



Lock & Dam 10

(Guttenberg, Iowa)
Mississippi River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG.

Construction: 1934-1937

General Contractors:

Lock: Hanlon and Oakes, St. Paul, Minnesota
Dam: McCarthy Improvement Company, Davenport, Iowa

Congressional District: IA-1; WI-3

Description

Lock and Dam 10 is located at Mississippi River Mile 615.0 in Guttenberg, Iowa.

The main lock is located along the right descending bank and consists of one lock chamber 110 feet wide by 600 feet long with an upper pool elevation of 611.0 feet, a tailwater elevation of 603.0 feet, and a vertical lift of 8.0 feet. Miter gates are at each end of the lock chamber. There is a partial auxiliary lock consisting of an upstream set of miter gates and a short concrete riverwall section.



The movable dam consists of a concrete dam 763 feet long with four roller gates (20 feet high by 80 feet long), six non-submersible Tainter gates (20 feet high by 40 feet long), and two submersible Tainter gates (20 feet high by 40 feet long), and is located adjacent to the auxiliary lock. Completing the dam system is an earthen embankment approximately 4,600 feet long, located between the movable dam and high ground on the Wisconsin side of the river, with a concrete overflow spillway 1,200 feet long.

The site has a public observation platform and restrooms open from dawn to dusk from April to November.

History/Significance

The Lock was put in operation in November 1937.

Built under the supervision and direction of the Rock Island District, Lock and Dam 10 was transferred to St. Paul District's jurisdiction on October 1, 1939. The complex was completed at an estimated federal cost of \$6,647,000.

Annual Tonnage (20-Year Historical)

<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>	<u>Tons</u>
2015	14,338,743	2010	13,914,432	2005	15,820,138	2000	19,956,214
2014	12,506,261	2009	13,800,501	2004	15,185,622	1999	22,005,796
2013	10,971,970	2008	11,851,569	2003	17,624,731	1998	19,417,877
2012	13,494,592	2007	15,642,174	2002	20,528,892	1997	18,321,573
2011	13,158,081	2006	16,429,337	2001	16,529,414	1996	19,640,671

U.S. ARMY CORPS OF ENGINEERS – ST. PAUL DISTRICT

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Commodity Tonnage (2015)

All Units (Ferried Autos, Passengers, Railway Cars)	-
Coal, Lignite, and Coal Coke	1,960,700
Petroleum and Petroleum Products	223,700
Chemicals and Related Products	2,578,474
Crude Materials, Inedible, Except Fuels	1,894,564
Primary Manufactured Goods	1,115,012
Food and Farm Products	6,549,524
Manufactured Equipment & Machinery	7,469
Waste Material	6,200
Unknown or Not Elsewhere Classified	3,100

Vessel & Lockage Data (2015)

Average Delay - Tows (Hours)	0.81
Average Processing Time (Hours)	0.43
Barges Empty	3,061
Barges Loaded	9,092
Commercial Vessels	1,368
Commercial Flotillas	1,358
Commercial Lockages/Cuts	2,082
Non-Vessel Lockages	-
Non-Commercial Vessels	18
Non-Commercial Flotillas	18
Non-Commercial Lockages/Cuts	18
Percent Vessels Delayed (%)	27
Recreational Vessels	3,062
Recreational Lockages	1,165
Total Vessels	4,448
Total Lockages/Cuts	3,265

The 9-foot Channel Navigation Project

The 9-foot Channel Navigation Project includes 37 lock and dam sites (42 locks) on 1,200 river miles in Illinois, Iowa, Minnesota, Missouri and Wisconsin. Constructed largely in the 1930s, it extends from Minneapolis-St. Paul on the Upper Mississippi River to its confluence with the Ohio River and up the Illinois Waterway to the T.J. O'Brien Lock in Chicago.

The maintenance needs of this aging infrastructure have surpassed annual operations and maintenance funding. This limited funding has adversely affected reliability of the system and has primarily resulted in a fix-as-fail strategy, with repairs sometimes requiring days, weeks or months. Depending on the nature of a failure and extent of repairs, shippers, manufacturers, consumers and commodity investors can experience major financial consequences. Additionally, today's 1,200'-long tows must split and lock through in two operations within the Project's 600' chambers. This procedure doubles and triples lockage times, increases costs and wear to lock machinery, and exposes deckhands to higher accident rates.

More than 580 facilities ship and receive commodities within the Project. Grains (corn and soybeans) dominate traffic; cement and concrete products are the second largest group. A modern 15-barge tow transports the equivalent of 1,050 semi-trucks (26,250 tons, 937,387 bushels of corn, or 240 rail cars). Annually, the 9-foot project generates an estimated \$1 billion of transportation cost savings compared to its approximately \$115 million operation and maintenance cost.

UPDATE: May 2016