



# FACT SHEET

Freshwater Aquatic Invasive Species in Rhode Island

November 2017

## Eurasian Milfoil



In the water, long stems of Eurasian milfoil are very noticeable, stems may be tan or reddish in appearance



Four leaves radiate from the same part of stem in a whorl, and whorls are often spaced out along the stem (left), but can become dense toward the tip of the stem (right)



At the tip, a spike emerges from the water with several very small buds (pinkish here) that become small yellow flowers in summer



Here, many flowering spikes from a large stand of Eurasian milfoil protrude from the water, and trap other small floating plants, algae, and pollen at the surface

### Species Description and General Information

Eurasian milfoil (*Myriophyllum spicatum*) is an underwater, rooted invasive plant. Leaves are whorled around the stem in groups of 3 to 6, but 4 leaves per whorl is most common. Leaves are feather divided with 12 to 24 leaflets per leaf. The leaf tips are blunt, giving the appearance that they have been snipped off. Whorls are openly spaced along the stem with 1 to 3 cm in between. Small, yellow flowers appear on an emergent spike in late summer. Plants prefer lakes, ponds and low energy areas of rivers and can tolerate a range of salinities. Plants disperse primarily through fragmentation and through spreading rhizomes (roots).

### Why is Eurasian Milfoil Considered a Nuisance Species?

Because plants are tolerant of low water temperatures and grow from roots initiated in the fall, Eurasian milfoil begins its spring growth earlier than other aquatic species. Its ability to create dense, monotypic stands that form canopies over the surface of the water allow it to outcompete and displace native species. Several case studies of Eurasian milfoil introductions reveal a subsequent substantial reduction in native species abundance and diversity. Further, Eurasian milfoil is a poor food source for waterfowl and supports a lower abundance of invertebrates (they serve as a food source for fish). Dense stands impede recreation opportunities such as fishing, boating and swimming and can devalue waterfront property. When plants begin to decompose they can lower the oxygen levels of the water body, creating the potential for fish kills.

### How Did Eurasian Milfoil Become Established in Rhode Island?

Eurasian milfoil is native to Europe and parts of Asia and North Africa. It was likely introduced as an ornamental that escaped cultivation, or as an aquarium plant that was dumped into natural water bodies. Because the plant can reproduce through fragmentation, trailers and boating equipment that are not cleaned of plant fragments are a likely means of introduction. Eurasian milfoil maintains a high tolerance for pollutants and easily invades polluted and disturbed areas.

## What Methods Can Be Used to Control Eurasian Milfoil?

Physical control through hand pulling or large scale mechanical harvesting are options for milfoil control. However, because Eurasian milfoil can reproduce through fragmentation, physical pulling and cutting may unintentionally disperse plant fragments, exacerbating the infestation. Therefore, physical control is not recommended, except where hand pulling can be monitored for escaped fragments when completely eradicating small, pioneer populations. By law, the manual removal of submerged aquatic vegetation is restricted to that area adjacent to, but no more than fifteen feet from existing or permitted docks, beaches or swimming areas under the RI Fresh Water Wetlands Regulations (Rule 6.02). Manual plant removal outside this area or physical control of larger patches via mechanical cutting or harvesting requires a DEM wetlands permit (contact the RIDEM OWR Water Quality and Wetlands Restoration Team).



Chemical control may be effective for large populations. The DEM Division of Agriculture licenses the applicators that can apply federally regulated herbicides to treat invasive plants. Each herbicide treatment requires a specific permit from the Division of Agriculture to ensure proper use. The most appropriate means of selecting a specific treatment plan is to consult a lake manager or licensed herbicide applicator, who can provide targeted treatment options and estimate associated costs. A more detailed survey of the entire water body will likely be needed to assess the severity of the infestation and develop the most effective and cost efficient long-term lake management plan.

## Please Help Prevent the Spread of Eurasian Milfoil in Rhode Island!

Learn to identify invasive plant species and be on the lookout for new plants in your lake.

It is much easier and cost-effective to manage a small patch of invasive plants than an entire lake covered with plants, so early detection is key! Identification resources are available on the RIDEM website at <http://www.dem.ri.gov/programs/benviron/water/quality/surfqw/pdfs/identify.pdf>.

## Be a GREAT Boater! Check, Clean, Drain & Dry!

RIDEM encourages the use of clean boat hygiene practices. **CHECK** boats (trailers, gear and motors too) for plant fragments before launching in the water AND after boats have been hauled out of the water. **CLEAN** any plant fragments, and dispose of them away from the water, and **DRAIN** your motor and bilge. Allow boats to **DRY** overnight at least 24 hours before putting in at another lake. See posted reminders at state boat ramps.

## Where is Eurasian milfoil found in Rhode Island?

As of November 2017, Eurasian milfoil has been documented in 8 lakes or ponds, and 2 river segments. The distribution map on the right shows locations where it has been found in red. A larger map can be found online @ <http://www.dem.ri.gov/programs/benviron/water/quality/surfqw/aismaps/myrspi.pdf>

