

Invasive Species Program Expansion

With more invasive species issues facing the state and a heightened level of concern, the 2007 Minnesota Legislature increased the funding for invasive species from \$2.4 million to \$4.9 million annually in fiscal year 2009. The increase in funding has allowed the Invasive Species Program to restructure to build capacity for the future, react quickly to new threats, and provide more support to local organizations and governments, Department of Natural Resources (DNR) field staff, and others trying to manage invasive species. The DNR is expanding activities focused on both aquatic and terrestrial species.

Specific expansion areas include:

1. Prevention efforts
 - expanded enforcement by DNR conservation officers;
 - expanded the DNR watercraft inspection program;
 - initiated a new prevention grant program.
2. Manage aquatic invasive species
 - increased funding for management grants;
 - added new field staff to work with lake associations and others on management efforts.
3. DNR's ability to monitor and manage invasive terrestrial plants growing on state lands and minimize the potential movement of invasive species associated with DNR activities.

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Enforcement

A significant portion of the funding increase was allocated/used for expanded enforcement efforts. To accomplish this, an equivalent of 4.5 full time positions were added to the Division of Enforcement. The officers split their time between invasive species and wetland enforcement issues. Eight of the officers are responsible for distinct work areas in the state (Figure 1). The officers, called Water Resource Enforcement Officers, will take the lead in coordinating invasive species enforcement activities such as developing a targeted plan for enforcement efforts, working with the local conservation officers on enforcement activities unique to their patrol areas, carrying out special investigations, and advancing educational opportunities. Eight Water Resource Enforcement Officers began their duties on April 30. Five of these officers were promoted and began their duties as Water Resource Enforcement Officers and three existing wetland officers also began to change their focus as they transitioned into the new job description. This first season saw the officers transition into their new positions and start to learn the invasive species issues in their respective work areas.

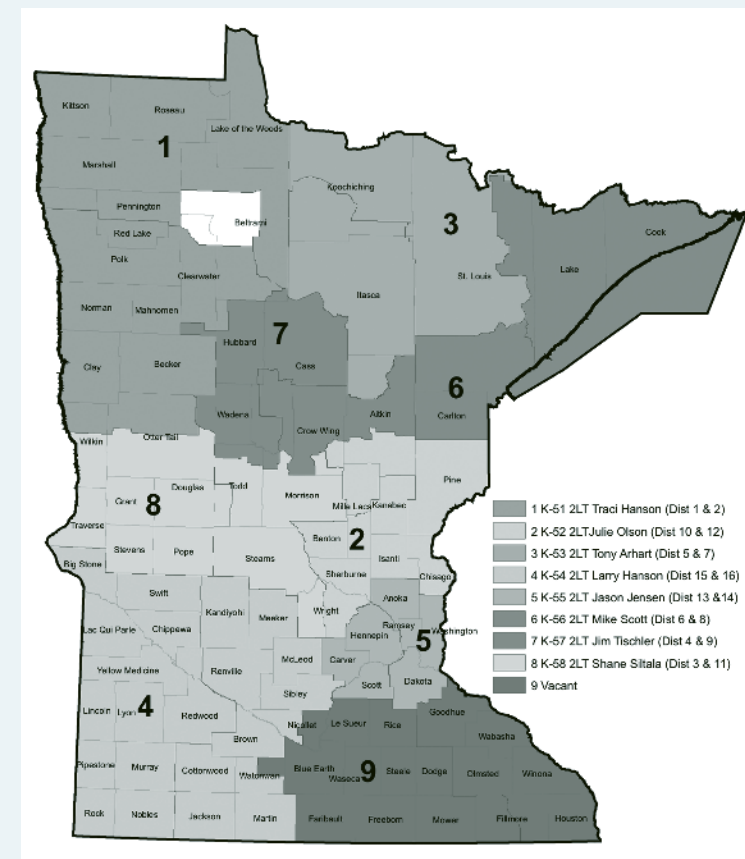


Figure 1. Water Resource Enforcement Officer Patrol Areas

Watercraft Inspection Program

In 2008, the number of DNR watercraft inspectors was increased from 50 to 75 who worked through the summer providing information to the public on invasive species. Inspections began in late April and continued through mid-October. Watercraft inspectors logged nearly 35,000 inspection hours (up from 24,000 hours in 2007) with a total of 49,300 watercraft/ trailers inspected. Nine local entities received grants for additional hours of inspection. Each grantee agreed to pay for a certain number of watercraft inspection hours with an equal match in hours from the DNR. This cooperative effort helped local entities increase inspection hours in their areas and increase invasive species awareness.

Prevention Grants

In 2008, the DNR began providing grants to local groups and governments to help prevent the spread of aquatic invasive species, especially zebra mussels and spiny waterfleas into Minnesota waters. Grants were provided to help local entities (lake associations, coalitions of lake associations, local citizen groups, and local units of government) implement locally focused prevention efforts and to dove-tail those efforts with other ongoing statewide aquatic invasive species prevention efforts. One example of a statewide prevention effort is the "Stop Aquatic Hitchhikers!" campaign that is being implemented by the DNR, Minnesota Sea Grant, Wildlife Forever, and the U.S. Fish and Wildlife Service. In total, \$50,703 was awarded to 12 grantees. The grant funded portions of the proposals were capped at \$10,000. In 2009, the DNR plans to increase the total prevention grant amount available to \$100,000.

Management of Aquatic Invasive Species

The Invasive Species Program hired four additional invasive species specialists to work at the local level with lake associations, lake improvement districts, and local units of government on prevention and management efforts. This increases the total number of invasive species specialists in DNR field or regional offices to six.

Grant funding for the management of curly-leaf pondweed and Eurasian watermilfoil increased to \$400,000, up from \$300,000 in 2007. Funding was used for nuisance control of Eurasian watermilfoil and pilot lake-wide treatments of curly-leaf pondweed and/or Eurasian watermilfoil. Grant funding for management will increase again in 2009.

Zebra Mussel News

Mille Lacs Lake zebra mussel population undergoes dramatic increase

Zebra mussels were first collected in Mille Lacs Lake in August 2005. Dive surveys by Fisheries biologists documented 140 attached adult mussels in 2007 (Figure 2). In 23 dives this season, biologists counted over 24,000 mussels with this invasive found at every dive site around the lake, except at the outlet to the Rum River. A commercial launch removed from the lake had over 1,000 young mussels attached to its hull. Water samples collected from around the lake had veligers in every sample in August and September, as well as half of the samples in July, compared to a single veliger found in 2007 samples. These data show a dramatic increase in reproduction and population levels of zebra mussels in this major angling destination. The numbers raise concern about the potential of this lake to spread this invasive to other inland lakes via trailered boats, the sale of docks or other gear by lakeshore residents, or water movement.

Zebra mussels spread far downstream in Mississippi River

Since the discovery of zebra mussels in Rice Lake on the Mississippi River just north of Brainerd in fall 2005, DNR Invasive Species Program staff have been monitoring/tracking their spread downstream. Sampling in 2006 and 2007 found some isolated mussels a few miles downstream of the dam in Brainerd. This season, however, reports from the public and staff documented small settled zebra mussels below the dam in Little Falls. Shoreline surveys in the impoundment above the dam recorded numerous sites with hundreds of attached mussels of different sizes. This suggests that the zebra mussels have moved at least this far downstream, and have established another large reproducing population in this impoundment on the river. Reports from the public have put zebra mussel sightings as far downstream in the river as Sartell. This rapid movement suggests that zebra mussels soon may become abundant from Brainerd all the way downstream to existing dense populations in Lake Pepin and beyond. Mississippi River boaters may be unaware of the high numbers and need to exercise care in cleaning their watercraft and emptying water to prevent further spread. Also, power plants, water utilities, and other water-using industries will likely need to undertake new prevention and maintenance in response to increasing zebra mussel populations in the river upstream of the Twin Cities.



Figure 2. Zebra mussels attached to native mussel in Lake Mille Lacs.

Three Asian Carp Species Caught in Mississippi River

In November 2008, a Wisconsin licensed commercial fisherman caught five Asian carp in seines in Pool 8 of the Mississippi River that extends from La Crosse, Wisconsin to Reno, Minnesota (Figure 3). Three species of Asian carp were found: one silver carp, at least one and likely two bighead carp, and two grass carp. The catch of the 6-pound, 24-inch silver carp in the Minnesota-Wisconsin border waters represents a large extension of the range for that species in the Mississippi River. The previous northernmost confirmed report of a silver carp was near Clinton, Iowa—more than 150 miles downstream. High water in many rivers south of Minnesota in 2008 appears to have enabled northward range expansions of the Asian carp species. Lock and dam structures are generally barriers to upstream migrations of fish, but when floodwaters overtop the dams, fish can swim past them and move upstream.



Figure 3. A silver carp caught in Pool 8 of the Mississippi River in November 2008.

Status of Invasive Species in Minnesota: 2008

Aquatic Plants

- Eurasian watermilfoil was discovered in 12 additional water bodies. The total number of milfoil infested water bodies is 215.
- Purple loosestrife was found in 21 new sites, bringing the total number of known infestations to 2,379.
- Curly-leaf pondweed is known to occur in 759 lakes in 70 Minnesota counties.
- Flowering rush was found in two additional lakes—Lake Tetonka and Upper Sakatah in LeSueur County.
- Brazilian elodea was found in Powderhorn Lake in Minneapolis in 2007 and was treated with an herbicide. No plants were found in Powderhorn Lake in 2008.

Wild Animals

- Zebra mussels are currently found in eight inland lakes, isolated areas of Lake Superior, the Mississippi River from Crow Wing County to the Iowa border, the St. Croix River from Stillwater downstream, Pelican Brook, and the Zumbro River downstream from Lake Zumbro (see hot topics for more information).
- No new Zealand mudsnail infested waters were discovered.
- Spiny waterflea continues to spread along Minnesotan-Canada border waters (Figure 4).
- More than 80 occurrences of the Chinese mystery snail and 50 occurrences of the banded mystery snail have been reported.
- Mute swans were found at five locations. A total of six birds were reported in the wild.

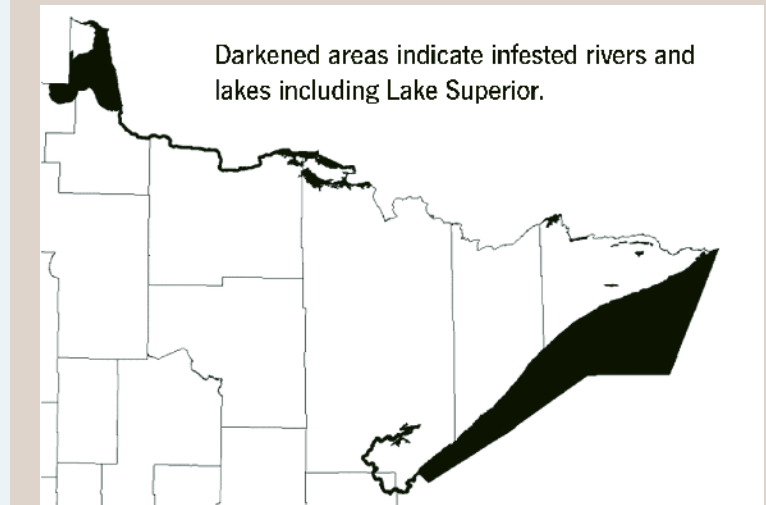


Figure 4. Spiny waterflea infested rivers and lakes in Minnesota as of November 2008.

The Problem

Invasive species have the potential to cause serious problems in Minnesota. Evidence from numerous locations in North America and from around the world demonstrates that these non-native species are a threat to the state's natural resources and local economies that depend on natural resources.

The Response

To address the problems caused by invasive species, the 1991 Minnesota Legislature directed the DNR to establish the Invasive Species Program and to implement actions to monitor and manage invasive species of aquatic plants and wild animals.

Program Goal Highlights

1. Prevent introductions of new invasive species into Minnesota

Keeping new invasive species out of Minnesota is a high priority for the environment and the state's economy. New introductions are costly to manage and may become perpetual problems.

Regulations

Regulations help prevent activities or practices that carry a high risk of introduction. In 2008, the Legislature made two technical changes to portions of Minnesota Statutes 84D that clarify: 1) a trailer or watercraft can be placed in the waters of the state with aquatic vegetation for shooting or observation blinds only if attached in or on a watercraft; and 2) a trailer, a watercraft, or plant harvesting equipment may not be placed in waters of the state if it has aquatic plants attached.

Legislation was passed requiring the operator of a vessel that is designed, constructed, or adapted to carry ballast water in state waters of Lake Superior to conduct ballast water management operations of the vessel according to a ballast water management plan that meets the requirements prescribed by the Minnesota Pollution Control Agency.

State statutes now allow the designation of infested waters via DNR Commissioner's Order instead of rulemaking. Outdated permanent rules that listed infested waters are in the process of being repealed.

Education

Education efforts explain the risks posed by invasive species and the steps that people and businesses can take to prevent new introductions. New education efforts, often in partnership with other organizations, included training sessions, presentations, displays, signage, and informational materials to help raise awareness.

2. Prevent the spread of invasive species within Minnesota

Efforts to prevent the spread of invasive species within Minnesota are focused on people and their habits. After an invasive species becomes established in our lakes and rivers, a primary means for its spread to other waters is the unintentional transport on boats, trailers, and other recreational equipment.

Watercraft inspections

Inspections began in late April and continued through mid-October in order to reach waterfowl hunters. Within this period, watercraft inspectors logged nearly 35,000 inspection hours, inspected 49,300 watercraft, and distributed more than 8,200 Invasive Alert Tags. Inspections also were conducted at 34 fishing tournaments.

The Watercraft Inspection Program worked cooperatively with eight lake associations and citizen groups to increase inspection hours in their areas. These groups funded additional hours of inspection at their accesses while the Invasive Species Program provided training, equipment, and supervision. The Lake Minnetonka Conservation District (LMCD) worked with the Invasive Species Program for the seventh year. Inspectors spent an additional 1,846 hours on four Lake Minnetonka accesses because of the funding provided by the LMCD.

Enforcement

Conservation officers spent 4,163 hours enforcing the invasive species laws and rules. Statewide, there were 22 civil citations, two criminal citations, and 18 written warnings issued. Conservation officers assisted with training approximately 20 local authorities in and around the Lake Minnetonka area. This training was given to meet the training requirement that Peace Officers need in order to issue civil citations (see hot topics for more information).

3. Reduce the impacts caused by invasive species

Grant program for control of curly-leaf pondweed or Eurasian watermilfoil

The DNR increased funding for its pilot project grant program for lake-wide control of curly-leaf pondweed or Eurasian watermilfoil. Grants totaling \$230,000 were given to 14 lakes for control efforts or for the collection of pre-treatment data. In addition, \$105,000 was given to 22 lakes to control nuisance populations of Eurasian watermilfoil. Legislation passed in 2007 requires that all grant applications to manage invasive plants in public waters have a workable plan for improving water quality and reducing the need for additional treatment. Also, grants may not be made for chemicals that are likely endocrine disruptors.

Coordination and Cooperation Among Groups that Manage Invasive Species

The successes achieved in preventing and managing invasive species result from cooperation among various organizations. Management of curly-leaf pondweed, Eurasian watermilfoil, and purple loosestrife involves cooperation with local lake associations and units of government. Efforts to prevent new introductions into Minnesota often involve the participation of DNR staff in state and regional groups such as the Minnesota Invasive Species Advisory Council (MISAC) and the Mississippi River Basin Panel on Aquatic Nuisance Species. These partnerships help to develop uniform messages in educational products and ensure information sharing about new and existing invasive species. MISAC held the first statewide invasive species conference on October 26-29 in Duluth. More than 400 participants attended the conference that focused on aquatic and terrestrial invasive species issues. MISAC members, including the DNR, provided sponsorship, coordination, and presentations for this highly successful conference.

Revenue and Expenditures

Funding for the Invasive Species Program includes a \$5 surcharge on watercraft registered in Minnesota and a \$2 surcharge on non-resident fishing licenses (which makes up the Invasive Species Account), appropriations from the general fund account, Environment and Natural Resources Trust Fund as recommended by the Legislative-Citizen Commission on Minnesota Resources, and local contributions. These funding sources generated \$3,014,000 for invasive species prevention and management activities for the 2008 fiscal year.

Aquatic invasive species spending for fiscal year 2008 is shown in Figure 5. The Management/Control and Inspections/Enforcement categories account for 64% of aquatic invasive species spending. These two spending categories along with expenditures for Education/Public Awareness activities, reflect the importance the Department places on efforts to prevent the spread of invasive species and to help manage the problems those species cause once they become established.

In addition, the Invasive Species Program received federal funds from the U.S. Fish and Wildlife Service and the U.S. Forest Service for a variety of research projects.

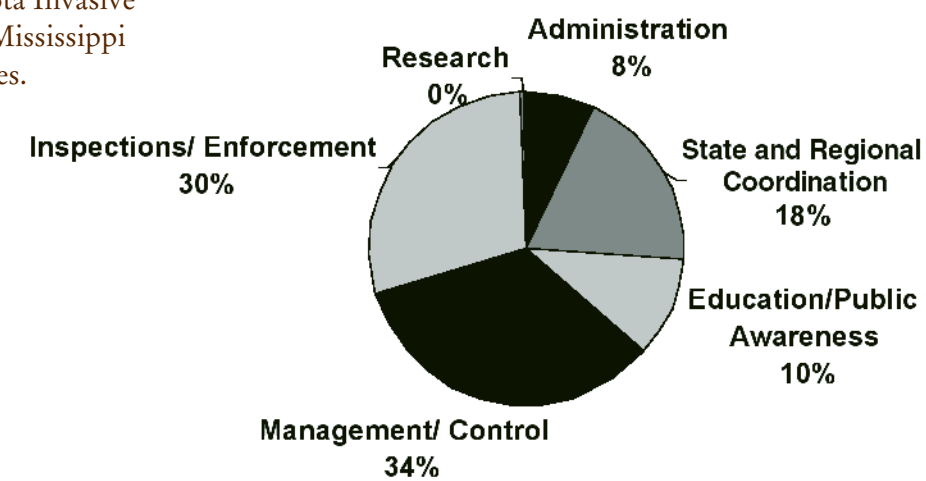


Figure 5. Aquatic Invasive Species Program spending from the Invasive Species Account and General Fund in FY08 by major categories.

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Invasive Species of Aquatic Plants and Wild Animals in Minnesota



Annual Report Summary for 2008

