

## MN DNR Aquatic Invasive Species Advisory Committee

Minnesota Aquatic Invasive Species Research Center  
Skok Hall 135  
2003 Upper Buford Circle  
St Paul, MN 55108

September 8, 2014

Dear MAISRC Advisory Board Members:

We are responding to your request for a list of priority species to be submitted by September 8. The MN DNR Statewide Aquatic Invasive Species Advisory Committee appreciates the opportunity to share with you the research priorities that our group has identified.

To provide background, our group was formed to advise the Minnesota Department of Natural Resources on its Aquatic Invasive Species Program. The 15 members selected by the DNR Commissioner and the 5 ex-officio members represent a broad range of personal and professional experiences including bait dealers, county commissioners, local governmental units, marina owners, lake associations, conservation groups, anglers, academia, watershed managers, federal agencies, tourism, and natural resource managers. We meet throughout the year to discuss and share information about AIS efforts in the state, as well as provide recommendations and feedback to the MN DNR.

The list attached represents our consensus on the species in need of focus and attention in our state. The list includes species that are firmly entrenched in the state and pose ongoing problems for managing existing infestations as well as preventing spread. The list also includes species that are threats to the state's waters, requiring rapid responses and more information as to the nature of the threat in our various lake ecosystem types.

In a future communication the MN DNR Advisory Committee will be sharing with MAISRC a list of key research questions that pertain to each species, based upon the experience of committee members as lake managers, business owners and natural resource managers.

On behalf of the Statewide AIS Advisory Committee, I look forward to continued collaboration and sharing of information to find solutions to a pervasive problem that impacts our state's economy and way of life.

Regards,

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	Rationale	Present or Future Threat
<b>Veterbrates</b>		
Bighead Carp	Econ and Rec impacts*: Filter feeders out compete native mussels, larval fish and some adult fish.	Potential threat: Established in Miss River, moving north
Silver Carp	Econ and Rec impacts:* Filter feeders out compete native mussels, larval fish and some adult fish. Can jump up to 10 feet: water sport impacts	Potential threat: Established in Miss River, moving north
Grass Carp	Problematic in some ecosystems. Herbivores that dramatically reduce aquatic vegetation and harm water quality by increasing phosphorous levels	In the Miss R basin, Caught in MN_IA border waters
Black Carp	Found in the Miss R basin, could expand, need to be prepared	In the Miss R basin
Northern Snakehead	Predatory fishes that may compete with native species for food and habitat	Specimen found in Lake Michigan
Rainbow Smelt	Compete with native fish for prey. Biomagnify contaminants. In Minnesota. could expand	In Minnesota
Common Carp	Improve management of an existing big problem: disrupt shallow lake and wetland ecology, causes water quality decline that impacts waterfowl and fish	Already a big problem here
<b>Invertebrates</b>		
Zebra Mussel	Stand in for many species - pathways of movement similar to other invasives	Already a problem here
Quagga Mussel	Emerging issue here. Very polymorphic with potential for rapid adaptation. Big impacts other places (similar effect of zebra mussels) Many impacts are unknown. Can colonize hard and soft substrata, unlike zebra mussels. Greater spatial/temp range than ZM.	
Rusty Crayfish and other crayfish	Aggressive invaders that harm fish communities by feeding on their eggs and young. Hybridize with natives. Eliminates aquatic veg. Bite swimmers	

PRIORITY SPECIES LIST, MN DNR Statewide AIS Advisory Committee

9/5/2014

Spiny Waterflea	Eats small animals (zooplankton) that are important food for native fishes. Clog fishing lines.	Existing in Minnesota (northeast)
Faucet Snail	Economic impacts (Ex: Winnebigoishish) Host for intestinal parasites that cause mortality in ducks and coots. Hard to distinguish from native snails. No known controls.	In Lake Winnibigoishish and the Miss R. at LaCrosse

Plants

<i>Myriophyllum spicatum</i> (Eurasian Watermilfoil)	Improve management, control of an existing big problem. Existing tools (herbicides) are not specific enough. Pathways of spread similar to other species. Continues to be most problematic aquatic invasive plant species.	Already a big problem
<i>Potamogeton crispus</i> (Curlyleaf Pondweed)	Improve management, control of an existing big problem. Existing tools (herbicides) are not specific enough. Interferes with boating and displaces native plants. Dying plants increase phosphorus leading to algal blooms.	Already a big problem
<i>Hydrilla verticillata</i> (Hydrilla)	Improve management, control of an existing big problem. Existing tools (herbicides) are not specific enough. Interferes with boating and displaces native plants. Dying plants increase phosphorus leading to algal blooms. Research on threat species could have benefits at guarding against future invasions.	New threat. Now in southern united states from California to Delaware

Microbes

VHS	Viral hemorrhagic septicemia, could be rapidly spread.	In Lake Superior waters of WI and MI
Spring Viremia of Carp	Fish pathogen that causes fish kills	Here, pool 8, Minnehaha Ck.
Heterosporis	Impacts imp. Fish species, there is a lack of protocols for rapid response, little know of life cycle	Here
Didymo or <i>Didymosphenia geminata</i>	Globally invasive single-celled algae (diatom), commonly referred to as rock snot. It can cover up to 100% of stream bottoms, markedly affecting stream ecology. Unlike many invasives, it can be a problem in nutrient-	Present in MN shores of Lake Superior

poor waters.

*Cylindrospermopsis raciborskii*  
(cyanobacteria)

C. raciborskii is an invasive toxin-producing cyanobacterium that can often be missed because it produces a bloom 2-3 feet below the water surface. C. raciborskii has been found in Manitoba and Indiana and is a toxic species of growing concern.

Present in metro lakes