



“Working Mississippi”: Moving Goods on the River

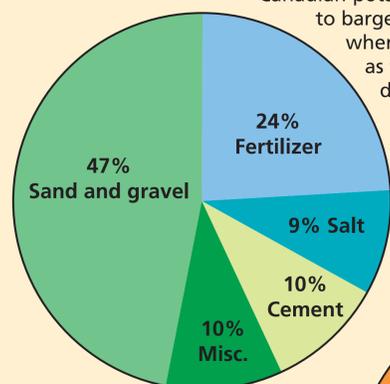
The Mississippi River provides Minnesota with a transportation link to the rest of the world. Nearly 7% of U.S. grain exports are carried by barge from the St. Paul area, traveling down the river to the Gulf of Mexico on their route to foreign destinations. The location of the Twin Cities at the upper end of the “stairway of water” created by the lock and dam system allows Minneapolis and St. Paul to serve as a major connection for the movement of bulk products in the Midwest.

What’s Moving on the River?

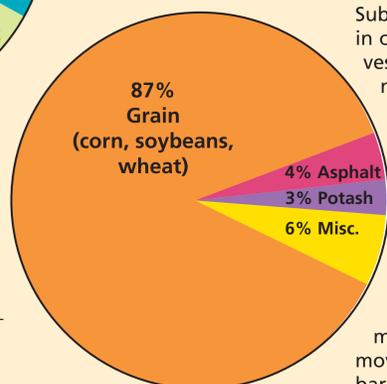
A wide range of bulk commercial products, or commodities, travels up and down the Mississippi River. Principal upbound commodities in the Twin Cities are led by sand and gravel. Originating from mines on Grey Cloud Island in Cottage Grove, MN, sand and gravel are used in construction and road building. Fertilizer arrives from Florida for application in agriculture and lawn care. Salt from Louisiana is used on roads and in water softeners. Cement for construction is shipped upstream from Iowa. Other bulk commodities carried upriver include slag (used in asphalt shingles), coal, caustic soda (used in industrial and food processes), light oil, liquid ammonia, molasses, steel, pipe and twine.

Grain accounts for the vast majority of downbound tonnage. Eight million tons of Minnesota’s corn, soybeans and wheat is shipped annually by barge to New Orleans for export to destinations around the world. Liquid asphalt for roads and roofing is shipped down-river from Twin Cities oil refineries.

Canadian potash is transferred from rail to barge and carried to locations where it is distributed for use as fertilizer. Other downbound commodities include petroleum coke for power generation, scrap metal for reprocessing, petroleum oil, sunflower oil, molasses and flyash.



Upbound Commodities



Downbound Commodities

Illustrations above and right: Principal commodities, or bulk commercial goods, transported upstream (upbound) and downstream (downbound) by barge on the Mississippi River in 1999.



Stairway of Water

Substantial changes have been made to the Mississippi River in order to accommodate modern barges and other large river vessels. The river was once shallow, swift and broad, with numerous shifting sandbars, riffles and islands. Since the 1930’s the U.S. Army Corps of Engineers has maintained a nine-foot minimum channel depth through a series of twenty-nine “pools” (impoundments created by dams) between St. Louis and Minneapolis. Locks (large chambers in which water may be raised or lowered) allow boats to move up or down from one pool to another, acting as a “stairway” for both large and small watercraft.

The Twin Cities’ location at the upper end of the “stairway of water” has resulted in Minneapolis-St. Paul serving as a major connecting terminal for all kinds of bulk commodities moving in the Midwest. Rail and truck transportation links barges with product origins and destinations in the Dakotas and Canada as well as Minnesota.

Photo above: a 15-barge tow moving on Mississippi River near Lansing, Iowa. Photo: L. Nicklay, Corps of Engineers, St. Paul District.



Location of barge terminals and service areas along Mississippi River

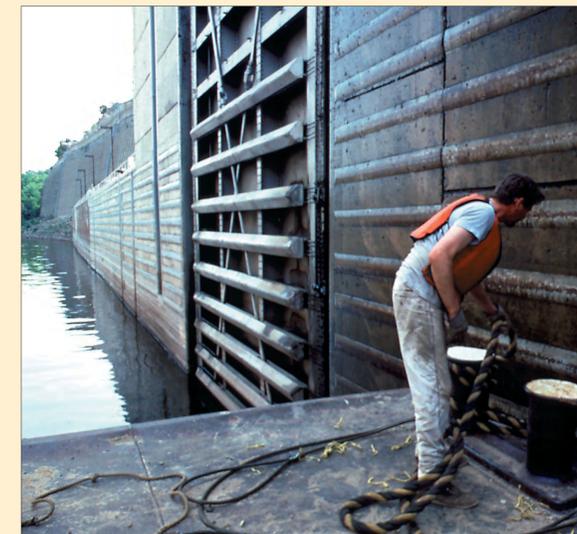


Photo above: Deck hand working through lockage at Lock and Dam #1 in Minneapolis. Photo: J. Korte, Mississippi National River and Recreation Area.

Barges and Towboats

Each barge has a carrying capacity equal to 60 semi trailers. A standard barge is 200 feet long, 35 feet wide, and when loaded to its 1500-ton capacity needs a nine-foot depth of water to float. Barges are cabled together into a “tow,” which can be longer than three football fields. A standard tow of 15 barges can be pushed by a single towboat. A towboat may be 150 feet long, four stories high, and 6000 horsepower.

Contact us:

Mississippi National River and Recreation Area
 Visitor Center in the Science Museum of Minnesota
 120 Kellogg Blvd West
 St. Paul, Minnesota 55102
 651 290-0200
 miss_info@nps.gov
 www.nps.gov/miss