



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

Information Paper

X. Dam Point Control

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. The Lock and Dam 25 Dam Point Control is one of 23 initial NESP ecological component projects being implemented under this new UMRS program.

The study area comprises the navigation pool and adjacent lands upstream of Lock and Dam 25 on the Mississippi River, which is located near Winfield, Missouri. Water levels in Pool 25 are currently managed by hinge point control, allowing water levels at the dam to fluctuate between 429.7 and 434 feet NGVD. Draw downs during environmentally inopportune times are detrimental to aquatic life. The study will examine the idea that the damaging results of a drawdown could be minimized by the ability to move the control point from the hinge point to the dam, and back, as river conditions dictate. Moving the control point from the hinge point to the dam would likely result in the need for acquisition of additional real estate interests in the pool area.

Problem Statement

The current water control plan has been effective in meeting navigation goals and providing important ecological benefits (via environmental pool management (EPM)), but has not provided the water control manager with the flexibility needed to optimize habitat benefits for fish and wildlife. Pool draw downs during the fish spawning period and during the fall and winter can have detrimental impacts to fish. Aquatic plants, particularly “emergents”, which grow along the water’s edge, depend on a natural seasonal fluctuation in water levels for their long-term survival and the production of new plants. With the relatively stable water levels created by the navigation pools, the plant beds have had little chance to reestablish

Current Status

In FY06, the existing conditions hydraulic model was advanced to a nearly complete state. The study and stakeholder teams were introduced to the Ecosystem Functions Model (EFM). The preliminary array of alternatives were identified and the stakeholder team provided input to the EFM evaluation parameters.

In FY07, \$350,000 will continue study efforts with completion of the existing conditions hydraulic model, application of the Ecosystem Functions Model in the preliminary alternatives analysis, acquisition of soils information in the pool, and a Feasibility Scoping Meeting.

Authority

Pending new authority, our current activities supporting UMRS navigation and ecosystem improvements are performed under authority provided by Section 216 of the Flood Control Act of 1970 (Public Law 91-611).