



US Army Corps
of Engineers
St. Paul District

Information Paper

G. Mooring Cells and Buoys Project

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 (UMR) from Minneapolis, Minnesota, to Cairo, Illinois; the Illinois Waterway (IWW) 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 navigation 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 the system's needs over the next 50 years, the Navigation and Ecosystem Sustainability Program (NESP) was implemented to achieve the dual purposes of UMR-IWW ecosystem restoration and navigation improvements. The Mooring Cells and Buoys project is one of several navigation efficiency component projects being implemented under NESP.

Problem Statement

The purpose of the Moorings Cells and Buoys Project is to design and construct mooring locations near lock approaches to improve navigation efficiency. These structures provide waiting areas closer to the locks where they can wait clear of an exiting tow. Navigation efficiency is improved by reduced entrance and exit times. Additionally, the mooring structures can provide environmental benefits. The new mooring structures would reduce tows pushing into the riverbank, which causes damage to shore line vegetation and increases near-shore turbidity.

Locks and Dams (L&D) 11 through 25 on the UMR and Lagrange L&D on IWW were evaluated for potential mooring structures. Marker buoys have been placed at the proposed locations to solicit industry feedback and to gain industry consensus of the final mooring locations.

Existing mooring buoys located below L&D 8 and L&D 25 received performance testing by industry to verify the buoy's function and feasibility. The results indicated that mooring buoys are no longer recommended as a mooring structure. Industry cited safety issues and that the buoys were more time consuming.

Current Status

FY 2005:

- Marker buoys placed at 8 sites for comments
- P&S for L&D 14 mooring cell completed to 95%
- Systemic DDR for mooring buoys initiated
- L&D 8 and L&D 25 marker buoys tests initiated

FY 2006:

- Performance testing on L&D 8 and L&D 25 marker buoys completed. Marker buoys placed at 2 more sites
- Systemic DDR for moorings projects developed
- Environmental Assessment (EA) for Lagrange L&D mooring project initiated
- Initial sites for construction identified (L&D14, L&D24 and Lagrange L&D)

FY2007:

- Completed marker buoys study
- Mooring locations for systemic DDR approved
- Design and P&S of mooring cells at L&D 24 and Lagrange L&D initiated
- LaGrange L&D mooring project EA through public review. Awaiting FONSI signature.

FY2008:

- LaGrange L&D mooring project EA to be finalized
- 95% ITR's for L&D 14 and LaGrange L&D mooring project to be completed
- EA for L&D 24 mooring project to be initiated
- Systemic DDR anticipated to be approved

Authority

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