P.O. Box 2004, Rock Island, IL 61204-2004

US Army Corps of Engineers
Rock Island District

Information Paper
I1. Lock 22 New 1200-ft Lock

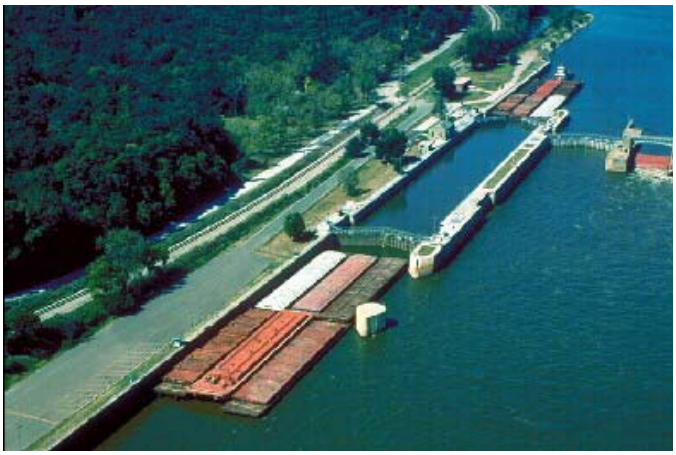
Upper Mississippi River System - Navigation and Ecosystem Sustainability Program

Contacts
Michael Tarpey, Team Leader
Ph. (309) 794-5179 fax.(309) 794-5698
Michael.J.Tarpey@mvr02.usace.army.mil
Scott D. Whitney, District Project Manager
Ph. (309) 794-5386 fax (309) 794-5710
scott.d.whitney@mvr02.usace.army.mil

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 22 – New 1200 ft Lock is one of 8 initial NESP navigation efficiency component projects being implemented under this new UMRS program.

The proposed new lock will be a 1200-foot, rock founded, lock constructed in the downstream direction in the auxiliary miter gate bay. The new lock will have an upstream, ported guardwall and will be approximate 1200 feet long. The downstream approach wall will be designed to block flow through the wall. The length and location will be determined during the initial design work. The existing 600-foot lock will remains in place and will become auxiliary lock chamber. Recreation traffic will primarily use this lock once the new 1200' lock is completed. The new lock will be safer for users since doubled locking is eliminated.

Total construction cost of the new lock, channel work, relocations and site specific environmental mitigation is estimated at $185,000,000 (2004 price level). This cost will be shared equally (50/50) between the Inland Waterway Trust Fund (IWTF) and Federal Govt.



Problem Statement
The majority of the Upper Mississippi River locks were designed and constructed in the 1930's and the lock chambers are 600-ft long. The 600-ft lock chamber cause significant average delays to navigation. Tows larger than 600-ft must break in half for two separate lockages. The new lock will be 1200 feet long and will significantly reduce delays and increase safety.

Current Status
In FY05, the preconstruction engineering and design (PED) phase for the new lock and guidewalls was initiated. This phase is scheduled to take approximately three years to complete. To date, the study team has accomplished significant work, including lock wall concept determination, approach wall concept determination, hydraulic physical and numeric modeling, geotechnical/foundation study, and environmental assessment. The PED work will be documented in a Design Documentation Report (DDR). In FY08, the project will proceed into the production of multiple sets of plans and specifications, and construction contracts. The construction is estimated to start in FY09 and take about eight years. It is estimated that the entire lock project will require thirteen years design and build, assuming sufficient funding.

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).