

Missouri Freight Transportation

Economy on the Move

Rail Freight



Rail Industry

Missouri is home to 19 railroads operating on nearly 4,400 miles of track, 2,500 miles of yard track, and about 7,000 public and private crossings. Kansas City and St. Louis are ranked as the second and third largest rail hubs in the U.S., respectively, with Kansas City carrying over 300 daily freight arrivals and departures. The rail industry currently employs 8,215 workers; 7,400 in rail transportation positions and 815 in rail support activities.

An Economic Driver

The rail industry employment has a large impact on Missouri's economy generating an estimated \$2.7 billion annually in Gross State Product, \$1.5 billion in personal income and \$82 million in new net Missouri general revenues. The more than 8,200 direct workers generate an estimated 17,985 indirect and induced spin-off jobs annually in Missouri through purchases of industry intermediate inputs and employee consumer spending.

Commodity Flows

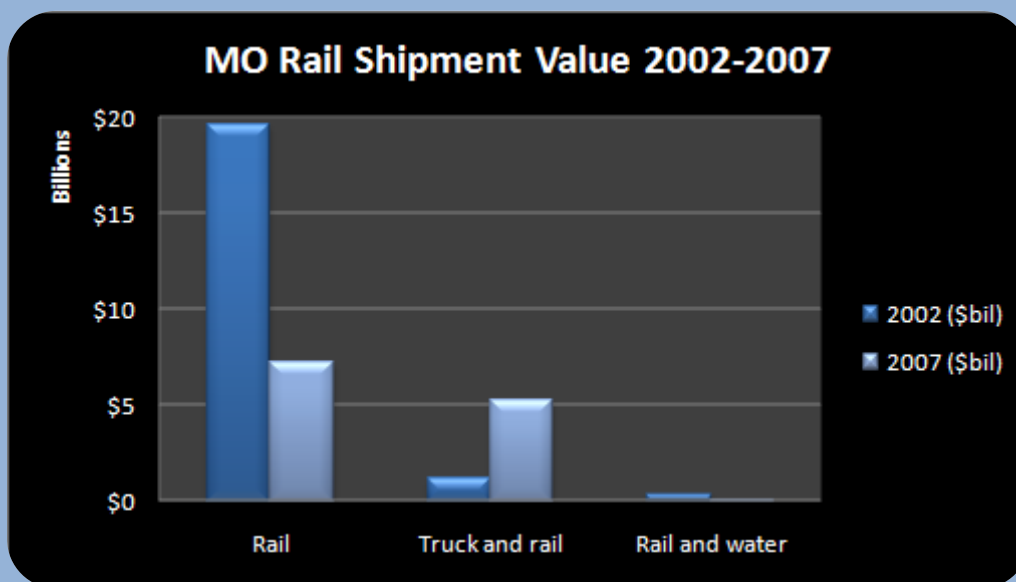
Shipment values and tonnage for all modes combined increased in Missouri by roughly 20% over the five years surveyed. Rail shipments accounted for over 5.5% of the value and over 9% of the total tonnage. Over \$7.2 billion in Missouri commodities are shipped by rail. Motorized vehicles and parts along with cereal grains make up 54% of the total value shipped to states. Over \$9.7 billion are imported by rail to Missouri. High value imports include motorized vehicles and parts, coal, pulp/newsprint/paper, plastics, and rubber.



Trends in Rail Shipments 2002-2007

Shipment values and tonnage for all modes combined increased in Missouri by roughly 20% over the five years surveyed. Missouri companies shipped nearly \$226 billion and 305 million tons of commodities throughout the U.S. Rail shipments accounted for over 5.5% of the value and over 9% of the tonnage or \$12.6 billion and 27.6 million tons.

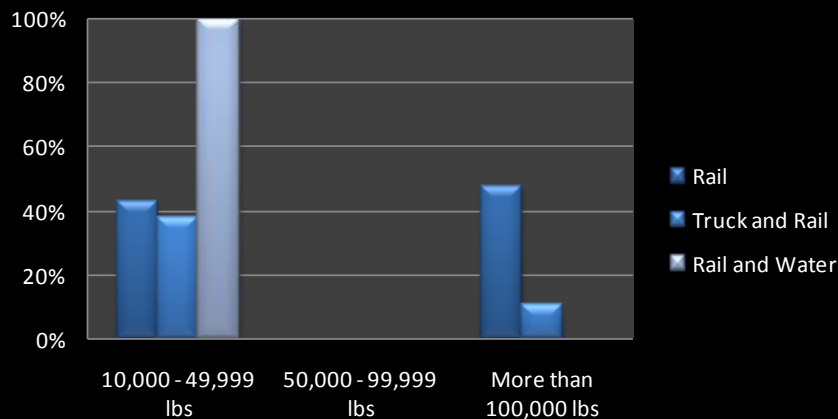
The Commodity Flow Survey breaks out rail shipping into rail only and rail intermodal modes (truck/rail, rail/water). The most recent survey reports a significant decline in rail only shipping values (63%) and tonnage (30%). The declines were mainly in sweet corn, animal fats/oils, mixed freight, and chemical products. Shipping increases occurred with motor vehicles, cereal grains, and alcohol/tobacco products. Alternatively, the intermodal truck and rail shipments increased substantially in both value (334%) and tonnage (421%). Rail and water intermodal decreased in value (84%) but increased in tonnage by over 600%.



Shipment Weights

The distribution of shipment weight by rail mode primarily falls into two categories. The 10 to 50 thousand lbs group represents about 5% of total rail tonnage but 41% of the total value. Shipments weighing over 100,000 lbs represent 74% of total rail tonnage and less than 32% of the value.

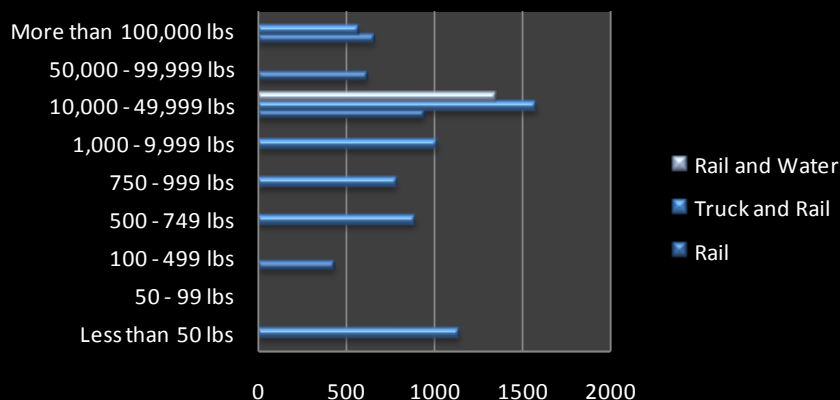
Distribution of Value by Shipment Weight



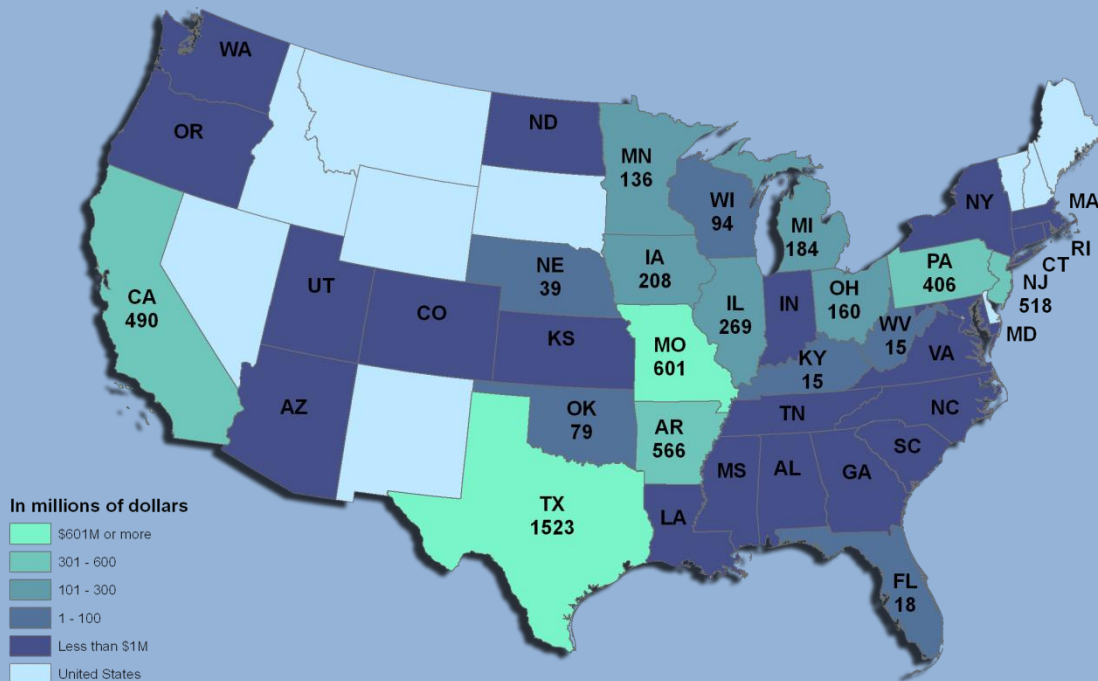
Shipment Distance

Missouri Rail-Only shipments average 670 miles to destination. Truck and Rail intermodal averages 795 miles and Rail and Water intermodal averages 1,353 miles to destination.

Distance of Rail Shipments by Weight



Missouri's Rail Shipments to States (\$M)

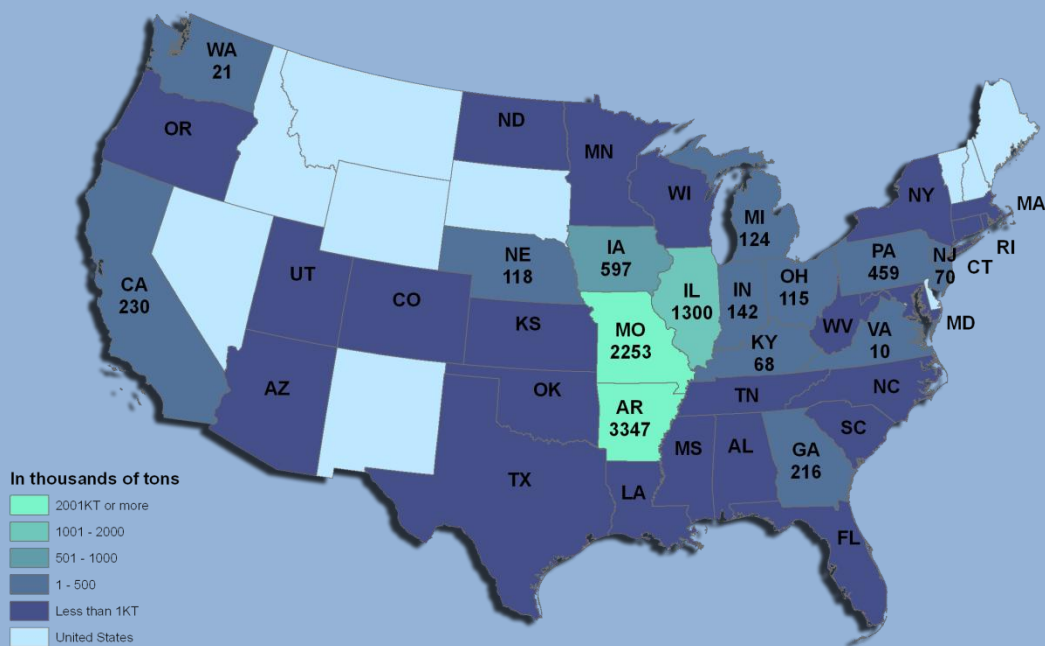


Missouri's higher value rail shipments are distributed mainly to the south, north, northeast, and California. Intermodal shipments by rail and water combinations move predominately south to Texas (\$27M), Louisiana, and Alabama. Higher value intermodal truck and rail shipments move mainly to the coastal states of California, Texas, Georgia, and Florida.

Destination	Value(\$mil)
Texas	1,523
Missouri	601
Arkansas	566
New Jersey	518
California	490
Pennsylvania	406
Illinois	269
Iowa	208
Michigan	184
Ohio	160



Missouri's Rail Shipments to States (Kilotons)

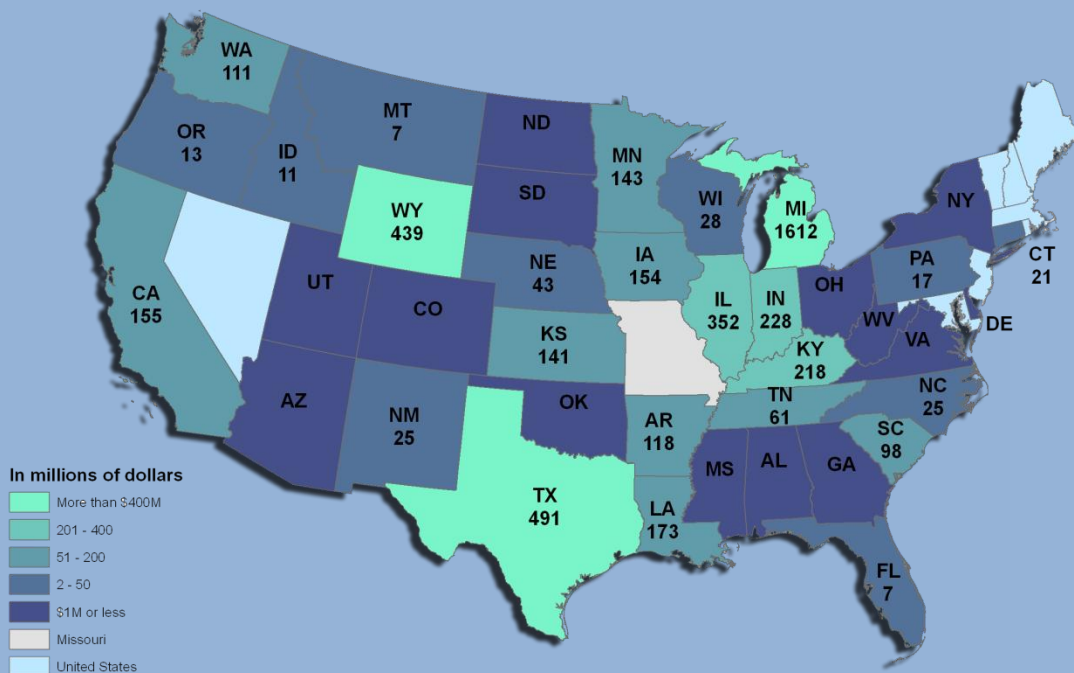


Missouri's heaviest rail cargo tends to stay close to home with destinations mainly in the surrounding states and within Missouri itself. Intermodal shipments by rail and water delivered the most tonnage in commodities to Texas (6 KT). States receiving the highest number of tonnage via truck and rail intermodal included Texas (524 KT), California (518 KT), Arkansas (207 KT), and Oklahoma (142 KT).

Destination	Tons (thous)
Arkansas	3,347
Missouri	2,253
Illinois	1,300
Iowa	597
Pennsylvania	459
California	230
Georgia	216
Indiana	142
Michigan	124
Nebraska	118



Missouri's Rail Imports from States (\$M)

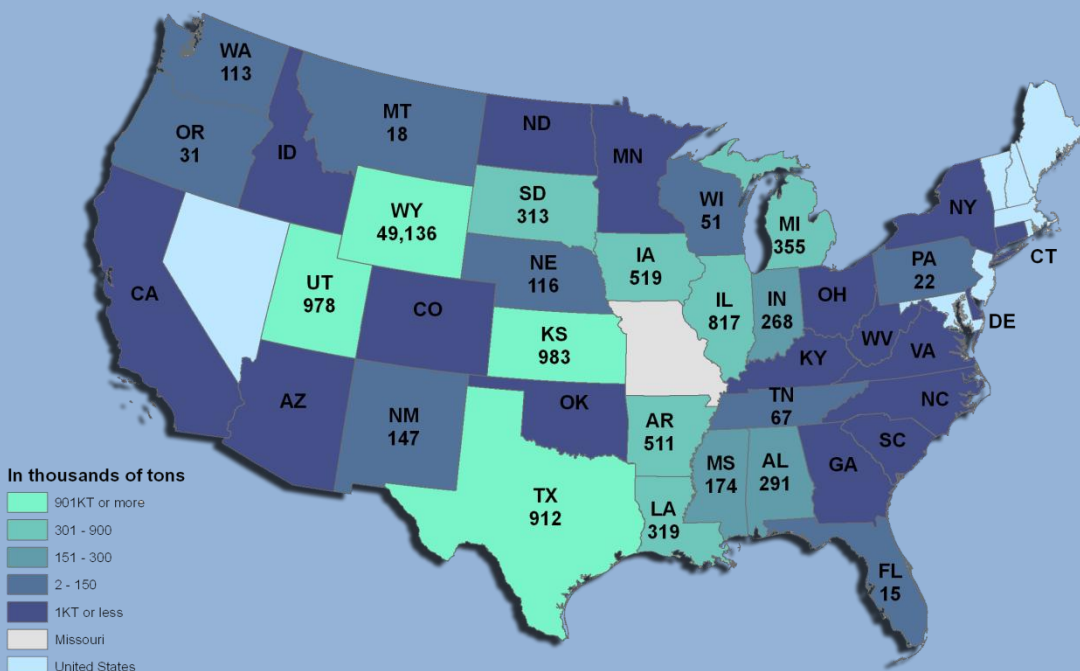


Missouri receives the highest dollar value of rail shipments from Michigan which are mainly automotive parts and vehicles. The bulk of incoming shipments are from the central part of the U.S. with Texas and Wyoming delivering a large portion of those commodities. Louisiana, West Virginia, and Wyoming are the primary rail and water intermodal shippers to Missouri. Michigan (\$2.1B) along with California, Indiana, and Washington top the list of intermodal truck and rail shippers to Missouri.

Origin	Value(\$mil)
Michigan	1,612
Texas	491
Wyoming	439
Illinois	352
Indiana	228
Kentucky	218
Louisiana	173
California	155
Iowa	154
Minnesota	143



Missouri's Rail Imports from States (Kilotons)



Missouri receives the highest tonnage of commodities by rail from the western part of the U.S. Wyoming by far is the heaviest shipper delivering over 49 million tons of coal annually to Missouri. Louisiana, Wyoming, and West Virginia are the main rail and water intermodal shippers. Michigan, Kansas, and Ohio top the list of intermodal truck and rail shippers to Missouri.

Origin	Tons (thous)
Wyoming	49,036
Kansas	983
Utah	978
Texas	912
Illinois	817
Iowa	519
Arkansas	500
Michigan	355
Louisiana	309
South Dakota	303



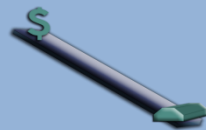
Missouri's Top Rail Commodity Shipments to States



Over \$7.2 billion in Missouri commodities are shipped by rail. Higher value shipments average 690 miles to destination while higher tonnage shipments average 580 miles. Motorized vehicles and parts along with cereal grains make up 54% of the total value of Missouri commodities shipped by rail. These high dollar commodities predominantly move to the northeast. Cereal grains, gravel, and prepared foodstuff make up 52% of the total tonnage shipped from Missouri with the majority of tons moving northeast and to the south.

Top Missouri Commodities Shipped to States

MO Commodities	Value(\$mil)
Motorized and other vehicles (including parts)	2,821
Cereal grains	1,098
Other prepared foodstuffs and fats and oils	552
Grains, alcohol, and tobacco products	283
Nonmetallic mineral products	112
Fertilizers	69



MO Commodities	Tons (thous)
Cereal grains	7,961
Gravel and crushed stone	1,934
Other prepared foodstuffs and fats and oils	1,429
Nonmetallic mineral products	1,025
Grains, alcohol, and tobacco products	763
Motorized and other vehicles (including parts)	323

Missouri's Intermodal Shipments to States

Missouri rail and water intermodal shipments account for \$53 million and 7 thousand tons of which are made up of Basic Chemicals, Pharmaceutical Products, Chemical Products and Machinery. This mode averages 1,400 miles to destination.

Missouri truck and rail intermodal shipments account for \$5.3 billion and 5.9 million tons. Motorized vehicles and parts, paper/paperboard articles, and machinery constitute over 55% of the total value of shipments. Waste/scrap, motorized vehicles and parts, and chemical products represent the commodities with the highest tonnage shipped by this mode.



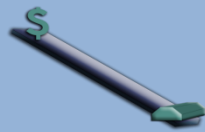
Missouri's Top Rail Commodity Imports from States



Over \$9.7 billion in commodities are imported by rail to Missouri. Higher value shipments average 760 miles to destination while higher tonnage shipments average 650 miles. Motorized vehicles and parts, coal, pulp/newsprint/paper and plastics/rubber represent Missouri's top rail imports by value. Motorized vehicles and parts typically arrive from the northeast. Coal comes in from Wyoming. Pulp/Newsprint/Paper is delivered mainly from Michigan, Texas, California and Alabama. Plastics and Rubber arrive from Texas. Coal and nonmetallic minerals make up 83% of the total tonnage shipped to Missouri.

Top Missouri Commodities Imported from States

MO Imported Commodities	Value(\$mil)
Motorized and other vehicles (including parts)	1529
Non-agglomerated bituminous coal	420
Pulp, newsprint, paper, and paperboard	254
Plastics and rubber	233
Base Metal	227
Other prepared foodstuffs and fats and oils	146



MO Imported Commodities	Tons (thous)
Non-agglomerated bituminous coal	48829
Nonmetallic minerals nec	524
Pulp, newsprint, paper, and paperboard	273
Motorized and other vehicles (including parts)	218
Fertilizers	196
Plastics and rubber	175

Missouri's Intermodal Imports from States

Missouri rail and water intermodal imports are made up of articles of base metal, coal and petroleum products. This mode averages 1,191 miles to destination.

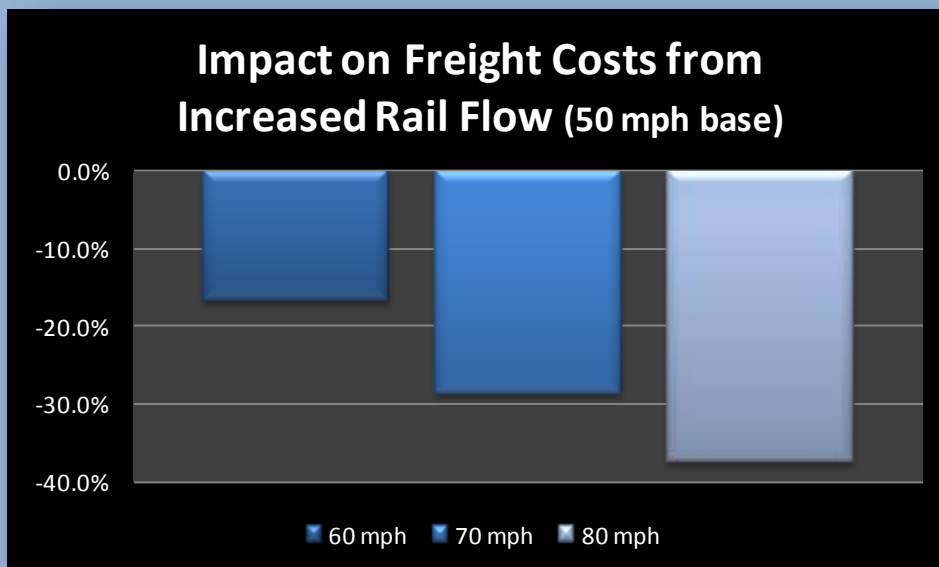
Missouri truck and rail intermodal imports account for \$7.4 billion and 3.4 million tons. Motorized vehicles and parts and base metals, mainly from Michigan and Indiana, constitute over 20% of the total value of shipments or \$1.5 billion. Motorized vehicles and parts and nonmetallic minerals represent the commodities with the highest tonnage imported by this mode.



Transportation Enhancements – Freight Rail

Investment in transportation infrastructure can reap many positive benefits for industry and consumers alike. Rail siding construction and high speed passenger rail projects will reduce congestion along the tracks and allow for average train speeds to increase.

This increase in efficiency lowers the overall costs of shipping freight, in terms of delay reduction, labor costs, and increased carrying capacities. For example with all other variables held constant, an increase in average train speed of 10 mph, can reduce freight costs by more than 15%. An increase of 30 mph results in a savings of nearly 40%, which equates to a gain of more than 300 direct jobs.



Source: TREDIS Transportation Model



Sources

U.S. Census, American Fact Finder Commodity Flow Survey
Regional Economic Models Incorporated
TREDIS Transportation Modeling
United States Railroad Retirement Board
U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Note

The recent release of the American Fact Finder *Commodity Flow Survey* by the U.S. Census describes the values, tonnage, and distance of state to state shipments. The information updates a 2002 survey and includes detailed estimates by modal activity (truck/barge/rail), commodity, and industry. Intermodal activities (ie. rail and water, truck and rail) are also estimated using this survey. While origins and destinations are cited in this report, data collection limitations measure the origin of movement and may not represent the commodity origin of production or final destination of the commodity.

Prepared by Tony Brite

