



Peoria Lock & Dam

(Creve Coeur, Illinois)
Illinois River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Construction: 1936-1939

Congressional District: IL-18

Description

Peoria Lock and Dam is 157.7 miles above the confluence of the Illinois River with the Mississippi river at Grafton, Illinois. The lock and dam is located four miles downstream of Peoria, Ill.

The lock is the standard 600-feet long by 110-feet wide. The maximum lift is 11 feet with an average lift of six feet. It takes ten minutes to fill or empty the lock chamber. The dam is a Chanoine wicket dam, the navigable pass type. Overall length of the dam is 570 feet. The movable dam is 432-feet long containing 108 wickets (3.75-feet wide, 16.42-feet high, 0.25-foot gap between wickets). The dam includes a single 84-foot-long submersible Tainter gate.



From 1987-1990, a major rehabilitation changed the physical components of the dam and operating procedures by replacing 26 of the original 134 wickets with a single 84-foot long submersible Tainter gate adjacent to the lock wall.

It takes two days for water to travel from Starved Rock Lock and Dam to Peoria.

History/Significance

The lock opened in 1939. Following the Supreme Court's decree of April 21, 1930, limiting the diversion of water from Lake Michigan, a new navigation plan was developed calling for removing four old locks and dams at Henry, Copperas Creek, LaGrange and Kampsville; new locks at Peoria and LaGrange, and a dam on the Mississippi River at Alton, Missouri, to provide the required navigation depth from the mouth of the Illinois to LaGrange. The lock is used only during low and moderate river flows when the wicket dams are raised to maintain the nine-foot navigation depth. During high flows, the wickets are lowered and open river conditions prevail.

Peoria is one of only two wicket dams on the Illinois Waterway. The lock and dam elements of the complex were completed at a cost of \$3,381,030.

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>
1992	30,988,124	1997	30,765,137	2002	32,080,328	2007	26,391,793
1993	31,779,743	1998	32,604,311	2003	31,878,067	2008	23,483,059
1994	35,445,137	1999	31,143,398	2004	32,321,149	2009	22,512,568
1995	33,900,177	2000	31,730,582	2005	29,734,319	2010	22,758,072
1996	31,229,178	2001	33,668,096	2006	30,514,817	2011	22,779,470

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Commodity Tonnage & Lockages (2011)

Coal	2,380,922
Petroleum	3,630,134
Chemicals	4,441,417
Crude Materials	3,699,173
Manufactured Goods	1,898,361
Farm Products	6,477,628
Manufactured Machinery	161,085
Waste Material	50,550
Containers & Pallets	1,600
Unknown	38,600

<u>Subtotals:</u>	Grain	5,284,458
	Steel	844,397

<u>Lockages:</u>	Commercial Boats:	3,098
	Recreation Boats:	373
	Light Boats:	221
	Other Boats:	40
	Total Boats:	3,732
	Total Cuts:	4,204

Current Maintenance Issues

Item (Critical Rank Order)

- | | |
|--|--|
| <ul style="list-style-type: none"> • Systemic Miter Gate Replacement • Add Guide Cells • Motor Vessel Sangamon Replacement • Emergency Stackable Miter Gates | <ul style="list-style-type: none"> • Systemic Filling Valve Replacement • Paint Tainter Gate, Service Bridge and Machinery • Permanently Close Butterfly Valves |
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TOTAL ESTIMATED COST: \$36,000,000

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. This is adversely affecting reliability of the system. Long-established programs for preventative 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 nature of a lock malfunction, extended repairs can have major consequences for shippers, manufacturers, consumers, and commodities investors.

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.

More than 580 manufacturing facilities, terminals, and docks 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.

UPDATE: October 2012

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