



WNY PRISM

Partnering to Protect Western New York from Invasive Species

Best Management Practices: Water Hyacinth

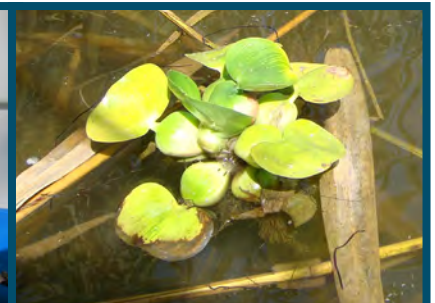
Water hyacinth (*Eichhornia crassipes*) is a floating aquatic plant found in all types of freshwater habitats. Water hyacinth has round, glossy leaves supported on the water by bulbous leafstalks that contain tiny chambers of air. When in flower, it produces a spike of showy, purple flowers with a distinct yellow blotch on its upper petals. It has feathery roots that hang freely in the water beneath the plant.

Water hyacinth is often used in water gardens and is introduced to waterways both intentionally and accidentally. It has one of the highest growth rates of any known vascular plant and can reproduce vegetatively, doubling its population every 2 weeks in ideal conditions. Stolons and seeds are then spread by water flow and human activity.

This plant can cover a waterbody in dense mats that reduce habitat for native species, lower dissolved oxygen levels and create a breeding ground for mosquitoes. Water hyacinth also impedes water recreational activities such as boating, fishing and swimming. Southern states spend millions of dollars annually to control water hyacinth infestations and as western New York experiences warmer winters, the threat of this species grows more concerning.

Integrated Pest Management (IPM) is an adaptive approach to invasive species management that involves the selection of multiple control methods and appropriate timing to meet the needs of each specific site and species. The goal is to maximize effective control and to minimize and potential negative impacts.

Management efforts should begin with an invasive species survey and site assessment. This allows for the development of a management plan and selection of appropriate removal methods. Management for most well-established species and/or infestations will require dedication over a number of years, often 2-5. Once initial control is achieved, restoration and continued monitoring will be required to maintain success.



Best Management Practices: Water Hyacinth (*Eichhornia crassipes*)

Management

Manual

Individual plants and small infestations can be hand pulled or collected with nets or pond rakes. Given their high rates of reproduction, the plants should be removed as soon as possible after initial detection.

Mechanical

Large infestations can be managed using a mechanical harvester. The infestation will need to be harvested for many years to collect all plants and deplete a potential seedbank. Water level manipulation through drawdowns can be employed in certain waterbodies.

Chemical

For large, established infestations where manual and mechanical removal methods are not available, herbicides are an effective alternative, but may negatively impact native species present. Multiple treatments will be needed to reduce the size of the infestation to manageable levels.

Biological

Several biocontrols have been identified that impact plant growth and reproduction, including the mottled water hyacinth weevil (*Neochetina eichhorniae*).

Spread Prevention

The use of these plants in water gardens is a primary vector and their use is discouraged. Clean, drain and dry all watercraft to prevent the spread of aquatic invasive species. Barriers can be employed to contain floating mats.

Disposal

Plants should be placed in thick, black plastic bags and disposed of in landfills. If the harvested material cannot be moved, plants should be disposed of upland at least 50 feet away from shore to prevent re-entry into the waterbody.

Restoration

Creating competition will protect against future infestations and reestablishment. Aquatic communities are positively affected by restoration and increased food web diversity.

USE PESTICIDES WISELY: Always read the entire pesticide label carefully and follow all instructions. Pesticide regulations can vary widely between regions; please contact local authorities for additional pesticide use requirements, restrictions or recommendations. Mention of pesticide products by WNY PRISM does not constitute endorsement of any material.



Photos Front: Top- water hyacinth flower; Middle- water hyacinth roots; Bottom (left to right)- water hyacinth leaf cross-section, water hyacinth closed flowers, water hyacinth.

Photos Back: Top- water hyacinth for sale, Bottom- mechanical removal (Photo Credit: Mike Goehle, USFWS).

Additional Resources

Florida Fish and Wildlife Conservation Commission

<https://myfwc.com/wildlifehabitats/habitat/invasive-plants/weed-alerts/water-hyacinth/>

Queensland Government

https://www.daf.qld.gov.au/_data/assets/pdf_file/0005/54680/water-hyacinth.pdf



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