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US Army Corps of Engineers
St. Louis District

Information Paper
PROJECT V1.

Upper Mississippi River System - Navigation and Ecosystem Sustainability Program

WING DAM/DIKE ALTERATIONS - HERCULANEUM

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Location/Description

The program area comprises the Upper Mississippi River System, as defined by Congress in the Water Resources Development Act of 1986 (WRDA 1986), which includes the Upper Mississippi River from Minneapolis, Minnesota, to Cairo, Illinois; the Illinois Waterway from Chicago to Grafton, Illinois; and navigable portions of the Minnesota, St. Croix, Black and Kaskaskia Rivers. This multi-use resource supports an extensive navigation system (made up of 1200 miles of 9 foot channel and 37 lock and dam sites), a diverse ecosystem (2.7 million acres of habitat supporting hundreds of fish and wildlife species), floodplain agriculture, recreation and tourism. Based on the recommendation of the recently completed UMR-IWW System Navigation Feasibility Study that examined system needs over the next 50 years, the Navigation and Ecosystem Sustainability Program (NESP) was implemented to achieve the dual purposes of UMRS ecosystem restoration and navigation improvements. The Wing Dam/Dike Alterations at Herculaneum is one of 23 initial NESP ecosystem restoration component projects being implemented under this new UMRS program.

This project is located on the UMRS between river miles 156.5 and 149.5, and within Monroe County, Illinois and Jefferson County, Missouri.

Existing stone dikes in the Herculaneum Reach will be altered (e.g., notching or removal) to allow the river's flow to create a more diverse depositional pattern, including the expected formation of a new side channel and a new island. New river training structures (e.g., chevron dikes) will be constructed to direct the flows and help create side channels and islands. This project will directly benefit the recovery efforts of the federally endangered Pallid Sturgeon.

This project has the following project objectives:

- Increase diverse river flow patterns
- Increase diverse depositional patterns
- Increase fish and wildlife habitat diversity
- Increase biological community

Problem Statement

The stone dikes that were constructed in this reach to help maintain a safe and dependable navigation channel have also resulted in a homogenous sedimentation pattern. This homogenous sedimentation pattern may be limiting the quality and amount of desirable aquatic habitat. Dike notching efforts by the St. Louis District, in conjunction with the Illinois Department of Natural Resources and the Missouri Department of Conservation, have demonstrated that dike modifications can create a more diverse depositional pattern without affecting navigation. This diverse depositional pattern is more desirable and results in a more diverse biological population.

Current Status

FY08 activities will include completion of a Project Implementation Report, conclusion of pre-project monitoring, preparation of plans and specifications for an FY09 Construction start.

Authority

The Water Resources Development Act of 2007, TITLE VIII Upper Mississippi River and Illinois Waterway System, authorized the project.