



Dresden Island Lock & Dam

(Morris, Illinois)
Illinois River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG.

Construction: 1928-1930

Congressional District: IL-11

Description

Dresden Island Lock and Dam is 271.5 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois. The complex is 1-1/2 miles downstream from the mouth of the Kankakee River and about 15 miles southwest of Joliet, Illinois.

The complex consists of a gated concrete gravity dam. The total length of the lock and dam between abutments is about 1,320 feet. Lock dimensions are 110 feet wide by 600 feet long with a maximum lift of 22 feet. Average filling time of the lock chamber is 14 minutes; 12 minutes emptying time.



The dam consists of an arch dam section, a fixed spillway section, nine Tainter gates (60 feet wide by 17 feet high), 18 plugged headgates, and a 500-foot-long earthfill section with steel sheet pile cut-off wall connecting the headgate section to the Illinois and Michigan Canal embankment.

It takes two hours for water to travel from Brandon Road Lock and Dam to Dresden Island during flood or high flow conditions.

History/Significance

The lock opened in 1933. Dresden Island Lock and Dam was one of five designed and partially constructed by the state of Illinois over a period from 1928 to 1930. Excavation and masonry work began in December 1928. The complex was about 35 percent complete when construction was turned over to the federal government due to state financial difficulties.

The government, by the authority of the Rivers and Harbors Act of 1930, completed construction in 1933. The estimated cost was \$2,306,000, however, the actual cost of the project was \$3,915,964, of which \$1,412,588 was funded by the state and \$2,503,376 was funded by the federal government.

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>
2016	15,978,305	2011	13,417,907	2006	20,548,035	2001	18,874,800
2015	15,666,937	2010	12,727,367	2005	19,371,418	2000	18,835,137
2014	16,455,087	2009	13,162,751	2004	20,389,783	1999	17,746,340
2013	13,579,738	2008	15,181,654	2003	18,556,711	1998	18,348,026
2012	14,325,734	2007	16,524,807	2002	18,712,254	1997	16,402,434

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

Commodity Tonnage (2016)

All Units (Ferried Autos, Passengers, Railway Cars)	-
Coal, Lignite, and Coal Coke	1,077,574
Petroleum and Petroleum Products	4,418,860
Chemicals and Related Products	2,849,352
Crude Materials, Inedible, Except Fuels	4,325,321
Primary Manufactured Goods	2,461,750
Food and Farm Products	713,572
Manufactured Equipment & Machinery	109,276
Waste Material	4,700
Unknown or Not Elsewhere Classified	17,900

Vessel & Lockage Data (2016)

Average Delay - Tows (Hours)	1.54
Average Processing Time (Hours)	0.83
Barges Empty	5,298
Barges Loaded	9,035
Commercial Vessels	3,076
Commercial Flotillas	3,003
Commercial Lockages/Cuts	3,464
Non-Vessel Lockages	2
Non-Commercial Vessels	40
Non-Commercial Flotillas	37
Non-Commercial Lockages/Cuts	37
Percent Vessels Delayed (%)	90
Recreational Vessels	618
Recreational Lockages	356
Total Vessels	3,734
Total Lockages/Cuts	3,859

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 2015, the 9-foot channel project generated an estimated \$3 billion of transportation cost savings compared to its approximately \$246 million operation and maintenance cost.

UPDATE: April 2017