

## ESTIMATED FEDERAL FUNDING NEEDS FOR IMPLEMENTATION

### Recommendation

1. Promulgate environmentally protective standards for ballast water, and implement effective ship-board treatments and best management practices.
2. Enact measures that ensure canals and waterways convey goods and/or vessels without enabling AIS to pass and expand their ranges.
3. Take immediate steps to prevent the introduction and spread of AIS as the result of escapement/release of organisms imported for various uses.
4. Support implementation of a well structured and funded integrated pest management (IPM) program for AIS in the Basin.
5. Support efforts to conduct and evaluate cost-effective AIS pathway-specific outreach and education programs.

### Estimated Federal Funding

\$0.0 M Annually

\$0.05 M Annually

\$0.3 M Annually

\$84.1 M Annually

\$20.0 M Annually

**\$104.45 M Annually**

**Total Estimated Annual Federal Funding**

## ABOUT MICRA

The Mississippi Interstate Cooperative Resource Association (MICRA) is an organization of 28 state natural resource agencies organized in 1991 as a partnership to improve interjurisdictional river resource management in the Mississippi River Basin.



Member states include AL, AR, CO, GA, IL, IN, IA, KS, KY, LA, MN, MS, MO, MT, NE, NY, NC, ND, PA, OH, OK, SD, TN, TX, VA, WV, WI, and WY.

The U.S. Fish and Wildlife Service, Tennessee Valley Authority, U.S. Bureau of Reclamation, USGS Biological Resources Division, Chickasaw Indian Nation, and Chippewa-Cree Indian Tribe are also Association members. The Mississippi River Basin is the largest watershed in the nation, covering 1.25 million square miles, and draining 41% of the continental United States. Ninety-three of the Basin's rivers have been identified by the states as interjurisdictional waters.

### MICRA's Mission

MICRA's mission is to improve the conservation, development, management and utilization of interjurisdictional fishery resources (both recreational and commercial) in the Mississippi River Basin through improved coordination and communication among the responsible management entities.

Additional MICRA and Action Plan Information Available at:  
[www.MICRivers.org](http://www.MICRivers.org)

## AN ACTION PLAN TO MINIMIZE ECOLOGICAL IMPACTS OF AQUATIC INVASIVE SPECIES IN THE MISSISSIPPI RIVER BASIN



## Action Plan Goals

1. Prevent all new introductions of Aquatic Invasive Species (AIS) within the Mississippi River Basin.
2. Implement control measures for AIS to ensure sustainable native aquatic ecosystems within the Basin.

## Priority Recommendations

**Aquatic Invasive Species (AIS)** are having negative impacts and reversing recent progress made towards ecological rehabilitation and restoration in the Mississippi River Basin. The Mississippi River Basin has been greatly impacted by many AIS and continues to be threatened by new introductions. The most problematic AIS in the Mississippi River Basin have been bighead carp, silver carp, common carp, zebra mussels, Eurasian water milfoil, hydrilla, giant salvinia, Brazilian elodea, purple loosestrife, and water hyacinth. There are a number of other threats within the Mississippi River Basin that have the potential to cause large impacts in the future including species such as black carp, northern snakehead, didymo (rock snot), quagga mussels and the pathogen viral hemorrhagic septicemia (VHS).

**A basin-wide approach is needed** to manage these threats, and to protect and restore the Mississippi River Basin. The Mississippi Interstate Cooperative Resource Association (MICRA) recommends the implementation of an *Action Plan to Minimize Ecological Impacts of Aquatic Invasive Species in the Mississippi River Basin*. AIS enter and spread within the United States through multiple pathways such as ship ballast-water discharge, canals and connecting waterways, recreational activities, and the release or escapement of organisms imported for a variety of uses.

**This Action Plan will focus the collaborative efforts** of the Mississippi River Basin states to implement a strategic, action-oriented approach to minimize risks of AIS introductions by working with partners to sever pathways and to implement an integrated pest management approach to contain and control AIS.

**MICRA**, with the assistance of the Mississippi River Basin Panel (MRBP) on Aquatic Nuisance Species, developed this Action Plan to guide near-term (2011-2016) coordinated efforts to prevent additional species invasions, and to contain and control populations of priority AIS established in the Mississippi River Basin.

### 1. Develop ballast water treatment standards and best management practices.

Work with partners to develop meaningful and enforceable regulations.

Coordinate efforts to monitor effectiveness at eliminating ship and barge-mediated introductions.



### 3. Develop measures that address the escapement or release of imported organisms.

Use science-based screening and risk assessment processes to evaluate organisms prior to importation.

Develop a list of species that are approved for import and increase resources for law enforcement.



### 4. Implement an Integrated Pest Management Program to control AIS populations.

Implement science based monitoring and rapid response programs for new AIS introductions.

Develop Integrated Pest Management Programs for the most troublesome AIS (e.g., Asian carp).



### 5. Develop AIS pathway-specific outreach and education programs.

Expand successful programs such as Stop Aquatic Hitchhikers!® and Habitattitude®.

Develop new campaigns for additional target audiences and organisms.



### 2. Enact measures to prevent the movement of AIS through man-made canals and waterways.

Examine options to prevent the spread of AIS between naturally discrete aquatic ecosystems.

Ensure that development of new cross basin connections include measures to prevent AIS dispersal.