



Capital Region Partnership for Regional Invasive Species Management Aquatic Response Report

Water Chestnut (*Trapa natans*) is an invasive aquatic plant which colonizes shallow areas of freshwater lakes, ponds, and slow-moving rivers & streams. In New York State, Water Chestnut is ranked “Very High” in ecological threat and is **prohibited** under [NYS Part 575 legislation](#). The plant is rooted to the sediment with long stems growing to the water’s surface, capped by floating rosettes. Infestations form dense mats of vegetation that can be impossible to paddle, swim, or boat through. These mats block sunlight and oxygen from penetrating the water, choking out native aquatic plants and reducing food, shelter, and oxygen for waterfowl, insects, and fish. Additionally, the fruits have sharp, barbed spines that are painful to step on. Infested waters often also experience a reduction in shoreline property values, hurting the local economy.

The Cove is an approximately 66-acre tributary of the Upper Hudson River in Schuylerville, New York. It is largely natural area with a handful of residences, with The Alley Bar and Grill at the northern tip. Water Chestnut afflicts the entirety of The Cove, with sparser distribution on the northern end and increasing density as you get closer to the mouth, with up to 100% surface coverage in some areas. The goal of this project was to clear an access path through the monoculture.

Section 1: Response Project Summary

| General Information | |
|--|--|
| Date Response Action Conducted: August 7 th , 2025 | County: Saratoga |
| Site Name: The Cove | Permit(s)/Permission(s) Acquired? Yes—private access permissions obtained from landowners; Canal Corps permissions obtained; Freshwater Wetland permitting waived |
| Address (if different): The Alley Bar and Grill—886 US-4, Schuylerville, NY 12871 | Time Spent on Site (Hours)/ # of Staff on Site: 5 hours/4 staff |
| | Property Owner Name, Title, and Contact: John & MaryAnn Still—owners of The Alley Bar and Grill/Stills Cove LLC; (518) 496-9780 & (518) 584-9160 |
| Parking Lot Latitude/Longitude: 43.058864, -73.593942 | Project Leader Name, Title, and Contact: Alexa Howansky—AIS Program Manager; ajh363@cornell.edu |
| Total Parcel Size (acres): 40 acres (excludes eastern pool of The Cove) | Disposal Name and Contact: Disposed on site at the Alley Bar and Grill—contacts above |
| Worksite Size (acres): ~2.5 acres | Team Member Name(s) and Title(s): Alex Picard (Steward Assistant Supervisor), Natalie Myers (Steward), Hanna Mitchell (Steward) |
| Report Author: Alexa Howansky | Data Recorder & iMapInvasives ID: Alexa Howansky—iMap ID 28804; ArcGIS user ajh363_CUGIS |
| # of Volunteers (if any): 7 (owners + their daughter + neighbor/resident on The Cove + 3 DEC interns) | # of Total Volunteer Hours on Site (# of volunteers x Time spent on site) 28 volunteer hours (7 volunteers x 4 hours) |





Conservation Goal:

- Delineate & assess a conservation value
- Local Eradication
- Suppression
- To prevent and protect a conservation value
- Post-Treatment Monitoring
- Exclusion
- Containment
- Restoration

Response Type:

- Initial Response
- Research Action
- Follow-up Monitoring
- Restoration
- Crew Assistance Program Project
- Volunteer Engagement

Disposal method(s):

Biomass was temporarily bagged during pull (for ease of weighing & transport), then dumped on-site at The Alley Bar and Grill to decompose in a location away from the water & previously approved by the DEC.

Project Significance:

The primary significance for the removal of Water Chestnut on The Cove is that the owners are facing significant financial consequences to their businesses (the restaurant on site as well as the marina), as a result of the infestation clogging up their marina and waterfront.

Additionally, there are Class 1 & 2 Freshwater Wetlands present—identified via the [NYSDEC Environmental Resource Mapper](#) (Fig.1)—that are at risk for ecological harm caused by the infestation. While the taller emergent species (i.e. cattail, pickerelweed, etc.) of these wetlands are in less direct competition with Water Chestnut, Water Chestnut causes a reduction in important submersed plants, associated microorganisms, and dissolved oxygen, decreasing the overall quality of the wetlands as a whole (U.S. Fish & Wildlife Service).

An initial Water Chestnut pull was conducted in 2024, focusing on large mats that had migrated further up The Cove after intense storms (remnants of hurricanes) dislodged them from the main monoculture further down The Cove. The owners continue to hand pull on their own nearly every day during the summers, both around the upper marina as well as attempting to maintain a boating access path through the monoculture, though they are unable to effectively manage it by themselves and the path routinely closes up.



Figure 1. Previously Mapped Freshwater Wetlands. Bright green shapes = Class 2 Wetlands; blue = Class 1 wetlands.



Section 2: Response Results Summary

Is this the first year of treatment? No; The CR-PRISM conducted an initial pull in 2024 (~910 lbs. removed).

Number of stems/bags/pounds of biomass removed (if applicable): estimated 1,300 lbs. (39 bags)

Is follow-up needed? Yes; detailed recommendations provided in Section 3.

| Species Common & Scientific Name | Tier | Threat Ranking | Response Method | Percent Cover (%) | Distribution/ Abundance | Size of Infestation (Acres/ Miles if linear) | Area Treated (Acres/ Miles if linear) |
|--|------|----------------|--------------------|-------------------|-------------------------|--|---------------------------------------|
| Water Chestnut (<i>Trapa natans</i>) | 4 | Very High | Manual (hand-pull) | 51 – 100% | Dense to Monoculture | ~38 acres | ~2.5 acres |

Roughly 10 – 15 acres on the North end have a sparser distribution in a typical year (i.e. without extenuating circumstances like hurricane damage). The remaining 25 – 30 acres comprise the densest cover, with 100% surface coverage in about 10 of those acres—population density increases the closer you get to the mouth.

Map:

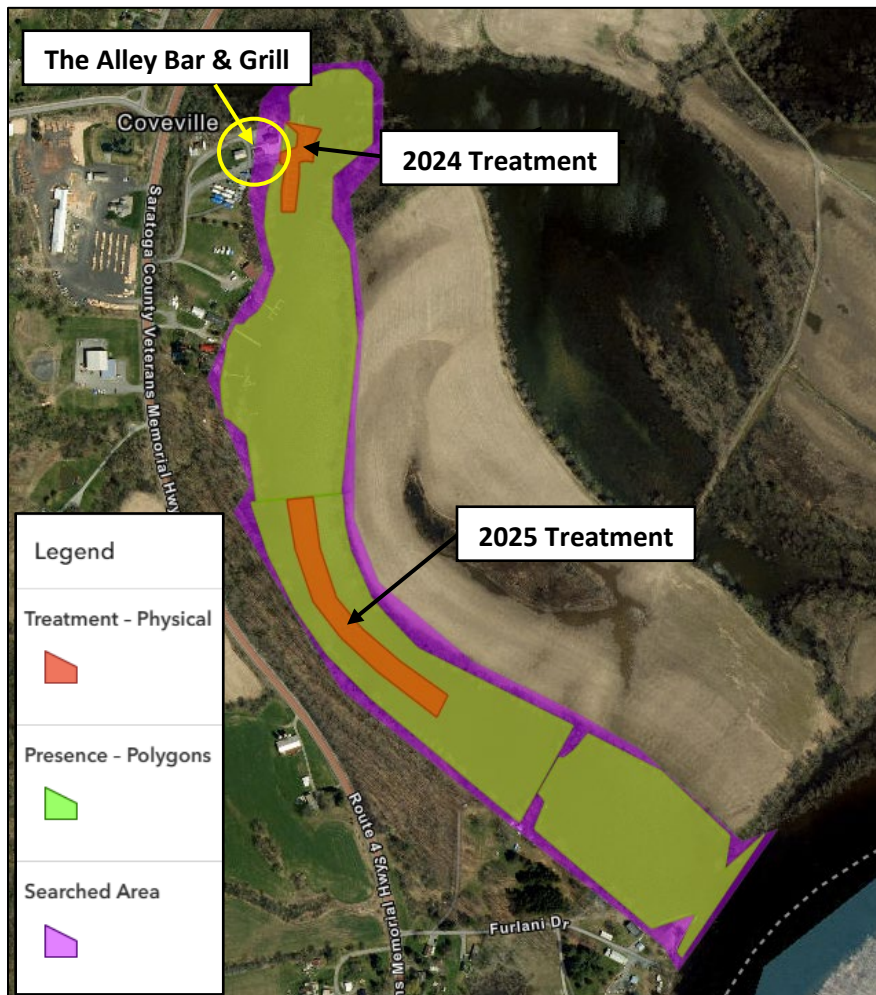


Figure 2. Map of The Cove/working area. Purple = searched area; green = presence of Water Chestnut; orange = hand pulling of Water Chestnut. Sourced from iMap Mobile Advanced via cugis.maps.argis.com



Photos:



Figure 3. Northern end of 2025 treatment polygon. Water Chestnut is shown covering a majority of the water's surface with only a narrow path down the middle.



Figure 4. Biomass pile! Co-owner MaryAnn Still pictured with a heaping pile of Water Chestnut in her lap.



Figure 5. Pulling in action. CR-PRISM Steward Natalie Myers shown pulling Water Chestnut.



Figure 6. Full bag hand-off. Participants shown handing full bags to co-owner John Still & others on a pontoon boat for ease of hauling.

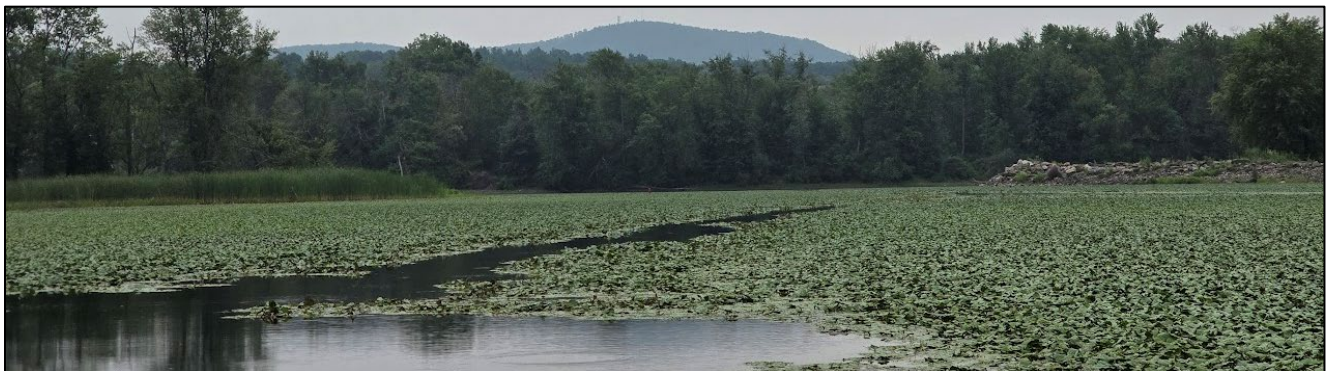


Figure 7. Southeast of treatment polygon. The narrow path disappears into the Water Chestnut monoculture, more than 820 feet from The Cove's confluence with the Hudson River.



Figure 8. *Group photo.* Pictured are 10 of 11 participants, along with the 39 bags (approx. 1,300 lbs.) of removed biomass.

Section 3: Summary of Recommendations

At this stage of infestation, it is the opinion of the Capital Region PRISM that hand-pulling alone is no longer an effective approach in the long-term management of the greater Water Chestnut monoculture of The Cove. Despite a large group of participants, several hours of work, streamlining of the hauling process via pontoon, and removal of roughly 1,300 pounds of Water Chestnut biomass (two thirds of a US ton)—there is hardly a detectable change in the population, and The Cove is still nearly impossible to access from the main Hudson River. Hand-pulling may still be appropriate for smaller-scale goals, such as keeping the immediate waterfront clear at The Alley Bar and Grill, or in some extenuating circumstances such as the hurricane damage in 2024.

The deployment of a mechanical harvester could be a viable management strategy for The Cove. Mechanical harvesters are motorized watercraft that remove aquatic weeds by large-scale pulling and/or cutting. There are a variety of harvester types, sizes, and operation methods. Most harvesters work by cutting vegetation below the water's surface or hydro-raking (i.e. dredging); some work by pinching and pulling the plant out of the sediment from the top. Each type has its pros and cons—for example, some AIS propagate by fragmentation (such as Eurasian Watermilfoil) and can grow from the abundance of cut fragments left in the water from cutting-type harvesters, though it can also be a quick and effective method for other species and is commonly used for Water Chestnut; hydro-raking heavily disturbs the sediment but can remove a large amounts of biomass and can help deplete the existing seed bank; pinch-pulling effectively removes plants from the root and can operate in extremely shallow water, but can cause disturbance to the sediment similar to hand-pulling but on a larger scale. Each method also has its own implications for permitting, whether it involves disturbance of regulated freshwater wetlands, navigable waters, etc.



Local eradication of the entire 40+ acre infestation may not be realistic without intense response measures such as repeated, large-scale hydro-raking and/or herbicide application. At a minimum, a more realistically attainable strategy would be to clear/widen/maintain an access path through the middle of the infestation via annual or semi-annual deployment of a mechanical harvester. Once cleared, such a path would be more easily maintained by supplemental hand-pulling of any regrowth during the season.

Exploration of larger-scale treatment options (such as herbicide, harvesting, etc.) may be pursued through various support channels such as application by the local municipality for [DEC Invasive Species Grant Program](#) funding, or seeking of subcontractors to perform the work.

Post-Treatment Monitoring:

If mechanical harvesting does occur on The Cove, post-treatment monitoring should occur throughout the growing season to check for additional harvesting needs (i.e. regrowth and/or narrowing of cleared path).

Harvesting before seed-drop (mid-August through October) may potentially result in decreased Water Chestnut density for future seasons in those cleared areas, possibly making maintenance of the same path easier year after year—for this reason, post-treatment monitoring (via repeated mapping of infestation distribution/density on iMapInvasives) will be important to tracking such a trend.

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References

- U.S. Fish & Wildlife Service. (2019, January 31). Water Chestnut (*Trapa natans*) Ecological Risk Screening Summary. <https://www.fws.gov/sites/default/files/documents/Ecological-Risk-Screening-Summary-Water-Chestnut.pdf>
- Water Chestnut. Department of Environmental Conservation. (n.d.). <https://dec.ny.gov/nature/animals-fish-plants/water-chestnut>

