

# Project Factsheet for: Thomas J. O'Brien Lock and Controlling Works, Illinois Waterway, Illinois (Major Rehabilitation)

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## Project Location Information

**Location:** Entrance to Lake Michigan (River Mile 326.0), in Chicago, Illinois  
**River Basin(s):** Illinois  
**State(s):** IL  
**Congressional District(s):** IA-3

## Status

T. J. O'Brien Lock and Controlling Works were placed into operation in 1960. After 43 years of service reliability and operation, problems are a recurring threat and have significant impacts to the navigation users. A plan to reduce the width of the Chicago River in the City of Chicago, near the Chicago Lock has already rerouted the barge traffic using the Chicago Lock to the O'Brien Lock. Although this will not cause a significant change in traffic flow, it does mean that O'Brien will be the only commercial access from the Illinois Waterway to Lake Michigan.

The completed Rehabilitation Evaluation Report FY03 was approved in 2004. Awaiting new start.

## Description

The project is located at the entrance to Lake Michigan (River Mile 326.0), Calumet River, in Chicago, Illinois. The facility is a unit of the Inland Waterway Navigation System and is one of nine such facilities between Chicago, Illinois, and La Grange, Illinois. O'Brien Lock is a low lift sector gate lock. It provides a maximum lift of 5.0 feet for traffic passing from Lake Michigan to the Little Calumet River. The lock chamber is 1000 feet long by 110 feet wide. The adjacent dam is 257 feet in length and comprised of two sections. The fixed section is 204 feet of steel sheet pile cellular construction. The controlling segment, a reinforced concrete structure with four slide gate sections, is 53 feet in length. Significant features of the work include rehabilitation of the sector gate electric system, the lock electrical distribution system, and injection grouting of the lock land & river walls cells.

The existing lock mechanical and electrical systems are original equipment installed in the 1960s. The electric power utility service was upgraded in 1998, but the other components have been in operation since the original construction of the lock. An electrical component failure of the lock electrical distribution system or the sector gate electrical system could result in lock failure, which could cause delays to navigation traffic. The sheet piling for the lock land wall and river walls have also been in service since the original construction of the lock. O'Brien Rehabilitation Evaluation Report (dated March 2003, Revised June 2003) estimates that should one of the sheet pile cells rupture, T.J. O'Brien Lock would have an unscheduled closure to navigation for a minimum of 60-days. The transportation impacts associated with a 60 day closure would approach \$18.3 million dollars. New lock dewatering bulkheads are needed to replace the old set of bulkheads that has been decommissioned due to age and deterioration.

## Summarized Financial Data

	Rehabilitation	Major Maintenance
Estimated Federal Cost	\$22,900,000	\$9,366,000
Estimated Non-Federal Cost	\$0	\$0
Total Estimated Project Cost	\$29,900,000	\$9,366,000
Federal Allocations through FY 2008	\$0	\$0
Allocations for FY 2009	\$0	\$0
Budget Request for FY 2010	TBD	\$200,000
Balance to Complete after FY 2009	\$22,900,000	\$9,166,000

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### **Major Work Item (Next Fiscal Year)**

Once funding begins, \$3M could be utilized to procure lock chamber bulkheads. Additional funding would be used to prepare Plans and Specifications and award a construction contract for rehabilitation of the facility.

### **Authority**

CG - Construction General -- River and Harbor Act of 1930

### **Project Manager Information**

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