



Lock & Dam 17

(New Boston, Illinois)
Mississippi River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG.

Construction: 1935-1939

General Contractors:

Lock: Massman Construction Co. and
Massman-Peterman Co., Kansas City, Mo.
Dam: Maxon Construction, Dayton, Ohio

Congressional District: IA-2; IL-17

Description

Lock and Dam 17 is 437.1 miles above the confluence of the Mississippi and Ohio rivers. The complex stretches across a wide portion of river where there are several marshy islands. The Port Louisa National Wildlife Refuge and Odessa State Wildlife Management Area occupy the islands, marshes, and sloughs on the Iowa shore both upstream and downstream from the dam.



The lock dimensions are 110 feet wide by 600 feet long with additional provisions for an auxiliary lock. The maximum lift is eight feet with an average lift of four feet. It takes approximately seven minutes to fill or empty the lock chamber.

The movable dam has eight submersible Tainter gates (20 feet high by 64 feet long) and three submersible roller gates (20 feet high by 100 feet long). The dam system also includes one non-overflow earth and sand-filled dike; two transitional dikes; and a submersible earth and sand-filled dike. It takes six hours for water to travel from Lock and Dam 16 in Muscatine, Iowa, to Lock and Dam 17.

History/Significance

Construction on Lock 17 began on Aug. 7, 1935 and was completed in February 1937. Construction on Dam 17 began in February 1937 and was completed in January 1939. The structure was placed in operation on May 14, 1939.

The site was inaccessible from the nearest highway. As a result, the contractors for the lock had to construct a 3.7-mile-long entrance road. The remoteness of the site caused other problems. Not enough workers could commute to the job site from their homes. As a result, the Massman Construction Company and the Massman-Peterman Company built a workers' camp near the lock and dam site. This camp consisted of eleven 16-man bunk houses and a large mess hall. A total of 1,573 men were employed on the lock construction at one time or another, with 626 men working on the peak day of construction which was July 8, 1936.

Favorable river stages and weather conditions were advantageous to the contractors. Only 18 days of extremely cold weather, seven days of hot weather, and a 30-day delay due to a flood on the Ohio River at a steel fabricators plant for a total of 55 days extension beyond the scheduled completion date of time were required for completing the lock. The average monthly precipitation for the construction period of the lock was below the previously established normal by over one inch. A contract for \$32,250 was issued in 1937 to a second contractor for clearing the trees on the islands extending about two miles upstream from Dam 17.

The lock and dam elements of the complex were completed at a federal cost of \$4,164,000.

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	20,469,969	2010	19,513,395	2005	22,596,983	2000	31,375,823
2014	17,651,636	2009	20,519,517	2004	22,107,520	1999	34,170,210
2013	14,664,956	2008	17,338,830	2003	27,171,584	1998	29,922,523
2012	18,357,280	2007	22,843,570	2002	31,631,819	1997	28,104,179
2011	18,918,020	2006	24,046,856	2001	27,451,332	1996	31,361,891

Commodity Tonnage (2015)

All Units (Ferried Autos, Passengers, Railway Cars)	-
Coal, Lignite, and Coal Coke	2,561,700
Petroleum and Petroleum Products	195,700
Chemicals and Related Products	3,942,786
Crude Materials, Inedible, Except Fuels	2,094,380
Primary Manufactured Goods	1,407,132
Food and Farm Products	10,154,291
Manufactured Equipment & Machinery	110,760
Waste Material	-
Unknown or Not Elsewhere Classified	3,220

Vessel & Lockage Data (2015)

Average Delay - Tows (Hours)	1.40	Non-Commercial Vessels	45
Average Processing Time (Hours)	0.88	Non-Commercial Flotillas	39
Barges Empty	5,090	Non-Commercial Lockages/Cuts	39
Barges Loaded	13,116	Percent Vessels Delayed (%)	56
Commercial Vessels	2,062	Recreational Vessels	256
Commercial Flotillas	2,044	Recreational Lockages	230
Commercial Lockages/Cuts	3,084	Total Vessels	2,363
Non-Vessel Lockages	1	Total Lockages/Cuts	3,354

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