



# The AIS Current

Michigan's Aquatic Invasive Species Newsletter:  
*The current wave of AIS information*

Michigan's AIS Program is cooperatively implemented by the Michigan Departments of Environmental Quality (MDEQ), Natural Resources (MDNR), and Agriculture and Rural Development (MDARD).



## State Says...No Free Rides for Invasive Species

Decontamination is an effective way to stop the introduction and spread of aquatic invasive species. The State of Michigan's Quality of Life (QOL) group, composed of the MDEQ, MDNR, and MDARD, is taking steps to improve their decontamination efforts. The goal: limit the spread of invasive species by State of Michigan staff performing field work.

One of the first efforts was to develop QOL Policy No. QOL-2-2014, *Invasive Species Decontamination of Field Operations in Michigan*, which went into effect on December 9, 2014. The policy applies to the three QOL departments. Due to the highly variable nature of field work performed by the three departments, the decontamination policy is not prescriptive, rather it states "Each division/office within each QOL department will develop decontamination steps that are practical and reasonable to perform by field staff to accomplish the goal of limiting the spread of invasive species." A companion guidance document, *Invasive Species Decontamination for Field Operations in Michigan*, contains basic decontamination steps for commonly used gear (e.g., boots, trucks, boats, etc.) and can serve as a reference guide for groups beyond the departments.

The departments are coordinating policy implementation to raise staff awareness, provide training, and supply field staff with

the necessary decontamination equipment based on individual needs. Current efforts include providing personal decontamination kits to field staff (see picture), as well as heated pressure washers at field offices for vehicle and gear cleaning.

Preventing the spread of invasive species is paramount. Invasive species harm the environment and economy of the ecosystems they invade, and once established, eradicating an invasive species is often not possible. The departments understand the important role decontamination plays in preventing the spread of invasive species and are working to ensure employees are not spreading invasive species while working in Michigan's great outdoors.

For more information on the state's decontamination policy and procedure visit: [www.michigan.gov/InvasiveSpecies](http://www.michigan.gov/InvasiveSpecies) or contact Tom Alwin, MDEQ, at 517-284-5551 or [alwint@mi.gov](mailto:alwint@mi.gov).



Visit Michigan's new invasive species webpage at [www.Michigan.gov/Invasives](http://www.Michigan.gov/Invasives)

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## High-Threat Aquatic Invasive Plant Detected and Removed from Michigan Waters

MDNR, Wildlife Division, staff recently completed the removal of a high-threat aquatic invasive plant known as yellow floating heart (*Nymphoides peltata*), as part of the state's Early Detection and Response Program, a joint effort of the MDNR, MDARD, and MDEQ.

The plant was found in a pond at the University of Michigan's (UofM) Dearborn Environmental Study Area in Wayne County. Yellow floating heart is a rooted, aquatic perennial with floating leaves that are heart-shaped to almost round. It looks similar to the native white water lily and spatterdock (often called yellow pond lily), but can be identified by the distinctive yellow flower with five fringed petals. Yellow floating heart is listed as a prohibited species in Michigan, making it illegal to possess, transport, or release the plant within the state.

This sighting of yellow floating heart originally was reported through the Midwest Invasive Species Information Network by Rick Simek, Natural Areas Manager of the UofM's Dearborn Environmental Interpretive Center. It's suspected that the plant has been in this pond for 20 or more years. The property originally was owned by Henry Ford, and some university staff theorize that his wife, Clara, planted this species in the Rose Garden pond herself sometime before 1950.

The presence of yellow floating heart is significant because it is the first record of the plant in Michigan. In neighboring Wisconsin, there have been two detections of this plant with extensive removal efforts. Yellow floating heart is listed on Michigan's Invasive Species "Watch List" that includes priority species identified as being an immediate and significant threat to Michigan's natural resources. The plant can spread rapidly, forming dense mats on the water's surface, displacing native species and limiting fishing, boating, and swimming. This plant threatens natural systems by changing community structure, excluding light availability to an ecosystem, and reducing oxygen levels in the water.

MDNR staff collected samples for verification, pressed some specimens for herbarium submission, and discussed treatment options with Rick Simek prior to removal efforts. During the 4-day effort, more than 1,000 pounds of this invasive plant were removed. Follow-up surveys of the surrounding area resulted in no additional sightings of the plant. This work was funded by a Great Lakes Restoration Initiative grant through the U.S. Fish and Wildlife Service. It helps that the Rose Garden pond is isolated from other water bodies, reducing the possibility of spread. However, this location will be monitored for years to come to ensure the yellow floating heart seedbank is depleted and the plant does not spread to areas outside the



*Invasive yellow floating heart*

Rose Garden pond.

The steps taken by the MDNR will help to ensure this aquatic invasive plant is not spread or released into the natural environment. Rick Simek and the rest of the staff at the UofM's Dearborn Environmental Interpretive Center were helpful in not only reporting the occurrence, but working to eradicate the high-threat aquatic invasive plant. This is a great example of how important it is for citizens to help the state's invasive species efforts. Everyone is encouraged to report invasive species through the Midwest Invasive Species Information Network Web site or smartphone app found at: [www.misin.msu.edu](http://www.misin.msu.edu).

For more information, contact: Kile Kucher, MDNR, 517-243-4077 or [kucherk@michigan.gov](mailto:kucherk@michigan.gov).



## Michigan Confirms Two New Aquatic Invasive Species

The MDEQ and MDNR recently confirmed two new invasive species in Michigan waters.

MDEQ staff confirmed a freshwater alga commonly known as didymo or rock snot growing in extensive mats in the St. Mary's River near Sault Ste. Marie. Additionally, MDEQ staff also recently discovered New Zealand mud snails in the Pere Marquette River near Ludington.

Unlike other types of nuisance algae, didymo thrives in cold, clean water. Under the right conditions, didymo can grow into thick mats that cover the river bottom. The mats look and feel like wet wool, which is why the algae is sometimes called rock snot, although it's not actually slimy. Didymo is not a threat to human health, but the formation of mats crowds out biologically valuable algae and invertebrates that are important food for fish. Additionally, thick didymo mats can become snagged in fishing gear and

interfere with fishing and wading. While didymo is native to the Great Lakes, this is the first time nuisance blooms have been observed in Michigan waters and the cause of the blooms is uncertain.

New Zealand mud snails are each only about 1/8 of an inch long and can be difficult to see. However, they often cluster in high densities and compete with native snails and other macroinvertebrates for food and space. Originally from New Zealand, the snails are now widespread in many western states and present in Wisconsin. They are easily transported and resilient and can survive in damp environments for up to 26 days.

Both of these species can easily attach to fishing equipment, wading gear, and other hard surfaces and hitch a ride to a new environment. Anglers and boaters are reminded to take steps to clean, drain, and dry their equipment to help prevent the

spread of both didymo and New Zealand mud snails, as well as all types of aquatic invasive species. Boaters are required by law to remove aquatic plants before launching, as well as to drain live wells, bilges, and all water from boats before leaving the access site. Additionally, boaters and anglers are encouraged to clean boats and equipment, including waders, with hot water or a dilute bleach solution, and allow to dry for at least five days before reusing, when possible.

Report any new sightings of didymo, New Zealand mud snails, or other invasive species to the MDEQ or MDNR at [michigan.gov/aquaticinvasives](http://michigan.gov/aquaticinvasives) or the Midwest Invasive Species Information Network at [www.misin.msu.edu](http://www.misin.msu.edu).

For more information, contact: Sarah LeSage, MDEQ, 517-243-4735 or [lesages@michigan.gov](mailto:lesages@michigan.gov).



Stay in the loop – sign up for updates on Michigan's Invasive Species Program!

Visit [www.Michigan.gov/Invasives](http://www.Michigan.gov/Invasives), click on the red envelope on the right hand side, enter your e-mail address, select "Invasive Species," and hit submit.



## Invasive Species Outreach at MDNR Visitor Centers

This past year, the MDNR ramped up its invasive species messaging at visitor centers at ten locations in state parks and fish hatcheries. Nearly 2,000 interpretive programs, offered in visitor centers from Porcupine Mountains Wilderness State Park in the western Upper Peninsula to the Wolf Lake State Fish Hatchery near Kalamazoo, included messaging about the threat of invasive species in Michigan. Depending on the location, the emphasis ranged from sea lamprey to the Asian long horn beetle including both terrestrial and aquatic species. More than 44,000 people attended these programs.

In addition, an additional 42 state parks used seasonal interpretive staff to offer invasive species programs as part of their weekly campfire programs and trail hikes.

The bulk of these were offered during an Invasive Species Education week, August 3-9,

2015. More than 3,300 people attended these programs.

Invasive species messaging was also a key ingredient to the 11,000 visitors to several popular river weirs that offer education programming during the fall salmon run.

For more information about the invasive species outreach and messaging at MDNR visitor centers and state parks, please contact Kevin Frailey, MDNR, at 517-284-6043 or [fraileyk@michigan.gov](mailto:fraileyk@michigan.gov).



## Partner Spotlight: Seeking Alternatives to the Endless Control of Invasive Aquatic Plants

Invasive aquatic plants are a widespread problem in Michigan's lakes. Most riparians are familiar with the inconveniences caused by Eurasian watermilfoil (EWM) as well as the costly cycle of chemical treatments used to control it. More and more lake associations, especially in southern Michigan, are now encountering a new invader – not a vascular plant, but an alga – called starry stonewort (SSW).

Though there are increasing numbers of aquatic invasive plants, there is only a small selection of herbicides used in various combinations to treat them. A team including staff from Central Michigan, Grand Valley State, and Montana State Universities, The Nature Conservancy and Progressive AE are taking time to evaluate common and alternative strategies for controlling both EWM and SSW with the goal of finding more effective solutions. "Up until this study, we haven't had a lot of good research to base these

treatments on," said Pam Tynning, environmental consultant with Progressive AE. "There are limited treatment options for aquatic invasive species. Chemical application is based on what is already being used and results are sometimes anecdotal, based on testing in the field."

Understanding why and how chemical treatments knock down EWM for only a short period of time could suggest improved treatment methods.



## Seeking Alternatives to the Endless Control of Invasive Aquatic Plants (cont.)



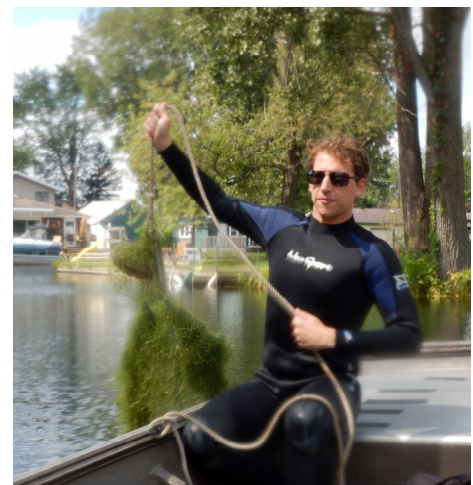
Does regrowth come from seed, plant fragments, or surviving root crowns? Are hybrid EWM plants developing resistance to herbicides? To test these questions, the team documented locations and abundance of EWM on Long Lake in Ionia County and Gun Lake in Barry County and harvested plant samples for genetic testing. In May, two test plots on the lakes were treated with liquid triclopyr, two with 2,4-D and one with granular triclopyr. To see what was actually happening to the plants, scuba divers were employed to sample and assess the plots weekly for nine weeks. "Though at first the EWM appeared to be dead following the treatments," Dr. Anna Monfils of Central Michigan University explained, "new growth began to emerge from these dead or 'zombie plants' as well as from plant fragments on the lake bottom." Whether the 'zombie' EWM plants are hybrids will not be clear until testing is completed in 2016.

A similar design, without genetic sampling, was used to study the effectiveness of a copper sulfate-endothall mix and chelated copper in treating SSW on Gun Lake. Chemicals were applied in August. Like EWM, SSW responds to treatment with a short period of decline followed by regrowth. In addition to chemical treatments, a third area was mechanically harvested. In two other plots, burlap mats were placed over SSW and anchored to the lake bed. These benthic barriers block sunlight and smother vegetation. Burlap, a biodegradable material, was chosen over synthetic mats because burlap will not billow under water and can be left in place, perhaps allowing native plant regrowth as the material degrades. The benthic barriers will be checked and assessed by divers in 2016.

The team's project, "Integrated Invasive Aquatic Plant Management: Evaluating, Refining and Expanding the

Management Toolbox," is supported by Michigan Invasive Species Grant Program funds. The study is being carried out in conjunction with current lake association treatment programs, providing an actual applied and practical component to the research. Look for future results to be expressed in best management practice documents designed to assist lake managers in designing more efficient treatment programs for specific lake conditions. Findings will also be used to update [Michigan's Status and Strategies for Established Aquatic Invasive Species documents](#) and shared at regional and state conferences.

For more information, contact: Anna Monfils, Central Michigan University, at [atmonfi1ak@cmich.edu](mailto:atmonfi1ak@cmich.edu).



## Illinois Invasive Carp Removal Exercise

In early August, the MDNR sent several fisheries staff to assist the Illinois DNR with an ongoing invasive carp removal project. The goal of the project is to respond to the leading edge and reduce population levels of invasive carp threatening the Great Lakes via the Chicago Area Waterway System.

While there, MDNR staff assisted the Illinois DNR and commercial fishers in capturing and removing bighead and silver carp from reaches of the Illinois River south of Chicago. Although bighead or silver carp are not present in any Michigan waters, this training provided critical knowledge to the MDNR for potential future response efforts.

Methods used during the course of this training exercise included gillnetting, seining, and electrofishing. All fish caught and removed were provided to a processor to make fertilizer.

Eleven MDNR staff members spent multiple days on the project. Another fisheries team conducted similar work in 2014. The MDNR's participation in this effort highlights its continued collaboration and dedication to addressing invasive carp issues and increasing Michigan's preparedness, should

bighead or silver carp ever be detected in our waters.

In addition to this recent training exercise, the MDNR has also coordinated and participated in other field efforts to increase preparedness and implement portions of the state's [Invasive Carp Management Plan](#). These include a field exercise on the St. Joseph River in the fall of 2013 and a multijurisdictional field exercise, co-led with the Ohio DNR, on Lake Erie in the fall of 2014.

"Opportunities like the one we participated in are critical to maintaining regional collaboration and helping to reduce the bighead and silver carp populations that are currently threatening the Great Lakes," said MDNR Senior Water Policy Advisor Tammy Newcomb. "The efforts provide valuable opportunities to help us address any invasive carp issues that threaten our state's waters while we work toward additional preventative solutions in Illinois."

For more information on Asian carp, visit [michigan.gov/asiancarp](http://michigan.gov/asiancarp).



For more information on Michigan's AIS Program, please contact Sarah LeSage, AIS Program Coordinator, at 517-243-4735 or [lesages@michigan.gov](mailto:lesages@michigan.gov). You can also visit [www.michigan.gov/invasives](http://www.michigan.gov/invasives).