



US Army Corps
of Engineers
Rock Island District

Information Paper

S. Backwater Rest. – Peoria Reach, IL River

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 Backwater Restoration effort in the Peoria Reach is one of 23 initial NESP ecological component projects being implemented under this new UMRS program.

This project is focused on the reach of the Illinois River from Chillicothe, IL (RM 190) upstream to Lacon, IL (RM 182) Previous Corps studies (2003) conducted an analysis of the rate of loss of backwater capacity and surface area for three backwaters (Babbs Slough-Sawyer Slough, Meadow Lake, and Wightman Lake) in the Peoria Pool. This analysis was based on the comparison of 2001 bathymetry data to data from 1903. Sedimentation rates between 1903 and 2001 for these backwaters ranged from 0.18 inches/year to 0.37 inches/year and the percentage reduction in storage capacity varied from 77.2% (0.78%/year) to 97.0% (0.99%/year).

This project will look at various alternatives including configurations, placement options, and technologies and approaches. There is great potential for adaptive management activities with the backwaters based on their proximity, different size openings to the main channel, sizes, etc. Dredging options currently being studied include channels and

more expansive areas with varied depths. Placement Options include: (a) on existing islands (increase elevations in selected areas to increase vegetation diversity and potential for mast trees); (b) creation of new islands (create habitat and potentially reduce sediment resuspension from wind and waves); (c) on adjacent agricultural lands; and (d) Beneficial reuse on brownfields, former mined lands, stockpile, gravel pits, etc.

Technologies and approaches include: (a) hydraulic, mechanical, and high solids dredging; (b) dewater backwater areas and use conventional equipment; (c) traditional staging (one backwater at a time); (d) Multiple backwaters at one time; and (e) Continuous construction (ongoing construction/O&M to address sedimentation)

Backwater restoration activities will increase critical spawning, nursery, and overwintering areas for fish, habitat for diving ducks and aquatic species, and backwater aquatic plant communities. Improvements in water quality, temperature, and dissolved oxygen are also anticipated.

Problem Statement

A dramatic loss in productive backwaters areas along the Illinois River due to excessive sedimentation is limiting ecological health and altering the character of this unique floodplain river system. In particular, the Illinois River has lost much of its critical spawning, nursery, and overwintering areas for fish, habitat for diving ducks and aquatic species, and backwater aquatic plant communities.

Current Status

The study team has met with local stakeholders to begin assessing the existing conditions of the reach. Specific work for FY 2008 includes Hydraulic modeling of potential project features, Phase II HTRW and cultural investigations and site specific surveying of project features.

Authority

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