



# 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).

## Michigan Invasive Species Grants Program

Invasive species have negative ecological, economic, social, and public health impacts. They have been widely identified as a serious threat to global and local biodiversity. Once established, they often out-compete native species for limited resources such as food and habitat, alter and damage existing habitat, displace native species, and in some cases prey directly upon native species.

The MDEQ, MDNR, and MDARD have partnered to address strategic issues of prevention, detection, eradication, and control for both terrestrial and aquatic invasive species in Michigan.

The Michigan Invasive Species Grant Program is made possible through funding in Gov. Rick Snyder's fiscal year 2015 budget. Through a new grant program, a minimum of \$3.6 million will be available for the 2014 grant cycle. Local, federal, or tribal units of government; nonprofit organizations; and universities may apply for a grant for work to be

conducted in Michigan. Projects that are collaborative in nature will receive higher scoring than for individual agencies or organizations. State agencies may serve as collaborators on project submissions but may not be a recipient of grant funds.

The main objectives of the Michigan Invasive Species Grants Program are to:

- Prevent new introductions of invasive species through outreach and education.
- Monitor for new invasive species as well as expansions of current invasive species.
- Respond and conduct eradication efforts to new findings and range expansions.
- Manage and control key colonized species in a strategic manner.

For more information, please visit [www.michigan.gov/invasivespecies](http://www.michigan.gov/invasivespecies). Applications approved for funding will be announced by February 15, 2015.

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Infestation of invasive nonnative Phragmites near St. Clair, MI.

## MDEQ Pilots New AIS Monitoring

As part of the overarching effort to develop a comprehensive AIS monitoring strategy, the MDEQ's Water Resources Division (WRD) was recently awarded a Great Lakes Restoration Initiative grant from the U.S. Fish and Wildlife Service. The two main objectives of the project were to:

- Evaluate methods similar to those used in Wisconsin (aka "the snorkeling method") for possible incorporation into the WRD's AIS Monitoring Strategy.
- Increase collaboration and coordination with local organizations.

Sampling for invasive plants and invertebrates occurred on 15 lakes across the state June through August 2014. Monitoring techniques included:

- Visual surveys and vegetative rake tosses around the entire perimeter of the lake.
- Five target locations and all boat launches were closely examined by snorkeling and nearshore wading.
- Plankton and veliger tow samples were sent to Michigan State University for analysis of spiny and fishhook waterflea and zebra mussel veliger presence.

- Watermilfoil tissue samples were sent to Grand Valley State University for genetic identification.
- eDNA samples were collected and sent to Michigan State University for analysis.

Various AIS were observed including: Eurasian watermilfoil, starry stonewort, purple loosestrife, Chinese mystery snails, banded mystery snails, curly leaf pondweed, and zebra mussels. No "AIS Watch List" species were observed during the surveys.

In addition to the monitoring efforts, it was equally as important to reach out to local organizations and form partnerships to aid in our survey efforts. There are many groups across the state that care about Michigan's aquatic resources and it was a pleasure to work together to move forward in the battle against AIS.

For more information on AIS monitoring efforts, contact Sarah LeSage, MDEQ, at 517-284-5472 or [lesages@michigan.gov](mailto:lesages@michigan.gov).



MDEQ biologist surveying for AIS using the snorkeling method.



MDEQ biologist working with a local partner during the nearshore wading portion of the survey.



MDEQ biologist decontaminating equipment in order to lower the risk of AIS transfer to the next lake.



Monitoring is an important part of AIS management. To have a chance of control and eradication, early detection of invasives, like parrot feather, is critical.

Great Lakes  
RESTORATION



## Increased Inspections Prove Vital for Prevention

This past spring and summer, MDARD plant industry inspectors were on a search and destroy mission to rid the state of Carolina Fanwort (*Cabomba caroliniana*) and other undesirables. MDARD conducted targeted site visits at firms potentially selling aquatic plants. The good news is that the majority of firms visited were in compliance, meaning that they were not selling prohibited or restricted aquatic plants. These firms included pet shops and aquarium supply stores. MDARD has also incorporated an AIS compliance monitoring component into nursery stock inspections at growers and dealers as a routine part of these inspections. A small portion of nursery growers and dealers historically are known to carry some water garden plants.



Carolina fanwort is a prohibited species in Michigan (above). Photo by: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

During all of the routine inspections and the targeted site visits, inspectors checked plant inventories as well as provided outreach information to store managers indicating which species of plants are prohibited or restricted under the NREPA. We have found that education is critical in keeping unwanted organisms out of trade.

Staff did encounter some prohibited species at a few locations. At one outlet in a local garden center store chain in southeast Michigan, MDARD staff found parrot feather, *Myriophyllum aquaticum*, offered for sale. The inspector restricted the stock held at that store and soon afterward at all 7 stores in the chain. The course of action then was to order and witness the destruction of the prohibited plant material. This was our biggest find of the year with a total of 49 potted plants destroyed. Elsewhere staff found small quantities of Carolina fanwort, *Cabomba caroliniana*, being sold at 2 pet shops and both species at a garden center, all plants were destroyed.

All of the prohibited plants had come from out-of-state brokers and suppliers in Iowa, Florida, Mississippi, and Pennsylvania. MDARD will be contacting agricultural



Examples of parrot feather that was confiscated by MDARD (above and below).



officials in the source states in an effort to assure that future shipments will comply with state regulations.

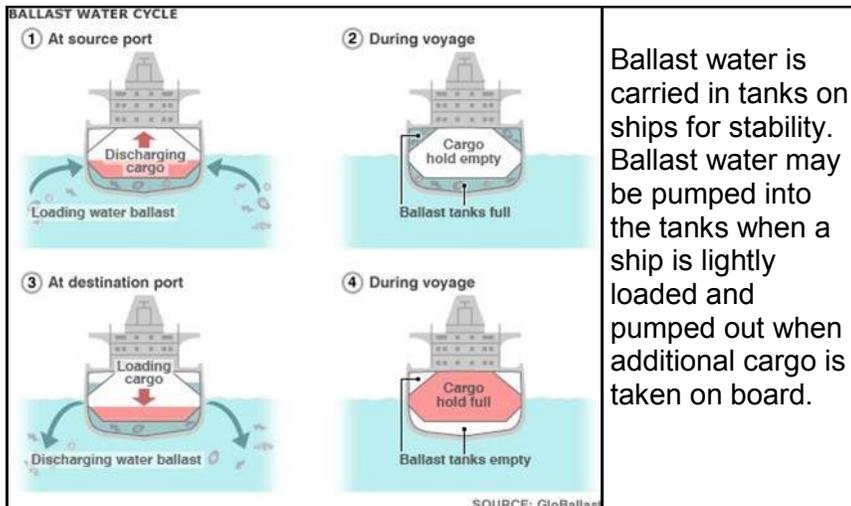
For more information on MDARD's efforts, contact Mike Bryan, MDARD, at 517-284-5648 or [bryanm@michigan.gov](mailto:bryanm@michigan.gov).



## AIS Pathways: Ballast Water 101

What is ballast water, what are the requirements, and just as importantly– who regulates them?  
Visit [www.michigan.gov/aquaticinvasives](http://www.michigan.gov/aquaticinvasives) for even more ballast water information.

### What is ballast water?



Ballast water is carried in tanks on ships for stability. Ballast water may be pumped into the tanks when a ship is lightly loaded and pumped out when additional cargo is taken on board.



### Shipping lingo:

**Salty** – an oceangoing vessel that operates in the Great Lakes or the St. Lawrence waterway after operating in water outside of the Great Lakes or St. Lawrence Waterway.

**Laker** – a non-oceangoing vessel.

The discharge of ballast water from ships can inadvertently introduce organisms from one port to new locations around the world. Since the construction of the St. Lawrence Seaway in 1959, ballast water discharges from oceangoing vessels have been the main pathway of new species to the Great Lakes Region. The discharge of untreated ballast water from oceangoing vessels continues to be a concern for Michigan and the Great Lakes Region.

Considerable regulatory activity at the international, national, and state levels is underway to move beyond ballast water exchange and saltwater flushing and to require treatment of ballast water. The International Maritime Organization (IMO)

developed and adopted the International Convention for the Control and Management of Ships' Ballast Water and Sediments. This Convention includes standards on the concentration of live organisms in ballast water discharge; however, the Convention is not yet effective.

The U.S. Coast Guard, U.S. Environmental Protection Agency, and several Great Lakes states have already included the IMO discharge standard under various regulatory frameworks that are being phased in. Michigan began regulating ballast water discharges in 2007; oceangoing vessels must treat their ballast water discharge or certify that there will be no discharge in Michigan waters.

With a protective national standard for ballast water and a strong regulatory framework for ballast water discharges in Michigan, the ballast water pathway for AIS can be managed and controlled.

For more information on ballast water, contact Sarah LeSage, MDEQ, at 517- 284-5472 or [lesages@michigan.gov](mailto:lesages@michigan.gov).



Cargo ship on the Detroit River. Photo by Michigan Sea Grant.



## AIS Education & Outreach: Summer Highlights

Outreach efforts in summer 2014 aimed to raise awareness among boaters and anglers about simple actions that can help prevent the spread of invasive species in Michigan's waters. Prevention is a key step in AIS management and recreational users have a critical role in slowing the spread of AIS. Visit [www.michigan.gov/aquaticinvasives](http://www.michigan.gov/aquaticinvasives) for more information.

### Michigan's 1st Annual Landing Blitz

Michigan's AIS Awareness Week kicked off with a two-day event called the AIS Landing Blitz. On June 6 and 7, 2014, the MDEQ, MDNR, and MDARD partnered with local citizen volunteers to assist boaters in preventing the spread of AIS. Boaters were encouraged to "Clean, Drain, and Dry" their boats, trailers, and equipment. Outreach efforts were targeted at 12 boating access sites across the state. At the end of the weekend, total numbers were:

- over 768 people contacted
- 128 boats inspected
- 59 boats washed

Information about the 2nd annual AIS Landing Blitz will be available in early 2015 on the MDEQ's Web site.

### MDEQ's Mobile Boatwash Increases AIS Awareness

Utilizing a grant from the U.S. Fish and Wildlife Service, the MDEQ purchased a mobile boat washing system to demonstrate how boats and equipment can be inspected and cleaned to prevent the unintended transport and spread of AIS. The boatwash serves as a prominent outreach tool to communicate important messages about AIS prevention and management. Through a partnership with Michigan State University and the U.S. Forest Service, MDEQ's boatwash was used at more than 25 events at 16 locations around the state. Additional totals included:

- 137 boats washed
- over 500 people contacted

Plans are currently underway for next summer's efforts.

### MDNR and MDEQ Partner with Michigan Out-of-Doors

A series of AIS informational segments aired on the popular *Michigan Out-of-Doors* television show as part of a partnership between the show's producers and MDNR and MDEQ. Topics included:

- Identification of the invasive Northern snakehead fish.
- Importance of removing aquatic plant material from boats, trailers, and equipment after a day of boating and/or angling.

More informational videos will be produced in 2015.

For education and outreach questions, contact Kevin Walters, MDEQ, at 517-284-5473 or [waltersk3@michigan.gov](mailto:waltersk3@michigan.gov).



DEQ boatwash in action.



**JIMMY GRETZINGER**  
Michigan Out of Doors

**SETH HERBST**  
MI DNR - Fisheries Division AIS Co.

Video snapshot from one of the educational videos.



## Michigan's AIS Program Partner Spotlight: Belle Isle

Belle Isle, America's largest city-owned island park is now managed as the State of Michigan's 102<sup>nd</sup> state park. In the heart of the Detroit River, Belle Isle forms the foundation of the city of Detroit's burgeoning recreation network. This setting provides an ideal opportunity to promote environmental stewardship and increase citizen awareness of AIS concerns threatening the Detroit River and the Great Lakes ecosystem as a whole.

Recently, the Friends of the Detroit River received a two-year Great Lakes Restoration Initiative grant from the U.S. Environmental Protection Agency to implement a comprehensive AIS management and outreach and education program in collaboration with a variety of partners, including: MDNR, Belle Isle Conservancy, MDEQ's Office of the Great Lakes, Wayne State University, Michigan Sea Grant, and others.

The islandwide AIS management effort is targeting four invasive plant species: common reed, reed canary grass, purple loosestrife, and Japanese knotweed. Stands of these species have been mapped, and licensed contractors are undertaking herbicide applications. The goal is to reduce the percent cover of these plants to a level that will be more easily managed by the MDNR beyond the grant period.

In addition to treatment activities, the project team is working to raise awareness about invasive plant and animal species currently present or that are a known threat to the Great Lakes ecosystem through outreach and education programs at the Belle Isle Aquarium and Belle Isle Nature Zoo. The goal is to build public awareness and demonstrate ways to minimize or prevent the introduction and spread of invasive species in the region. For example, the public can see a model of one of the Great Lakes' most unwanted fish



Entrance to the Belle Isle Aquarium.  
Photo credit: Michelle Selzer

species, the northern snakehead.

The Aquarium is open to the public every Saturday and Sunday from 10:00 a.m. to 4:00 p.m., and the Nature Zoo is open Wednesday through Sunday from 10:00 a.m. to 5:00 p.m. For more information about the project, contact Sam Lovall, Friends of the Detroit River, at [sam.lovall@gmail.com](mailto:sam.lovall@gmail.com); or Jeffrey Ram, Wayne State University, at [jeffram@gmail.com](mailto:jeffram@gmail.com).

### Additional Resources

It's here – the Phragmites Technical Guide has been updated. To obtain your own copy, go to the MDEQ's AIS Web site listed below.

Looking for a quick easy-to-use AIS identification guide? Check out MSU's "[Michigan Boater's Guide to Selected Invasive Aquatic Plants](#)."

Stay in the loop – sign up for updates on Michigan's AIS Program. Visit [www.michigan.gov/aquaticinvasives](http://www.michigan.gov/aquaticinvasives), click on the red envelope on the right hand side, enter your e-mail address, select "Aquatic Invasive Species," and hit submit.

For more information on Michigan's AIS Program, please contact Sarah LeSage, AIS Program Coordinator, at 517-284-5472 or [lesages@michigan.gov](mailto:lesages@michigan.gov). You can also visit the MDEQ's AIS Web site at: [www.michigan.gov/aquaticinvasives](http://www.michigan.gov/aquaticinvasives) or the MDNR's Invasive Species Web site at: [www.michigan.gov/invasivespecies](http://www.michigan.gov/invasivespecies).