

# WHAT'S THE PROBLEM?

Invasive plants have moved into Michigan waters from around the globe. These invaders lack natural predators and are clogging waterways, disrupting aquatic ecosystems, and limiting native habitat. It is extremely costly to eradicate invasive species from Michigan waterways once introduced.

Some of these species may be appealing for aquariums and ponds because of their vigorous growth and reproduction. However, they can be unintentionally released into the wild via careless disposal by hobbyists, or escape from ponds and water gardens during floods or other disturbances. To reduce these invasions, Michigan regulates the possession and sale of certain plant species.

## REPORT INVADERS!

If you suspect you may have received a regulated invasive species in a plant shipment, contact MDARD immediately:

**1-800-292-3939**  
**MDA-Info@michigan.gov**

Report invasive species found in the wild to the Midwest Invasive Species Information Network:  
**[misin.msu.edu](http://misin.msu.edu)**

The list of state-regulated species is regularly updated. For the latest information:  
**[michigan.gov/mdard](http://michigan.gov/mdard)**

Together, we can keep Michigan waters pure.

## TIPS FOR CONSUMERS

If you decide to clean or dispose of aquariums or water gardens, don't dispose of the plants and animals into natural waterways where they may introduce disease or become established. Alternative ways to safely and humanely dispose of unwanted plants and animals:

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**Inspect and rinse new aquatic plants to rid them of seeds, plant fragments, snails and fish.**

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**Build water gardens well away from other waters.**

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**Seal aquatic plants for disposal in a plastic bag in the trash. Do not compost.**

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**Give or trade unwanted fish or plants with another hobbyist, environmental learning center, aquarium or zoo.**

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**Contact a veterinarian or pet retailer for guidance on humane disposal of animals.**

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# LEARN MORE

For more information on how to reduce invasive pet and plant escapes, visit **[mi.gov/invasivespecies](http://mi.gov/invasivespecies)**



**RIPPLE**  
REDUCE INVASIVE  
PET & PLANT ESCAPES



MICHIGAN STATE UNIVERSITY | Extension

Great Lakes RESTORATION



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# WORKING TOGETHER IN MICHIGAN FOR HEALTHY

## GET TO KNOW

# THE INVADERS

### REGULATED PLANT SPECIES

Michigan laws regulate the possession and sale of certain plant species which are considered undesirable. These unwanted species are listed in Part 413 of the Natural Resources and Environmental Protection Act (NREPA), or Act 451 of 1994, as amended.

Prohibited or restricted plant species identified in NREPA Part 413 cannot be sold or imported into Michigan. These species, however, could be sold unintentionally if they are misidentified or mislabeled, or when plant fragments hitchhike in the transport or growing media of otherwise allowable species.

All of the following plants, fragments, seeds or a hybrid or genetically engineered variant thereof are specifically prohibited or restricted and cannot be sold or imported.



**RIPPLE**  
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**European frog-bit** | *Hydrocharis morsus-ranae*



- Leathery, heart-shaped leaves are 1 to 2 inches wide, resembles a miniature water lily
- Free-floating, not typically anchored into a substrate
- Flowers have 3 white petals, bloom in summer

**Hydrilla** | *Hydrilla verticillata*



- Leaf margins are distinctly saw-toothed and often have one or more sharp teeth along the length of the leaf mid-rib
- Leaves grow in whorls of 4 to 8 around the stem
- Slender roots with potato-like tubers

**Yellow floating heart** | *Nymphoides peltata*



- Bottom-rooted with long branched stems up to one meter in length just below the water's surface
- Heart-shaped leaves are 1-4 inches long on long stalks
- Bright yellow 5 petalled flowers are about 1 inch in diameter; flower edges are distinctively fringed
- Leaves are often purplish underneath, with slightly wavy margins

**Fanwort** | *Cabomba caroliniana*



- Multi-branched submerged plant with leaves oppositely arranged
- Leaves finely divided into a fan-shaped arrangement of leaflets
- Leaflets are less than 1/2 inch long and very narrow
- Small oval-shaped leaves are sometimes present

**Parrot feather** | *Myriophyllum aquaticum*



- Bright green, fir-tree-like; emergent leaves and stems grow out of the water
- Leaflets have a feather-like arrangement
- Generally 5 leaves whorl around the stem

**Brazilian elodea** | *Egeria densa*



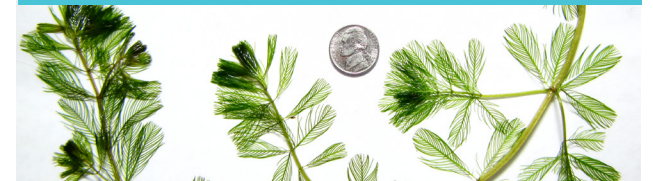
- Leaves are oblong or broadly linear in whorls of 4-6 around stem, bright green in color
- Very small white flowers form at the tip of slender stems above the water in late summer

**Curly leaf pondweed** | *Potamogeton crispus*



- Leaves are stiff and oblong, rounded at the tip, and alternate around the stem
- Leaf margins are wavy like lasagna noodles and are finely toothed
- Flowers rise above the water during late spring
- Appears reddish-brown when in the water but is actually green

**Eurasian water-milfoil** | *Myriophyllum spicatum*



- Leaves have 12 or more pairs of leaflets
- Leaves are arranged in whorls of four around the stem
- Collapses around the stem when removed from the water

**Water chestnut** | *Trapa natans*



- Floating leaves are triangular with toothed margins
- Leaves are waxy on the top and hairy on the underside
- Produces thorny four-pointed nutlets in early summer
- Four-petal white flowers appear in early summer

**Purple loosestrife** | *Lythrum salicaria*



- Erect, perennial plant grows up to 8 feet tall
- In July produces lush magenta-colored flowers with 5 to 7 petals on long spikes
- Leaves are long and narrow with pointed tips and smooth edges. Two leaves are at each joint and are attached directly to square and slightly fuzzy stem

**These plant species are also regulated under NREPA Part 413 but are not as likely to be found in the aquarium or water garden trade:** Phragmites or Common reed (*Phragmites australis*), Flowering rush (*Butomus umbellatus*), Giant salvinia (*Salvinia molesta, auriculata, biloba, or herzogii*), Japanese knotweed (*Fallopia japonica*), Giant hogweed (*Heracleum mantegazzianum*), Cylindro (*Cylindrospermopsis raciborskii*), African oxygen weed (*Lagarosiphon major*), Water soldier (*Stratiotes aloides*), Starry stonewort (*Nitellopsis obtusa*), Autumn olive (*Elaeagnus umbellata*)

**PHOTO CREDITS:** Paul Skawinski, from Aquatic Plants of the Upper Midwest; Leslie J. Mehrhoff, University of Connecticut, Bugwood.org; Jo Latimore, Michigan State University; Rob Andress, Department of Conservation & Natural Resources, Bugwood.org; Paige Filice, Michigan State University; Eric Coombs, Oregon Department of Agriculture, Bugwood.org