



Wisconsin Department of Natural Resources
2020-2021
Invasive Species Report

About This Report

This report provides updates on the Department of Natural Resources' invasive species programs and progress in managing invasive species from July 1, 2020 through June 30, 2021. During this time, the department has engaged partners in early detection, management, and control, implemented a coordinated response framework, and provided training and outreach for businesses and other stakeholders.

The legislature has defined invasive species as “nonindigenous species whose introduction causes or is likely to cause economic or environmental harm or harm to human health.” These species can be aquatic or terrestrial weeds, insect pests, nuisance animals, or disease-causing organisms.

The impact of invasive species.

Invasive species can occur in all types of habitats and affect urban and rural areas throughout Wisconsin. The adverse effects on our environment and citizens include damage to natural resources, alteration of aesthetic values, harm to wildlife and human health, and a strain on our economy. The costs to manage and control invasive species can be reduced or avoided if invasions are prevented in the first place.

Why does this matter?

The Invasive Species Identification, Classification, and Control Rule (Chapter NR 40, Wis. Adm. Code) classifies invasive species in Wisconsin as Prohibited or Restricted and regulates their transportation, possession, transfer and introduction. It also establishes “Preventative Measures” to slow the spread of invasive species. This rule applies to over 245 species and affects everyone in Wisconsin.

Want to Get Involved?

NR 107 and NR 109 are laws related to chemical and mechanical/manual management of aquatic plants, respectively. Both laws are undergoing rule revisions and the public comment period will begin on the economic impact analysis for the rule will begin this fall. Public hearings on the new rules will take place later this winter.

Visit <https://dnr.wisconsin.gov/topic/lakes/plants/rules> for more information on aquatic plant management rules.

Species Monitoring and Control

Virtual, But Valuable. In May 2020, webinar training sessions were hosted to review topics ranging from species identification, to monitoring and reporting, to disinfection. In spring 2021, meetings took place to review previously recorded webinars, provide additional webinar training sessions, and answer questions. When in-person training was not possible, the DNR adapted in order to continue invasive species monitoring programs. All webinar recordings are available to the public on the DNR webpage: <https://dnr.wisconsin.gov/topic/Lakes/AIS/Monitoring.html>



A State Natural Areas (SNA) team is trained to identify stilt grass with COVID19 precautions in place.

Pathway to Success. Pathway management is a major focus of Wisconsin's Aquatic Invasive Species (AIS) management plan. It aims to prevent invasive species through behavior change. The three priority pathways for behavior change are Maritime Commerce & Ballast Water, Organisms in Trade, and Recreation Activities & Service Providers. Each pathway is unique, so a management plan that recognizes the differences in user groups was created. The Maritime Commerce Pathway group is working to communicate with and connect the Great Lakes States in addition to improving communications within Wisconsin. Several DNR programs, other agencies, and partners are working together to develop monitoring, education, and enforcement policies having to do with Organisms in Trade. The Recreation Activities & Service Providers pathway is focusing on dock service providers. Traditionally, this group hasn't been addressed but is now receiving the necessary training and resources to reduce invasive species spread.

Citizen? Scientist? Why Not Both? Invasive species are often identified by DNR employees, but citizen science monitoring efforts are equally as important. In July 2020, a volunteer for the DNR's Bureau of Natural Heritage Conservation's Rare Plant Monitoring Program discovered Japanese stilt grass while searching for rare plants in the Coulee Experimental Forest. Japanese stilt grass is spread easily by shoes, tires, animals, and more due to its small seeds. It has been known to develop into dense populations that blanket forest floors. Amanda Weise, the volunteer, was able to identify and report the invasive on EDDMapS, a web-based mapping system for documenting invasive species and pest distribution. Amanda's report was soon verified by the Wisconsin First Detectors Network as the first stilt grass report in Wisconsin. Thanks to Amanda's report, the DNR was able to implement its response protocol to control the stilt grass through hand pulling and spraying. Each year, the forest will be surveyed and the stilt grass controlled until it is no longer present



Volunteer Jeff Jenkins searches for garlic mustard at Ridgeway Pine Relict State Natural Area (SNA). Photo by Mary Kay Baum.

Species Monitoring and Control

Invasive species have multiple avenues of spreading, so the DNR ensures that each species is met with the most appropriate form of control. Funding for control methods can come through grants like the Great Lakes Restoration Initiative-Environmental Protection Agency (GLRI-EPA) grant. This grant paid for the control of lesser celandine, an aggressive yellow-flowered perennial, on 22 sites covering 15.84 acres in the Milwaukee Metropolitan area. It also funded the treatment of several hundred giant hogweed plants, an invasive that can cause serious skin inflammation and burns, in Sheboygan. Education and outreach is also an important form of invasive species control. The Lower Chippewa Invasives Partnership and the Southeast Wisconsin Invasive Species Consortium (SEWISC) have provided extensive education on wild chervil, which is often spread via mowing.



DNR Property Management by the numbers

3159 hours from State Natural Area volunteers for invasive species control and conducting prescribed burns impacting over **1316** acres on **34** different sites

Volunteer Patrick Mulrooney poses by a brush pile of buckthorn at Bluff Creek State Natural Area (SNA).
Photo by Scott Farrell.

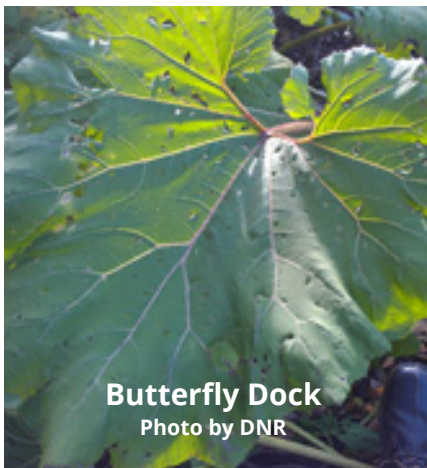
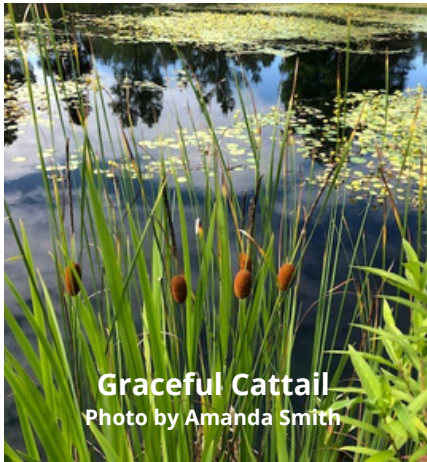
Species Monitoring and Control

Have You Seen Me?

Check out these 2021 invasive species discoveries. Citizen monitoring is an integral part of invasive species monitoring, so visit the DNR website to see what you should be on the lookout for in your area.

The Aquatic and Wetland Invasive Species Monitoring webpage was published in June 2021. It provides information on identification of invasive species, where they're located, and how to report them. The website includes protocols for both citizen and DNR monitors.

<https://dnr.wisconsin.gov/topic/Lakes/AIS/Monitoring.html>



Species Monitoring and Control

Floating marsh pennywort (*Hydrocotyle ranunculoides*)

Discovered by DNR staff at the Horicon Wildlife Area. The regional DNR AIS Coordinator and Statewide Monitoring leader surveyed the site to verify the identity of the species. While there is some uncertainty on whether this species is native to Wisconsin, the local distribution suggests this is an introduced population. Given the limited access to assess the population with Horicon, the aquatic invasive species team worked with the DNR Forestry Aeronautics team to use drones to assess flight height needed to detect pennywort and deploy drones to delineate presence of pennywort. The status of this species will continue to be assessed within Wisconsin.

Starry stonewort (*Nitellopsis obtusa*)

In early September 2020, a local partner identified a small population of starry stonewort at a boat landing in Marquette County. The survey that detected this population was the result of an effort to search boat landings following another proximal discovery. Local DNR staff and partners are working with the lake group to explore options with the AIS Early Detection grant program to assess the population and expand prevention efforts.

Butterfly dock (*Petasites hybridus*)

Two populations of butterfly dock were discovered on opposite ends of the state, in Dane County and Douglas County. The unusually large leaves of this unique plant attract the eye of horticulturalists and plant enthusiasts and has resulted in intentional plantings in Wisconsin and the Midwest. This plant can spread rapidly along road and streams, jeopardizing soil stability. The Dane County population was discovered by a citizen, and the Douglas County population was discovered by a DNR partner. The Dane County government will fund the control of the population with coordination by the Upper Sugar River Watershed Association. The Douglas County population was awarded an AIS Early Detection grant.

Common reed grass (*Phragmites australis* ssp. *australis*)

Local partners have identified that the tall grass that lines State Highway 41 is expanding in western and northern Wisconsin where it is currently a Prohibited species under Wisconsin's Invasive Species Rule. Small localized populations were observed in Bayfield, Grant and Richland counties. A response plan has been developed for the Bayfield population and the lake association is working with individual landowners on control. Upper Sugar River Watershed Association has plans to control both populations under its Lake Monitoring and Protection Network agreement with the DNR.

Water lettuce (*Pistia stratiotes*)

A DNR warden received a call from the DNR Tip Hotline about water lettuce in a private pond in Milwaukee County. The warden is working with the landowner to remove all the plants and monitor the pond.

Graceful cattail (*Typha laxmannii*)

DNR identified a small population of graceful cattail in a private Marinette County pond during a routine visit to assess the removal of a long-term population of yellow floating heart. The local Cooperative Weed Management Area, Wild River Invasive Species Coalition, is applying for a DNR AIS Early Detection and Response grant to help the landowner with control.

Japanese stiltgrass (*Microstegium vimineum*)

A citizen from the DNR Rare Plant Monitoring Program identified Japanese stiltgrass in the Coulee Experimental Forest in La Crosse County. The next nearest population is in Iowa and northeast Illinois. Given the colonization of this species in other states and ability to spread rapidly along streams, a team of DNR Forestry, Natural Heritage Conservation, and Water Resources quickly gathered on site with rubber boots, steam cleaners and field guides to assess the population. The population was limited to a trailhead and roadsides. Forestry is coordinating management and will continue to monitor.

Enforcement and Response

Conservation Wardens within the DNR are responsible for enforcing natural resource laws and recreational safety laws through community involvement, educational outreach, and traditional patrol. One of the types of laws wardens must enforce are invasive species laws. Such enforcement can include traditional field-based enforcement, like ensuring boaters are not leaving lakes and rivers with boat trailers full of invasive plants or zebra mussels. Additionally, conservation wardens investigate the illegal trade of invasive species, which has become a focus over the past two years. In addition to the normal patrol-based invasive species work done by all wardens, several wardens have been given specialized training to deal with invasive species in trade issues on a larger scale. Below are several examples of this work.



Self-Cloning Marbled Crayfish Nationwide Distribution. Conservation Wardens investigated a Green Bay man who was raising hundreds of marbled crayfish in his basement, selling them on eBay, then shipping them around the country through the US Postal Service. Marbled crayfish (*Procambarus fallax* forma *virginalis*), also known as "Marmorkrebs," are the world's only known self-cloning crayfish. They can reproduce without having to find a mate, therefore the release of a single one of these crayfish can start an entire new population! Wardens notified natural resource agencies in 12 other states where the seller shipped these to, and many of those states began investigations in their own states. This has resulted in the discovery of over 1,000 of these crayfish, with nearly 400 of them in Wisconsin. Many more leads that have not yet been fully investigated by the other states yet. The Green Bay man was convicted on three charges of "possess/transfer Prohibited invasive species."



A close up of a marbled crayfish carrying over 100 eggs, marbled crayfish packaged for sale, and connected tanks in a basement.

Enforcement and Response

Asian Carp for Sale. Conservation Wardens were contacted by a citizen concerned about live Asian carp for sale in a Madison store. Asian carp are required to be eviscerated or have the gill covering severed to ensure they are dead, since they can be revived after long periods out of water. Wardens purchased intact Asian carp (bighead, silver, and grass carp) from the business, which led them to the supplier of the illegal fish – a wholesale fish dealer from southwest Wisconsin. The wholesale fish dealer was found to be picking up thousands of pounds of Asian carp at a time from commercial fishermen in Illinois, then transporting them intact back to Wisconsin, sometimes within hours of them being caught. He sold them in Wisconsin and Illinois, but his records could not account for tens of thousands of pounds of Asian carp. He also had not marked his transport vehicle with his business name or that it was carrying fish. He was convicted on seven charges in Grant County with total penalties of \$2,223. The charges were for "Violate Fish Dealing Rules" (3 charges), "Illegal Transport of Asian Carp" (2 charges), and "Fail to Keep Wholesale Fish Dealer Records" (3 charges). Other charges are pending in Dane County Circuit Court.

Operation Crusty Crab. Conservation Wardens investigated a citizen complaint about an invasive red swamp crayfish for sale in a Milwaukee pet store. The investigation revealed that several wholesale pet distributors had provided around 900 invasive crayfish to pet stores throughout Wisconsin even after some of the distributors and pet stores had been notified of invasive species rules. Dozens of criminal and civil charges have been filed throughout Wisconsin for the more egregious violations, along with hundreds of warnings.



Prohibited invasive crayfish sold as pets. On left: Thunderbolt crayfish. On right: Neon Red crayfish.

Grants

The Weed Management Area-Private Forest Grant Program (WMA-PFGP) awarded \$110,650 to partner groups in fiscal year 2021, which reflects an additional \$50,000 from federal grants that were re-allocated to this program.



Attendees of a Woodland Management Workshop through the Lower Chippewa Invasives Partnership learn about tools and equipment needed to be successful in landowner invasive species management. Photo by Chris Gaetzke.

Sustain Our Great Lakes 2020. DNR's Bureau of Natural Heritage Conservation was awarded a \$228,569 grant from the National Fish and Wildlife Foundation: Sustain our Great Lakes program and Fund for Lake Michigan. This grant will be used for ecological restoration and invasive species control at DNR State Natural Areas (SNAs) and surrounding landscapes. Activities for this project will include prescribed fire, selective tree thinning, brush mowing, invasive species control, and revegetation on high conservation value areas. The department will be partnering with Cooperative Invasive Species Management Areas (CISMAs) and will expand this work onto adjacent public and private properties to form protective buffers around quality habitats to expand available habitat and habitat diversity, control invasive species, and improve connectivity between SNAs.



Pictured on left: Volunteer Amber Glembin pulls garlic mustard at Frontier Park. Pictured on right: Workshop attendees observe a freshly cut forest edge that was mowed in order to remove common buckthorn and honeysuckles. This area is now being grazed by cattle and sheep to control regrowth. Photo by Chris Gaetzke.

Forest Health

Woodlot and forest landowner participation is critical for prevention and management of invasive forest pests and diseases. To assist woodlot owners, the DNR has developed guidance on prevention and management of some of the most damaging invasive forest pests and diseases.



Members of the Friends of the Lower Wisconsin Riverway treat invasive brush and brambles at the Twin Lizard effigy mound group. Photo by Timm Zumm.

- Owners of pine or spruce plantations can view a video introduction to Heterobasidion root disease (HRD) use an interactive guide to determine whether they should treat cut stumps with a fungicide to prevent HRD from infecting their stands.
- The guidelines for silvicultural management of ash-dominated forests threatened or damaged by emerald ash borer (EAB) was recently updated by a team of stakeholders. The team included landowners, forest industry, local government and DNR forestry staff. Recent research and silvicultural trials, increased EAB spread, and a changed regulatory framework were incorporated into the revision.
- Guidance on organizing an aerial suppression spray to prevent defoliation from gypsy moth or other forest defoliators is now available. Aerial sprays are practical when more than 20 acres of woodland is threatened with defoliation, but guidance on a variety of control options for smaller areas is linked from the Wisconsin Gypsy Moth Portal.
- The DNR website on oak wilt now includes a short video introducing viewers to oak wilt, what impacts it can have, and what landowners can do to prevent spread onto their property.

Outreach

PlayCleanGo. The Department of Natural Resources partnered with the North American Invasive Species Management Association (NAISMA), regional CISMAs, county governments, and nature centers to identify 65 locations throughout Wisconsin for the installation of PlayCleanGo boot brush kiosks. PlayCleanGo promotes awareness, understanding, and cooperation by providing a clear call to action to be informed, attentive, and accountable for stopping the spread of all invasive species. PlayCleanGo engages outdoor enthusiasts where they recreate to encourage active invasive species prevention measures such as cleaning outdoor recreation gear (boots, bikes, boats, and more) before entering a recreation area through a trail, boat landing or other pathway.



A new boot cleaning station is installed.

Bite Sized. During 2020-2021, the Surface Water Grant Program rolled out the new Lakes Monitoring and Protection Network Grants which brought several new counties into the fold of the Wisconsin Aquatic Invasive Species Partnership. These partners from counties and non-profits provide nearly statewide coverage for Wisconsin's AIS Prevention programming. Through spring, new partners and staff for existing partners were provided a series of trainings through regularly scheduled "Trainings in Small Bites" that covered an overview of NR40, training on our flagship prevention efforts such as the AIS Signage program, and tools they can use everyday such as the WDNR map viewers to plan their work. Presented virtually, the trainings were recorded and preserved in a new training library. The trainings were facilitated by UW Madison Division of Extension staff.



Melinda Myers poses in a garden.

Garden Friends and Fiends. Educating water, rain, and shoreline gardeners about their part in preventing the spread of aquatic invasive species has continued in partnership with nationally-known Wisconsin gardening expert Melinda Myers. During 2020-2021, in-person events were curtailed, however her extensive reach through newsletters and social media directly reached gardeners across the Midwest. Myers regularly noted the risks and impacts of invasive species during her series of gardening webinars throughout the year. New in Spring 2021 was a webinar dedicated to planting alternatives to invasive or overly aggressive species and how to manage invasive species gardeners may come across.

Outreach

Lake it 'Til You Make It. Other regular AIS and Water Quality programs resumed normal operations in Spring 2021, including Clean Boats, Clean Waters (CBCW) boater education, the Citizen Lake Monitoring Network, Water Action Volunteers, and Purple Loosestrife Biocontrol. Each had been active, although in a more limited way, during the pandemic with coordinators for each program providing specific safety guidelines. CBCW staff and volunteers were provided masks and signage for boat launch visits during 2020.



Sloan Wunder, a CBCW inspector through Glacierland RC&D waits for boaters to arrive.



Lights, Camera, Action! Department staff were interviewed by video and radio platforms. Zoom video interviews on lesser celandine reporting were provided to two television stations, WQOW and WAOW, in addition to an in-person interview on Japanese stiltgrass for Spectrum News. Kelly Kearns, the Terrestrial Invasive Plants Coordinator, participated in multiple educational radio interviews. The DNR also partnered with the University of Wisconsin-Extension to hold a webinar series that discussed shoreline issues with citizens of Walworth County and the Geneva Lakes Conservancy. DNR staff presented information on wetland invasive species identification and control.

Invader Crusader Awards

The governor-appointed Wisconsin Invasive Species Council advises the Wisconsin Department of Natural Resources on invasive species issues. Each year, the council honors “Invader Crusaders,” individuals, groups or organizations who have made significant contributions to prevent, monitor, or control invasive species that can harm Wisconsin’s ecosystems, economy, and in some cases, public health.

Nominations come from citizens and organizations, and awards are given in several categories. This year’s winners will be recognized at an in-person ceremony planned for September along with 2020 Invader Crusader winners as no event took place last year due to COVID-19 precautions.

2021 Invader Crusader Award winners and the organizations they volunteer or work for are listed below. Find summaries of their outstanding contributions on the Wisconsin Invasive Species Council website.

Professional Individuals Category Winners

- Eric Boettcher, Director of Parks and Recreation for the City of Whitewater
- Anne Pearce, Coordinator of the Wisconsin First Detector Network, Madison
- Bret Shaw, Associate Professor in the UW-Madison Department of Life Sciences Communication, Madison

Professional Group Category Winners

- River Revitalization Foundation, Milwaukee
- Wild Rivers Invasive Species Coalition, Kingsford, MI

Volunteer Individuals Category Winners

- Ann Mawicke, chair of the Invasive Species Committee of the Natural Lakes Private Preserve Owners’ Advancement Association, Presque Isle
- Timothy Richert, chair of the Lagoon Restoration Committee of Humboldt Park Friends, Milwaukee
- Jeff Steele, co-chair of Friends of Starkweather Creek, Madison

Volunteer Group Category Winners

- Chiwaukee Prairie Preservation Fund, Kenosha
- Friends of Hackmatack National Wildlife Refuge, Richmond, IL

Youth Category Winners

- Peter Dargatz & his Nature Kindergarten Class, Menomonee Falls

Who to Contact

General Questions on Invasive Species:

invasive.species@wisconsin.gov

Wisconsin's Invasive Species Rule:

tara.bergeson@wisconsin.gov

Terrestrial Invasive Plants:

invasive.species@wisconsin.gov

Aquatic Invasive Species-Find your Local AIS Coordinator:

https://dnr.wi.gov/lakes/invasives/Contacts.aspx?role=AIS_RE_COORD

Forest Insects or Diseases-Find your Regional Forest Health Specialist:

<https://dnr.wi.gov/topic/ForestHealth/staff.html>



A boot brush is used to clean dirt and seed from boots.

How to Help

Found an invasive species that may be new to your area? Send photos, details of its location, abundance, and habitat to invasive.species@wi.gov

Reporting an aquatic invasive species? Check out this page:

<https://dnr.wi.gov/topic/Invasives/report.html>

Want to work with others on invasive species in your area? Join your local Cooperative Invasive Species Management Area (CISMA):

<https://ipaw.org/the-solution/education/cismas/>

Want to control specific invasive species on your land? Find more information at these sites:

<https://dnr.wi.gov/topic/Invasives/control.html>

<https://mipcontroldatabase.wisc.edu/>



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