M cClellan-Kerr Arkansas River Navigation System is the waterway’s official name—so named by an Act of Congress, 1/5/1971 (PL91-469).

▲ The MKARNS is 445 miles long and includes the Verdigris, Arkansas & White Rivers. A 9-ft. channel depth is maintained by the Corps of Engineers. A 12-ft. channel has been authorized.

▲ The MKARNS is a multi-beneficiary system: water supply, navigation, fish and wildlife, recreation, hydropower generation, and flood control (when considered as part of the Arkansas River Basin Project and its upstream reservoirs that control water flows).

▲ There are 18 locks and dams—13 in Arkansas and 5 in Oklahoma; each lock chamber is 110’ wide x 600’ long and can handle an 8-barge tow.

▲ Federal cost of the System was $1.3 billion. Add to that $186.1 million for construction of Montgomery Point Lock & Dam (completed in 2004), for a total cost of $1.49 billion. Total industrial investments along the waterway are valued at $3.2 billion.

▲ The System has an elevation differential of 420 feet from its beginning at mule 600 on the Mississippi River to the head of navigation near Tulsa.

▲ The 2,500-acre Tulsa Port of Catoosa is one of the largest, most inland ice-free ports in the nation, with 60 industries employing over 3,000 workers.

▲ Port & dock facilities on the MKARNS in Oklahoma equal 85 industries, nearly $3 billion in private investments, 5,000 jobs, and $200 million in annual payroll.

▲ More than 2,000 semi-trucks per day travel into and out of Oklahoma’s port & terminal facilities to load or unload products on/off barge.

▲ A 2001 study showed that moving freight by barge resulted in cost savings of $68 million for Oklahoma farmers, manufacturers and consumers, compared to the cost of alternative overland modes.

▲ In 2011, 1.2 million people visited the five Corps-operated projects on the system in Oklahoma. 42 million visitors took advantage of the 12 Corps-operated projects in Arkansas (campgrounds, parks, boat ramps, reservoirs, hiking trails and picnicking areas).

▲ In 2011, 1,134 recreational vessels locked through Oklahoma’s 5 locks; 3,547 locked through Arkansas’ 13 locks.

▲ In 2011, 196,494 pleasure boats were registered in Oklahoma; 207,926 registered in Arkansas.

▲ Flood damages prevented by Arkansas River Basin projects under the jurisdiction of the Corps’ Tulsa District totaled $115.5 million in FY 2011. Cumulative damages prevented through 2011 equal more than $11.8 billion.

▲ Flood damages prevented by Arkansas River Basin projects under the Corps’ Little Rock District totaled $187.9 million in FY 2011. Cumulative damages prevented through 2011 are $1.9 billion.

Did you know . . .

... that barges on America’s inland navigation system is equivalent to 58-million truck trips each year?

... that if waterborne cargo were diverted to highways, two inches of asphalt would be needed to increase the pavement thickness of 126,000 land miles of intercity Interstate? The effects would be greater for highways parallel to waterways.

... that one barge can carry the weight of 136 school buses, 750 pickup trucks, 12,000 refrigerators, or 200 elephants?

... that President Richard M. Nixon dedicated the McClellan-Kerr Arkansas River Navigation System at a June 1971 ceremony at the Tulsa Port of Catoosa?
2011 Tonnage

2011 tonnage on the entire McClellan-Kerr Arkansas River Navigation System totaled 10.6 million tons, with a value of $3.1 billion. The tonnage is equivalent to the carrying capacity of 7,054 barges, 108,058 railcars, or 423,230 semi-trucks. Oklahoma’s 2011 waterborne commerce totaled over 4.9 million tons worth over $1.8 billion. The tonnage is equivalent to the carrying capacity of 3,267 barges, 49,000 railcars, or 196,000 semi-trucks.

Iron & Steel
1,625,600 tons $1,267,968,000
Chemical Fertilizer
1,960,976 tons 707,912,000
Other Chemicals
155,249 tons 52,785,000
Petroleum Products
613,907 tons 229,601,000
Coal & Coke
731,966 tons 69,537,000
Sand, gravel & rock
2,706,368 tons 27,064,000
Soybeans
985,768 tons 325,303,000
Wheat
684,581 tons 109,533,000
Other Grains
663,613 tons 94,279,000
Miscellaneous
17,722 tons 3,544,000
Forest Products/Minerals
396,700 tons 53,027,000
Project Cargo; mfg. equip/machines
36,304 tons 181,520,000

Studies have shown that without barge competition, agricultural shippers pay higher rail and highway transportation costs the farther they are from an inland waterway.

Marine Highways & the McClellan-Kerr System

In August 2010, the Maritime Administration designated the McClellan-Kerr Arkansas River Navigation System as a Marine Highway Connector for the M-40 Marine Highway Corridor (Mississippi River).

The corridors identify routes where water transportation presents an opportunity to offer relief to landside corridors that suffer from traffic congestion, excessive air emissions or other environmental concerns. Corridors are generally longer, multi-state routes, whereas Connectors represent shorter routes that serve as feeders to the larger corridors.

Inland Waterway Channels: Draft/Width Challenges

- Exporters, importers and domestic shippers depend on authorized port & waterway depths and widths, and locks and dams infrastructure.
- Inadequate channel depths & widths can lead to higher transportation costs. Barges and vessels may be loaded to less than capacity, barges and vessels may be required to ship the same amount of commodities, and one-way, or daytime-only traffic restrictions may be imposed.
- In recent years, there have been extended periods where low river levels and reduced channel widths impeded grain barge movements. When river levels are low, barges must be loaded lighter than normal and the number of barges in a tow may be reduced to the available channel width.
- The same is true for high river levels due to heavy rains and flooding. Flooding causes sediment buildup downstream and barges have to be loaded lighter or tow widths reduced.
- At a 9-ft draft, a barge has 1,500 short tons of capacity; for each foot of reduced draft, the barge loses about 200 short tons of capacity.
- Temporal closures and restrictions on traffic in channels due to low and high water conditions, sedimentation, groundings, natural disasters, man-made disasters, strikes and lockouts can lead to delays, spoilage, diversion to other modes and ports, higher transportation costs, and lost sales.

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Comparisons between a 9-ft & 12-ft channel.

- Originally authorized at a 9-ft draft, Congress approved a 12-ft channel on the MKARNS, but Oklahoma and Arkansas waterway interests are finding it difficult to get funded.
- With a 12-ft channel on the MKARNS, a tank barge would be able to carry 1.2 million gallons of gasoline, enough to fuel nearly 2,500 automobiles for a year.
- With a 12-ft channel on the MKARNS, a barge could carry 2,000 tons, the equivalent of 20 railcars or 80 semi-trucks.