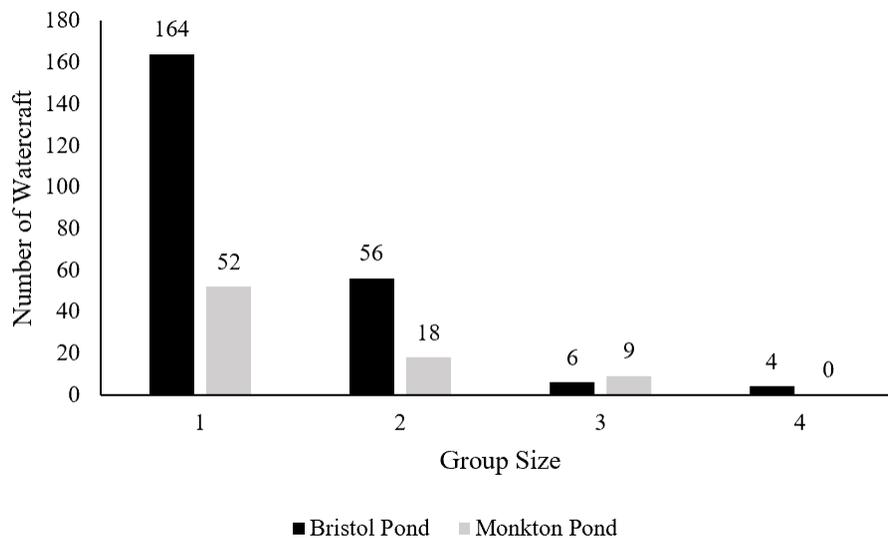


Figure 5. Number of watercrafts at Bristol Pond and Monkton Pond, Vermont by group size during the summer of 2023.

Most visitors were familiar with aquatic invasive species or had heard about AIS elsewhere (Figure 6). If the visitors were unfamiliar with AIS, the boat launch stewards would educate the visitor on the prevalence and concerns of AIS, the types of AIS found in Bristol and Monkton Ponds, and various techniques to prevent the spread of AIS.

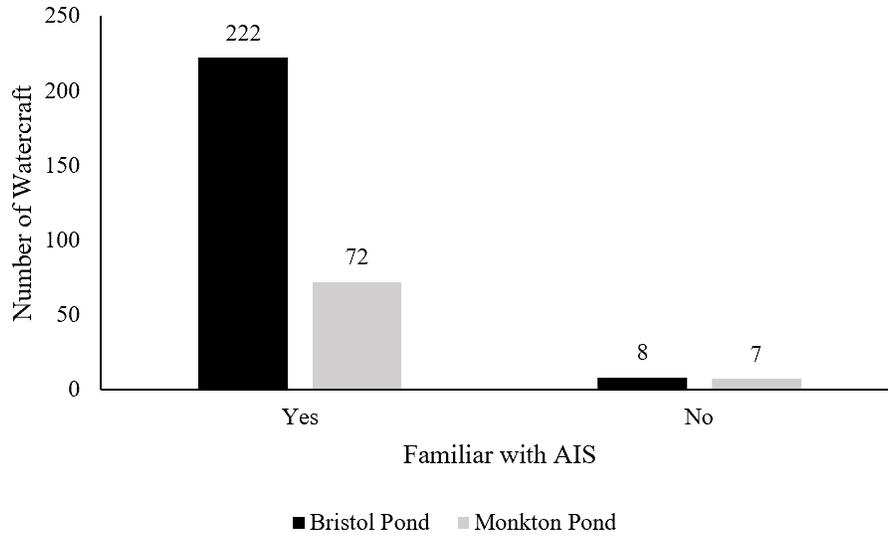


Figure 6. Number of watercraft owners who were familiar with aquatic invasive species (AIS) at Bristol Pond and Monkton Pond, Vermont during the summer of 2023.

Most watercraft at Bristol Pond and Monkton Pond did not have any aquatic plants on them. However, more plants were found on boats retrieving from both ponds, compared to launching (Figure 7 and Figure 8). Eurasian Watermilfoil, followed by miscellaneous debris/mud, were the most commonly found aquatic plants on watercraft and their trailers at Bristol Pond and Monkton Pond (Table 1). We noticed one piece of Brittle Naiad on one watercraft this year, though the boat stewards spent their spare time at Bristol Pond pulling out the small infestation near the dock. On July 8, the boat steward at Bristol Pond was joined by a team of three from VTDEC to help pull the Brittle Naiad. The boat launch stewards found most of the aquatic plants on motorboats at Bristol Pond and Monkton Pond (Table 2). 23.5% of motorboats at Bristol Pond had aquatic plants on them prior to inspection, while 31.3% of motorboats at Monkton Pond had aquatic plants on them prior to inspection (Table 2).

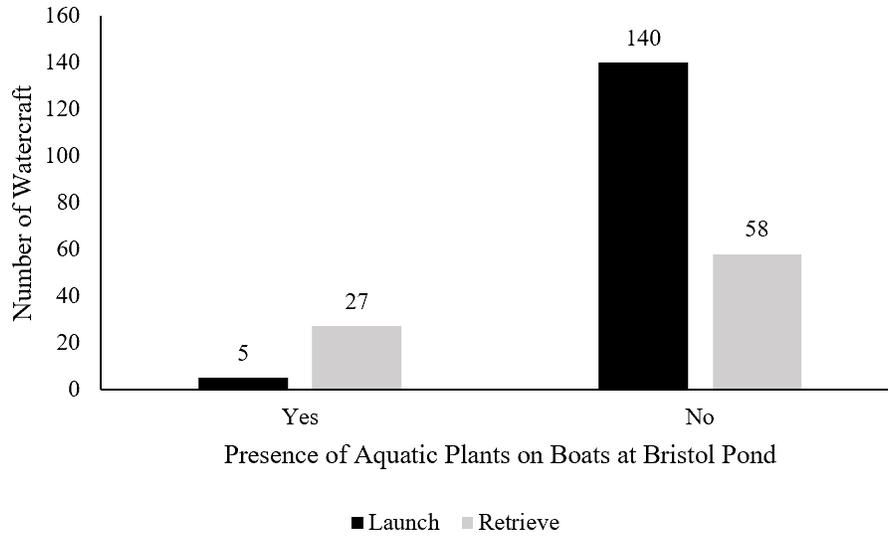


Figure 7. Number of watercrafts that had aquatic plants on them during inspections at Bristol Pond, Vermont during the summer of 2023.

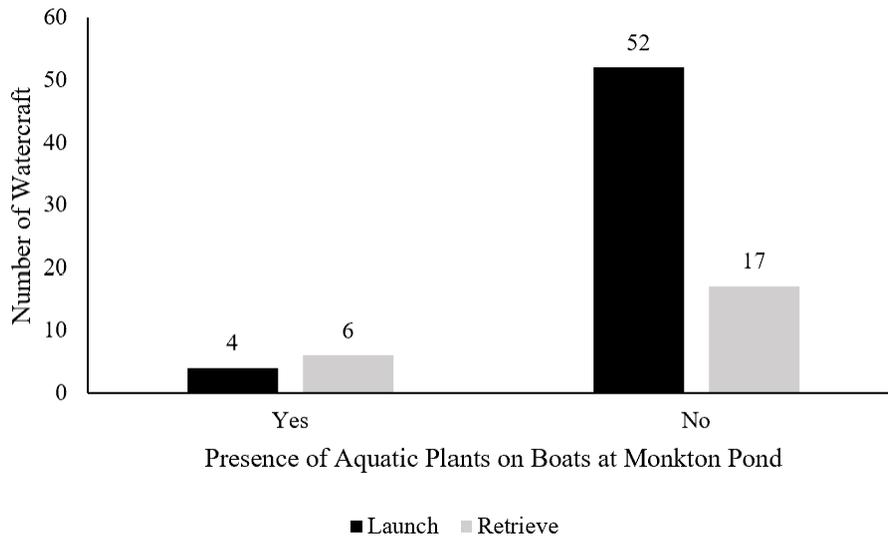


Figure 8. Number of watercrafts that had aquatic plants on them during inspections at Monkton Pond, Vermont during the summer of 2023.

Table 1. Species found on watercrafts at Bristol Pond and Monkton Pond, Vermont during the summer of 2023. * indicates aquatic invasive species.

Species Present	Bristol Pond	Monkton Pond
Bladderwort	1	0
Brittle Naiad	1	0
Eurasian Watermilfoil*	29	4
European Frogbit*	2	0
Miscellaneous Debris/Mud	15	5
Pond Lily	1	1
Unknown	4	2

Table 2. Number and percentage of boats that had aquatic plants on them prior to inspection at Bristol Pond and Monkton Pond, Vermont during the summer of 2023.

Watercraft Type	Bristol Pond	Monkton Pond
Canoe	1 (2.9%)	0 (0%)
Kayak	11 (10.2%)	0 (0%)
Motorboat	19 (23.5%)	10 (31.3%)
Rowboat	0 (0%)	0 (0%)
SUP	0 (0%)	0 (0%)
Other	1 (100%)	0 (0%)

Watercraft launching into Bristol Pond and Monkton Pond were known to have previously been in at least 34 different waterbodies (Table 3). 49.6% of the watercraft launching into Bristol Pond had previously been in other waterbodies in the last 14 days, while 50.6% of watercraft launching into Monkton Pond had previously been in other waterbodies in the last 14 days. The majority of watercraft launched into Bristol Pond and Monkton Pond came from waterbodies located in Vermont (Table 3).

Table 3. Last waterbody that watercrafts were previously retrieved from prior to launching at Bristol Pond and Monkton Pond, Vermont during the summer of 2023.

Waterbody	Bristol Pond	Monkton Pond
New York		
Chapel Pond	1	0
Long Lake	1	0
Paradox Lake	2	0
Other		
Atlantic Ocean	4	0
Unknown/New boats	21	6
Vermont		
Berlin Pond	0	1
Blueberry Lake	5	0
Bristol Pond	101	12
Burr Pond	2	2
Chittenden Reservoir	4	0
Colchester Pond	3	6
Colton Pond	1	0
Curtis Pond	1	0
Dead Creek	5	1
Echo Lake	1	0
Fairfield Pond	0	1
Fern Lake	2	0
Indian Brook Reservoir	2	0
Lake Champlain	22	5
Lake Dunmore	3	0
Lake Hortonia	1	0
Lake Iroquois	14	1
Lake St. Catherine	1	0
Lamoille River	1	0
Laplatte River	2	3
Marshfield Dam	1	0
Missisquoi River	1	0
Monkton Pond	9	34
Otter Creek	3	0
Peacham Pond	2	0
Shelburne Pond	3	4
Sugar Hill Reservoir	1	0
Sunrise Lake	0	1
Waterbury Reservoir	9	0
Winooski River	1	1

Conclusion

During the summer of 2023, LCA's boat launch stewards interacted with 230 watercraft at Bristol Pond and 79 watercraft at Monkton Pond. The vast majority of visitors were familiar with AIS, likely due to the longevity of the LCA boat steward program and repeated instances of boat stewards across the state educating the public about AIS concerns. Fewer aquatic plants were found on watercraft this year compared to the summers of both 2021 and 2022. This may have to do with the natural variation in plant growth through years and the 2021 growing season being more productive than this year's growing season. This summer was extraordinarily rainy, which likely impacted the growth rate of many plants by both an increase in water level and sedimentation and pollution from runoff. Additionally, recreational boaters are less likely to visit waterbodies when it is raining, and visitors are less willing to use their watercraft on waterbodies that have increased pollution and sedimentation from stormwater runoff, which may have reduced the number of watercraft checks in 2023.

LCA's boat launch steward program's fourth year was successful in intercepting AIS and educating the public on the issues surrounding AIS. The vast majority of visitors to Bristol Pond and Monkton Pond seemed genuinely excited to have the program and many people from the community went to the ponds to ask LCA's boat launch stewards AIS questions. Furthermore, 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. Therefore, LCA's boat launch steward program could potentially prevent, both directly and indirectly, AIS from spreading to other uninfested waterbodies. The program was deemed successful and LCA intends on continuing the program into the summer of 2024 pending funding.

Funding Statement

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