



**US Army Corps
of Engineers**
Rock Island District

Information Paper

P2. Fish Passage – L&D 22

Upper Mississippi River System - Navigation and Ecosystem Sustainability Program

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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. Fish Passage at Lock and Dam 22 is one of 23 initial NESP ecological component projects being implemented under this new UMRS program.

Lock and Dam 22 is located at River Mile (RM) 301.2 on the UMR near Saverton, Missouri, between Ralls County, Missouri, and Pike County, Illinois. The average lift at Lock and Dam 22 is approximately 11 feet. The project area is located in Congressional District 9 in Missouri and District 17 in Illinois.

The objective of this plan is to restore longitudinal connectivity at Lock and Dam 22 for a wide range of migratory warmwater fish species. This project proposes the non-structural manipulation of dam gates and the construction of a fish passage structure at Lock and Dam 22 to enable the passage of fish. If successful, this project will increase access to upstream habitats which should result in an increase in the size and distribution of native migratory fish populations. Because the Lock and Dam 22 fish passage project is among the first of this kind on the UMR, another general goal is learn from this project through monitoring and evaluation and apply this knowledge to future fish passage projects.

The three components of monitoring and evaluation are 1) to gain information needed for project planning and design (pre-project monitoring), 2) to determine if the project objectives are met (project performance monitoring) and 3) to apply lessons learned to subsequent fish passage projects (adaptive management). Project performance indicators are derived from the quantitative project objectives and serve as the focus of monitoring effort.

Problem Statement

Lock and Dam 22 blocks the upstream movement of fish most of the time. This dam as well as other navigation dams reduces longitudinal connectivity to aquatic and floodplain habitats which contributes to the degradation of the river ecosystem. This contributes to the following ecological issues:

- Impeded migration routes
- Reduced access to habitat
- Reduced geographic range of migratory fish species
- Reduced population size of migratory fish species
- Reduced population size and distribution of mussels

Current Status

The multi-agency Project Delivery Team is progressing through the planning process. Tasks accomplished include pre-project monitoring, hydraulic modeling, project scoping, and coordination. Project monitoring activities in FY08 include a telemetry study of fish movements and the development of a system model for assessing the effect of fish passage at Lock and Dam 22. The Draft Project Implementation Report (PIR) is scheduled for completion in FY08.

Authority

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