

# Project Factsheet for: Backlog of Maintenance - Major Rehabilitation and Major Maintenance - Mississippi River & Illinois Waterway Locks And Dams

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## Project Location Information

**Location:** Mississippi River & Illinois Waterway Locks And Dams  
**River Basin(s):** Illinois, Mississippi  
**State(s):** MO, IA, IL  
**Congressional District(s):** IA-3, IA-4, IA-5, IL-11, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, IL-19, IL-2, IL-3, MN-1, MN-7, MO-6, MO-9, WI-1, WI-2, WI-3, WI-5, WI-6, IA-1, IA-2

### Status

Operations and Maintenance and Major Rehabilitation Programs are unable to adequately fund maintenance activities to ensure the navigation system operates at an acceptable level of performance.

The Mississippi Valley Division created a Product Delivery Team in early 2006 to address this problem regionally for the entire Mississippi River and Illinois Waterway Locks and Dams systems. Prior to creating the regional PDT, the amount of maintenance being deferred was increasing for some locks and dams in some districts while other districts were awarding contract improvements annually. The regional approach should improve this inequity. The PDT meets regularly, at least quarterly or more often as necessary.

### Description

The Major Rehabilitation and Major Maintenance Program for the Locks and Dams on the Mississippi River and Illinois Waterway has been ongoing since 1975.

- Major rehabilitation consists of reliability or efficiency improvements.
  - Reliability improvements are considered when they significantly extend the physical life of a component, have direct consequences to navigation and ecosystem, and can be economically justified by benefit-to-cost analysis. The region focuses on this method of major rehabilitation.
  - Efficiency improvements are considered if they enhance operation efficiency of the component.
- Major maintenance is categorized as major repairs or improvements that don't qualify for major rehabilitation and must be funded out of the regular O&M Budget.
- The remainder of the regular O&M Budget dollar is used for baseline (routine) operation and maintenance.
- The O&M Budget has not seen significant increases and has not been allowed to increase to match inflation.
- The O&M Budget is not sufficient to fund the entire Major Maintenance costs for the Locks and Dams. The Major Maintenance improvements not funded are added to a list of backlog maintenance.
- The longer repairs to the system are delayed, the more they will cost the taxpayers and shippers in the future.

## MAJOR MAINTENANCE OF MISSISSIPPI RIVER AND ILLINOIS WATERWAY LOCKS AND DAMS

<u>L&amp;D Components not Justified for Major Rehabilitation</u>	<u>Consequence of not Doing Work</u>
Lock Miter Gates	Miter gate failure would cause closure of locks to all navigation and shipments.
Auxiliary Miter Gates	Continued deterioration and potential loss of pools for navigation and ecosystem sustainability.
Lock and Dam Electrical Systems	Electrical failures cause temporary power outages to lock and dam operating machinery. Such failures would impact pool regulation for navigation and ecosystem sustainability.
Repair Dam Roller and Tainter Gates	Deterioration of gate structures would occur with possible failure and inability to regulate pool for navigation and ecosystem management.
	Concrete supports and protects lock and dam operating machinery and gates. Concrete is deteriorating exponentially.

Lock and Dam Concrete

Concrete failures are now more frequent creating a greater probability of damage to miter gates by transiting tows. Also, allowing more potential for inability to manage pools for navigation and ecosystem sustainability.

### Summarized Financial Data

The Mississippi Valley Division Regional Backlog of Maintenance is valued at around \$1,315,970,000 with close to 400 identified items. Rock Island District's portion of the list includes 164 items with an approximate total value of \$802,786,000; or 61 percent of the Regional total. Some of the highest ranking Rock Island District maintenance projects include the following:

- Illinois Waterway LaGrange L/D Major Rehabilitation and Major Maintenance
- Mississippi River L/D's 20 and 21 Systemic Miter Gate Replacement
- Illinois Waterway Lockport Channel Concrete Wall - Major Rehabilitation
- Mississippi River L/D's 11, 12, 13 Emergency Gates Repair/Replacement
- Illinois Waterway O'Brien L/D Major Rehabilitation/Major Maintenance
- Systemic Bulkhead Slots @ 10 L/D Sites on the Mississippi River
- Illinois Waterway Peoria and LaGrange L/D Bulkhead Slots
- Mississippi River L/D 18 Dam Concrete Repairs (Safety)
- Illinois Waterway Brandon Road Concrete Repairs

### Authority

OM - Operations and Maintenance -- River and Harbor Act of 1930

### Project Manager Information

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