Invasive Species



Red swamp crayfish

What are invasive species?

Invasive Species are organisms that cause economic, environmental, or human health harm when introduced to an ecosystem where they are non-native. Most introduced species are neutral or beneficial, but some have characteristics like tolerance to a wide variety of conditions and the ability to produce many offspring in a short period of time that allow them to crowd out native species.

What is the problem with invasive species?

Invasive species can decimate native species and cause economic and health damage. Sea lamprey devastated the native fish population in the Great Lakes by parasitizing and killing the fish. Zebra mussels clog water intake pipes, and concentrate E. coli bacteria, posing both economic and human health threats. Garlic mustard carpets the forest floor and releases toxins, creating an inhospitable environment for native spring ephemerals and other plants that pollinators and wildlife rely on. The effects of invasive species often echo through the system in ways that are not apparent until much later. Zebra mussels eat harmless green algae, allowing cyanobacteria to grow and potentially produce harmful algal blooms that turn swim areas into pea soup, sicken pets and swimmers, and contaminate drinking water. A 2021 study estimated that invasive species cost North American countries \$2 billion in damage annually.

Invasive species are most effectively addressed by preventing them from invading in the first place. If they do invade, catching and eradicating them early can be effective. Once an invasive species is entrenched, it can be impossible to remove. Because of this, Michigan maintains a "Watch List" of invasive species that have not been identified in the wild or have limited known distribution in Michigan, to be prioritized for surveillance, reporting, and other possible responses in order to reduce the risk of impact to valued assets. These species can be found on the <u>Michigan EGLE Watch List</u>. Some species on this list are restricted and illegal to possess or sell.



European Frog-bit intermixed with phragmites

What species should you be concerned about in Southeast Michigan?

www.michigan.gov/invasives/id-report/ prohibitedrestricted

The Michigan Invasive Species Information Network (MISIN) keeps a list of Watch List as well as non-watch list species and has a tool for reporting them. They feature information about how to identify species and map their known distribution. Any Watch List species are of utmost concern and should be reported immediately. Friends of the Rouge is currently part of a project to survey for Watch List species European Frogbit to determine the extent of its infestation in an area of the watershed where they were recently found. Early detection of the spread followed by treatment can be effective at limiting the spread and impact. Another Watch List species, Red Swamp crayfish, have invaded ponds in a portion of the watershed where the DNR has been working furiously to control them. Any sightings of these bright red crayfish should be reported to the DNR or through MISIN. They dig gigantic burrows that destabilize banks and aggressively overpopulate, wiping out most of the rest of the aquatic animals in the pond.

Non-Watch List species are also a huge concern, especially if they are not yet present in an area. Zebra mussels and

round goby moved up into the Rouge River most likely through bait bucket release. Asian clams are also becoming ubiquitous in the Rouge River watershed. It is very important to clean any clothing, gear, or boats you use in another body of water before moving to another one so you do not become the vector who brought them in.

Invasive plants like garlic mustard, exotic honeysuckle, common and glossy buckthorn, phragmites, and purple loosestrife are all some of the most problematic in the Rouge River watershed. Our forest edges are quickly filling in with woody honeysuckle and buckthorn, degrading the habitat and outcompeting native plants our wildlife relies on. Phragmites have the ability to suck a wetland completely dry such that few other plants can live.

Friends of the Rouge has been at the forefront of discovering and reporting invasive species through our monitoring programs. Round goby and red swamp crayfish were first noticed and reported by members of our fish survey team. Due to our long term monitoring program, we have been able to document the migration of the round goby up the Lower branch and its effect on the native fish community.

What are steps to eradicate already established invasive species?

Cooperative Invasive Species Management Areas (CISMAs) are partnerships of groups and individuals that work to address invasive species impacts on the environment, economy and human health within a defined region. By collaborating across jurisdictional boundaries, CISMAs work to leverage resources and overcome challenges associated with the prevention, early detection, response, and control of invasive species.

Contact your local CISMA if you have questions about invasive species or if you are interested in becoming involved in efforts to prevent and control invasive species in your community.

www.michigan.gov/invasives/take-action/local-resources

How does Friends of the Rouge help?

Friends of the Rouge provides information about invasive species on the website and through email posts, newsletters, and social media. We regularly share alerts about new invaders like the spotted lantern fly as well as informational webinars and identification training sessions. At our restoration and cleanup days, we often engage volunteers in invasive species removal on public and private lands. Participants learn to identify and remove them and therefore become educated about how to address this on their own property.

Friends of the Rouge encourages the planting of native plant species and eradication of invasive species. Our rain garden education promotes planting a diverse mix of plants/trees/shrubs that will help the ecosystem become more resilient in the face of new invasive species. We offer sales of native plants so that homeowners and businesses can plant them. We favor native plants in all of our green infrastructure projects and train maintenance staff on the identification of invasives.

Our monitoring practices minimize the spread of invasive species by assigning teams to sample within the same branch or providing disinfection supplies and instruction. Paddlers are instructed to wash/dry their water crafts following a padding event and we provide written and verbal information about this at all group paddling events.

What can you do to mitigate the effects of invasive species on our ecosystem?

Elected officials can help develop legislation to ban the sale and distribution of invasive species and encourage the use of all native plants in any sponsored projects. Both terrestrial and aquatic invasive species are still being sold at garden centers, aquariums, and pet stores, as well as online. Developing laws that ban the sale of invasive species in our region will go a long way in reducing the spread. Favoring native plants in projects can help to develop a stronger market for the plants that should be there rather than planting Kentucky bluegrass, Japanese barberry, and day lilies in every landscape.

Addressing potential invasion points like ballast water and the aquarium industry will reduce current and future invasions. As many as 100 invasive species arrived in the Great Lakes when a ship dumped its ballast water. Stricter protocols for how ships dispose of ballast water when they enter the Great Lakes from the sea would have helped to prevent this.

Ensuring funding remains for invasive species program efforts, such as through the Great Lakes Restoration Initiative, are crucial for this fight against these invaders. Efforts throughout the Great Lakes region to stop the spread of invasive species should be supported.