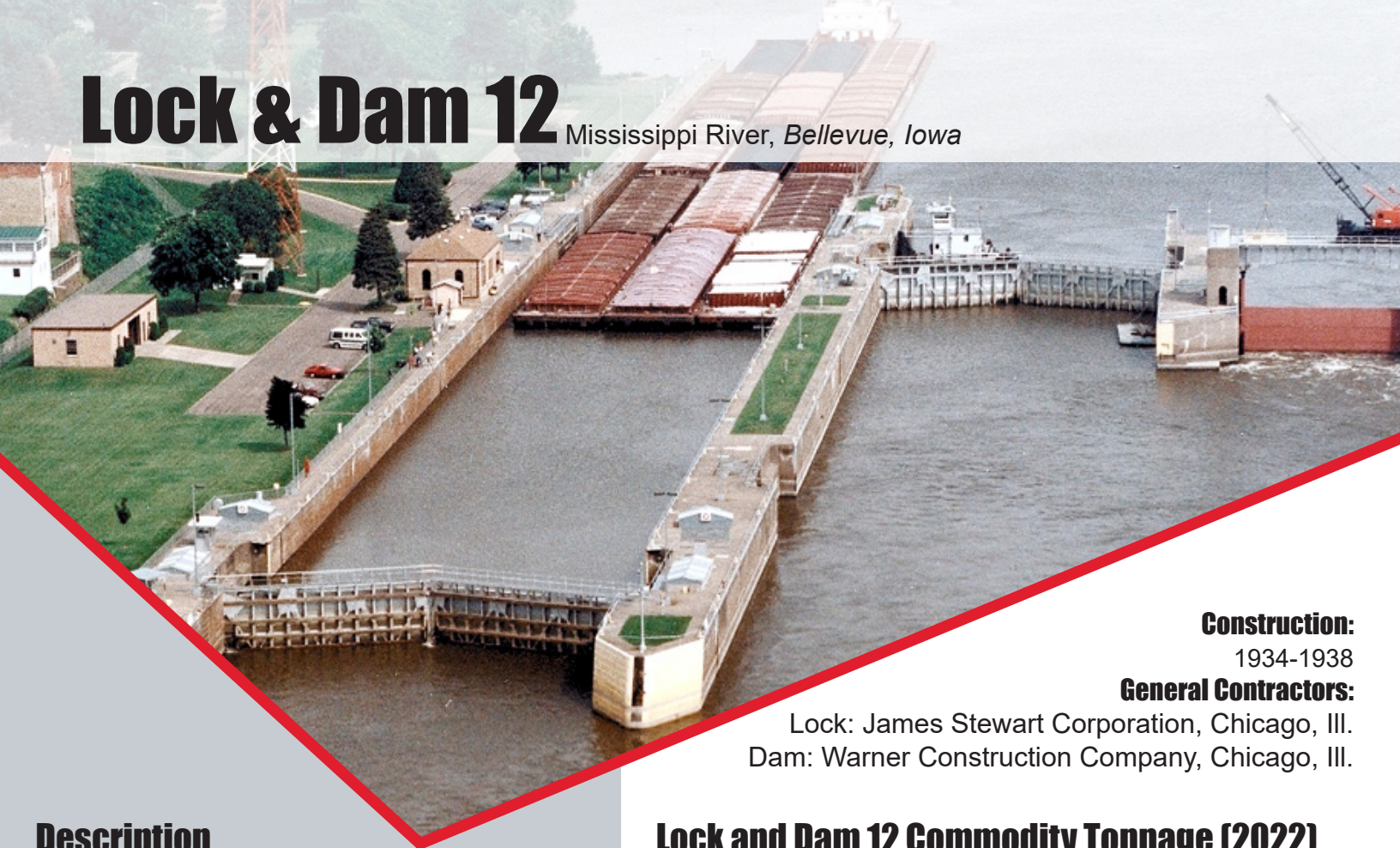


# Lock & Dam 12

Mississippi River, Bellevue, Iowa



## Construction:

1934-1938

## General Contractors:

Lock: James Stewart Corporation, Chicago, Ill.

Dam: Warner Construction Company, Chicago, Ill.

## Description

Lock and Dam 12 is 556.7 miles above the confluence of the Mississippi and Ohio rivers. The complex stretches across the river where the bluffs on the Iowa side are very close to the river; a complex of islands and sloughs extends nearly three-quarters of the way across the river from the Illinois side. Bellevue State Park occupies the high ground on the Iowa side, while the urbanized area of Bellevue extends to the government-owned property on the flat land below the bluff. The Lost Mound Unit of Upper Mississippi River National Wildlife and Fish Refuge occupies the islands, slough and small flat bottom areas on the Illinois side.

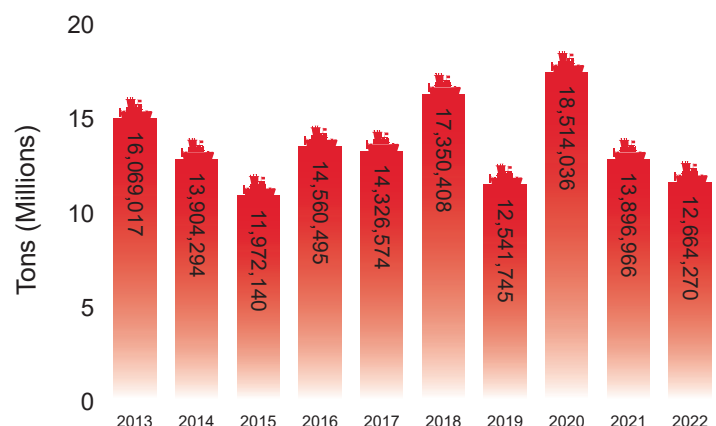
Lock dimensions are 110 feet wide by 600 feet long with additional provisions for an auxiliary lock. The maximum lift is 9 feet with an average lift of 6 feet. It takes approximately 10 minutes to fill or empty the lock chamber.

The movable dam consists of seven 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 includes two, non-overflow, earth and sand-filled dikes; two transitional dikes; and a concrete-covered, ogee spillway, submersible earth and sand-filled dike. The foundation is set in sand, gravel and silt. It takes eight hours for water to travel from Lock & Dam 11, in Dubuque, Iowa, to Lock & Dam 12.

## Lock and Dam 12 Commodity Tonnage (2022)

Food and Farm Products	6,102,570
Chemicals and Related Products	2,652,950
Crude Materials, Inedible, Except Fuels	1,333,630
Primary Manufactured Goods	1,232,160
Petroleum and Petroleum Products	668,000
Coal, Lignite, and Coal Coke	628,410
Manufactured Equipment & Machinery	27,350
Waste Material	14,400
Unknown or Not Elsewhere Classified	4,800
<b>Total Tonnage</b>	<b>12,664,270</b>

## Annual Tonnage (10 Year- Historical)



**U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT**  
 CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004  
 Corporate Communications Office, (309) 794-5729, [www.mvr.usace.army.mil](http://www.mvr.usace.army.mil)

## History/Significance

Construction of Lock 12 began in February 1934 and was completed in November 1935. Construction of Dam 12 began in September 1936 and was completed in July 1938. The structure was placed in operation May 14, 1939. During peak construction, as many as 1,217 men were employed on the construction project.

Two time extensions were given to the contractor during construction of the lock. Work was shut down and pumping of the cofferdam stopped March 26, 1935, as the U.S. Government Weather Bureau forecasts indicated the river stage would flood the cofferdam. The maximum river stage reached and exceeded the elevation required by the specifications for the top of the cofferdam by one-half foot. Construction was resumed May 4, 1935. A 39-day extension was granted for time lost during the shutdown.

The second time extension was granted from June 29 through July 23, 1935. The river stage from Oct. 2, 1934, to Aug. 6, 1935, prevented the placement of concrete in the downstream guidewall without cofferdam protection. The contractor delayed construction of a temporary cofferdam in anticipation that, prior to the completion of other work, the river would recede to a stage where building of a cofferdam would not be necessary. The river did not fall to this stage by July 11, 1935, so a temporary cofferdam was constructed and work on the guidewall resumed July 24, 1935. The contractor was granted an extension of 25 days. While the winter of 1934-1935 was severe at times, the contractor took advantage of the recurrent mild weather to place concrete.

The lock and dam elements of the complex were completed at a federal cost of \$5,581,000. During major rehabilitation in 2001-2002 the electrical system was replaced, new operating machinery for the Tainter valves and miter gates was installed, and concrete was replaced on the lock walls and guidewalls.



## Vessel & Lockage Data (2021)

Average Delay - Tows (Hours)	1.29
Barges Empty	3,346
Barges Loaded	8,763
Commercial Vessels	1,649
Commercial Lockages	2,318
Other Vessels	30
Other Lockages	28
Recreational Vessels	1,559
Recreational Lockages	617
Total Vessels	3,238
Total Lockages	2,963

## 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 near Cairo, Illinois, and up the Illinois Waterway to the T.J. O'Brien Lock in Chicago.

The system is often compared to a stairway with the "treads" being the pools of water created by each dam, with the locks serving as "risers," carrying boats from one river pool to the next like and elevator. This system of locks and dams provides what the rivers in their natural states couldn't – a dependable nine-foot depth for commercial navigation.

Operating the locks and dams is a continuous job as tows and recreational vessels lock through year-round, if weather conditions permit. The structures have long outlived their life expectancy but continue to operate efficiently thanks to the hard work and dedication of USACE employees who operate and maintain the structures.

The inland waterway navigation system is essential to the economy of the Midwest as well as the nation and world. More than 580 facilities ship and receive commodities within the Nation's Corn Belt Ports Statistical Area. 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). On an annual basis, the 9-foot channel project provides billions of dollars in transportation cost savings to the navigation industry.

