



WATERWAYS
COUNCIL, INC.

Lock and Dam 24, Mississippi River, IL/MO



Location Mississippi River in Clarksville, Missouri

Existing Structures Lock is a 110' x 600' lock chamber with a concrete gated dam and overflow spillway.

Annual Tonnage 2006 tonnage at Lock and Dam No. 24 totaled 30.1 million tons of commerce. Major commodities included grain, agricultural chemicals, petroleum, and coal.

Summary of Problems The lock and dam are nearly 70 years old and have exceeded their planned economic life. Among numerous reliability issues, the lock wall concrete had deteriorated to a point of serious concern for its integrity. Replacement of the top ten feet of concrete has been completed; the lock electrical/mechanical operating equipment has been replaced; the dam pier bridge columns have been replaced; and rehabilitation of the dam gates is scheduled for completion this fiscal year, as is the construction of the upstream protection cell. Additional work on the dam gate anchorages is scheduled for future remedial actions pending testing and analysis.

Corps of Engineers Actions Major Rehabilitation was initiated in 1996. The total estimated cost of the project is \$85.3 million.

Current Status

- Project is complete except for possible dam gate anchorage rehabilitation, as-built drawings, and O&M manual
- Activities in FY 2008 (\$308k CG)
 - Prepare as-built drawings, monitor dam gate vibrations for possible dam gate anchorage rehab, complete engineering study, and initiate plans and specs
- President's Budget for FY 2009 does not provide monies to continue work, although the capability for work is \$340,000, in order to monitor dam gate vibrations for possible dam gate anchorage rehabilitation, complete the engineering study, prepare as-built drawings, and complete the Operations and Maintenance manual.
- Issues and Other Information
 - Major Rehab restores reliability without increasing capacity
 - Major Rehab is complete except for dam gate anchorages

Summarized Financial Data

Construction

Total Estimated Project Cost	85,300,000 ¹
Allocations thru FY 2006 (CG)	67,870,000
Allocation for FY 2007(CG)	1,454,000
Appropriation for FY 2008 (O&M)	308,000
Balance after FY 2008 (O&M)	15,636,000
Amount that could be Used in FY 2009	340,000

¹ In accordance with the cost-sharing and financing concepts reflected in WRDA 1986, 50 percent of the total cost of construction will be derived from the Inland Waterways Trust Fund.

Background

Lock and Dam 24, authorized by the River and Harbor Act of 1935 and the Water Resources Development Acts of 1986 and 1992, is located near Clarksville, Missouri. Completed Major Rehabilitation Project work includes replacement of the lock miter gates, the auxiliary lock closure structure, the power distribution system, the lock motors and controllers, the control system, and the miter gate machinery; addition of debris openings in the dam guard wall and upstream bend way weirs; and rehabilitation of the dam tainter gates, replacement of several dam bridge columns, the Illinois abutment, and the lock land wall, intermediate wall, and river wall. An upstream protection cell is under construction and was scheduled for completion in 2007. Remaining work includes the rehabilitation of the dam tainter gate anchorages (the anchorage rehabilitation construction process requires the replacement of the downstream dam bulkheads and pickup beam). Ice flow conditions must be experienced to determine if the resulting gate vibrations are sufficient to merit anchorage rehabilitation. Remaining work includes studies to determine if the bend way weirs need to be lengthened and the lengthening of the weirs if recommended, rehabilitation of the remaining dam gate anchorages if recommended, and completion of as built drawings and the O&M manual for the major rehabilitation project features.

Source: US Army Corps of Engineers