



Lock & Dam 7

(La Crescent, Minnesota)
Mississippi River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG.

Construction: 1933-1940

General Contractors:

Lock: Nolan Brothers and Minneapolis Dredging Co.,
Minneapolis, Minn., and Dearborn Electrical
Construction Co., Chicago, Ill.

Dam: Warner Construction Co., Chicago, Ill.

Congressional District: MN-1; WI-3

Description

Lock and Dam 7 is located at Mississippi River Mile 702.5 near La Crescent, Minnesota, 4.5 miles above LaCrosse, Wisconsin.

The main lock is located along the right descending bank and consists of a single lock chamber 110 feet wide by 600 feet long with an upper pool elevation of 639.0 feet, a tailwater elevation of 631.0 feet, and a vertical lift of 8.0 feet. There are miter gates at each end of the lock chamber. There is a partial auxiliary lock consisting of an upstream set of miter gates and short concrete riverwall section.



The movable dam consists of a concrete structure 940 feet long with five roller gates (20 feet high by 80 feet long), nine non-submersible Tainter gates (15 feet high by 35 feet long), and two submersible Tainter gates (15 feet high by 35 feet long), and is located adjacent to the auxiliary lock. Completing the dam system are two earthen embankment segments: the French Island embankment approximately 7,000 feet long, located between the movable dam and French Island, with a concrete overflow spillway 1,000 feet long; and the Onalaska embankment approximately 1,600 feet long, located between French Island and Onalaska, with a concrete overflow spillway 677 feet long.

The site has a public observation platform, outside displays, a visitors center, and restrooms open from dawn to dusk from April through mid-October.

History/Significance

The Lock was put in operation in April 1937. Originally scheduled to be nearer to La Crosse, this complex was relocated because of water level problems connected with the La Crosse site. The design of the complex was heavily influenced by French Island, which was incorporated into the design as a natural dike, and the Dresbach Slough, which was reopened to provide the upper approach to the lock.

At the completion of its major rehabilitation, the Corps restored the original control building into a visitors center, which is on the National Historic Register. The displays interpret the Corps role in assisting with management of the river resources.

The complex was built at a federal cost of \$6,776,000.

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180 5TH STREET EAST, SUITE 700, ST. PAUL, MN 55101-1678
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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>
2017	13,801,330	2012	9,282,753	2007	10,429,410	2002	14,460,872
2016	13,484,006	2011	9,477,117	2006	10,913,536	2001	12,000,987
2015	9,833,174	2010	9,732,976	2005	10,391,612	2000	14,816,119
2014	9,359,996	2009	9,546,522	2004	10,786,169	1999	15,856,894
2013	8,234,572	2008	7,258,768	2003	12,297,081	1998	14,454,177

Commodity Tonnage (2017)

All Units (Ferried Autos, Passengers, Railway Cars)	-
Coal, Lignite, and Coal Coke	9,600
Petroleum and Petroleum Products	252,500
Chemicals and Related Products	2,561,568
Crude Materials, Inedible, Except Fuels	1,536,300
Primary Manufactured Goods	888,202
Food and Farm Products	8,534,200
Manufactured Equipment & Machinery	15,760
Waste Material	-
Unknown or Not Elsewhere Classified	3,200

Vessel & Lockage Data (2017)

Average Delay - Tows (Hours)	1.31	Non-Commercial Vessels	36
Average Processing Time (Hours)	0.43	Non-Commercial Flotillas	35
Barges Empty	3,769	Non-Commercial Lockages/Cuts	35
Barges Loaded	8,910	Percent Vessels Delayed (%)	28
Commercial Vessels	2,189	Recreational Vessels	3,754
Commercial Flotillas	2,098	Recreational Lockages	1,207
Commercial Lockages/Cuts	2,654	Total Vessels	5,979
Non-Vessel Lockages	-	Total Lockages/Cuts	3,896

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). In 2016, the 9-foot channel project generated an estimated \$2 billion of transportation cost savings compared to its approximately \$246 million operation and maintenance cost.

UPDATE: August 2018

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