

Aquatic Invasive Species Management in Minnesota



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Definition

"Invasive species" means a non-native species that can naturalize and:

- 1) causes or may cause economic or environmental harm or harm to human health; or**
- 2) threatens or may threaten natural resources or the use of natural resources in the state.**



(M.S. 84D.01, Subd. 9a)

Why Manage Invasive Species?

Minimize the impact caused by invasive species to:

1. Ecology

- a. Natural communities, species diversity
- b. Natural community function
- c. Water quality



2. Economy

- a. Recreation
- b. Commercial
- c. Property values



3. Community

- 1. Social
- 2. Personal property expectations



Aquatic Invasive Species

❖ Plants

- Eurasian water milfoil
- Curly-leaf pondweed
- **Hydrilla**
- **Water chestnut**



❖ Fish

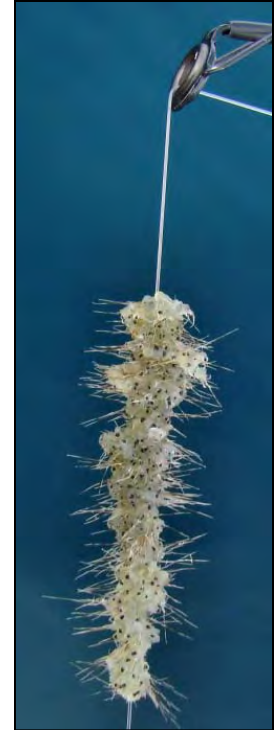
- ruffe
- round goby
- Asian Carp
- **Northern snakehead**



Aquatic Invasive Species (cont'd)

❖ Invertebrates

- zebra mussel
- spiny waterflea
- New Zealand mudsnail
- faucet snail

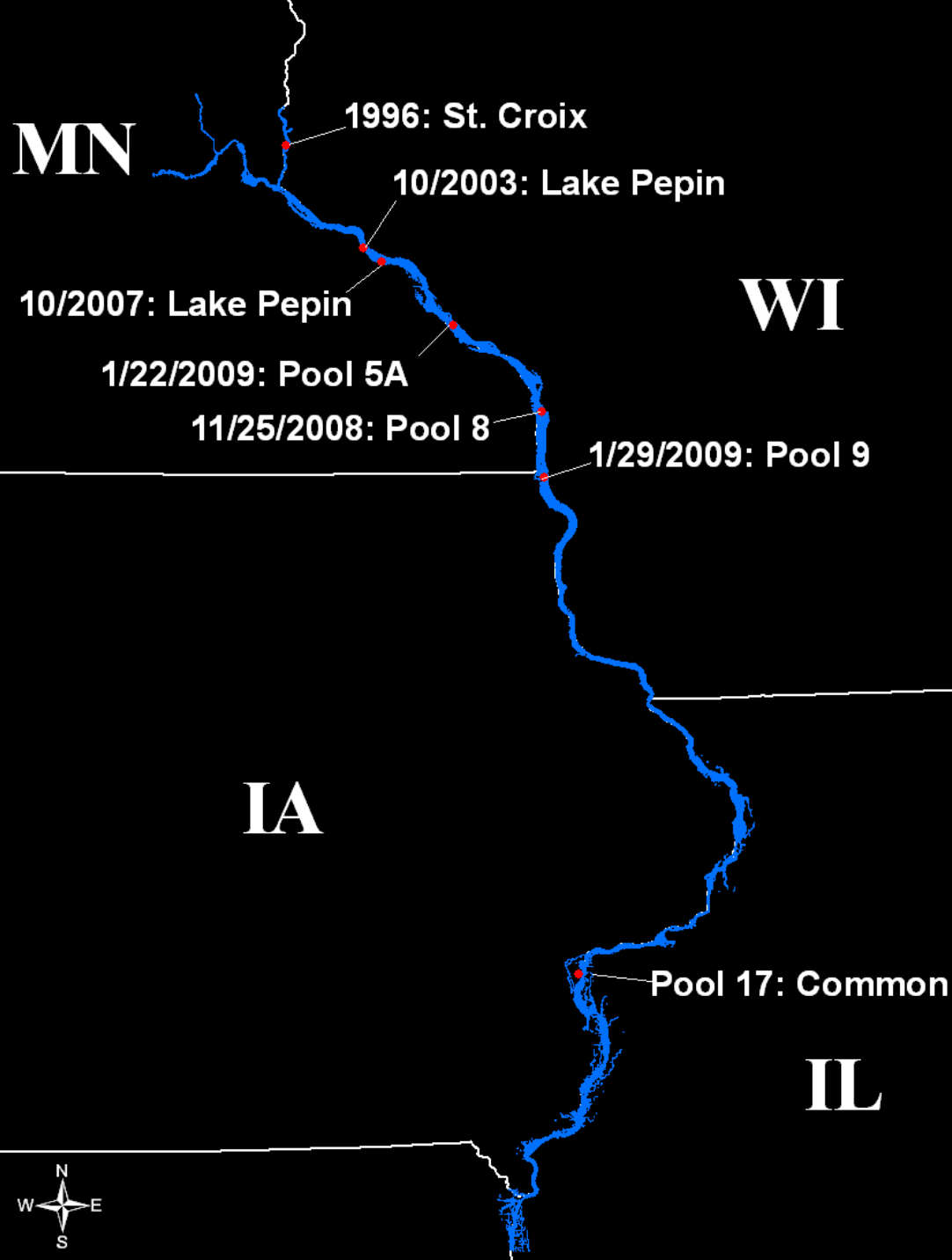


❖ Pathogen

- VHS



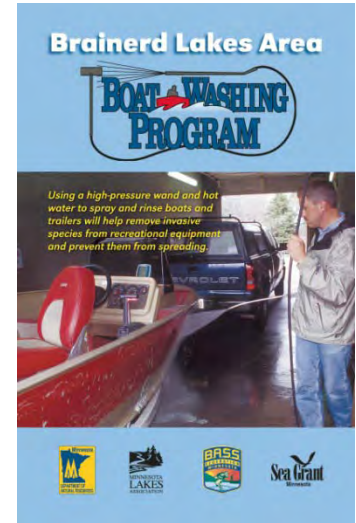
Bighead Carp



Invasive Species Strategy

Key Elements

1. Prevention
2. Early Detection & Rapid Response
3. Containment
4. Management



Prevention

Examples of Strategies:

- Regulations
- Enforcement
- Watercraft Inspections
- Public Awareness
- Signage
- Permits and Conditions



Regulations

Prohibited Species

- bighead carp (*Hypophthalmichthys nobilis*)
- black carp (*Mylopharyngodon piceus*)
- grass carp (*Ctenopharyngodon idella*)
- silver carp (*Hypophthalmichthys molitrix*)
- northern snakehead fish (*Channa argus*)
- round goby (*Neogobius melanostomus*)
- rudd (*Scardinius erythrophthalmus*)
- ruffe (*Gymnocephalus cernuus*)
- sea lamprey (*Petromyzon marinus*)
- tubenose goby (*Proterorhinus marmoratus*)
- white perch (*Morone americana*)
- zander (*Stizostedion lucioperca*)

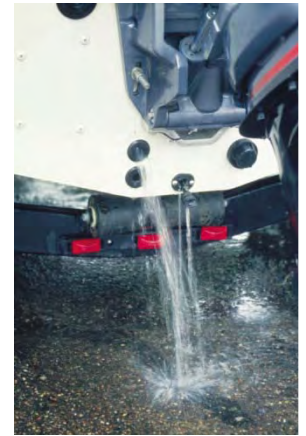


Regulations cont'd

- environmental introduction of transgenic fish
- possession, transport, or introduction of prohibited invasive species
- transport of aquatic plants
- required draining of bilges, livewells and pull drain plug
- designate waters as infested
 - Required drain bait buckets, pull drain plug
 - restrictions on harvest of bait



USFWS CFRO



(MN Statutes 84D and 116C; MN Rules 6216)

Management - Aquatic

- ❖ Historically focused on invasive aquatic plants
- ❖ Common carp control to improve wildlife (waterfowl) habitat.
- ❖ Seek better management tools
 - herbicides
 - biological control
- ❖ Genetic biocontrol of invasive fish not on the radar screen



Genetic Biocontrol of Invasive Fish

(from a state's perspective)

- ❖ Need for a formal process for assessment and approval- at regional, national scale
- ❖ Need leadership at Federal level
- ❖ Role for States to provide input on decision making
- ❖ Public support
- ❖ Trash vs Treasure
- ❖ Don't do more harm than good

Thank You



Silver Carp

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