Lock & Dam 9

(Lynxville, Wisconsin)
Mississippi River

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

Construction: 1936-1940
General Contractors:
Lock: Walter W. Magee Company, St. Paul, Minn.
Dam: United Construction Company, Winona, Minn.

Congressional District: IA-4; WI-3

Description

Lock and Dam 9 is located at Mississippi River Mile 647.9 near Lynxville, Wisconsin, 205.1 miles below Minneapolis.

The main lock is located along the left descending bank and consists of a single lock chamber 110 feet wide by 600 feet long with an upper pool elevation of 620.0 feet, a tailwater elevation of 611.0 feet, and a vertical lift of 9.0 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 concrete structure 811 feet long with five roller gates (20-feet high by 80-feet long), six 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 is an earthen embankment approximately 7,200 feet long, located between the movable dam and high ground on the Iowa side of the river, with a submersible sheetpile cell spillway 1,350 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 July 1937.

Due to a good 6-foot channel and relatively trouble-free engineering and environmental characteristics, Lock and Dam 9 was a group "B" priority, and the second-to-last complex built by the St. Paul District. The complex was completed at an estimated cost of $8,287,000.

Annual Tonnage (20-Year Historical)

Year	Tons	Year	Tons	Year	Tons	Year	Tons
1992	15,005,700	1997	15,691,122	2002	17,352,121	2007	13,354,186
1993	11,133,199	1998	17,028,400	2003	14,995,775	2008	10,368,822
1994	13,737,349	1999	18,820,900	2004	13,256,894	2009	12,009,688
1995	15,416,068	2000	17,742,027	2005	13,395,636	2010	12,107,482
1996	16,552,523	2001	14,549,356	2006	13,923,104	2011	11,547,240

Commodity Tonnage & Lockages (2011)

Coal	1,653,087
Petroleum	283,800
Chemicals	1,838,881
Crude Materials	1,858,890
Manufactured Goods	962,200
Farm Products	4,926,382
Manufactured Machinery	8,600
Waste Material	0
Containers & Pallets	1,600
Unknown	13,800

Subtotals:	Grain	4,603,440
	Steel	41,217
Lockages:	Commercial Boats:	931
	Recreation Boats:	3,680
	Light Boats:	64
	Other Boats:	37
	Total Boats:	4,712
	Total Cuts:	3,298

The 9-Foot Channel Project

Lock and Dam 9 is one of 29 locks and dams on the Upper Mississippi River that provide a water stairway of travel for commercial and recreational traffic from Minneapolis to the Gulf of Mexico.

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. It includes 37 Locks and approximately 1,200 miles of navigable waterway in Illinois, Iowa, Minnesota, Missouri and Wisconsin.

The maintenance needs of the aging infrastructure are increasing at a rate much greater than the operations and maintenance funding provided for the system which adversely affects reliability of the system. Long-established programs for preventive maintenance of major lock components have essentially given way to a fix-as-fail strategy, with repairs sometimes requiring weeks or months to complete. Depending on the malfunction, extended repairs can have major consequences for shippers, manufacturers, consumers, and commodities investors.

Additionally, the system's 600-foot locks do not accommodate today's modern tows without splitting and passing through the lock in two operations. This procedure requires uncoupling barges at midpoint which triples lockage times and exposes deckhands to increased accident rates.

There are more than 580 manufacturing facilities, terminals, grain elevators, and docks that ship and receive tonnage in the Upper Mississippi River basin. Grains (corn and soybeans) dominate traffic on the system. Other commodities, mainly cement and concrete products, comprise the second largest group. A modern 15-barge tow transports the equivalent of 1,050 large semi-trucks (26,250 cargo tons, 875,000 bushels, or 17,325,000 gallons). Annually, the 9-foot project generates an estimated $1 billion of transportation cost savings compared with the operation and maintenance costs of approximately $115 million.