



US Army Corps of Engineers



***Huntington District
Navigation Area Office***



BUILDING STRONGSM



US Army Corps of Engineers



Navigation

- **9 Locks and Dams**
- **Transportation of bulk commodities**
- **Largest US inland waterway port**
- **84 percent of coal shipped within Ohio River Basin used for producing electricity**



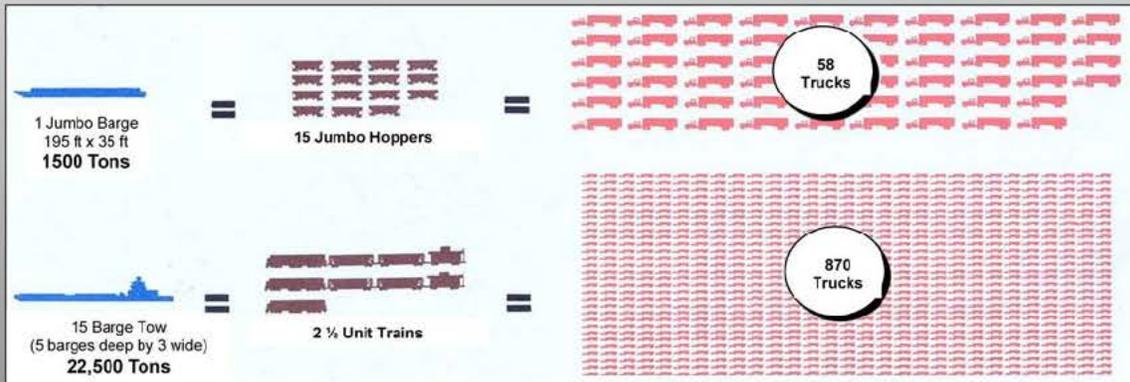



BUILDING STRONG™

- Huntington District has 9 locks and dams projects - 6 on the Ohio River and 3 on the Kanawha
- Robert C. Byrd was renovated with the new lock operational in January 1993.
- Winfield L&D was modernized with the new main lock becoming operational in November 1997.
- Marmet L&D was modernized with the new main lock becoming operational in January 2009.
- Over 228 million tons are transported over Ohio River System waterways. These tonnages equal a cost savings of over \$1 billion over the next least expensive mode of transportation.
- Of the coal shipped in the Ohio River system, over 84 percent is used for Power Production.



Hauling Comparison



280M Tons = 31K Unit Trains = 10.8M Trucks

BUILDING STRONGSM

On average costs:

11.06/ ton water

18.44/ ton overland – truck or rail

Savings per ton:

Coal \$5.92

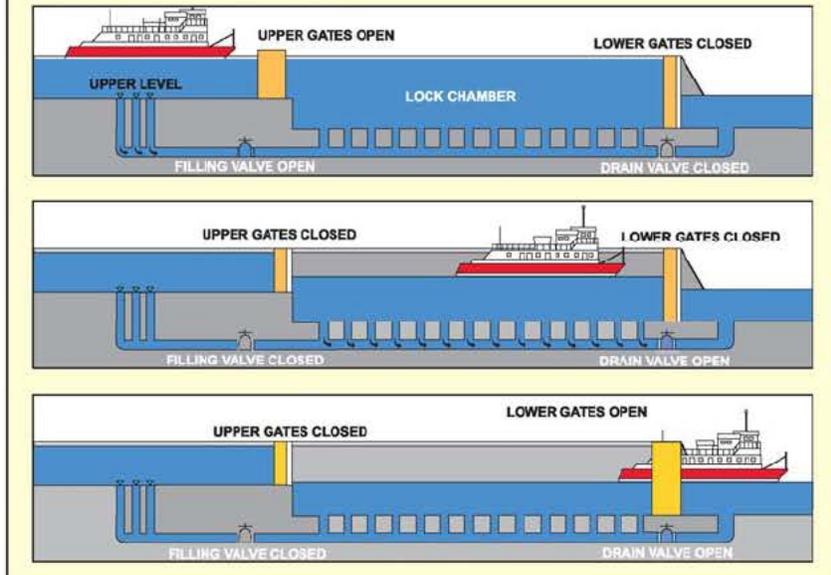
Petrol \$9.45

Aggregates \$7.51

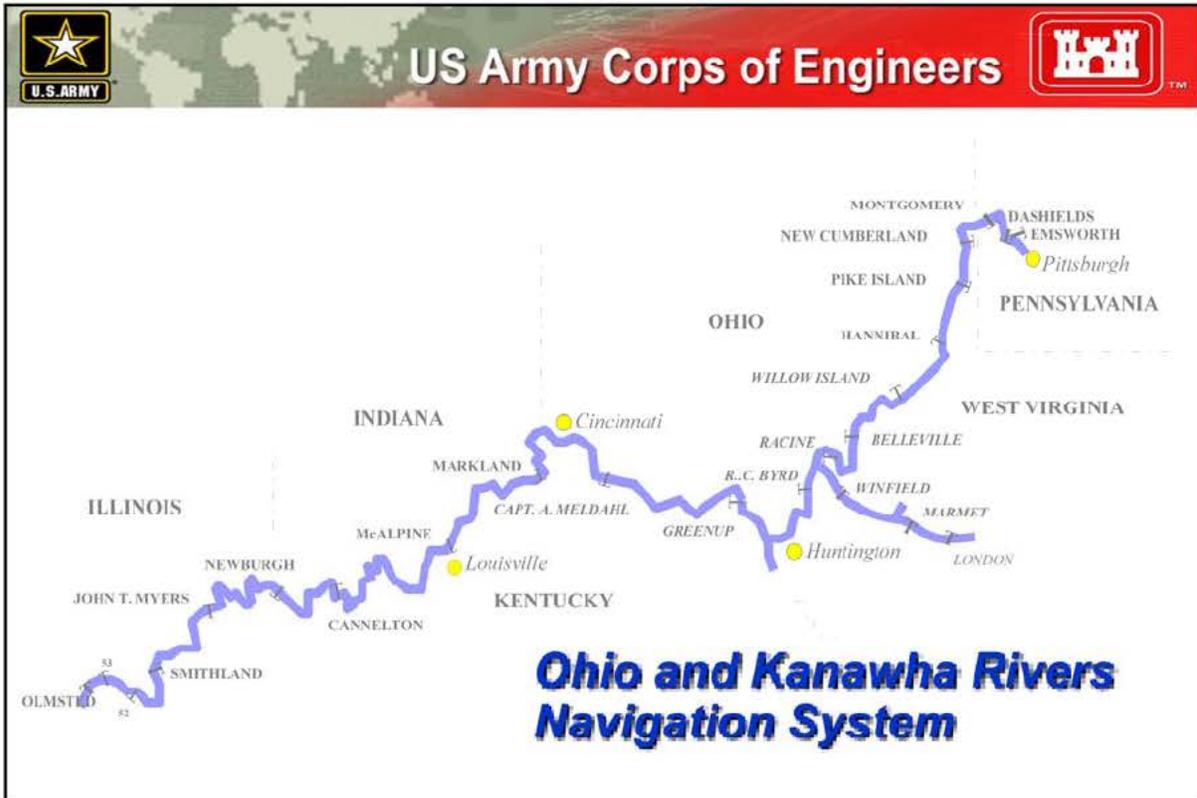
Chemicals \$22.20



How Locks Operate



How a lock works



Inland navigation is a mission of Corps that has great impact on Nation's economy

For us – It is coal, chemicals, and aggregates



LRH Navigation Projects - Ohio Locks



Willow Island. Ohio River, 161.7 miles downstream from Pittsburgh, PA, and 3.4 miles upstream from Waverly, WV. Main lock 110' by 1200', auxiliary lock 110' by 600', (20.0' normal lift). (completed 1976) Hydro facility currently under construction.

Belleville. 42.2 miles from Willow Island. Main lock 110ft by 1,200ft, auxiliary lock 110ft by 600ft. Belleville Hydroelectric Plant, AMPOhio. (22' lift)(completed in late 60s)

Racine. 33.6 miles from Belleville. Main 1200ft by 110ft, auxiliary 600 by 110. AEP owns and operates a hydroelectric generating plant on the Ohio abutment (normal lift 22') (completed 1971)

R.C. Byrd. 41.7 miles from Racine. Main lock 110' by 1200', auxiliary lock 110' by 600'. (normal lift is 23') Original project complete 1937, additional chamber complete 2002.

Greenup. 61.8 miles from Robert C. Byrd Locks & Dam. Main lock 110ft x 1200ft, aux 110ft x 600ft. The City of Hamilton, Ohio operates the hydroelectric plant of the Ohio abutment (30' normal lift) Construction complete 1962.

Meldahl. 95.2 miles from Greenup. Main lock 110ft by 1200ft, aux 110ft x 600ft. (normal lift 30') Construction complete in 1965. Hydro plant currently under construction.



Navigation - Kanawha Locks



BUILDING STRONGSM

London. 56' x 360' and 56' x 407' (normal lift 24.0') Completed in May 1934.

Marmet. 110' x 800' main lock with aux original locks the same size as London. (normal lift 22') New lock Original completed 1934 new lock completed Jan 2009.

Winfield. 110' x 800' main lock with twin aux original locks 56' x 360' (normal lift 28') New lock Original completed 1937 new lock completed Jan 1997.

AEP owned hydro facility