



WATERWAYS
COUNCIL, INC.

Lockport Lock and Dam



Waterways Council, Inc. is the national public policy organization advocating a modern and well-maintained national system of ports and inland waterways.



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Location

Lockport Lock and Dam is 291.0 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois. The complex is two miles southwest of the city of Lockport, Illinois.

Existing Structures

The lock is 110 feet wide by 600 feet long. Maximum vertical lift is 42.0 feet, the average lift is 39 feet. It averages 22.5 minutes to fill the lock chamber; 15 minutes to empty.

Annual Tonnage and Projected Traffic Growth

Tonnage for 2009 was 12,460,893 million tons, with coal and petroleum the leading commodities moved.

Summary of Problems

The existing 9-foot Channel Navigation Project was largely constructed in the 1930s and extends down the Upper Mississippi River from Minneapolis-St. Paul to its confluence with the Ohio River and up the Illinois Waterway to the Thomas J. O'Brien Lock in Chicago.

The Lockport Dam consists of the Metropolitan Water Reclamation District of Greater Chicago lock, powerhouse and associated controlling works. The Corps has no ownership of the controlling works; however, it has the responsibility to maintain the foundation, piers, dolphins and all the concrete at the Lockport Controlling Works and the gravity structure at the dam.

Corps of Engineers Actions

The Stage I, Approach Dike, installed a 4,300 ft. cut-off wall with low strength concrete and was completed in Sep 2009. Stage II, Controlling Works, a contract to refurbishing the brick and granite exterior façade, which will protect the concrete structure was awarded June 2010. The contract is 100% ARRA funded. Construction is scheduled to be completed in January 2012. The Stage III contract, Canal Walls, to replace 2 miles of the canal wall was awarded in September 2009 using ARRA and construction general funding. Construction is scheduled to be completed April 2012. Total project cost is \$110.089 million all of which was funded with ARRA (stimulus) Funds and without IWTF cost share.

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Project Description

The project is located along a three-mile reach of the Chicago Sanitary Ship Canal (CSSC) just upstream of Lockport Lock. In 1984 Congress directed the Corps to assume navigation responsibility for the CSSC as a part of the Illinois Waterway project. The Approach Dike (right descending bank) was constructed in early 1900's of a limestone cement core wall and non-homogeneous materials. It has deteriorated to the point where its function as a seepage cutoff is limited. The CSSC concrete Canal Walls (left descending bank) are in an advanced state of deterioration that affects wall stability. Failure of the Approach Dike or the Canal Walls would cause loss of navigation pool, extensive flooding and potential loss of life. The Controlling Works is in need of rehabilitation to ensure operational integrity. The Lockport powerhouse and dam also retain the navigation pool. Estimated repairs cost - Approach Dike, \$27M; Canal Walls, \$95M, and Controlling Works, \$1.4M

Current Status

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Associated minor projects using O&M funds have cleared trees from the embankment and filled in the exciter bays in the Dam's hydropower section with low strength concrete to stop leaking into the powerhouse, were completed in FY09.

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