



**US Army Corps of
Engineers
St. Paul District**

Zebra Mussel Control Feasibility Study on the Upper Mississippi River

Location/Description

Zebra mussels (*Dreissena polymorpha*) are significant threat to the continued survival of the endangered mussel, Higgins' eye (*Lampsilis higginsii*).

In April 2000 the U.S. Fish and Wildlife Service (Service) issued a final Biological Opinion for the operation and maintenance of the 9-Foot Navigation Channel Project on the Upper Mississippi River Navigation System (UMRS) in the states of Illinois, Iowa, Minnesota, Missouri and Wisconsin. In this opinion, the Service determined that operation and maintenance of the navigation pools and project-dependent commercial barge transportation would facilitate the continued existence of zebra mussels in the UMRS and that zebra mussel persistence in the UMRS would likely impede the recovery and survival of the endangered Higgins' eye pearlymussel. The Service listed a reasonable and prudent alternative believed necessary to avoid jeopardy, which included to: conduct a reconnaissance study and subsequent feasibility study to control zebra mussels in the UMR.



Management of zebra mussels may need to include a number of actions, such as measures to control/manage dispersal of zebra mussels in the UMRS, measures to reduce/manage zebra mussel populations in the UMRS and measures to prevent future introductions of zebra mussels and/or other exotics into the UMRS.

Alternatives to be studied will include such things as large-scale alterations of the hydrodynamics of the UMRS to manage zebra mussels, small-scale alterations of the hydraulics of the UMRS, closing portions of the UMRS, cleaning/coating technologies and barriers to prevent transport of zebra mussels.

The feasibility study will be a multi-District team effort consisting of Corps of Engineers representatives from the St. Paul, Rock Island, St. Louis and Chicago Districts, as well as from the Engineer Research and Development Center (ERDC). In addition, an interagency collaborative effort would be needed to complete the feasibility study. Public meetings and stakeholder meetings with commercial shipping interests that use the 9-foot channel project, recreational boating interests, and regional, county and local interests, would be completed. The feasibility study could recommend implementation of zebra mussel management alternatives that fall outside of Corps of Engineers existing authorities. Such alternatives would need to be implemented by other concerned agencies or the public.

Status

Initiation of zebra mussel control measures is extremely time sensitive in that the endangered Higgins' eye pearlymussel faces extinction. A draft reconnaissance study report has been completed, but is awaiting final approval. The feasibility study, if funded, will be initiated in FY 2005 and take 3 years to complete at a cost of \$1,990,000.

Authority

Section 216 of the River and Harbor and Flood Control Act of 1970 authorizes the Chief of Engineers to review the operation of completed projects when found advisable due to significantly changed physical or economic conditions and to report thereon to Congress with recommendations on the advisability of modifying the structures or their operation for improving the quality of the environment in the overall public interest. The introduction and subsequent population expansion of zebra mussels has significantly changed the aquatic environment of the UMRS. It is proposed that the feasibility study for controlling zebra mussels should be undertaken using the Section 216 authority.

Fiscal Year 2005-07

Total Federal Cost \$1,990,000

Non-Federal Cost \$0

Total Estimated Cost \$1,990,000

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