

MN DNR Statewide Aquatic Invasive Species Advisory Committee

List of Priority Aquatic Invasive Species and Research Topics

Sent to Minnesota Aquatic Invasive Research Center, U of M, September and December, 2014

Priority Species

Vertebrates: Carps (Bighead, Silver, Grass, Black, Common), Northern Snakehead, Rainbow Smelt

Invertebrates: Mussels (Zebra, Quagga), Crayfish (Rusty and others), Spiny Waterflea, Faucet Snail

Plants: Eurasian Watermilfoil, Curlyleaf Pondweed, Hydrilla

Microbes: VHS, Spring Viremia of Carp, Heterosporis

Research Sub Area: Prevention

Preventing the arrival of new, potentially more dangerous species and limiting the spread of current invasive species.

- Priority 1: Identify strategies to address the movement patterns of current and future invaders. In particular, identify how different water user groups move invasive species through the movement of equipment (such as personal watercraft, recreational and small boat commercial fishers, guides, docks, lifts etc.) and how different equipment designs may pose more threat than others.
- Priority 2: Identify patterns of user movement from contaminated lakes to allow more strategic positioning of education, decontamination and enforcement efforts.

Research Sub Area: Integrated Control and Management

Managers need to know which tools to use and when to use them in their water body. An effective control and management action plan that is locally appropriate is needed for each invader.

- Priority 1: For priority species: What are the best current tools and plans (toolbox and workbook) for managers for integrated management options for each species, for particular situations and regions? Can others be developed? What modifications are needed for local adaptations of these plans? Although much is known, easy access to this information is also needed.
- Priority 2: Early detection and rapid response- what are the best ways to detect and control new invaders?

Research Sub Area: Invasive Species Ecology and Impacts

Each invasive species is unique and its impact in a region is affected by characteristics of the invader as well as the characteristics of the region.

- Priority 1: What are long-term ecological impacts to date on water bodies and projected future ecological impacts?
- Priority 2: Using the best tools available, determine how priority species are moving within the state.

Research Sub Area: Economic and Social Impacts

Given the budget limitations of every managing agency, it is essential we put the impact of invasive species into economic terms. What are the current and future costs of the different invaders?

- Priority 1: For each priority species, research the economic risks of continued spread: property tax, business and tourism and economic impacts of invasion.
- Priority 2: For each priority species, research the social costs of the invasion to Minnesota's quality of life, traditions and heritage.