

Recommendation of the Mississippi River Basin Panel on ANS Regarding the Need for Dispersal Barriers to Prevent the Spread of Aquatic Invasive Species

*Adopted in concept at the meeting of the panel on May 26, 2004
and modified based on member's suggestions on May 18, 2005.*

Background

Connectivity within river systems is ecologically important to sustain native fishes and mussels. More than 50 fishes are known to migrate within the Mississippi River Basin (MRB) to reach habitats needed to sustain populations. The need to maintain natural connectivity and native fish passage must be balanced with the need to prevent the spread of aquatic invasive species within and between river basins. Barriers maintained, enhanced, and installed could protect native species and habitats, and economies that depend on those resources, from aquatic invasive species (AIS).

Canals and waterways constructed to connect naturally separate basins enable invasive species to move between the basins. For instance, the artificial connection between the Great Lakes and the MRB has allowed the dispersal of species such as the zebra mussel and round goby from the Great Lakes basin into the MRB. The same pathway could allow Asian carp species to enter the Great Lakes from the MRB.

Panel Position

The Mississippi River Basin Panel on aquatic nuisance species (Panel) recommends the development and use of physical and technological barriers as an appropriate regional and local strategy to slow or prevent the spread of AIS between basins. Physical barriers include dams, locks, fish screens, and perched culverts, whereas technological barriers may include light, sound, bubbles, electric, pheromones, and other scientific innovations.

The Panel recommends that:

- where man-made canals and waterways connect naturally discrete basins, either barriers or hydrologic separation may be needed to prevent the *inter-basin* spread of AIS.
- appropriate agencies should install, enhance, or maintain *intra-basin* barriers in *strategic* locations to prevent the dispersal of AIS.
- management agencies incorporate AIS issues into decisions affecting the construction, removal, and bypass of all barriers
- the lead State and Federal agencies in a proposed management action should assess environmental and economic impacts of constructing, removing, and bypassing barriers, and coordinate with all agencies having management authority to seek concurrence on the preferred management alternative.

Additionally, the Panel notes:

- This recommendation is not intended to suggest that all existing barriers to fish migration should be maintained, nor that barriers should be placed indiscriminately.
- Improving fish passage and connectivity between barriers is consistent with the overall objective of this recommendation.

Rationale

The roles of the Mississippi River Basin Panel include:

- Identifying priorities for activities in the Mississippi River Basin (Basin) with respect to aquatic nuisance species;
- Coordinating aquatic nuisance/invasive species program activities in the Basin,
- Assisting the Task Force in coordinating Federal aquatic nuisance species program activities in the basin;
- Providing advice to public and private individuals and entities concerning methods of controlling aquatic nuisance species; and
- Developing and submitting recommendations to the national Aquatic Nuisance Species Task Force (ANSTF) (established via Public Law 101-646).

The ANSTF has established the following goal, “Reduce the threat of harmful aquatic species being introduced into US waters.” To attain this goal and goals identified in state and interstate plans, as well as to fulfill the role of the Panel in coordinating and advising on ANS issues in the basin, the Panel recommends incorporating ANS impacts while evaluating possible actions to construct, remove, and bypass dams or other barriers in the Mississippi River Basin. It is for this reason that the recommendations above have been developed.