History of Hydrilla in Connecticut

The highly invasive aquatic plant, Hydrilla verticillata, known commonly as 'hydrilla' or 'water thyme', was first identified in the Connecticut River near Glastonbury, CT in 2016. It can be found growing in the river's many coves, tributaries, and boat basins. It has also been identified in isolated lakes and ponds that are not connected to the Connecticut River. Hydrilla was first discovered in the United States in the 1960's in Florida. Since then, it has spread to multiple states. Various hydrilla subspecies (such as the Connecticut River Hydrilla) have also been introduced and are also spreading. The Connecticut River hydrilla is unique from other known hydrilla strains, as it is genetically distinct. Its biology is largely unknown at this time.

In 2019 and 2020 surveys were conducted in the Connecticut River from Agawam, MA south to the Long Island Sound. Hydrilla was found growing between Agawam, MA and as far south as Essex, CT. These surveys of hydrilla in Connecticut/Massachusetts waters, confirm the plant is spreading throughout the lower Connecticut River, and the risk of it spreading further to other regional waterbodies is significant. Fragments of the plant, which are easily caught and transported by boats and boat trailers, can sprout roots and establish new populations. Fragments also float and are capable of dispersing via wind and water currents. Due to the importance of the Connecticut River as an environmental resource and driver of the local economy, stakeholders are seeking an aggressive management program.

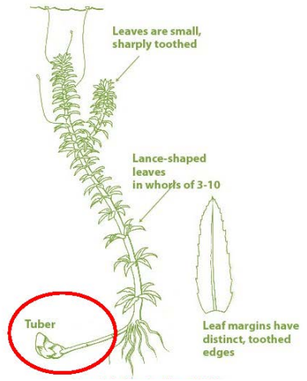
What is Hydrilla?

Hydrilla is a submerged aquatic plant that is typically rooted in shallow water, with long stems that can grow up to 25 feet in length and grow up to one inch per day. The stems branch at the water's surface and grow horizontally, forming thick, dense mats. These dense stands can alter river flow, shade or crowd out native aquatic plants, replace habitat for sensitive species, alter water chemistry & dissolved oxygen levels, increase water temperatures, and negatively affect the diversity and abundance of fish populations. Hydrilla can also grow in a wide variety of water conditions (e.g., high/low nutrients, high/low turbidity, variable pH, up to 7% salinity) and water temperatures. Unlike most native aquatic plants, hydrilla is capable of growing under extremely low light conditions. Hydrilla grows very rapidly and has no natural predators or diseases in the invaded range of the United States to limit its population.

Connecticut River Hydrilla Characteristics

- Stems: slender, branched, up to 25 ft long
- Leaves: pointed, serrated edge, barb on leaf underside, grow in whorls of 4-10
- Turions: dormant buds on stems found at leaf axils, freeze-resistant viability (overwinters); prolific production in Connecticut River strain
- Subterranean Tubers: hydrilla typically has potato like sub-surface root structures, long-term viability **(Important to note: tubers have not been observed growing on the Connecticut River strain of hydrilla)**

CT River Hydrilla - no tubers present on the roots
Source: Aliki Fornier, Connecticut River Conservancy



Other strains of Hydrilla - tubers present on the roots
Source: Cayuga Lake Watershed Network 2012

What is USACE doing to help manage hydrilla in the Connecticut River?

The U.S. Army Corps of Engineers, and its Engineer Research and Development Center's (ERDC) Aquatic Plant Control Research Program, is leading a demonstration project to determine the effectiveness of herbicides registered for aquatic use by the U.S. Environmental Protection Agency to safely reduce and control the spread of the Connecticut River hydrilla. Because the Connecticut River strain is unique, controlling it may be more challenging than other known strains growing in the United States. The project will investigate hydrilla's growth patterns, water exchange dynamics in the Connecticut River, and evaluate herbicide efficacy in laboratory conditions in 2023 to guide operational scale field demonstrations of herbicide use efficacy in 2024. Additional testing and field demonstrations are expected beyond 2024 within the Connecticut River and its watershed. There are several safe, well understood, and effective herbicides that are available for use. Any selected herbicides will be added to the website and shared with stakeholders once they have been chosen for use. Post treatment monitoring surveys will begin in 2024 to assess the condition of the hydrilla as well as non-target impacts.

"Purpose of the Demonstration Project:
To develop selective control methods to manage hydrilla in a flowing and tidalwater system while minimizing impacts on native vegetation"

Who Can I Contact for More Information?

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For more information, please visit the project website and project storymap

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Connecticut River Hydrilla

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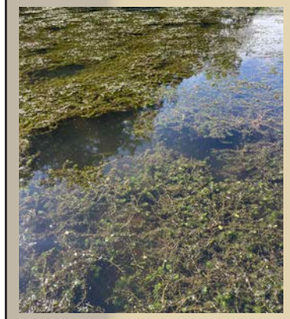
Why is hydrilla management important?



Hydrilla is an invasive aquatic plant species that can negatively affect local ecosystems. Hydrilla is an aquatic submerged plant that has earned the title "world's worst invasive aquatic plant". Listed as a federal noxious weed, hydrilla has made its home in just about every conceivable freshwater habitat including: rivers, streams, lakes, ponds, marshes, canals, ditches, boat basins, and reservoirs

This project's intent is to develop treatment plans that will effectively diminish the negative effects associated with hydrilla and in turn benefit the Connecticut River's natural ecology and the local economy.

Why do we need to stop hydrilla?

- It grows very rapidly during the growing season (up to one inch per day)
- It forms dense mats that fill the entire water column and block sunlight
- It decreases dissolved oxygen levels which can lead to fish kills
- It destroys waterfowl feeding areas and fish spawning sites
- It displaces native plants and reduces the weight and size of sportfish due to loss of open water and native vegetation
- It restricts boating, fishing, and swimming due to its thick mats
- It can hurt our local economy due to impacts on tourism and water-front property values

How does it spread?

- Primary method of spreading is through hydrilla fragments on recreational boats and trailers
- Even tiny fragments of hydrilla can sprout roots and establish new populations
- Fragments float and can be spread via wind and water currents

Will the hydrilla treatment impact recreation and fishing in the Connecticut River?

The hydrilla treatment should have minimal-to-no impact to recreation in the Connecticut River. Other than when contractors are on-site carrying out treatment, where some restricted public access may be needed, no long-term closures or restricted access is currently anticipated with this work. The treatment is expected to have minimal to no effects on fishing or to fishing access.

Hydrilla fouled boat prop

CT River hydrilla (no tubers)

Where will the demonstration project occur?

The selected five treatment sites are Keeney Cove, Portland Boat Works, Chapman Pond, Chester Boat Basin, and Selden Cove.