

McAlpine Locks and Dam



McAlpine Locks and Dam is located in downtown Louisville, Kentucky. The dam is at mile 604.4 of the Ohio River and the locks are in the Louisville and Portland Canal on the Kentucky side of the river. The 56' x 600' auxiliary lock was completed in 1921 and the 110' x 1200' main chamber was opened in 1961. There is also an inactive 56' x 360' lock chamber. In 1960, the project was renamed from Lock and Dam 41 in honor of a former Louisville District Engineer.

Construction began at McAlpine in 1996 on a new 110' x 1200' lock, which will replace the active 110' x 600' auxiliary and an inactive auxiliary lock. Innovations associated with this project include roller compacted concrete walls, wrap around filling and emptying system with in-chamber culverts, a shortened guide wall and reduced cofferdam length. Construction began in 1996 and is scheduled for completion in 2008.

During construction, the McAlpine project is reduced to a single chamber project because the new 1200' lock is being constructed in the foot-print of the auxiliary 600' chamber.



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McAlpine Locks & Dam - 2004 Commodity Distribution (values in millions of dollars)				
Commodity	Tonnage	Percent	Value	Percent
Coal	17,393,459	32%	\$682	5%
Petroleum	5,116,830	10%	\$778	6%
Crude Petroleum	26,922	0%	\$3	0%
Aggregates	4,431,236	8%	\$221	2%
Grains	3,647,488	7%	\$567	4%
Chemicals	5,409,860	10%	\$2,345	18%
Ores/Minerals	3,919,856	7%	\$442	3%
Iron/Steel	11,305,188	21%	\$4,688	36%
Other	2,415,165	5%	\$3,195	25%
Total	53,666,004	100%	\$12,921	100%
<i>Source: U.S. Army Corps of Engineers Waterborne Commerce Statistics</i>				

Construction began at McAlpine in 1996 on a new 110' x 1200' lock, which will replace the active 110' x 600' auxiliary and an inactive auxiliary lock. Innovations associated with this project include roller compacted concrete walls, wrap around filling and emptying system with in-chamber culverts, a shortened guide wall and reduced cofferdam length. Construction began in 1996 and is scheduled for completion in 2008.

During construction, the McAlpine project is reduced to a single chamber project because the new 1200' lock is being constructed in the foot-print of the auxiliary 600' chamber.

According to the Corps of Engineers Waterborne Commerce Statistics for 2004, almost 54 million tons of commodities were shipped through McAlpine Locks. These shipments had a combined value of \$13.0 billion. The leading commodity shipped through McAlpine Locks was coal, which made up 32% of the total tonnage.

The state that shipped the most tonnage through McAlpine Locks was Louisiana, with just over 17.5 million tons worth \$4.9 billion. Iron, steel, ores and chemicals made up over 14.8 million tons of this amount. Kentucky, was next, shipping 9.8 million tons of mostly coal.

McAlpine Locks & Dam 2004 Barge Tonnage Shipped by States (values in millions of dollars)			
Shipments By	Tons	Value	Top Commodity
Louisiana	17,537,332	\$4,884	Iron/Steel
Kentucky	9,821,003	\$2,179	Coal
Illinois	8,002,690	\$728	Coal
West Virginia	4,611,232	\$788	Coal
Indiana	4,423,916	\$416	Aggregates
<i>Source: U.S. Army Corps of Engineers Waterborne Commerce Statistics</i>			

Ohio received the most tonnage (11.8 million tons) moving through McAlpine Locks. Kentucky was next, moving 11.7 million tons. See map for a graphical representation of state tonnage movements through McAlpine Locks.

McAlpine Locks & Dam			
2004 Barge Tonnage Received by States			
<i>(values in millions of dollars)</i>			
Receipts By	Tons	Value	Top Commodity
Ohio	11,802,776	\$ 3,064	Iron/Steel
Kentucky	11,738,547	\$ 1,762	Coal
Louisiana	7,369,098	\$ 915	Coal
West Virginia	5,956,122	\$ 1,036	Aggregates
Pennsylvania	5,404,116	\$ 2,120	Iron/Steel
<i>Source: U.S. Army Corps of Engineers Waterborne Commerce Statistics</i>			

Louisiana's 3rd Congressional District was the leading shipper of commodities through McAlpine Locks. This district shipped 14.8 million tons of ores, iron, steel and chemicals, with a combined value of nearly \$3.7 billion. Kentucky District 4 was next, with 5.2 million tons. See map for the top 10 Congressional Districts shipping tonnage through McAlpine Locks.

McAlpine Locks & Dam 2004 Barge Tonnage				
Shipped by Congressional Districts				
<i>(values in millions of dollars)</i>				
Shipments By	District	Tons	Value	Top Commodity
Louisiana	3	15,055,838	\$3,664	Iron/Steel
Kentucky	4	5,258,381	\$1,353	Coal
Illinois	12	4,276,737	\$ 332	Coal
Indiana	9	3,064,658	\$ 315	Aggregates
Illinois	19	2,824,525	\$ 110	Coal
<i>Source: U.S. Army Corps of Engineers Waterborne Commerce Statistics</i>				

The leading Congressional District in receipts of McAlpine Locks commodities was also Kentucky District 4, which received over 8 million tons. This tonnage was mostly Iron/steel and coal, and had a combined value of \$1. billion. Louisiana District 3 received 6.7 million tons of goods with a value of any congressional district: \$744 million. Ohio District 6 had 5.9 million tons of goods with the highest combined value of any congressional district, \$1.2 billion. See map for the top ten Congressional Districts receiving McAlpine Locks tonnage.

McAlpine Locks & Dam 2004 Barge Tonnage				
Received by Congressional Districts				
<i>(values in millions of dollars)</i>				
Shipments By	District	Tons	Value	Top Commodity
Kentucky	4	8,255,074	\$ 1,284	Iron/Steel
Louisiana	3	6,667,865	\$ 744	Coal
Ohio	6	5,926,303	\$ 1,727	Iron/Steel
Indiana	9	5,082,795	\$ 569	Coal
Ohio	1	4,942,620	\$ 1,184	Chemicals
<i>Source: U.S. Army Corps of Engineers Waterborne Commerce Statistics</i>				

Kentucky and Barkley Locks 2004 Barge Tonnage Shipped to States (values in millions of dollars)			
Receipts By	Tons	Value	Top Commodity
Tennessee	19,321,399	\$2,208	Coal
Alabama	8,880,865	\$2,944	Grain
Louisiana	3,566,484	\$408	Aggregates
Kentucky	1,803,563	\$333	Coal
Arkansas	1,716,676	\$401	Aggregates

Source: U.S. Army Corps of Engineers Waterborne Commerce Statistics

Kentucky's 1st Congressional District shipped the most commodities through Kentucky and Barkley Locks, shipping 13 million tons of aggregates, coal and other commodities, worth \$672 million. Illinois 19 was next, with almost 5 million tons. See map for the top 10 Congressional Districts shipping tonnage through Kentucky and Barkley Locks.

Kentucky and Barkley Locks 2004 Barge Tonnage Shipped from Congressional Districts (values in millions of dollars)				
Shipments By	District	Tons	Value	Top Commodity
Kentucky	1	15,441,434	\$824	Coal
Illinois	19	6,755,236	\$235	Coal
Louisiana	3	2,893,046	\$664	Ores/Minerals
Illinois	12	1,161,253	\$309	Petroleum
Alabama	5	847,429	\$730	Iron/Steel

Source: U.S. Army Corps of Engineers Waterborne Commerce Statistics

The leading Congressional District in receipts of Kentucky and Barkley commodities was Tennessee District 8, which received 6.5 million tons. This tonnage was mainly coal, aggregates and chemicals and had a combined value of \$394 million. Alabama District 5, second in tonnage, had the highest commodity value of \$2.4 billion. See map for the top 10 Congressional Districts receiving commodities through the Kentucky and Barkley locks.

Kentucky and Barkley Locks 2004 Barge Tonnage Shipped to Congressional Districts (values in millions of dollars)				
Receipts By	District	Tons	Value	Top Commodity
Tennessee	8	8,776,084	\$547	Coal
Alabama	5	6,038,792	\$2,636	Coal
Tennessee	5	4,725,730	\$716	Aggregates
Tennessee	6	3,178,787	\$118	Coal
Arkansas	1	1,716,676	\$401	Aggregates

Source: U.S. Army Corps of Engineers Waterborne Commerce Statistics