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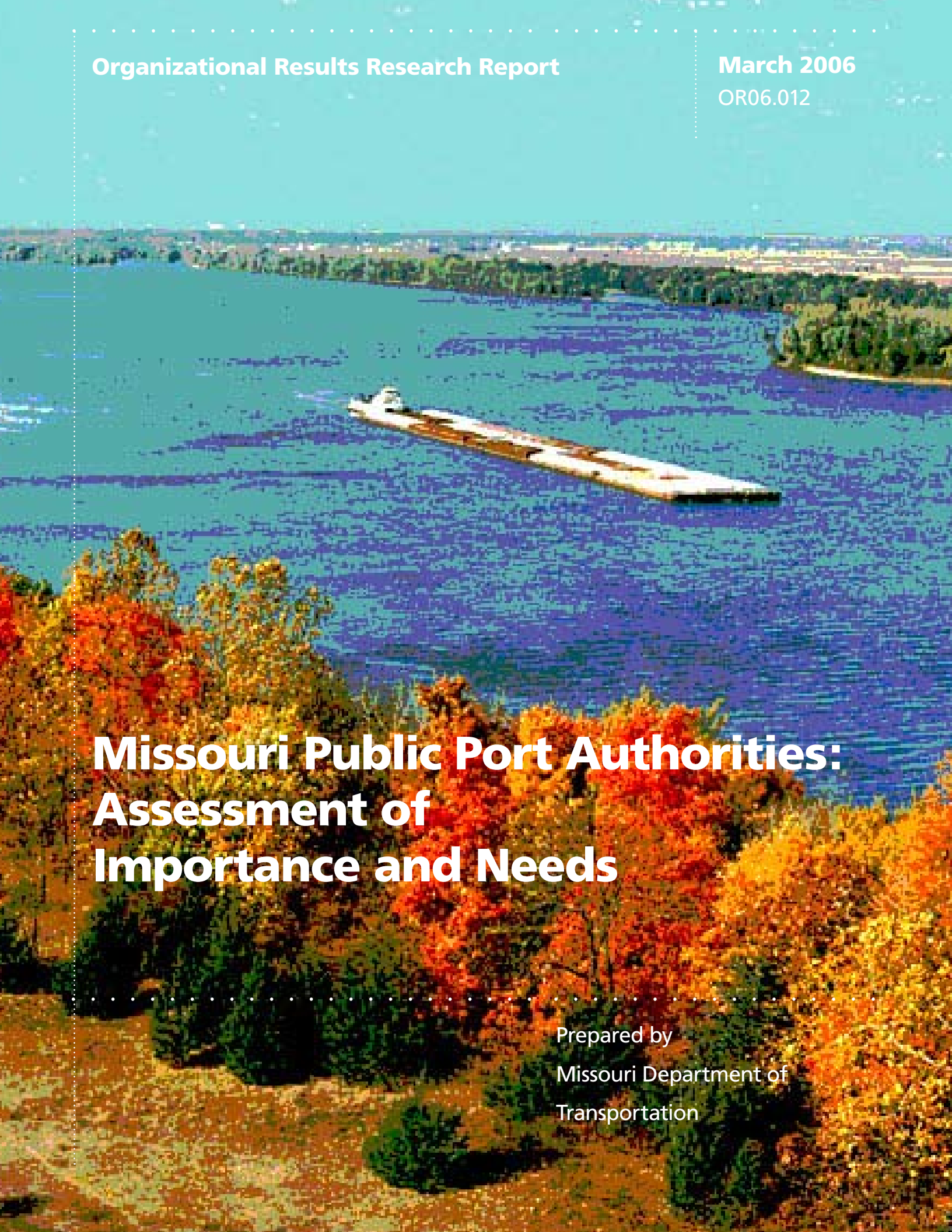

Missouri Public Port Authorities: Assessment of Importance and Needs

Prepared by

Missouri Department of Transportation

FINAL REPORT

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Missouri Public Port Authorities: Assessment of Importance and Needs

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The opinions, findings and conclusions expressed in this report are those of the principal investigator and the Missouri Department of Transportation. They are not necessarily those of the US Department of Transportation or the Federal Highway Administration. This report does not constitute a standard, specification or regulation.

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16. Abstract:

The purpose of this report was to assess the importance and needs of Missouri's fourteen Public Port Authorities. It includes relevant assessment of Missouri's waterways in general. Waterways have an economy of scale unlike any other mode of transportation, carrying the most weight at the least cost. Missouri's waterways carry more than 34 million tons of cargo annually, worth an estimated $2 billion annually. Public Port Authorities reported more than 2.7 million tons of cargo annually, worth an estimated $190 million annually. They also have acreage, development, employment, and businesses worth millions of dollars. They reported service to 36 Missouri counties and 6 other states while Missouri's waterways have the potential to serve 83 counties. The Missouri River in particular has a potential to serve more counties and communities than it does. The primary beneficiary of Public Port Authorities and waterways in general are farmers, with secondary benefits to other businesses and related economies affecting most of Missouri. Port authorities reported needs in the order of millions of dollars per year with most reported needs being infrastructure or short-term needs. A Missouri River navigation season that is better, longer, and more reliable is a common need reported by all three Missouri River Public Port Authorities. It is a common need of more than 23 Missouri counties, more than 50 small Missouri communities, dozens of private Missouri ports, and the farmers of most Missouri counties.

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Executive Summary:

The purpose of this study was to assess the importance and needs of Missouri's fourteen Public Port Authorities. Importance in this case includes size, employment, beneficiaries, potential for improvement, and cargo quantities in terms of annual tonnage and dollar value. Needs in this case include general needs for navigation and specific Port Authority needs for infrastructure, equipment, or support facilities as reported by the Public Port Authorities.

There are two central findings about the importance of Public Port Authorities:

- ▸ **The wealth of Missouri, and**
- ▸ **Waterways' economy of scale.**

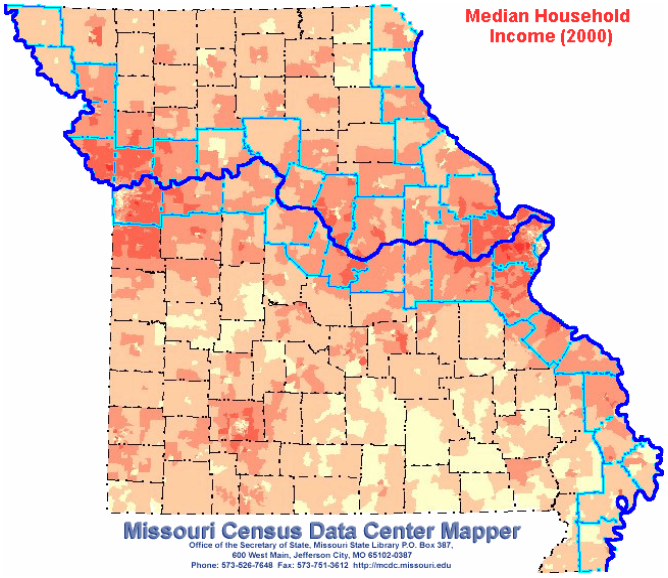


Figure 1, Wealth Along Missouri Waterways

Wealth: Missouri's waterways were our first resources, in the form of natural transportation. Of all our resources, they are our most renewable. All other resources were brought to their shores and exchanged for the wealth that built Missouri. The lasting effects of our waterways are shown in the map of Figure 1, showing higher median household incomes in darker reds, from the 2000 census. Nearly all counties with the highest household income are waterway counties.

Economy of Scale: Most people see barges while crossing major bridges. Barges in the distance seem small compared to trucks in the next lane. However, the picture in Figure 2 shows the actual scale of barges and trucks. A tow with one barge is near many big trucks and heavy equipment, dwarfing them to the point of making them tiny in comparison. This is only one barge while a "standard tow" is 15 times bigger, 15 barges and one towboat (and a "large tow" on the Mississippi River can be 40 times bigger). The economy of scale means that every standard tow blocked between Kansas City and St Louis requires replacement by a convoy of semi-trucks on I-70, fully loaded, 45 miles long, burning 75,000 more gallons of diesel fuel. (Calculations shown in the report.)

Figure 2, Economy of Scale, SEMO Port Authority.

Tows cannot replace all trucks, but they have an economy of scale which trucks, trains, and planes cannot match. Waterways carry more weight than possible with any pavement, railway, or runway. Waterways reach shores not accessible by rail or pavement. They put Missouri in the global market, with massive commodities worth tens of millions of dollars per standard tow. They reduce transportation costs of bulk items for business and agriculture—such as source materials, final products, fertilizers, feed, and crops. Waterways make Missouri's farmers and businesses competitive against the 41 states that also have ports or waterways, including most states around Missouri. Waterways carry tens of millions of tons of cargo worth billions of dollars annually. Public Port Authorities in particular reported handling millions of tons of cargo worth hundreds of millions of dollars annually, primarily benefiting farmers.

There are two central findings about the needs of Missouri's ports:

▸ Port Authorities have diverse needs totaling millions of dollars per year, and
▸ There is a common need for improved navigation of the Missouri River.

Port specific needs: There are fourteen Public Port Authorities, plus some 200 other ports, private and government, and hundreds of related businesses in shipping, industry, commerce, and agriculture. The fourteen Public Ports reported diverse needs, unique to each of them but totaling millions of dollars per year, mostly in terms of infrastructure improvements. Some needs were reported as critical but short-term needs were the most common priority reported.

Common waterway needs: Missouri has 25 counties adjacent to the Missouri River, and more counties neighboring them. There are more than 50 small communities adjacent to the Missouri River, plus large cities and metropolitan areas. Three public ports and dozens of private ports also benefit from the Missouri River, and all of these have a common need for improved navigation on the Missouri River. The river has the potential to reach more farmers than either the Arkansas or Illinois Rivers. It has the potential to carry cargo equal to 80% of a busy interstate highway parallel to I-70, carrying cargo worth billions of dollars per year and primarily benefiting Missouri farmers. The river also needs to be environmentally healthy and safe in order to provide water resources, recreation, land value, and flood protection. Making the river navigable, healthy, and safe is a tough challenge, beyond the scope of this report, and yet potentially worth billions of dollars to Missouri, per year.

Figure 3, New Madrid County Port Authority with Barges, Trucks and Trains.

Table of Contents:

TECHNICAL REPORT DOCUMENTATION PAGE. ii
Executive Summary: iii
Table of Contents: v
List of Figures: vi
List of Tables: vii
Report Overview: 1
The Mississippi and Missouri River Systems: 2
The Missouri waterways and ports as they fit within big pictures: 2
Economic Value of Waterborne Cargo and Port Authorities: 6
The value and benefits of Missouri waterways: 6
The values and benefits of Missouri ports: 10
Assessment of Waterway Issues: 16
The common needs of Missouri waterway users: 16
Summary Benefits of Missouri Waterways: 23
Assessment of Port Authority Needs: 25
The detailed needs of Public Port Authorities in Missouri: 25
Conclusions: 44
Importance: 44
Needs: 44
Bibliography: 45
Appendix A, Blank Survey:
Appendix B, Detailed Survey Results:

List of Figures:

Figure 1, Wealth Along Missouri Waterways iii

Figure 2, Economy of Scale, SEMO Port Authority. iii

Figure 3, New Madrid County Port Authority with Barges, Trucks and Trains. iv

Figure 4, Photograph of South East Missouri Public Port Authority and Mississippi River Tows..... 1

Figure 5, Maps of the United States Showing Missouri's Location in the Waterway Network (top) As well as Waterways Relative to Interstates (lower left) and Railways (lower right). 2

Figure 6, Missouri Area Waterways and Ports. 3

Figure 7, Photograph of Private Port Facilities, Structures, and Employment. 3

Figure 8, Map of Locations of Public Port Authorities in Missouri Counties and MoDOT Districts.. 4

Figure 9, Map and Chart of Locks and Dams of the Upper Mississippi River Near Missouri..... 4

Figure 10 , Maps of Port Authority Locations Relative to Highways (left), Railroads (center), and Airports (right). 5

Figure 11 , Waterways Compared to Other Transportation Networks. 5

Figure 12, Illustration of Missouri's Development and Waterborne Transportation at St Louis..... 6

Figure 13, Illustration of Two Tows on the Mississippi River. The bigger tow has 17 barges, only 2 more than normal for a “standard tow” of 15 barges. 7

Figure 14, Tow with 31 Barges..... 8

Figure 15, Photograph of a River Section, Lined with Barge Traffic, Amid Farms and Residences... 9

Figure 16, Private Port Facilities. 10

Figure 17, Map of Counties and States Reported Served by Public Port Authorities. 10

Figure 18, Chart of US Army Corps of Engineers Reported Missouri River Tonnage, 1992 to 2003. 16

Figure 19, Map and Pie Charts of National and Regional Waterborne Commodities of 2003 According to US Army Corps of Engineers Data. 17

Figure 20, Pie Charts of Commodities on the Mississippi River Above St Louis, St Louis to the Ohio River, and Below the Ohio River, According to US Army Corp of Engineers, Data Center, for 2003..... 18

Figure 21, Pie Charts of Missouri River Commodities in 2001 and 2003..... 18

Figure 22, Maps of Waterways and Missouri, Relative to Agriculture Customers. Darker Colors Indicate More Quantities of Indicated Farm Products. 19

Figure 23, Map of Agriculture per County Relative to Waterways..... 19

Figure 24, Photograph of a Massive Sand Mining Pile Next to the Missouri River. 20

Figure 25, Graph of Missouri River Widths, Flow Quantities, and Flow Velocities in the Late 1920's and Early 2000's. 21

Figure 26, The Missouri River at Boonville with Regular Surface Disturbances Caused by Wing Dikes. 22

Figure 27, Tow on the Mississippi River. 23
Figure 28, A Tow Boat on the Mississippi River. 23
Figure 29, Green Space Along the Mississippi River. 24
Figure 30, Illustration of the Diversity in Ports. 25
Figure 31, The Missouri River at Kansas City with the Downtown Airport, the Kansas City Public Port Authority, Other Waterfront Development, and I-70. 26
Figure 32, Bar Graphs of Reported Inbound Cargo (left) and Outbound Cargo (right). 27
Figure 33, Bar Graph of Outbound Farm Products. 27
Figure 34, Kilotons of Cargo as Reported by Missouri Public Port Authorities. 28
Figure 35, Barge at St Joseph Port Authority. 29
Figure 36, Tow on the Mississippi River. 30
Figure 37, Combined Cost Estimate of Needs per Priority for All Reporting Public Port Authorities. 31
Figure 38, Millions of Dollars of Needs as Reported by Missouri Public Port Authorities. 31
Figure 39, Total Annual Reported Expenditures, Other Than Payroll. 39
Figure 40, Ratings of Access Road Conditions, Capacity, and Signs. 39
Figure 41, Large Tow on the Mississippi River. 40
Figure 42, Coal Tow at St Louis. 41
Figure 43, Mississippi River and Pemiscot County Port Authority. 42
Figure 44, St Louis Waterway Commerce. 43
Figure 45, St Joseph's Highway, Railway, and Waterway Transportation Networks. 44

List of Tables:

Table 1, *Rank* and Tons of Waterborne Cargo per States: 7
Table 2 , Location and Size Information on Missouri's Public Port Authorities. 11
Table 3, All Reported Seasonal Peaks per Month per Commodity. 28
Table 4, Estimated **Infrastructure** Needs per Port Authority. 32
Table 5, Estimated **Equipment** Needs per Port Authority. 35
Table 6, Estimated **Support Facility** Needs per Port Authority. 37

Report Overview:

Based on the "Arkansas State Public Riverport Study and Needs Assessment," MoDOT determined it could benefit from a similar assessment. Data was collected from several sources including a survey of Public Port Authorities and the US Army Corp of Engineers. Data collection focused on two issues: Importance of waterways, especially Missouri's Public Port Authorities, and Needs of Missouri's Public Port Authorities. Survey results, as reported, are presented in this report along with additional data for a more complete picture. Progression is from big picture waterway issues to details of individual Public Port Authority needs, in five sections:

1. **The Mississippi and Missouri River Systems** - The Missouri waterways and ports as they fit within big pictures.
2. **Economic Value of Waterborne Cargo and Port Authorities** - The value and benefits of Missouri waterways and ports.
3. **Assessment of Waterway Issues** - The common needs of Missouri waterway users.
4. **Assessment of Port Authority Needs** - The detailed needs of Public Port Authorities in Missouri.
5. **Appendices** - Survey and survey answers on which the report is based.

Figure 4, Photograph of South East Missouri Public Port Authority and Mississippi River Tows. Note: This is the same location and time as the photograph in Figure 2, with the single barge tow in the port, and many semi-trucks on the dock.

The Mississippi and Missouri River Systems:

The Missouri waterways and ports as they fit within big pictures:

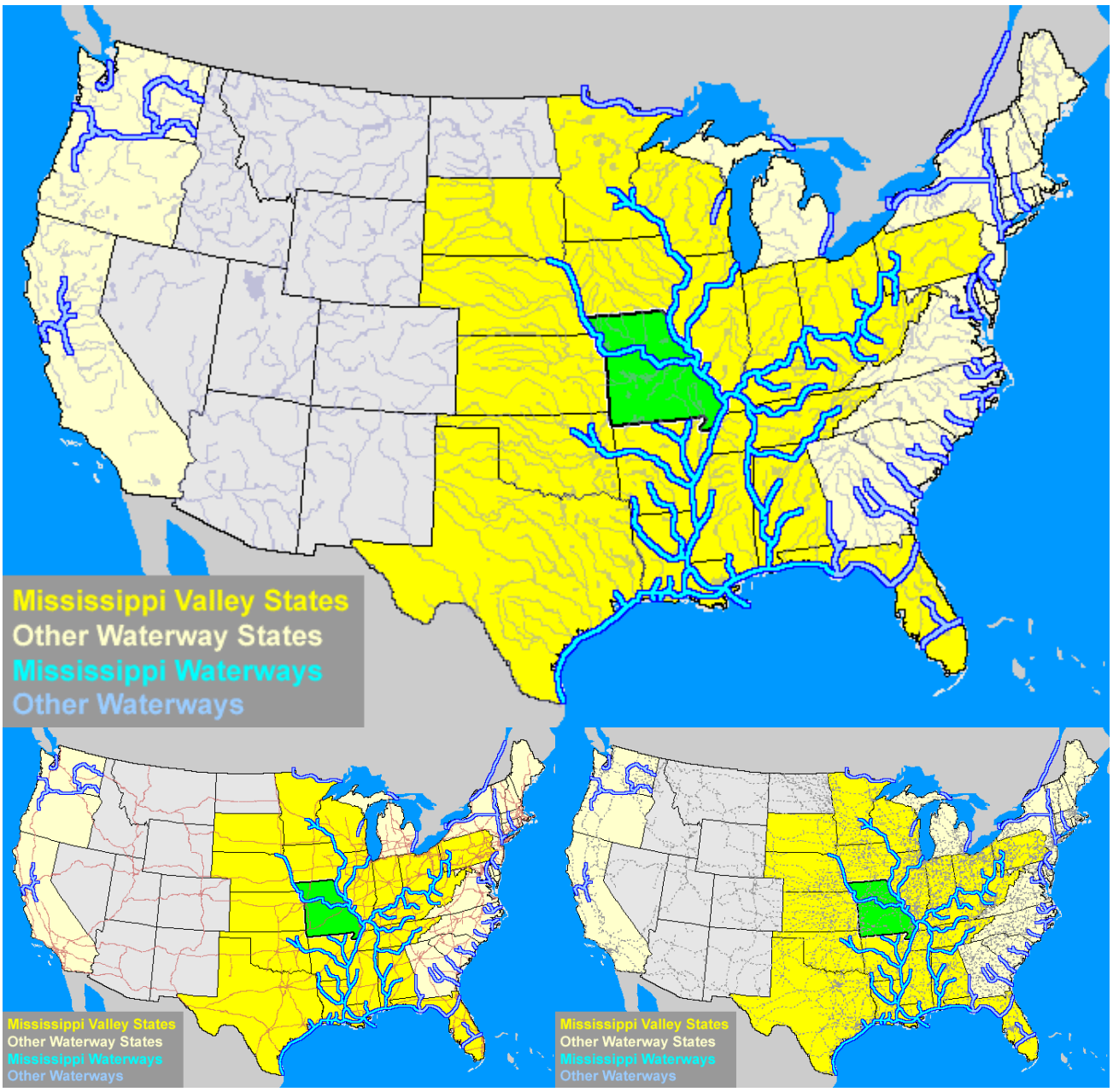


Figure 5, Maps of the United States Showing Missouri's Location in the Waterway Network (top) As well as Waterways Relative to Interstates (lower left) and Railways (lower right).

The Missouri and Mississippi Rivers are part of a vast inland waterway network directly connecting 21 states, as shown in Figure 5. They connect Missouri to Pennsylvania, the Gulf of Mexico, and the Great Lakes via the Illinois River canal. Indirectly they connect Missouri to 41 of the United States that also have waterways, and to the rest of the world. Missouri sits in the heart of the Mississippi River Valley, a prime location to reap benefits from the network. Both the Missouri and Illinois Rivers converge with the Mississippi River near Saint Louis, while the heavily used Ohio River converges near Cape Girardeau. The Ohio River also connects to the Gulf of Mexico at Alabama, via the Tombigbee Waterway. Missouri is in a prime location for reduced transportation costs of inbound supplies and outbound products of industry and agriculture. Missouri is also a

prime location for commerce and service of through cargo moving up and down the network; dividing, combining, and transferring at network branches and inter-modal facilities. Interstate and railway networks are also shown in Figure 5, with many major networks coming together in Saint Louis and Kansas City. Any cargo in the waterway network destined for Colorado or other states west and north of Missouri is best served by going through Missouri. Thus, Missouri's location and waterways are a major transportation resource for Missouri.

The Mississippi River is a valuable resource for Missouri, but we share it with many other states. As such, we can count on other states to help us support and maintain it, so that we need not worry about it alone. The Missouri River on the other hand is most navigable within Missouri. Kansas, Nebraska, and Iowa have only limited interest in its navigation, and more interest in its health, safety, and benefits other than transportation. Missouri has the most to gain from the Missouri River as a transportation resource.

In Missouri, as in most states, ports can be divided into two categories, public and private. Some non-public ports are still government owned, primarily Army Corps of Engineer, Coast Guard, and ports facilities for government owned utilities. Most private ports are privately or commercially owned and used for recreation or cargo.

Figure 6, Missouri Area Waterways and Ports.

Ports in general serve waterborne transportation and process cargo. In and near Missouri there is an extensive collection of port facilities, public and private as shown in Figure 6's map of all port facilities inventoried by US Army Corp of Engineers near Missouri. Two hundred of the ports shown are inside of Missouri, as are the fourteen Public Port Authorities. This map does not include personal docks and similar small facilities. Figure 6 also illustrates that there are far less ports along the Missouri River than there are along the Mississippi or Illinois Rivers. Only 1 in 4 of Missouri's ports facilities are on the Missouri River.

Figure 7, Photograph of Private Port Facilities, Structures, and Employment.

Figure 7 shows a photograph illustrating the variety and diversity in size, employment, and function of two private port facilities. Facilities such as these represent many millions of dollars of value, employment, and income for Missouri. Their connections to national and international

markets put Missouri in the global market and directly or indirectly bring income and investment to Missouri. Although private ports are valuable to Missouri, surveying them was beyond the scope of this report. The primary focus of this study was a survey of Public Port Authorities in Missouri. Thus, in subsequent illustrations, only public ports will be shown.

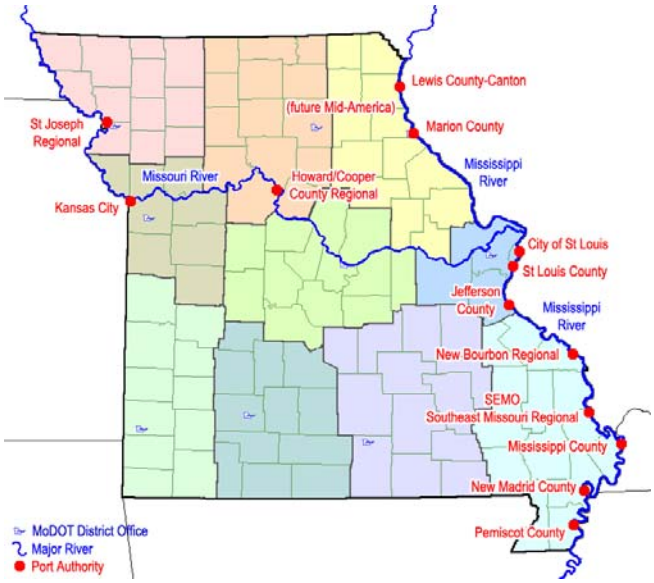


Figure 8, Map of Locations of Public Port Authorities in Missouri Counties and MoDOT Districts.

In Missouri, "public ports" are established via Public Port Authorities. These authorities are organized and empowered similar to communities or counties, although they are unique in that they can be organized before they have a physical location. In Missouri, there are currently fourteen Public Ports authorized, and not all of them have physical port facilities. Figure 8 shows the locations and names of the Public Port Authorities currently in Missouri. Three of them are on the Missouri River, the rest are on the Mississippi River. Also, six out of ten MoDOT Districts have at least one Public Port Authority within them. Eleven of the fourteen Public Port Authorities are along the Mississippi River.

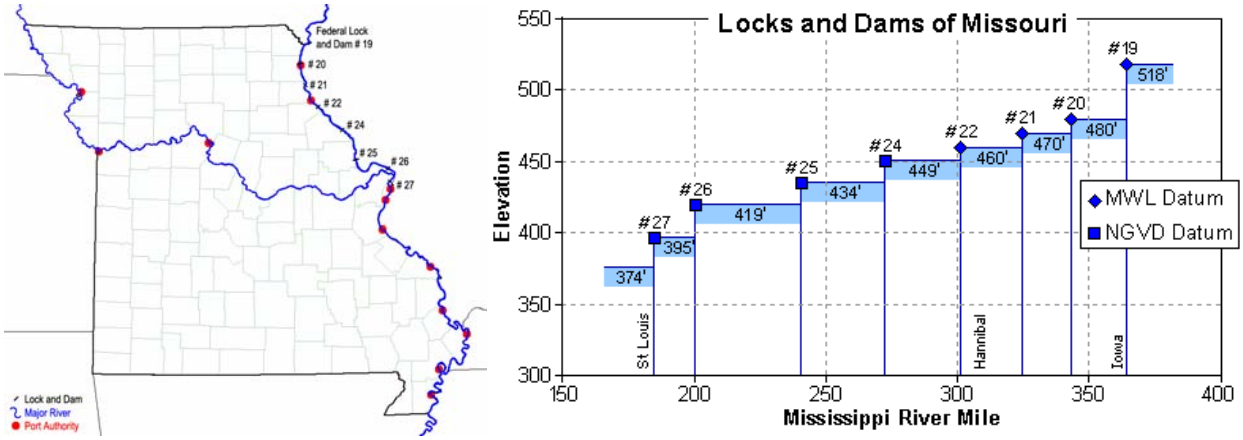


Figure 9, Map and Chart of Locks and Dams of the Upper Mississippi River Near Missouri.

The Mississippi River below the Ohio River, south of Cape Girardeau, is referred to as the Lower Mississippi. Above the Ohio River, it is referred to as the Upper Mississippi River. The Mississippi River changes below the Ohio River in part due to the inflow of the Ohio River, but also due to widening of the valley below the Ohio River. The Mississippi River also changes below the Missouri River, due in part to the inflow of the Missouri River. The Mississippi River below Saint Louis is a free flowing river, without locks or dams to regulate its flow. The Mississippi River at and above Saint Louis is regulated by a series of locks and dams. The map in Figure 9 shows the location and numbering of locks and dams near Missouri. The graph in Figure 9 shows the location of the locks in river miles, their elevations, and the height of lift at each lock.

The Missouri River, in Missouri is free flowing, without locks or dams to regulate its flow. Further north the Missouri River has dams, but not locks. Originally, the dams were built to regulate

flow, especially of snowmelt from the Rocky Mountains. They also create lakes that have since developed significant lake-based economies; economies that depend on dams for steady lake levels instead of steady out flow.

Figure 10 , Maps of Port Authority Locations Relative to Highways (left), Railroads (center), and Airports (right).

Missouri has one of the nations most extensive state owned highway networks as shown in Figure 10, left map. Many Public Port Authorities are near Interstate Highways while all of them are near state highways. Thus, cargos transferred off tows often move onto state highways. Most port authorities also have access to railroads as shown in the center map of Figure 10. Some connect directly, allowing cargo to transfer directly from barges to railcars, while others require intermediate trucking. The location of airports relative to port authorities is also shown in Figure 10, right map. However, aircraft and tows tend to carry opposites types of cargo (light packages vs. massive bulk). So, there is a limited need to transfer between these modes.

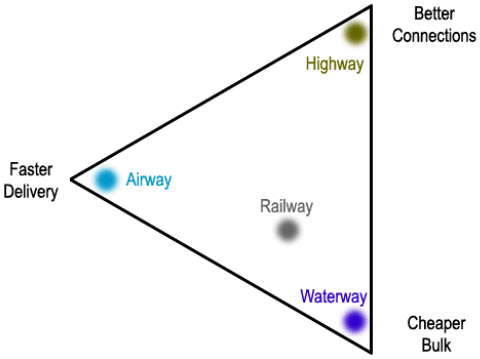


Figure 11 , Waterways Compared to Other Transportation Networks.

When it comes to connectivity, highways are the best transportation networks—all businesses are connected to highways, but few businesses are directly connected to airways, waterways, or even railways. When it comes to speed, airways are the fastest transportation network—absolutely no other system can deliver packages from Missouri to Europe as fast as airplanes. However, when it comes to cost, waterways are the cheapest transportation network—absolutely no other system can deliver grain from Missouri to Europe in competitive quantities and costs. Railways are between all others modes and benefits. For instance, compared to waterways, they are better, faster, and more expensive. Thus, waterways are an important part of the total transportation system, and Missouri is fortunate to have so much waterway access.

Economic Value of Waterborne Cargo and Port Authorities:

The value and benefits of Missouri waterways:

Figure 12, Illustration of Missouri's Development and Waterborne Transportation at St Louis.

Waterways are the foundation on which Missouri was built. Lewis and Clark came here because the Missouri River was here. It was the original Missouri transportation system, and thus it was Missouri's first resource. As other material resources were developed, they were brought to waterway shores for transportation to consumers. Wealth flowed back to Missouri, in exchange for the early resources, via waterways, and the wealth prompted development, outward from Missouri's rivers. Railways, highways, industry, and even Missouri's governments spread out from waterways as illustrated in Figure 12 of the Saint Louis skyline, dominated by the waterfront and waterway dependant development.

The lasting wealth of Missouri waterways was shown in Figure 1 of the Executive Summary. As reported in the 2000 census, nearly all counties with the highest median household income are along the Missouri and Mississippi Rivers. Figure 1 also shows a new line of wealth spreading out from the Route 66 / I-44 corridor which further illustrates the importance of transportation on income.

Tonnage of cargo through ports according to the US Army Corp of Engineers for CY 2003:

- Missouri ports processed 34,050,000 tons of waterborne cargo. Of which
- 9,265,000 tons were shipped out of the state,
- 6,306,000 tons were shipped into the state (creating a 30% trade surplus), and
- 8,479,000 tons were shipped through the state.

- Ports in the Saint Louis area (MO and IL) processed 32,000,000 tons, and
- Ports in the Kansas City area (MO and KS) processed 3,600,000 tons.

Missouri is ranked at 23rd for most cargo, out of 41 waterway states, based on tonnage of waterborne cargo. Of the eight states next to Missouri, only three have more waterborne tonnage than Missouri, and they are all east of the Mississippi River, as shown in the following table.

Table 1, *Rank* and Tons of Waterborne Cargo per States:

Nebraska		Iowa			
40	50,000	*33*	14,471,000		
				Illinois	
				6	113,314,000
Kansas		**Missouri**			
38	1,694,000	***23***	**34,050,000**		
				Kentucky	
				11	99,332,000
Oklahoma		Arkansas			
37	4,895,000	*32*	15,083,000		
				Tennessee	
				21	45,840,000

According to US Army Corp of Engineers for CY 2003

The numbers in Table 1 illustrate the massive scale of waterborne commerce, with millions of tons of quantities per state. The dollar value of tonnage varies greatly, depending on what is carried. Sand is worth about $3 per ton while soybeans are worth about $140 per ton. If the average value is $70 per ton, then Missouri's waterborne commerce is worth more than $2 billion, annually. (Tabulated numbers are for cargo handled by ports, public and private, per state of the port.)

As illustrated in Figure 2 of the Executive Summary, tows carry massive amounts of cargo and dwarf big trucks in comparison. A single "standard" tow is 15 barges with a capacity of 22,500 tons or 45 million pounds. Therefore, a standard tow can carry $3 million in soybeans, or $14 million in gasoline. "Large" tows on the Mississippi below Saint Louis can be as large as 40 barges and worth 167% more than a standard tow.

Figure 13, Illustration of Two Tows on the Mississippi River. The bigger tow has 17 barges, only 2 more than normal for a “standard tow” of 15 barges.

It would take 225 railroad cars or 900 semi-trucks to carry the same amount of cargo as a standard tow. Unlike trucks, tows and unit trains can carry a lot of cargo with relatively few crewmembers (who can work around the clock in shifts). However, 900 trucks require 900 drivers (or twice that if working in shifts), 900 paychecks, and maintenance of 900 engines. These numbers presume 1,500 tons of cargo per barge, 100 tons per train car, and 25 tons per semi-truck.

Semi-trucks, or 18-wheelers, are limited to 80,000 pounds of total weight, gross weight, without special permits. Thus, the tons capacity a semi-truck depends on the weight of the truck. Estimates

of average capacities vary from about 24 to 26 tons. Furthermore, “trucks” in general can be larger or smaller than semi-trucks. Smaller “single unit” trucks account for a lot of truck traffic, but they cannot carry 25 tons each. Double trailer and oversized trucks also account for some truck traffic, while carrying more than 25 tons each. A further complication is packing efficiency. A truck may be capable of carrying the weight of 2.5 units of material, at 10 tons per unit, but if the units are not dividable, such as rolls of steel, then each truck can only carry 2 units or 80% of its weight capacity. Meanwhile each barge can carry an even number of such units or 100% of its weight capacity. In which case, 180 additional trucks would be required per standard tow, due to packing limits.

The following calculations presume 100% packing efficiency on trucks and tows. They also presume 25 tons per truck so that the tonnage capacity of an average annual daily traffic (AADT) count of trucks is presumed to be 25 times the traffic counts.

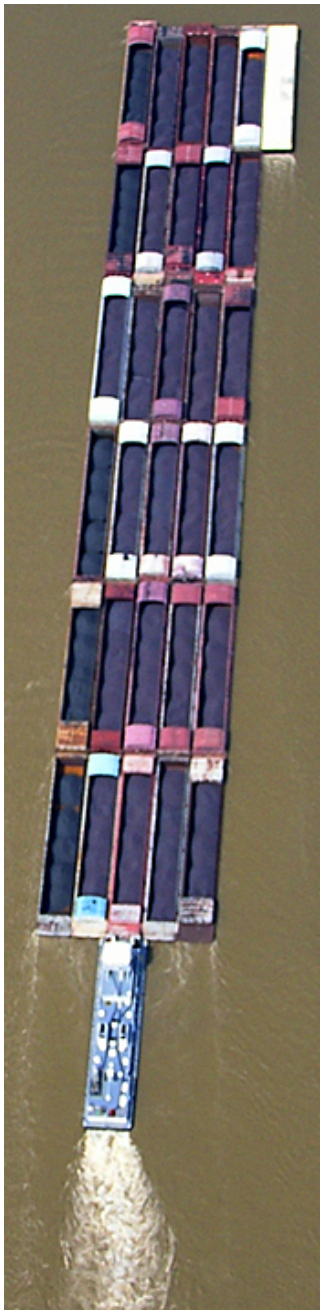


Figure 14, Tow with 31 Barges.

If a standard tow is blocked between Kansas City and Saint Louis so that it transfers all cargo to trucks instead, then it will require 900 more trucks on I-70. At 2-second gaps between trucks and 70 miles per hour, those 900 semi-trucks will make a convoy 45 miles long (about 200 feet between trucks, plus about 60 feet for each truck). A full tow burns an average of 44 gallons per mile while 900 trucks burn an average of 381 gallons per mile. It is 370 miles to the Kansas state line by the Missouri River (370 mi x 44 gpm = 16,280 gallons). It is 240 miles to Kansas by I-70 (130 miles shorter by highway, but: 240 mi x 381 gpm = 91,440 gallons). Thus, 900 trucks burn about 75,000 gallons more fuel to carry the same cargo to the same destination. Bottom line, each tow going between Saint Louis and Kansas City eliminates 900 trucks on I-70, and saves 75,000 gallons of diesel fuel.

Additionally, waterways are inherently grade separated from highways and railways, thus they do not cause congestion in other modes. Using 1 tow instead of 900 trucks reduces congestion, which has secondary fuel savings for the remaining traffic, improves safety, and reduces the need to maintain and expand highways. Each tow needs less crew than 900 trucks need, and thus tows save on labor costs. Reduced labor and fuel costs directly lower transportation costs. Transportation costs are a critical factor in agriculture and commerce. If a bushel of crop requires $2 to grow and is only worth $4 at market, then transportation costs must be less than $2 for the crop to be profitable. Anything that lowers crop transportation costs, can improve profitability for farmers. At the same time, agriculture and industry are the biggest consumers of bulk products such as fertilizers, large equipment, and raw materials. When waterways reduce their transportation costs as well, then production costs go down, which further improves marketability and profit of crops.

A busy interstate (2 lanes each way, such as I-70) carries about 9,000 AADT trucks per day. If all 9,000 trucks are semi-trucks, then they equal only 10 barges per day. Thus, if a waterway carries average annual daily traffic of 5 tows in each direction per day, then it is equal to the cargo capacity of a busy interstate. Conversely, the annual cargo traffic of waterways makes the Mississippi River equal to 1.6 busy interstates north of St Louis, 2.3 busy interstates south of St Louis to the Ohio River, and 3.8 busy interstates south of the Ohio River.

Figure 15, Photograph of a River Section, Lined with Barge Traffic, Amid Farms and Residences.

Waterways offer more benefits than just transportation. These values include water supply, land value, recreation, and tourism. An ecologically healthy waterway can supply water to communities, businesses, and agriculture along its shores. Cheap transportation and water availability are desirable features for agriculture and many businesses, increasing the adjacent land value for business and agricultural purposes. Healthy, attractive waterways make land with a view of the waterway an attractive place to live, and thus increase land value for residences. Development and increased land values increase property tax revenues, allowing better government services and further improving land value.

Waterways provide opportunities for recreation. Large, fast moving rivers are generally less desirable for recreation than lakes and smaller rivers, but there is some recreational value in large waterways. Healthy waterway ecosystems and borderlands also provide opportunities for hunting, fishing, and related recreation. Recreational opportunities make healthy waterways destinations for tourism. The healthier and more attractive waterways are, the more value they have for recreation and tourism. In some cases, waterways are used to carry passengers on tour boats, and cruises. In the case of the Missouri River, parallel tourism in the form of the Katy Trail, historic communities, and Amtrak service would be improved by a healthier Missouri River.

Thus, the values and benefits of Missouri waterways are many and varied. Waterborne cargo in Missouri is about 34 millions tons annually, with values from $3 to $140 per ton for an estimate total value of $2 billion, per year. When it is used instead of trucking, it saves fuel and improves highway conditions including improved safety, reduced congestion, and reduced emissions. Reducing fuel and labor costs reduces transportation costs, improving profits commercially and agriculturally. Meanwhile, waterways improve land value and provide opportunities for tourism.

The values and benefits of Missouri ports:

Figure 16, Private Port Facilities.

The Army Corps of Engineer's inventory of ports in Missouri included about 200 facilities, not counting small personal docks and similar structures. These facilities vary greatly in size and value and it was beyond the scope of this study to assess their importance to Missouri. However, ports as shown in Figure 16 employ thousands of Missourians and have facilities worth millions of dollars. Instead of assessing private ports, this study focused on Missouri's fourteen Public Port Authorities.

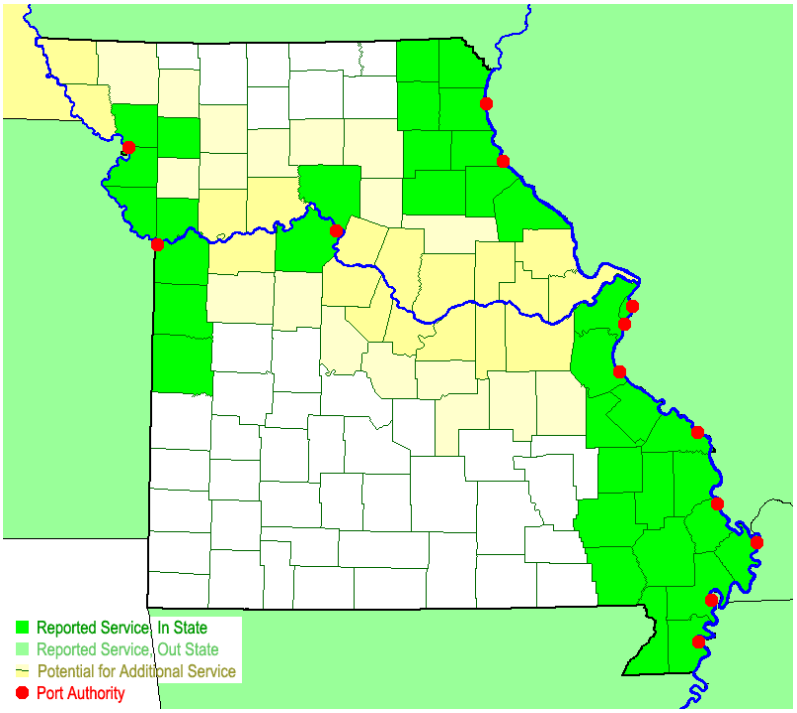
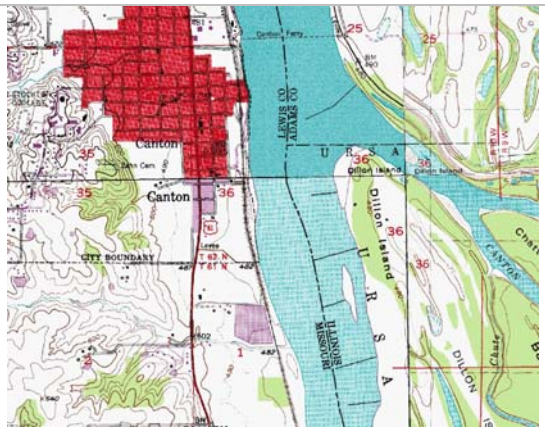
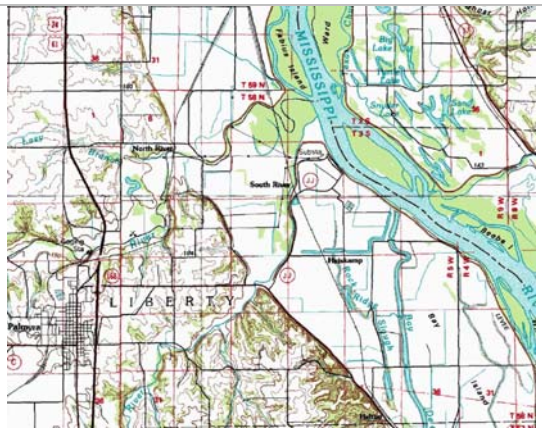


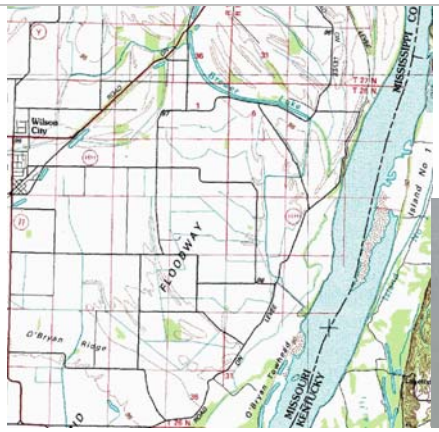
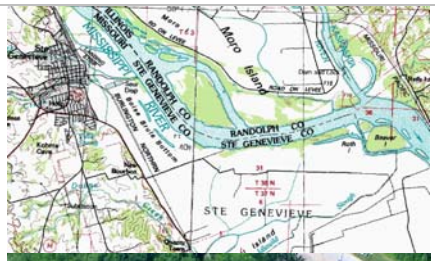
Figure 17, Map of Counties and States Reported Served by Public Port Authorities.

The survey shown in Appendix A was sent to each of the public ports and asked several questions about their value to Missouri, as will be detailed later. One such question asked about counties and states served by Public Port Authorities. The ports that responded to the survey reported serving 36 counties and 6 states, as shown in Figure 17. Note some of the ports serve counties two (or three) layers away from the rivers. If a two county radius were applied to both rivers, then waterways and ports could serve the majority of counties in Missouri, as shown. Thus, Figure 17 not only shows the service areas of public port, but also the potential service from more and better port authorities.

Table 2 , Location and Size Information on Missouri's Public Port Authorities.

Port Location and Contact Information.	***Importance to Missouri***
City Of St. Louis Port Authority Mr. Nick Nichols 1015 Locust, Suite 1200 St. Louis MO 63101 Telephone: (314) 622-3400 FAX: (314) 231-2341 E-Mail: stlport@stlouis.missouri.org Located on the Mississippi River. 	 This port did not answer survey questions about port size, staff, and revenue. However, it is one of the larger Public Port Authorities of Missouri as shown in the photograph, and it did not request financial assistance from the state, highlighting the value of a port able to support itself.
Howard/Cooper County Regional Port Authority Mr. Roy Humphreys, Office Manager 609 Main Street Boonville Mo 65233 Telephone: (660) 882-5858 FAX: (660) 882-3325 E-Mail: howcoop_port@sbcglobal.net Located on the Missouri River at Mile 196.45. 	 This port reported approximately 32 acres of land and employs 7 people, plus adjacent private port acreage and employment. However, trains and trucks transport most of its commodities, instead of barges, due to limited transportation on the Missouri River.
Jefferson County Port Authority Ms. Rosie Buchanan, Assistant Executive Director P.O. Box 603 Hillsboro MO 63050 Telephone: (314) 797-5336 FAX: (314) 797-5080 E-Mail: rbuchanan@jeffcomo.org To be located on the Mississippi River. 	(No Picture.) This port is being established, does not have a port facility at this time, and did not answer survey questions about size, staff, and revenues.

Kansas City Port Authority Mr. Pat Sterrett 10 Petticoat Lane, Suite 250 Kansas City MO 64106-2103 Telephone: (816) 221-0636 FAX: (816) 221-0189 E-Mail: psterrett@edckc.com Located on the Missouri River at Mile 367.1. 	 This port reported 11 acres of land, a payroll of $300,000 for 6 employees, and support to 6 businesses with additional employees. Revenues are primarily from bulk commodity storage and handling. It too reports problems due to limited transportation on the Missouri River.
Lewis County-Canton Port Authority Mr. Dick Pulse P.O. Box 282 Canton MO 63435 Telephone: (573) 288-5463 FAX: (573) 288-5560 E-Mail: lpa@nemonet.com Located on the Mississippi River. 	 This Public Port Authority's answers were specific to one private port within the authority and this study was not intended to survey private ports, thus the answers were beyond the scope of this study and not included.
Marion County Port Authority Mr. George Walley, Executive Director 201 N 3rd St, Ste 220 Hannibal MO 63401 Telephone: (573) 221-1033 FAX: (573) 221-3389 Located on the Mississippi River at Mile 319. 	 This port reports 1,200 acres of land with an additional 1,000 acres available offsite. It reported 300 people working at the port within 3 businesses that depend on the port.

Mid-America Port Commission Capt. Mark McNally, Executive Director P.O. Box 361 Monroe City MO 63456-0361 Telephone: (217) 222-3111 FAX: (217) 222-1113 E-Mail: maiaport@adams.net Web: www.maia-port.com To be on the Mississippi River. 	 This port commission is a three state commission working on a port facility to serve Illinois, Iowa, and Missouri. It does not yet have a physical location in Missouri. Thus, most of the survey did not apply.
Mississippi County Port Authority Mr. Leon Steinbrueck, Project Manager P.O. Box 705 Dexter MO 63841 Telephone: (573) 624-7505 FAX: (573) 624-7505 E-Mail: lesjes@newwavecomm.net On the Mississippi River at Mile 946. 	 This port reported 18 acres with an additional 118 acres available off site. It is also part of the ferry service at nearby Dorena as shown in the picture.
New Bourbon Regional Port Authority Mr. Ron Steele, Economic Development Planner P.O. Box 366 Perryville MO 63775 Telephone: (573) 547-8357 FAX: (573) 547-7283 E-Mail: semorpc@semorpc.org On the Mississippi River at Mile 120.5. 	 This port reported 72 acres with an additional 20 acres available offsite. It is also part of the ferry service at Ste. Genevieve as shown in the picture.

New Madrid County Port Authority Ms. Timmie Hunter, Executive Director 435 Main Street New Madrid MO 63869 Telephone: (573) 748-2530 FAX: (573) 748-7220 E-Mail: nmcopa@sheltonbbs.com Web: www.newmadridcountyport.com On the Upper Lower Mississippi River at Mile 885. 	 This port reported 80 acres, 103 businesses depending on the port, and 99 people employed by the port or working at the port and employed by others. Revenue is primarily from leases, grants, and throughput fees.
Pemiscot County Port Authority Mr. David Madison, Executive Director 619 Ward Avenue Caruthersville MO 63830 Telephone: (573) 333-4125 FAX: (573) 333-4216 E-Mail: pemiscotport@yahoo.com Web: www.pemiscotport.com On the Upper Lower Mississippi River at Mile 849.9. 	 This port reported 83 acres, 60 businesses depending on the port, and 82 people employed by the port or working at the port and employed by others. Revenue is primarily from rent, grants, and throughput fees.
SEMO, Southeast Missouri Regional Port Authority Mr. Dan Overbey, Executive Director 10 Bill Bess Drive Scott City MO 63780 Telephone: (573) 264-4045 FAX: (573) 264-2727 E-Mail: semoport@semoport.com Web: www.semoport.com On the Upper Mississippi River at Mile 48. 	 This port reported 500 acres with an additional 80 acres available offsite. It reported 210 people employed by the port or at the port, and revenue primarily from leases, tonnage rents, and railroad income.

St. Joseph Regional Port Authority Mr. Brad Lau, Executive Director 3003 Frederick Avenue St. Joseph MO 64506 Telephone: (816) 232-4461 FAX: (816) 364-4873 E-Mail: blau@stjoseph.com On the Missouri River at Mile 448. 	 This port reported 15 acres with 46 acres available offsite. It reported 4 businesses depending on it and 4 people employed by the port or working at the port and employed by others. It also reported problems due to limited transportation on the Missouri River.
St. Louis County Port Authority Ms. Jackie Wellington 121 S. Meramec Ave., Suite 900 Clayton MO 63105 Telephone: (314) 615-7663 FAX: (314) 615-7666 E-Mail: jwellington@stlouisco.com 	(No Picture) This port is currently perusing casino opportunities, and it reported "not applicable" to questions about size, staff, and revenue.
* Most ports lease land and/or facilities to private businesses and have other private businesses, called stevedores to handle all cargo. On an item-by-item basis, it is clear which items are publicly or privately owned, but in general, the line between public and private is not so clear.	

As shown in Table 2, the reporting Public Port Authorities have more than 2,000 acres of land, with more land available off site, and more land within ports that did not report. The survey did not request data on the dollar value of land and developments. However, the photographs in Table 2 illustrate assets easily worth millions of dollars.

A study by Black and Veatch in June of 2000 concluded, "The Port System in the State of Missouri provides substantial benefits to the state through reduced costs of transportation and encouragement of industrial development." Also, "...investments made by the State will produce substantial increased commercial activity, thus promoting the general welfare of the citizens of the State." That study examined the costs and benefits of ports with many details about the value of individual ports. It found eight public ports in CY 2000 employed 600 people full time with wages of $17,500,000. It also produced a Strategic Plan and a manual for evaluating expansions and improvements needs. Its work is not duplicated in this study.

Waterways are comparable in capacity and importance to interstate highways. Annual cargo through Missouri's ports is worth billions of dollars. Assets of public ports are comparable to industrial parks. Thus, like other transportation networks, Missouri's waterways, private ports, and public ports are important in terms of billions of dollars.

Assessment of Waterway Issues:

The common needs of Missouri waterway users:

All three Public Port Authorities on the Missouri River reported a need for improvement of navigation on the Missouri River. This section of the report focuses on the common Missouri River needs reported by several port authorities. These needs are also indirectly common to Mississippi River ports, since increased usage of the Missouri River would also increase usage of the Mississippi River. Improved navigation on the Missouri River can only be done with mutual improvement of the river's environmental health and safety as well. Thus, a solution will be a complicated issue, beyond the scope of this study. This section briefly presents the issues and benefits of improved navigation and health of the Missouri River.

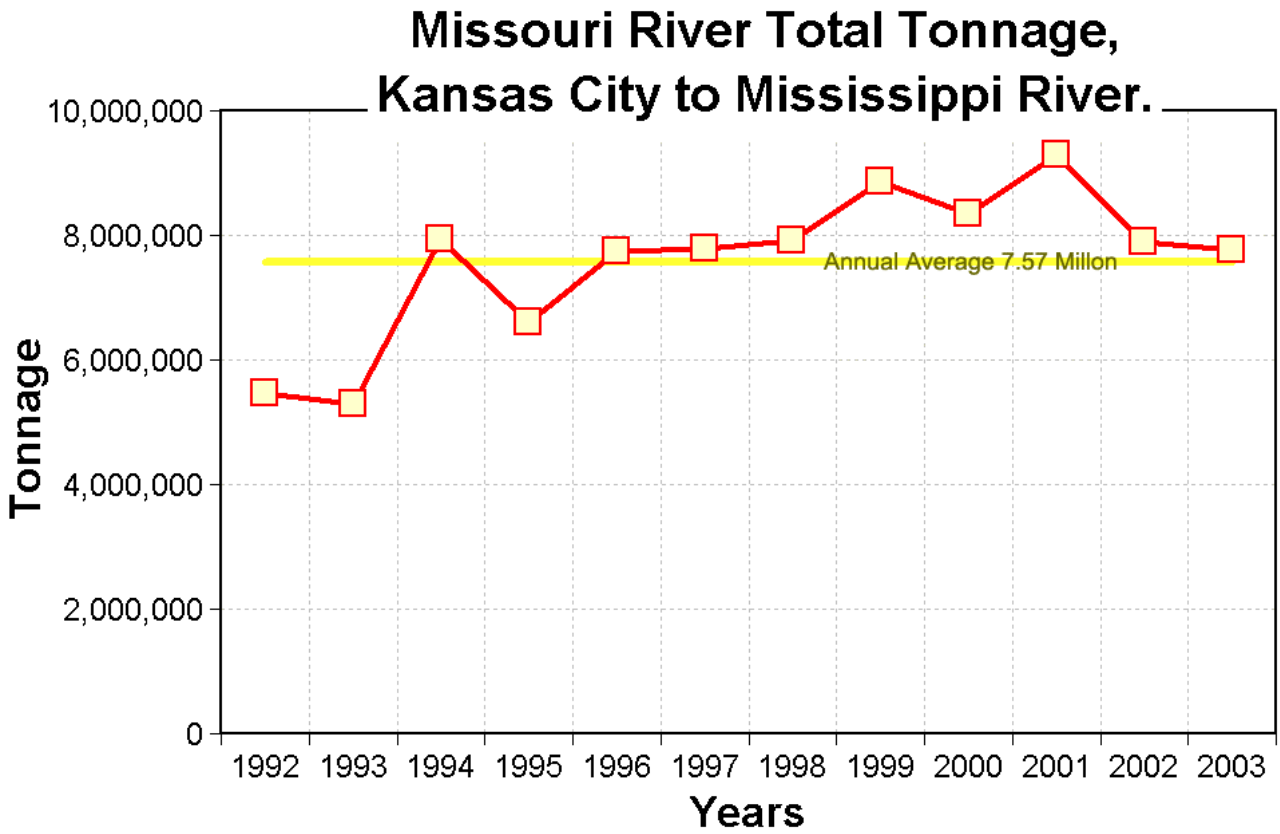


Figure 18, Chart of US Army Corps of Engineers Reported Missouri River Tonnage, 1992 to 2003.

The graph in Figure 18 shows the annual average Missouri River cargo of nearly 8 million tons. Even if all of that tonnage is only sand, worth about $3 per ton, then the Missouri River tonnage is worth nearly $24 million dollars per year. With high value tonnage, such as industrial and agriculture products, the annual dollar value quickly climbs. All of which is good, but it needs to be considered in context of cargo carried on other waterways near Missouri.

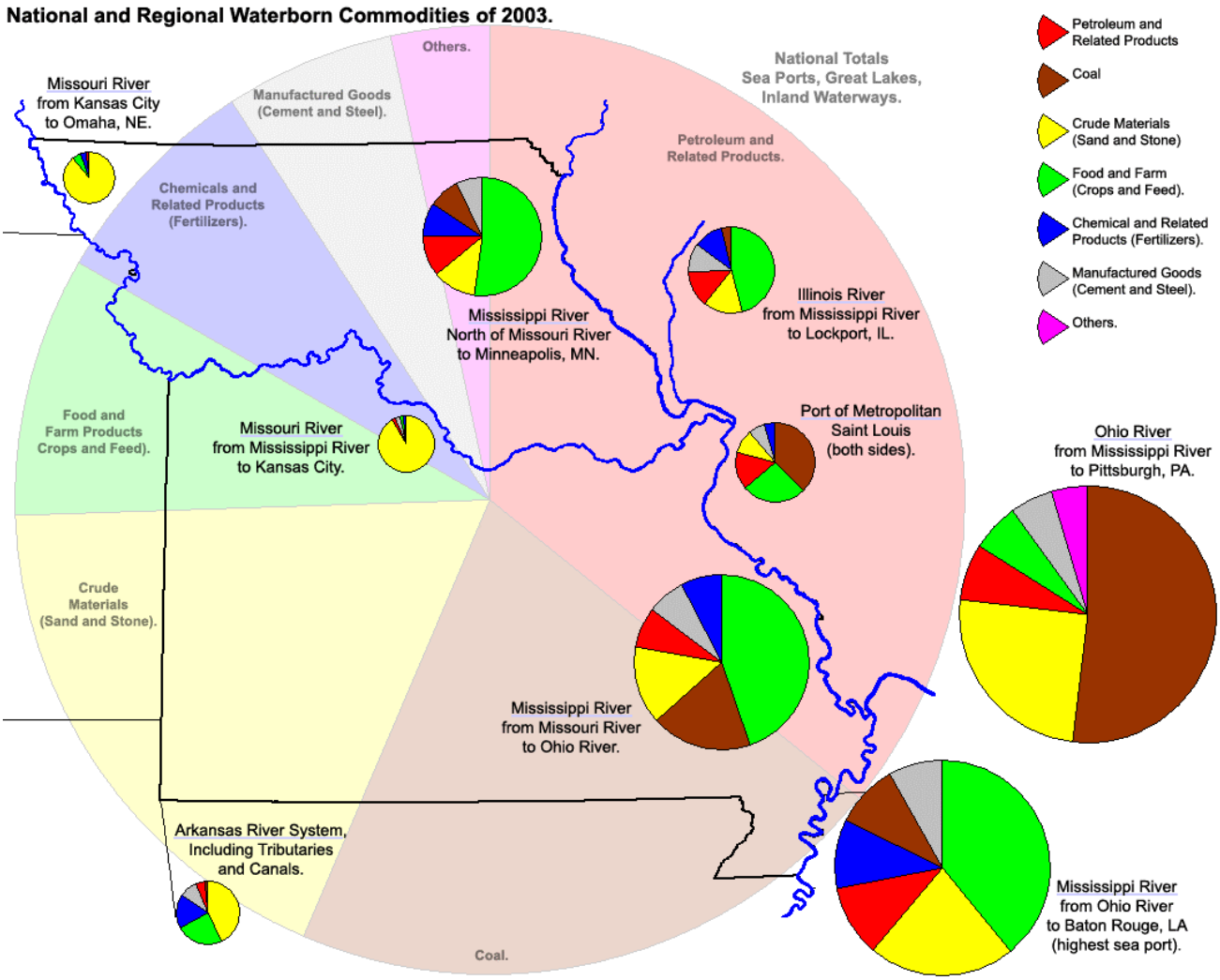


Figure 19, Map and Pie Charts of National and Regional Waterborne Commodities of 2003 According to US Army Corps of Engineers Data.

Figure 19's combined pie charts and map show location, quantity and types of cargo carried on waterways near Missouri. The Illinois, Ohio, and Arkansas waterways are shown as whole waterways, while the Missouri River and Mississippi River are divided into sections. The Missouri River sections are above and below Kansas City, while the three Mississippi River sections are divided into 1) above the Missouri River, 2) below the Ohio River, and 3) in between them. There is an additional pie chart for all ports in the metro Saint Louis area, including ports on both sides of the river. The pie chart for the Illinois River does not include the port of Chicago, nor the canal connecting it to the Great Lakes. Meanwhile, the Arkansas River pie chart actually represents a system of several rivers and canals combined. The background, pale pie chart shows the national, totals of all waterborne cargo, including coastal waterways.

The diameter of each pie chart is to scale by total tonnage, thus the Ohio River carries the most tonnage, of rivers in the Missouri region. Each pie slice is then to scale within each pie. Thus, a little more than half of the Ohio River tonnage is for Coal (including lignite coal). Nationwide coal is secondary to petroleum, but much more coal is shipped by national waterways than by the Ohio River. Farm products (green) and chemical fertilizers (blue) are major commodities in most cases. Figure 19 also puts the Missouri River within context. If farming goods, manufactured goods, and petroleum were shipped on the Missouri River in quantities similar to the Arkansas or Illinois rivers, then total cargo would be millions more tons, worth more than a billion dollars per year.

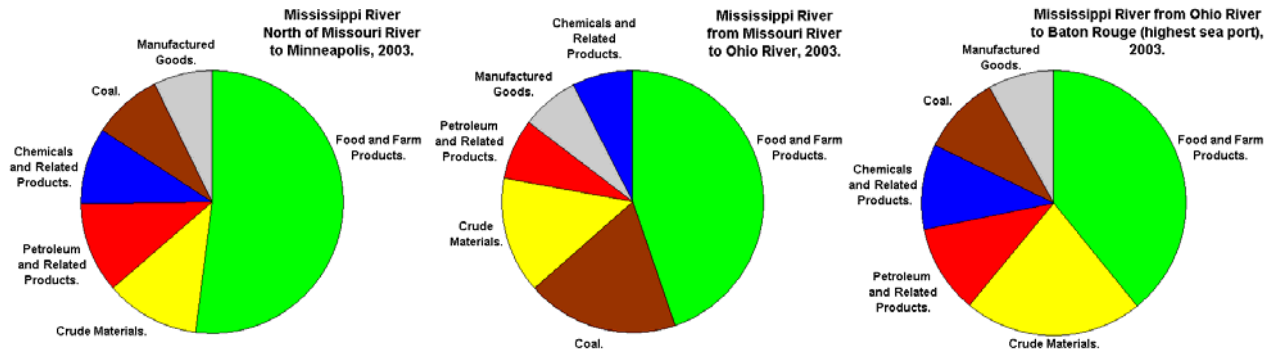


Figure 20, Pie Charts of Commodities on the Mississippi River Above St Louis, St Louis to the Ohio River, and Below the Ohio River, According to US Army Corp of Engineers, Data Center, for 2003.

Figure 20 shows equal diameter versions of the three Mississippi River pie charts from Figure 19. In all three sections of the river, farm products are the primary commodities, as shown in green. Fertilizers are also major commodities of the blue group. Thus, farm supply and products account for most of the Mississippi River usage near Missouri. Waterways decrease shipping costs and thus increase potential profit for Missouri Farmers.

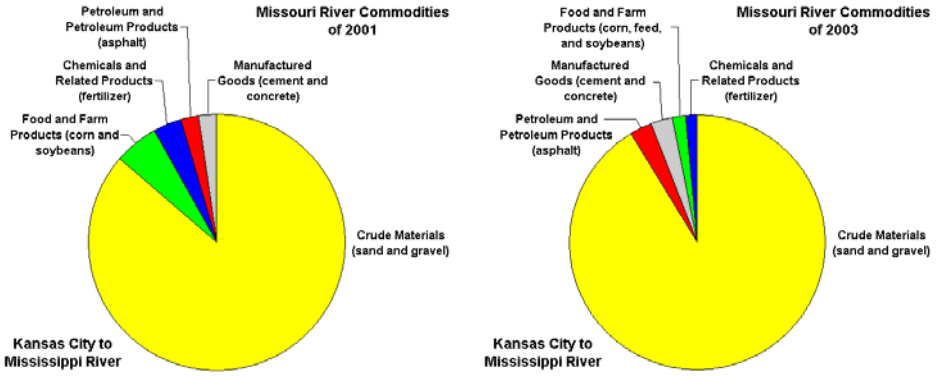


Figure 21, Pie Charts of Missouri River Commodities in 2001 and 2003.

The second pie chart in Figure 21 is the same as previously in Figure 19, while the first pie chart is the same location, but two years earlier in 2001—a peak year for cargo on the Missouri River. Compared to the Mississippi River, the ratio of products carried on the Missouri River is very different. Yellow in the pie charts is for "crude materials" which, on the Missouri River, is almost entirely sand. Farm products and fertilizers count for a much smaller ratio of Missouri River cargo than the Mississippi River cargo. In addition, the big change between years on the Missouri River is a drop in usage for fertilizer and farm products. The total in 2003 was about average, while the total in 2001 was peak, due to increased usage for farm goods. Thus, farming products are both the key to increased usage and the most likely commodities to benefit from increased waterway usage.

Previous calculations compared river cargo to interstate cargo and found the Mississippi River near Missouri carries cargo equal to about 2 busy interstate highways. Similar calculations can be done for the Arkansas, Missouri, and Illinois Rivers. The Arkansas River system carries about 27% of a busy interstate. The Missouri River below Kansas City carries about 16% of a busy interstate, and the Illinois River carries about 81% of a busy interstate.

The differences in these three rivers is important with respect to predicting if the Missouri River potential demand is closer to a quarter of an interstate highway or to a nearly full interstate highway. First, the Illinois River has an advantage in that it connects via canal to the Great Lakes and thus has through traffic. However, the Missouri River has a potential to reach deeper into farmlands than the Illinois River.

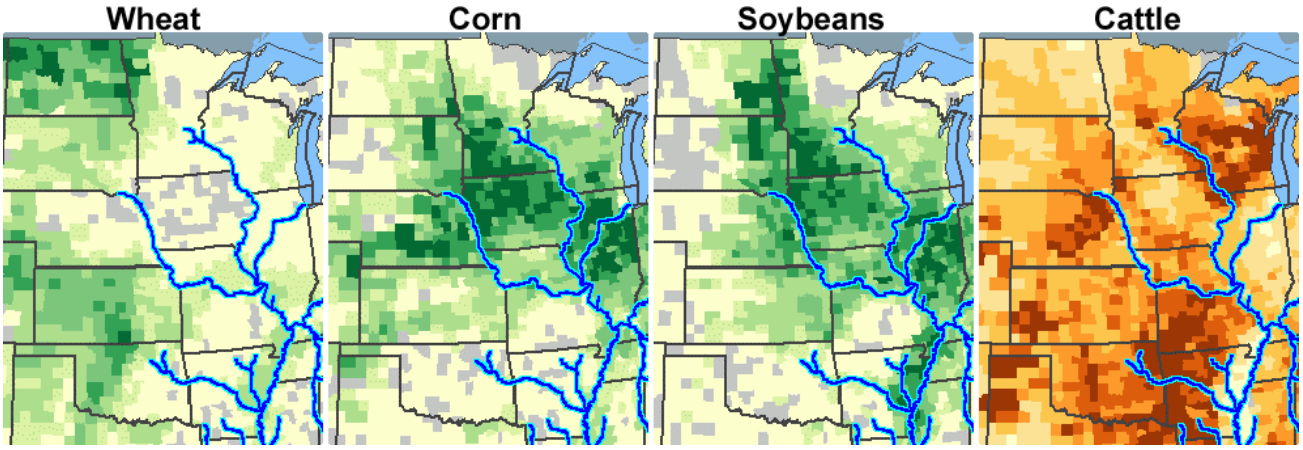


Figure 22, Maps of Waterways and Missouri, Relative to Agriculture Customers.
Darker Colors Indicate More Quantities of Indicated Farm Products.

The maps in Figure 22 show the Missouri and other Rivers in relation to four major types of farm productions. (Data on other types of production were not available or not as significant in the Missouri River area.) Darker colors indicate counties with higher production.

Previous pie charts of Figure 19 showed the Arkansas River carrying more farm products and fertilizer than the Missouri River, but these maps show the Arkansas River reaching fewer areas of intense farm production. The Missouri River reaches deep into areas of intense corn and soybean production, as does the Illinois River, and potentially reaches more counties than the Illinois River. Thus, the Missouri River has the potential to carry more farm related cargo than the Arkansas River, possibly more than the Illinois River, and possibly more than 80% of a busy interstate highway.

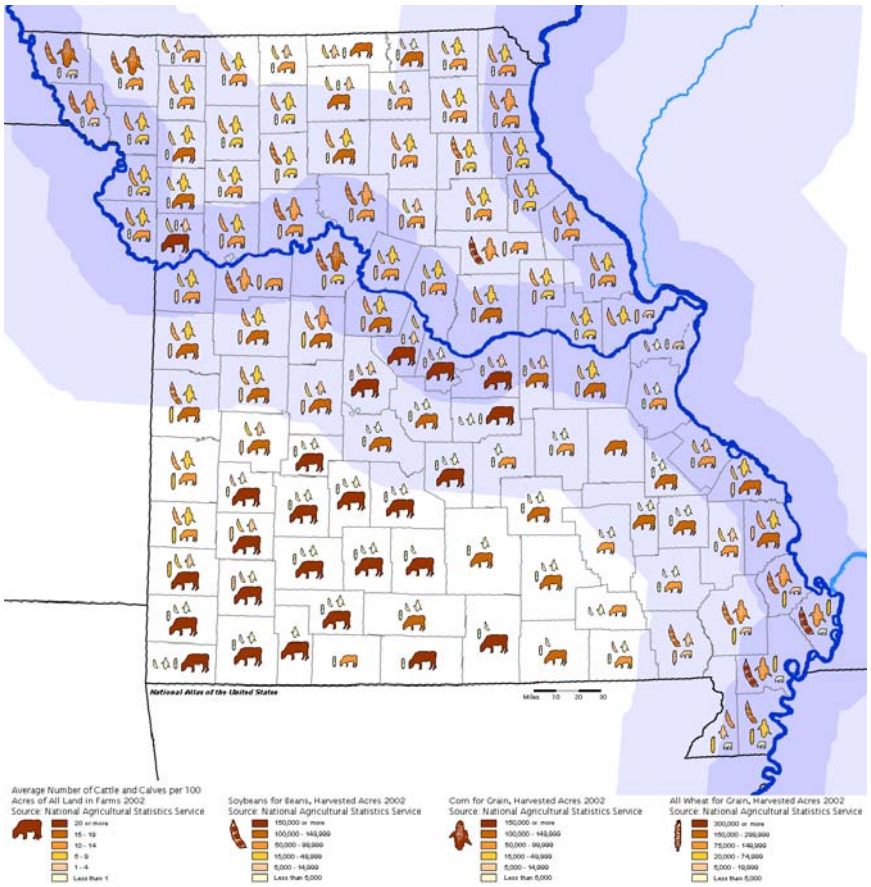


Figure 23, Map of Agriculture per County Relative to Waterways.

The map in Figure 23 shows the Missouri details of the same data as in Figure 22. The Missouri Waterways are shown with a 20-mile radius highlighted (light blue) and an additional 40-mile radius (pale blue). These highlights correspond well with the previous map of Public Port Authority service areas, Figure 17, where smaller ports serve the closer counties and larger ports expand service to the additional counties. Thus, this map shows the potential service to Missouri farmers, and their crops.

Of Missouri's 114 counties, 39 are well within 20 miles of a Missouri waterway, 23 of them bordering the Missouri River, and 44 more counties are extensively within a 60-mile

radius of a waterway, including nearly all counties north of the Missouri River. The highlighted counties of Figure 23 include Missouri's largest producers of corn and soybean as well as many large cattle producing counties, which use grain for feed. Thus, the Mississippi and Missouri waterways are well positioned to serve most of Missouri's farmers, and the Missouri River has a large potential to serve farmers better.

Figure 24, Photograph of a Massive Sand Mining Pile Next to the Missouri River.

Sand mining is the current dominate use of the Missouri River. The picture in Figure 24 shows the magnitude of one, private sand mining operation. Note the large wheeled loader, near the right end of the sand pile, dwarfed by the size of the pile. Sand is usually mined from the river and delivered to shore facilities for local use. Although sand production does not typically represent production for export to other states or countries, it does count as waterway usage tonnage, and amounts to tens of millions of dollars in Missouri's economy.

If sand mining continued, while farm related cargo were increased to equal the Illinois River, then Missouri River cargo would be worth more than $2 billion. Additional use for commercial and industrial cargo would further increase the dollar value of Missouri River cargo. Thus, the Missouri River has a huge potential, but it is primarily used for sand mining. Developing this potential will require improving the Missouri River to make it a navigationally reliable travelway.

Issues relevant to improving Missouri River navigation are at odds with issues relevant to upstream economics and to making the river environmentally healthy and safe. These issues are complex and open to debate as indicated by recent planning activities by the US Army Corps of Engineers. This report will not delve into the issues, but instead it will present only a brief over view of the situation.

Upstream economics: Upstream dams originally built for flood control and navigation have created lakes, and the lakes have created lake based economies, similar to ones found around Missouri lakes. Land value, recreation, and tourism depend on steady lake levels instead of levels that change seasonally in order to maintain a steady down stream flow. Thus, upstream it is economically better for the dams to change out flows as needed to maintain steady levels.

Downstream economics: Despite the potential and historical importance of the Missouri River, it has had navigational problems most of it's life. In the early days, it was wide, shallow, and prone to flooding or drying up. Channelizing and flow control dams solved many of those problems, but now upstream economics and environmental changes have limited navigation. Meanwhile, acres of river valley land can be farmed and sold more easily than acres of river surface. Thus, land in the Missouri River valley has often been worth more than navigation on the Missouri River.

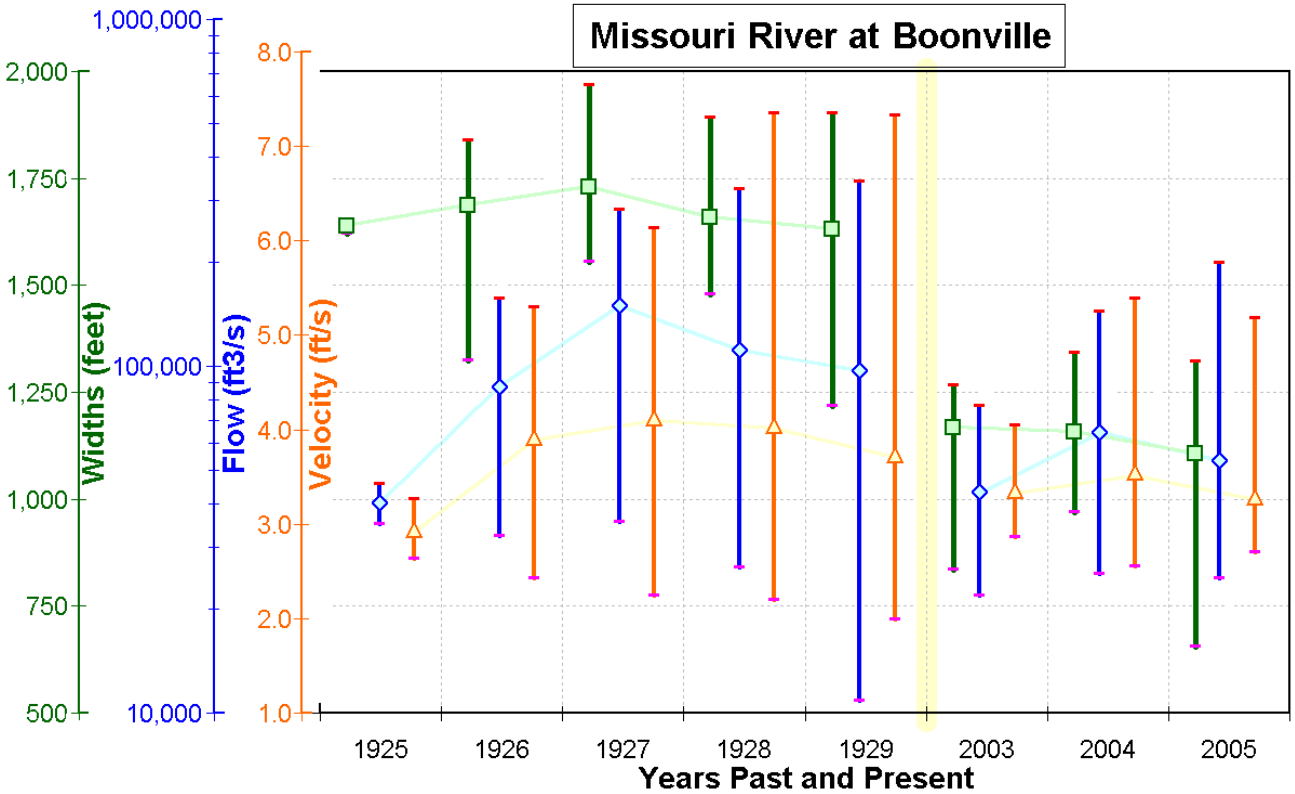


Figure 25, Graph of Missouri River Widths, Flow Quantities, and Flow Velocities in the Late 1920's and Early 2000's.

Figure 25 shows how the Missouri River in Missouri has changed, since available data started in the 1920's, and illustrates down stream economics. The data is from USGS measurements at Boonville. The location was selected due to availability of the data and the central Missouri location making it approximate an average between Kansas City and Saint Louis. There are three values plotted versus time, and time is plotted in two groups, 76 years apart. The values are river width, quantity of flow, and average velocity of flow. Each is plotted on a separate scale due to the wide differences in the nature of these values, especially the flow quantities (blue) that are plotted on a logarithmic scale. The data from the late 1920's represents 2 to 12 measurements per year, while the data from the early 2000's represents 28 to 30 measurements per year. Each year shows the minimum, maximum, and average values. Thus, the graph is rather complex due to the complexity of the situation, but the results are important.

In the last 76 years, the Missouri River has become less extreme in flow minimums and maximums (not counting the floods of the 1990's). Average widths have decreased by more than 500 feet. Flow quantity has decreased by almost 60,000 cubic feet per second, and the decreased flow has resulted in slower flows, despite the decreased width. Average flows are now about 3 feet per second as compared to previous 4 feet per second.

Figure 26, The Missouri River at Boonville with Regular Surface Disturbances Caused by Wing Dikes.

Average widths are about 30% less than they were 76 years ago. Historically, bank protection levees or “wing dikes” are made into the river. These cause backwaters and material to be deposited behind them eventually covering the dikes and creating new land. New dikes are then built to protect the new land and the process repeats. Effectively this method "reclaims" land from the width of the Missouri River. Land that can be farmed, counted as an asset, or sold. Thus, there is a downstream economic advantage for landowners to make the river narrower.

The Missouri River is also a resource for fresh water. There is an economic advantage for adjacent farmers, industry, and communities to consume its waters and thus decrease its flow quantities.

The result of all these issues is that the Missouri River has a reputation for unreliable navigation. Less than 200 days of navigation were reported in each of 2004 and 2005, out of normal 244-day seasons. For comparison, consider the economic effects of planning to close an I-70 33% of every year, and then actually closing it 46% of the year.

Solving these issues to make the Missouri River reliably navigable for as much of the year as possible is beyond the scope of this study. However, these issues are common to all Missouri River Port Authorities, and indirectly common to Mississippi River Port Authorities who would also benefit from increase waterway traffic. Making the Missouri River comparable to the Arkansas or Illinois Rivers has a potential to make the Missouri River worth billions of dollars per year, and it would primarily benefit farmers in most counties of Missouri.

Summary Benefits of Missouri Waterways:

Many of the following benefits have been indicated in previous parts of the report, but they are gathered and summarized here for clarity. These are the benefits of improved waterways and Public Port Authorities, up to and including improvement of the Missouri River to make it reliably navigable.

Figure 27, Tow on the Mississippi River.

- Waterways connect with the global marketplace and their trade surplus brings the wealth of the world to Missouri.
- The Missouri River is well positioned for trade into states west and north of Missouri.
- Public Port Authorities currently report service to 36 Missouri counties and 6 other states.
- More and better Port Authorities have the potential to directly serve 39 Missouri waterway counties, and indirectly serve 44 neighboring counties, or about 70% of Missouri.
- Waterways are best for bulk commodities such as fuels, raw materials, commercial products, fertilizers, feed, and farm products.
- Waterways have the massive capacity needed to carry bio-fuel supplies and products in quantities significant to the national fuel market.
- Redirecting existing bulk commodities to waterways instead of trucks frees up trucks to server other needs, thus increasing effective trucking capacity without increasing truck traffic.
- Waterways are inherently grade separated from other modes of transportation. Grade separation
  - Avoids congestion in other modes of transportation,
  - Avoids conflicting movements, and thus
  - Improves safety in other modes of transportation.
- Every full, standard tow going between St Louis and Kansas City
  - Is equal to 900 full semi-trucks if they are packed at 100% efficiency.
  - Eliminates the need for a convoy of trucks 45 miles long.
  - Saves 75,000 gallons of diesel fuel and subsequent emissions.
  - Requires less crew and support staff than 900 truck drivers.
  - Reduces congestion on I-70 with secondary improvements in safety.
- Waterways require fewer operators than equivalent trucks, thus reducing labor costs.
- Reducing labor needs and fuel usage improves the potential for profit, especially to farmers, thus improving farm economies and encouraging more farm production in Missouri.
- Tow crews can work in teams, as opposed to hundreds of individual truck drivers, thus reducing the risk of operator errors, which improves safety.

Figure 28, A Tow Boat on the Mississippi River.

- Improving Missouri River navigation between St Louis and Kansas City
    - Would improve 367 Missouri travel way miles.
    - Would improve 20 Missouri counties directly and potentially improve adjacent counties indirectly.
    - Would be equivalent to adding 80% of the cargo capacity of a busy interstate highway parallel to I-70. Like adding a truck lane to each direction, with a combined capacity increase of more than 7,000 trucks per day.
    - Would make feasible new tow related businesses, industry, and ports—public or private.
    - Would restore transportation importance to 50 small communities.
    - Would improve the economies of adjacent communities and counties, with secondary improvements in more distant communities and counties.
    - Would improve profitability of farmers in 20 to 36 counties.
- Improvements of the Missouri River navigation above Kansas City
    - Would extend all the above benefits into 5 to 9 more Missouri counties.
    - Would improve the reach of the Missouri River into farming areas of other states and thus increase the importance of the Missouri River.
    - Would bring more cargo of other states through Missouri with the potential for Missouri to profit from the needs and products of other states.
- Navigational improvement of the Missouri River could bring new federal funding to Missouri
- Improvements above Kansas City could bring in development funding from neighboring states.
- Navigation improvements could justify and fund bridge improvements over the Missouri River.
- New waterway fees and bridge tolls, instead of increased taxes, can fund improvements.
- Navigational construction on the Missouri River will require offsetting environmental reconstruction, which is actually an opportunity to fund environmental improvements.
- Environmental improvements along the Missouri River will
    - Improve health such as improving water quality for communities and farmers.
    - Improve safety such as reducing the danger of flooding and making more of the waterway slower or shallower, and thus better for recreational boating.
    - Improve the view and thus land value of overlooking land and communities.
    - Improve habitat for land and water based wildlife with resulting improvement in hunting, fishing, and related recreational activities.
    - Will make the river and adjacent communities more desirable tourist destinations.

Figure 29, Green Space Along the Mississippi River.

Assessment of Port Authority Needs:

The detailed needs of Public Port Authorities in Missouri:

A major part of this study was a survey of the specific needs of Missouri's Public Port Authorities. As shown in Table 2 before, these ports are about as diverse as possible, from new ports just starting business to a port so busy as to be self-sufficient. Thus, the specific needs of these ports are just as diverse and hard to generalize. Still, this section of the report tries to condense the results, while the 50 pages in Appendix B present the details.

This study was based on similar work by the Arkansas State Highway and Transportation Department. However, the Arkansas study included site visits and interviews with port staffs as well as the survey. Their additional work collected more consistent data on which to base a more consistent assessment of their ports. This MoDOT study depends heavily on survey results, as reported.

Figure 30, Illustration of the Diversity in Ports.

Due to the wide range of differences in ports, such as illustrated in Figure 30, their survey answers covered a wide range as well. Some responses were more detailed and complete than others. Estimations of conditions, needs, and priorities were at the discretion of the port experts who completed the surveys. There were also parts of the survey that could have been better, to produce better results. For instance, questions about commodity details asked for the top five commodities of each port, when it is possible some ports had significant quantities of more than five types, while other ports only had significant quantities of one or two types. Lessons learned from this survey have been documented to guide future surveys.

Due to the limits of the survey, the diversity of ports, and the diversity of answers, the survey results should be used as indicators of port conditions and not as a comprehensive inventory. Also, while significant parts of the survey asked about estimated costs of needs, the survey results should not be used to replace proper methods of planning for development, application for assistance, and evaluation of requests. Within these limits, the survey produced the results as summarized in the following sections.

Blank surveys were eleven pages long, with six parts each. An example blank survey is in Appendix A. Each part's results are discussed below and detailed in Appendix B. The six survey parts asked about:

1. Contact information, location, and size of the Public Port Authority.
2. Service areas, customers, and services offered.
3. Cargo, in annual totals and top five commodity details.

4. Potential commodities and tenants, lost opportunities and future possibilities.
5. Needs for infrastructure, equipment, and support facilities.
6. Economic impact, access issues, development issues, and other ideas for improving public ports.

The first part of the survey requested information on contacts, location, and size of the Public Port Authority. This information was already summarized in Table 2 of this report. Complete responses are detailed in Appendix B, pages 1 to 4.

The second part of the survey asked about service areas, customers, and services offered. The previous map, in Figure 17, illustrated the 36 counties and 6 states reported serviced by Public Port Authorities. The complete list of service areas, per port, is in Appendix B, pages 5 and 6.

The survey question about customers produced diverse responses, with some ports naming individual customer companies, and others naming customer types. Most of the reported customers were related to either farming (product handling) or shipping (servicing tows). There were some customers in industry as well. The list of reported customers, per port, is in Appendix B, page 7.

Nearly all port services reported were either commodity movement services, or servicing barges and tows. The list of reported services offered, per port, is in Appendix B, page 8.

The third part of the survey asked about annual totals of all cargo, and the top five cargoes with commodity details. Such cargo is only part of the previously discussed cargo data from the US Army Corps of Engineers. The reporting public port authorities had rather steady quantities of cargo per year. The three with the lowest totals were all Missouri River ports, and all of them reported a potential for improvement, with improved navigation on the Missouri River.

Figure 31, The Missouri River at Kansas City with the Downtown Airport, the Kansas City Public Port Authority, Other Waterfront Development, and I-70.

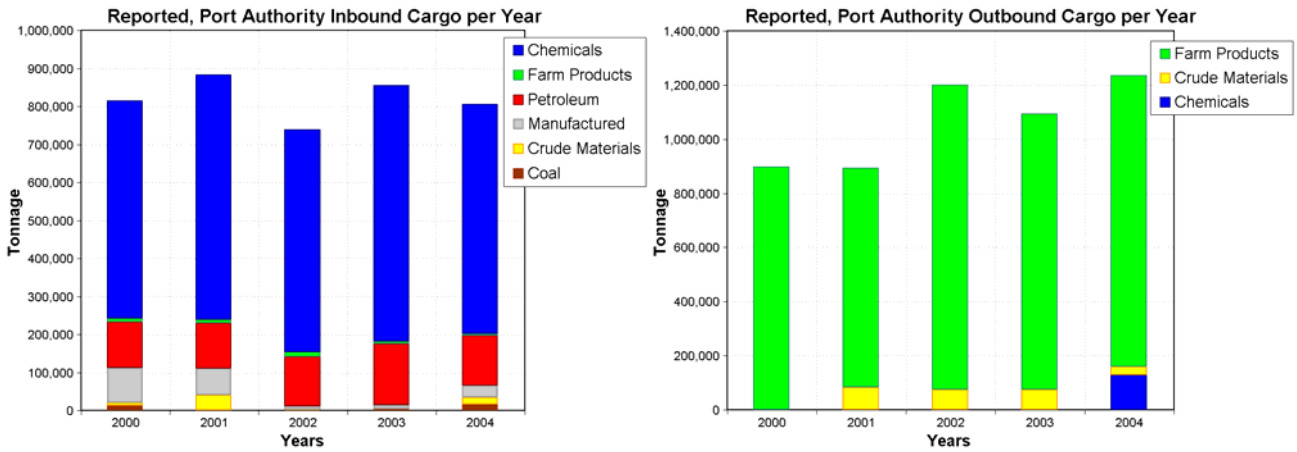


Figure 32, Bar Graphs of Reported Inbound Cargo (left) and Outbound Cargo (right).

The two bar graphs in Figure 32 show inbound and outbound cargo totals per year, by cargo types as commonly used in US Army Corps of Engineers reports. The graphs are based on answers to survey questions about the "top five" commodities of each port. This limits the value of the data in that an unreported commodity #6 of a large port may have been more significant than a reported commodity #2 of a small port. Future surveys might handle this topic better by asking for as many commodities as exceed a selected annual quantity limit. However, these graphs are still useful in showing the difference between inbound and outbound commodities.

Of the reporting Public Port Authorities, “chemicals” (blue) dominate inbound commodities while farm products (green) dominate outbound commodities. The "chemicals" group consists mostly of different types of agricultural fertilizers. Therefore, they are mostly agricultural chemicals rather than industrial chemicals. The “farm products” group is for commodities produced by farms and is mostly different types of grains.

The blue and green parts of Figure 32 show that farmers are the primary users of Public Port Authorities. Previous figures have shown farmers are primarily served by the Mississippi River while the Missouri River primarily carries crude materials, especially sand. In Figure 32, crude materials are minor commodities, of reporting Public Port Authorities. Thus, these graphs show improvements of Public Port Authorities, and of Missouri River navigation in general, will primarily benefit farmers.

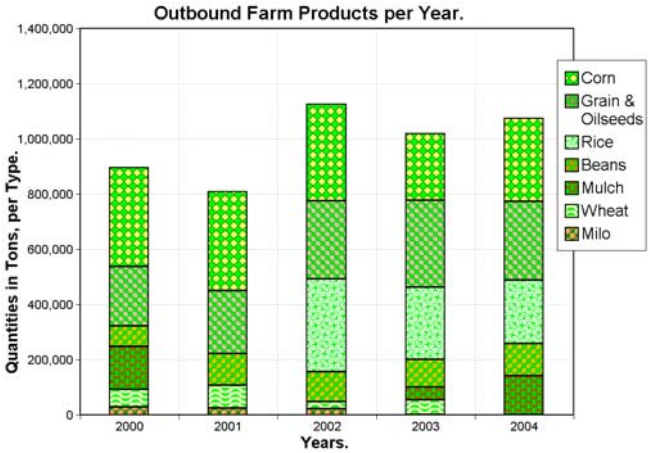


Figure 33, Bar Graph of Outbound Farm Products

The reported outbound farm products (green part of Figure 32 right) are several commodities as shown in more detail of Figure 33. Corn is one of the largest reported farm products. Soybeans may have been reported in “grain and oilseeds” by some ports and in “beans” by other ports. Thus, soybeans and corn are probably closer to equal. In three of the years, rice was reported as a major farm product. Mulch, wheat, and milo round out the list of major farm products.

Inbound vs. outbound questions could also be improved by identifying modes of transportation. A commodity inbound by one mode would be outbound by another mode; unless it is used on-site, such as inbound grains mixed on site to make outbound feed.

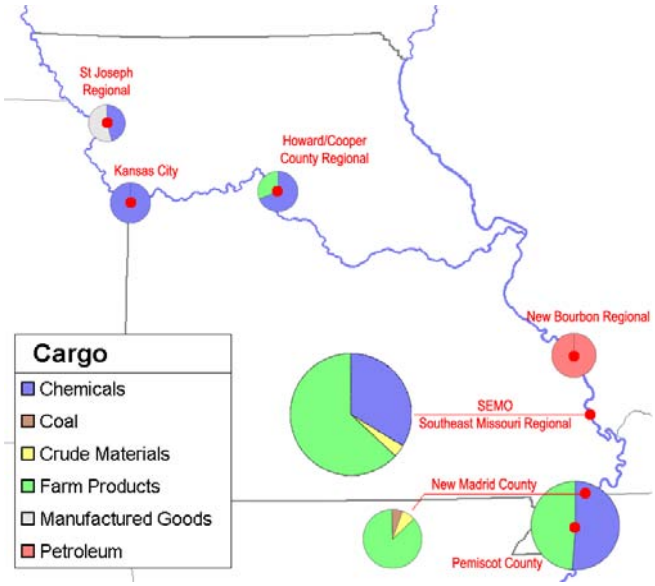


Figure 34, Kilotons of Cargo as Reported by Missouri Public Port Authorities.

The map and pie charts in Figure 34 show cargo types and quantities per reporting Public Port Authorities. The pie chart diameters are sized relative to total cargo although the difference from smallest to largest is more extreme than shown here. For instance, Kansas City's total is actually about 10% of SEMO's total, when the diameter shown is only 33% of SEMO's.

Within each pie chart, the slices indicate commodity types and ratios. Thus, New Bourbon primarily handles petroleum products, while Kansas City primarily handles chemical products, other than petroleum.

SEMO handles the most commodities, and most of them are fertilizer and farming products. Pemiscot is the second largest and again it primarily serves farming products. A similar graph is shown later in Figure 38, except it summarizes needs per ports. Comparison of the two will show both cargo and needs are largest on the Mississippi River south of St Louis.

Nearly all commodities were reported coming from or going to other US waterway states. However, many commodities were from or to Gulf Coast states where they could then have secondary links to other nations and the global economy.

Survey questions asked for peak months and peak tons of major commodities. This is another question that could be improved in future surveys. Some ports answered with a single month, while others answered with months in a way not clear if they meant a range of months or multiple peaks in multiple months. Detailed answers are in Appendix B, page 9.

Table 3 combines all the answers, effectively spreading out the peaks since different ports peak in different months. The table also highlights the Missouri River navigation season, even though the peaks shown are for both the Missouri and Mississippi Rivers.

Table 3, All Reported Seasonal Peaks per Month per Commodity.

	Commodity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Inbound	Fertilizers		X	X	X	X	X		X	X	X	X	
	Salt	X									X	X	X
	Sulfate	X	X	X	X	X	X	X	X	X	X	X	X
	Molasses						X	X	X	X			
	Rice									X	X		
	Pet coke						X		X		X		
	Sand					X							
	Commodity	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Outbound	Beans	X									X		
	Corn	X							X	X	X		
	Cotton Seed	X											
	Grain									X	X	X	
	Milo								X	X			
	Mulch	X	X	X	X	X	X	X	X	X	X	X	X
	Rice	X	X	X	X								
	Soybeans										X	X	
	Wheat						X						
	Sand				X								

Missouri River, Maximum Navigation Season

Within its limits, Table 3 is still useful, especially when combined with information on the Missouri River navigation season. The river is to be navigable from the start of April to the end of November. However, when water levels run low, the Missouri River season ends early rather than starts late. Thus, once crops are available, tow operators may be unwilling to risk going up stream because they do not know if they will be able to return down stream.

Significant parts of the fertilizer season are outside of the Missouri River navigation season, too. Other arrangements have to be made then, and it is easer to continue those arrangements than to change them during the navigation season. Thus, the Missouri River navigation season severely limits river use for either of these primary beneficiaries.

The fourth part of the survey asked about potential commodities and tenants, lost opportunities and future possibilities. These answers were diverse and typically specific to port conditions, except that all ports on the Missouri River reported losses due to problems with navigation on the Missouri River. The next most common reason for lost opportunities, or the needs for future opportunities were infrastructure and equipment limits. Complete details are in Appendix B, pages 10 to 12. Below is an abbreviated version of all replies.

Figure 35, Barge at St Joseph Port Authority.

- **Future Opportunities:**

- Howard/Cooper County Regional Port Authority reports: Until the Missouri River navigation season becomes more defined; it will be difficult to attract new commodities to the port.
- Jefferson County Port Authority needs a physical port facility to handle *wet or dry cargo*.
- Kansas City Port Authority needs improved handling systems, cranes, conveyors, and facilities in order to handle *containerized bulk commodities*.
- Mid-America Port Commission needs specialized handling equipment--a rail mounted translating crane--in order to handle *containerized cargo*.
- New Bourbon Regional Port Authority needs an outbound conveyor system to handle 100,000 tons of *trap rock* per year.
- The New Madrid County Port Authority would like to handle additional *farming commodities, steel, and aluminum*. In order to increase commodity movement at the port it needs
    - A warehouse,
    - The existing rail at the harbor site extended to the general cargo dock, and
    - The dock upgraded for tonnage lifts with an H-Crane to move containers between barge, rail, or truck.
- Pemiscot County Port Authority needs to complete its rail spur to port facilities and also a second cargo dock, cranes, yard, and office to handle 1,000,000 tons of *containers*.
- Southeast Missouri Regional Port Authority needs
    - A liquid dock to handle liquid commodities,
    - A reload operator to handle lumber, and
    - A warehouse to handle metals.

- St. Joseph Regional Port Authority: There has been an interest in Weyerhaeuser bringing *raw material paper* by bulk to their corrugated cardboard manufacturing plant in St. Joseph. River and barge limitations prohibited arrangements from being made. Other types of commodities are also likely for St. Joseph.

- **Past Losses:**

- Howard/Cooper County Regional Port Authority. Currently there is very little river transportation occurring on the Missouri River and most *grain and fertilizer*, which the port had previously transported by barge, is now being done by train or truck. The reason for this loss is due to the recurring conflict of recreational uses versus navigational use of the river, the endangered species act, the navigation season on the Missouri River is variable and the river depth is variable, affecting the interest of barge towing companies to operate on the Missouri River.
- Kansas City Port Authority lost 40,000 tons in 2004, and 10,000 tons in 2003, of *fertilizer* because the river was not reliably accessible to commercial barge traffic, due to inconsistent water flow.
- The New Madrid County Port Authority has lost over 250,000 tons of *steel* over the past five years due to the lift load capacity at the General Cargo Dock being incapable of handling a single lift of more than 20 tons. The dock must be upgraded to avoid future losses as we continually turn customers away. The upgrade would have a big impact on tonnage movement.
- Southeast Missouri Regional Port Authority lost 100,000 tons of *soy diesel* in 2005. In by rail, out by truck and barge. Prospect is interested in SEMO Port, but decided to pursue other locations in Iowa first. Port site, which is filled above flood level, is barely large enough and still needs road, rail, water, sewer, and storm drainage.
- Southeast Missouri Regional Port Authority lost 300,000 tons of *steel* in 1998. In by barge, out by rail and truck. Terminal company was referred by Union Pacific Railroad. Desire was to compete for Nucor Steel (Blytheville, AR) outbound steel, which primarily moves by BNSF railway and truck. Steel would move by barge to terminal, then by UP Railway. Terminal chose a St. Louis site for better overall rates (barge to St Louis, switch rates to eastern railroads). From SEMO port, UP rail rates to IL interchange points made higher overall rates.
- Southeast Missouri Regional Port Authority lost 600,000 tons of *iron ore* in 1997. In by barge, out by rail. Barge line wanted a cost proposal for barge-to-rail transfer of direct reduced iron ore from Gulf points to a steel company in Chicago. Barge line was referred by Union Pacific Railroad. Requirements were to keep product dry, move when northern rivers froze, etc. Final choice was barge all the way to Chicago and on ground storage at steel mill because that was a much cheaper alternative.
- Southeast Missouri Regional Port Authority lost 500,000 tons of *pasta* in 1994. In by barge, out by rail and truck. Client was lost because the port, at that time did not have sewer, electric, gas or railroad. The prospect wanted 100 acres, however the Port did not have 100 acres filled above the flood elevation. Prospect also wanted to buy the property and the Port was only willing to lease property. The location consultant said that SEMO Port was initially rated #1 of 19 sites, but was dropped due to a lack of land filled above flood elevation.

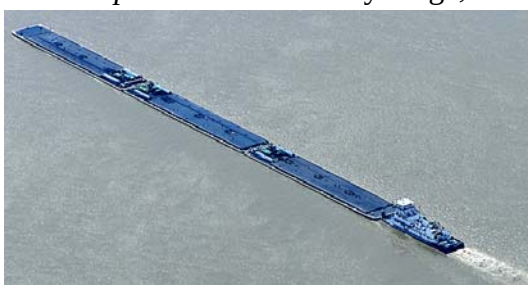


Figure 36, Tow on the Mississippi River.

The fifth part of the survey asked for details about needs for infrastructure, equipment, and support facilities. Complete details are in Appendix B, pages 14 to 27.

Figure 37 shows the total of all requested needs, per priority and per type (infrastructure, equipment, or support facilities). Critical needs are less than $5 million, and nearly all of them are infrastructure needs. Infrastructure is the primary type of need in all time frames. Note, some of the needs were not given a priority. Thus, they are reported as "other" priority.

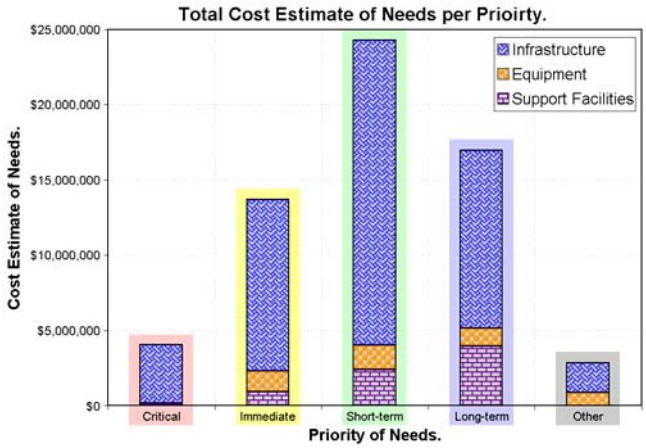


Figure 37, Combined Cost Estimate of Needs per Priority for All Reporting Public Port Authorities.

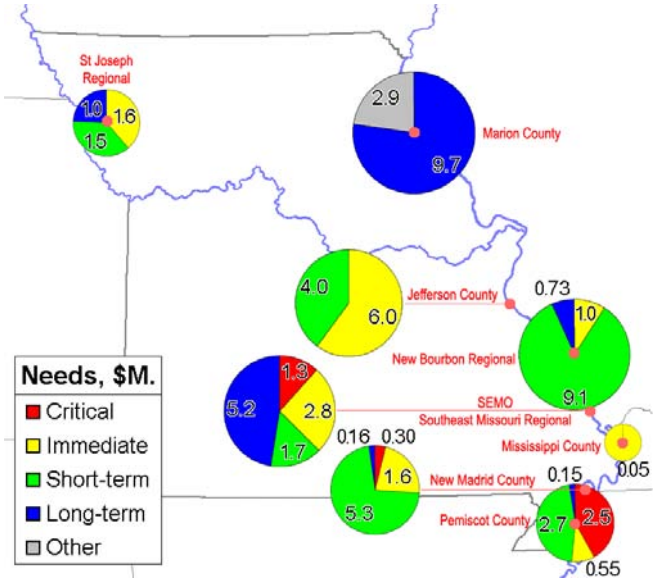


Figure 38, Millions of Dollars of Needs as Reported by Missouri Public Port Authorities.

The map and pie charts in Figure 38 show the location and relative magnitudes of Public Port Authority needs. The diameters of the pie charts relate to the total magnitude of need, for instance St Joseph estimated a larger need than Mississippi County. However, the difference is actually more extreme than the change in diameter indicates, for instance the St Joseph estimate is actually 80 times greater than the Mississippi County estimate. The slices of the pie charts are proportional within each port, so for instance Jefferson county estimates 60% of it's needs are Immediate and 40% are long term. The slices are numbered to indicate needs in millions of dollars, which for Jefferson County happens to be $6 and $4 million respectfully.

An interesting point is to compare Figure 34 and Figure 38, commodities and needs. (Note: The pie graphs are consistent within each figure, but not between figures. An equal diameter for cargo, in thousands of tons, and needs, in millions of dollars, is not intended to equate needs and cargo.) Together the figures show most of the cargo, and most of the needs, are on the Mississippi River, especially south of Saint Louis.

The questions about need could also be improved, because ports found them difficult to answer. Some ports reported needs without estimating dollars. Others ports reported needs without estimating priorities. The full details of ports answer are in Appendix B, pages 14 to 27. Below are summary tables of reported needs with estimated costs. The first table is for infrastructure needs, and it is the largest list of needs.

Table 4, Estimated **Infrastructure** Needs per Port Authority.

	Asset	Critical	Immediate	Short-term	Long-term	Other
Howard/Cooper County Regional Port Authority						
Top infrastructure need for existing business: Increase capacity of grain and storage handling at the grain facility by addition of grain bins. Requires purchase or long-term lease of additional land.						
Jefferson County Port Authority.						
Top infrastructure need for existing business: Priority need of physical port facility.						
Top infrastructure need for new businesses: Transportation (highway, rail and barge transportation).						
General	Electric Lines			$ 1,000,000		
	Gas Lines			$ 1,000,000		
	Mooring Dolphins		$ 1,000,000			
	Sewer Lines			$ 1,000,000		
	Water Lines			$ 1,000,000		
Other	Building Construction		$ 1,000,000			
	Land Purchase		$ 3,000,000			
Rail	Spur Track		$ 1,000,000			
Total			**$ 6,000,000**	**$ 4,000,000**		

	Asset	Critical	Immediate	Short-term	Long-term	Other
Marion County Port Authority.						
Top infrastructure need for existing business: Existing business can live with current conditions.						
Top infrastructure need for new businesses: Modification of Dock and Levee to allow larger barges and for Multi-Modal container operations. More rail spurs.						
General	Dock				$ 3,000,000	
	Electric Lines				$ 250,000	
	Gas Lines				$ 50,000	
	Mooring Dolphins				$ 500,000	
	Sewer Lines				$ 200,000	
	Steam Line				$ 500,000	
	Water Lines				$ 200,000	
Other	Levee Modifications				$ 2,500,000	
Rail	Marshalling Yard				$ 500,000	
	Spur Track				$ 1,000,000	

Road (on-site)	Secondary					$ 2,000,000
Total					**$ 8,700,000**	**$ 2,000,000**

	Asset	Critical	Immediate	Short-term	Long-term	Other
Mississippi County Port Authority.						
Top infrastructure need for new businesses: Slack water harbor.						
General	Water Tower		$ 50,000			
Total			**$ 50,000**			

	Asset	Critical	Immediate	Short-term	Long-term	Other
New Bourbon Regional Port Authority.						
Top infrastructure need for new businesses: Slackwater harbor and dock.						
General	Dock			$ 2,802,467		
	Electric Lines			$ 36,000		
	Harbor Excavation			$ 2,393,000		
	Mooring Dolphins			$ 289,000		
	Sewer Lines			$ 591,000		
Rail	Spur Track			$ 3,000,000		
Total				**$ 9,111,467**		

	Asset	Critical	Immediate	Short-term	Long-term	Other
New Madrid County Port Authority.						
Top infrastructure need for existing business: General cargo dock tonnage lift capacity increased.						
Top infrastructure need for new businesses: Extending rail service, and levee road paving.						
General	Dock			$ 1,460,000		
	Water Lines	$ 297,000				
Rail	Main Line		$ 1,234,000			
Road (on-site)	Main			$ 2,000,000		
	Secondary			$ 800,000		
Total		**$ 297,000**	**$ 1,234,000**	**$ 4,260,000**		

	Asset	Critical	Immediate	Short-term	Long-term	Other
Pemiscot County Port Authority.						
Top infrastructure need for existing business: Complete rail spur.						

General	Dock			$ 500,000		
	Mooring Dolphins				$ 150,000	
Rail	Marshalling Yard		$ 550,000			
	Spur Track	$ 2,450,000				
Total		**$ 2,450,000**	**$ 550,000**	**$ 500,000**	**$ 150,000**	

	Asset	Critical	Immediate	Short-term	Long-term	Other
SEMO, Southeast Missouri Regional Port Authority.						

Top infrastructure need for existing business: Cornmill - Street paving, railroad tracks. GSC - paving. Other items per capital plan.

Top infrastructure need for new businesses: Site fill, road, rail, water, sewer, and storm drainage.

General	Dock crane & shed				$ 564,000	
	Dock face surface		$ 160,000			
	Drainage	$ 51,000	$ 49,000			
	Mooring dolphins	$ 70,000		$ 128,000	$ 396,000	
	Sewar lines	$ 56,000	$ 49,000			
	Silt dike		$ 40,000			
	Water lines	$ 51,000	$ 49,000			
Rail	Aux dock spur				$ 143,750	
	Br2 fill		$ 88,217			
	Br3 fill		$ 150,000	$ 150,000	$ 229,345	
	Br3 ties		$ 34,540			
	Br4 fill			$ 100,766		
	Cape yard track				$ 87,400	
	Co305 rail		$ 93,954			
	Crossings	$ 7,500	$ 22,500	$ 22,500	$ 15,005	
	Culverts		$ 60,000	$ 60,000	$ 150,000	
	Dock spur			$ 157,550	$ 123,050	
	Grain tracks			$ 235,620	$ 235,620	
	Interchange track		$ 334,087			
	Marq rail		$ 77,765			
	North side tracks	$ 499,000		$ 211,918	$ 419,520	
	Paint steel		$ 385,000			
	Tankcar unload		$ 25,000			
	Temp upgrades		$ 20,000	$ 14,500		

	Ties	$ 85,000	$ 50,000	$ 100,000	$ 23,198	
Road	NW Rush Rd		$ 35,190			
	Rt AB		$ 30,000			
	Street paving	$ 359,000	$ 200,000	$ 121,000	$ 438,484	
Total		**$ 1,178,500**	**$ 1,953,253**	**$ 1,301,854**	**$ 2,825,372**	
	Asset	**Critical**	**Immediate**	**Short-term**	**Long-term**	**Other**
St. Joseph Regional Port Authority.						
Top infrastructure need for existing business: New access and roadway in port.						
Top infrastructure need for new businesses: New access and roadway in port.						
Other	Fertilizer domes			$ 1,100,000		
Road (on-site)	Main		$ 1,568,600			
Total			**$ 1,568,600**	**$ 1,100,000**		
Totals of Infrastructure Needs of All Ports		**$ 3,925,500**	**$ 11,355,853**	**$ 20,273,321**	**$ 11,808,199**	**$ 2,000,000**

The following table summarizes reported equipment needs and estimated costs.

Table 5, Estimated **Equipment** Needs per Port Authority.

Howard/Cooper County Regional Port Authority.						
Top equipment need for existing business: Improvement of the conveyor systems to move grain between bins and between bins and trucks.						
	Asset	**Critical**	**Immediate**	**Short-term**	**Long-term**	**Other**
Marion County Port Authority.						
Top equipment need for existing business: Nothing critical at this time.						
Top equipment need for new businesses: Container handling equipment and new crane setup.						
Conveyer	Covered					$ 450,000
Crane	Crain				$ 950,000	
	Overhead Bridge					$ 400,000
General	Clamshell Basket				$ 50,000	
Total					**$ 1,000,000**	**$ 850,000**
	Asset	**Critical**	**Immediate**	**Short-term**	**Long-term**	**Other**
New Bourbon Regional Port Authority.						
Top equipment need for new businesses: Outbound conveyor system.						

Conveyer	Open		$ 1,000,000			
Total			**$ 1,000,000**			

New Madrid County Port Authority.

Top equipment need for existing business: Crane replacement.

Top equipment need for new businesses: Truck Scales.

Asset		Critical	Immediate	Short-term	Long-term	Other

Pemiscot County Port Authority.

Top equipment need for new businesses: Equipment to handle containers.

Crane	Container			$ 600,000		
Crane	Mobile			$ 400,000		
Total				**$ 1,000,000**		

Asset		Critical	Immediate	Short-term	Long-term	Other

SEMO, Southeast Missouri Regional Port Authority.

Top equipment need for existing business: Railroad upgrades (track & bridges), track maintenance, and equipment.

Top equipment need for new businesses: Dolphins and liquid dock, warehouse.

	Equipment		$ 370,000			
Conveyer	Barge to rail conveyor				$ 174,000	
	Rail to barge conveyor			$ 198,000		
Total			**$ 370,000**	**$ 198,000**	**$ 174,000**	

Asset		Critical	Immediate	Short-term	Long-term	Other

St. Joseph Regional Port Authority.

Conveyer	Open			$ 400,000		
Total				**$ 400,000**		

Totals of Equipment Needs of All Ports		**$ 1,370,000**	**$ 1,598,000**	**$ 1,174,000**	**$ 850,000**

The last table summarizes reported support facility needs with estimated costs. It also concludes with the total costs of all reported needs.

Table 6, Estimated **Support Facility** Needs per Port Authority.

	Asset	Critical	Immediate	Short-term	Long-term	Other
New Bourbon Regional Port Authority.						
General	Office Building				$ 170,000	
Warehouse	Dry				$ 556,000	
Total					**$ 726,000**	

	Asset	Critical	Immediate	Short-term	Long-term	Other
New Madrid County Port Authority.						
Top support facility need for existing business: Replacing guard shack.						
Top support facility need for new businesses: Warehouse.						
General	Guard House			$ 317,124		
	Harbor			$ 39,000		
	Land		$ 410,000			
	Office Building			$ 91,000		
	Truck Scale				$ 158,000	
	Warehouse			$ 616,000		
Total			**$ 410,000**	**$ 1,063,124**	**$ 158,000**	

	Asset	Critical	Immediate	Short-term	Long-term	Other
Pemiscot County Port Authority.						
Top support facility need for new businesses: Transload facility.						
General	Maintenance Shop			$ 100,000		
	Office Building			$ 100,000		
	Transload Facility			$ 500,000		
Warehouse	Container yard			$ 500,000		
Total				**$ 1,200,000**		

	Asset	Critical	Immediate	Short-term	Long-term	Other
SEMO, Southeast Missouri Regional Port Authority.						
Top support facility need for existing business: Railroad upgrades (track & bridges), support facility (maintenance building).						
Top support facility need for new businesses: Warehouse.						

General	Security items				$ 44,400	
Land	Land purchases				$ 530,000	
	Site fill			$ 50,000	$ 953,750	
	Topo maps		$ 20,000			
Warehouse	Covered Storage			$ 62,100	$ 62,100	
	Open storage			$ 44,147	$ 44,147	
	Warehouse	$ 100,000	$ 500,000			
Total		**$ 100,000**	**$ 520,000**	**$ 156,247**	**$ 2,098,397**	
	Asset	**Critical**	**Immediate**	**Short-term**	**Long-term**	**Other**
St. Joseph Regional Port Authority.						
Top support facility need for new businesses: Covered or indoor storage.						
General	Grain Bins				$ 1,000,000	
Total					**$ 1,000,000**	
Totals of Support Facility Needs of All Ports		**$ 100,000**	**$ 930,000**	**$ 2,419,371**	**$ 3,518,397**	
	Asset	**Critical**	**Immediate**	**Short-term**	**Long-term**	**Other**
Totals of all Needs For all Port Authorities.		**$ 4,025,500**	**$ 13,655,853**	**$ 24,290,692**	**$ 16,500,596**	**$ 2,850,000**

A previous study, by Black and Veatch in 2000, developed documents for planning, requesting, and estimating costs and benefits of projects. While the above information can help with planning and budgeting, it should not replace proper methods of planning development, applying for assistance, and evaluating needs. The priorities and estimates above are the reported opinions of survey respondents, and not validated or endorsed by MoDOT in anyway. This study did not include enough information to evaluate the reported needs. Instead, the information is here to illustrate the separate needs of different port authorities. The information can be used as a starting point for planning and decisions.

The last part of the survey had several subsections asking a wide range of questions about economic impact, access issues, development issues, and other ideas. Detailed answers are in Appendix B, pages 28 to 46. The first few questions asked about staff and payroll. The results of which were previously reported in Table 2.

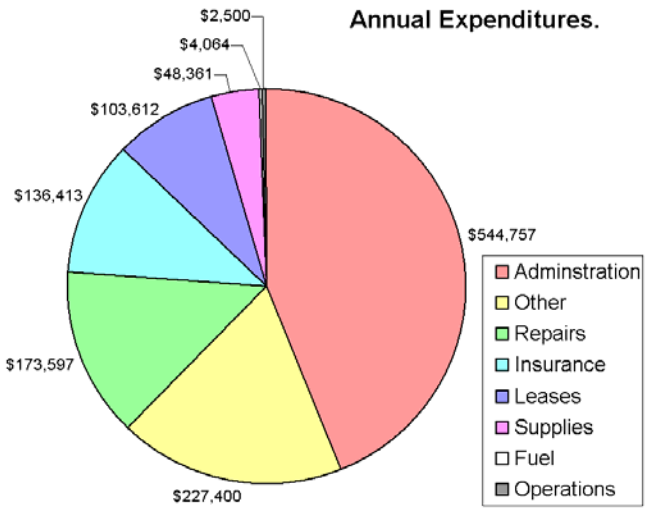


Figure 39, Total Annual Reported Expenditures, Other Than Payroll.

The first subsection of questions asked about revenue sources and expenditures. Revenues primarily come from rentals/leases, fees, and state subsidies. Total reported expenditures, other than for payroll are shown in Figure 39. Administration costs are the most significant expenditure, at about 1/3rd of the total. Miscellaneous costs, repair costs, and insurance costs were the next most significant expenditures.

The next subsection of questions asked about Landside Access Issues. Three questions asked for ratings of access road features and tallied results are shown in Figure 40. For the most part, access road features are good to moderate, with a few cases of problems. Most of the rest of the subsections questions asked for descriptions as summarized below:

- Any problems accessing US Highways, Interstates, or Railroads?
  - No facility exists. When built, will need access roads capable of handling heavy truck traffic to site.
  - None, high quality industrial grade. Main Line Rail onsite
  - No rail system available in the county.
  - Rail spur incomplete; connects to BNSF, but does not yet reach port.

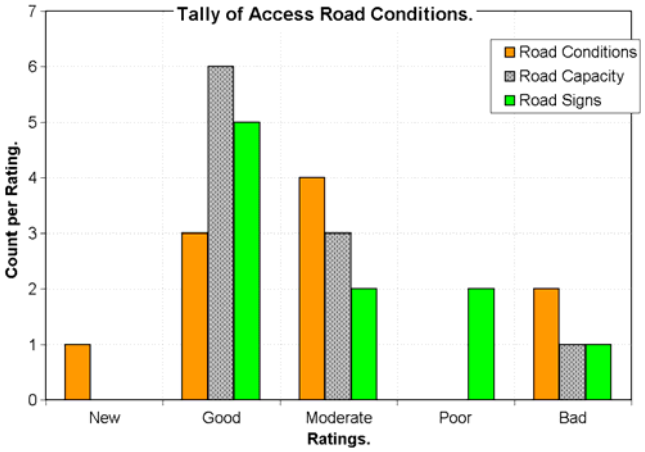


Figure 40, Ratings of Access Road Conditions, Capacity, and Signs.

- Any access road condition problems?
  - None, they are in excellent condition and above the 500-year flood level. Planned improvements to be made to 1.5 miles from port. Width of the roadway is a problem, but not critical. Road will have to be widened. Gravel, pothole ridden, and small shoulder.
  - Needs mowing. Terrible access and very poor road. Funding is partially in place for improvement.
- Any access road capacity problems?
  - Farm and agriculture related truck traffic.
  - Seasonal congestion.

- Any access road bridge problems?
    - Access road bridge is the Missouri River bridge at Boonville which has no stated tonnage limit.
    - Current Bridge to be replaced.
    - No, weight limit is the maximum MO gross weight.
- Any access road sign problems?
    - Lack of signage.
    - Missing.
    - When knocked down, MoDOT does not repair for days.
- Any rail line or railroad problems?
    - The rail service is approximately 1/2 mile from the port facility, on the other side of the river, and requires additional transport from the port facility to the rail.
    - Sporadic switching service.
    - Need rail spur to port site. Need to extend the service. Rail spur incomplete. It does not yet connect to port. General railroad situation. Rates are higher than in St. Joseph and have cost business. Sometimes it is cheaper to truck from Kansas City.
- Any Channel problems?
    - The Missouri River is supposed to be maintained at a minimum 8.5 foot channel but has not been done since 1993.
    - Silting in times of low water.
    - None, Corps does a great job.
- Any dock waterside problems?
    - Load lift capacity must be increased.
- Any dredging problems?
    - Low river stage during dredging season could cause harbor walls to collapse. Extra precaution had to be taken at the site.
    - None, Corps does a great job.
- Any problems with the size of vessels that can be accommodated?
    - The port will allow for tenants on each side of the harbor to simultaneously load/unload, and vessel size cannot block another tenant from entering or exiting the harbor during this time.

Figure 41, Large Tow on the Mississippi River.

Figure 42, Coal Tow at St Louis.

The next set of questions asked about "top" needs for infrastructure, equipment, and support facilities. The results were reported in tables that listed all predicted needs and estimated costs, Table 4 to Table 6.

The final set of questions asked about problems and ideas. Many ports answer with their particular needs, but the Missouri River ports tend to answer with a common need for reliable transportation on the Missouri River.

- What are the ports major disadvantages when competing for new cargo or development?
  - As relates to industrial development, lack of land and infrastructure would be the major impediment. As related to competition for new cargo shipment, the major disadvantage would be due to usage of the Missouri River. The on-going debate between recreational versus navigational use of the river, the endangered species act, the variable navigation system, invariable depth of the channel of the Missouri River, all of which reduce the interest of barge towing companies.
  - No port facility.
  - Inconsistent or non-existent river access due to lack of water (low flows) and/or poor channel maintenance.
  - Current docking system and levee system is limiting development opportunities.
  - Lack of facilities.
  - Lack of a slack water harbor.
  - Lack of harbor, dock, and outbound conveyor system.
  - Freight rates are normally good for the area, but we must increase the load lift capacity of the dock to compete for new business. We must also pave the levee road and expand rail to provide all the services requested of the port.
  - We lack rail connection to port site.
  - Semo Port has excellent access to barge, rail, and truck. It needs to develop additional industrial sites with fill, roads, railroad track, water, sewer, and storm drainage. The Semo Port Railroad (SE) needs upgrades to track and bridges. Additional cargo handling facilities are needed to expand capacity, improve efficiency, and minimize environmental impact.
  - Lack of barge operators on the Missouri River.
- What does the port need to develop its maximum potential?
  - Change of philosophy as to use of river, which will emphasize navigational use, guarantee length of seasons, and river depths.
  - Increase grain storage and handling capacity.
  - A physical port.
  - River access.
  - Redesign and modification of the docking and levee access system.
  - Acquire land and start building a port.
  - Slack water harbor.
  - Harbor, dock, and outbound conveyor system.
  - Completed rail spur.
- Describe any laws, regulations, or environmental constraints on port growth?
  - Usage of the Missouri River. The on-going debate between recreational versus navigational use of the river. The endangered species act, the variable navigation system, and invariable depth of the channel of the Missouri River.

- None at this time.
- None.
- Corp of Engineers' permit procedures often require a year or more to process and can add significant delay to projects.
- US Fish and Wildlife - Endangered Species Act.

- Is lack of rail, truck, and barge intermodal service a major impediment to operations?
  - Yes, see above problems with river access.
  - No, with main line rail, good highway and barge access we are constrained by the comments noted above.
  - Rail spur of 1.75 miles needs to be built to service the port.
  - Rail is not available in Mississippi County.
  - Yes. Numerous times the port has been requested to move a commodity from dock to rail. The inability of the port to provide this service has resulted in the loss of the potential to move the commodity.
  - Lack of rail connection to port site.
  - "If ""intermodal"" is defined as containers or piggyback trailers, the lack of intermodal has not hurt. Semo Port has intermodal hubs available in Memphis TN, Marion AR, and the St Louis MO areas. Containers and trailers can be dragged from those ramps, but drayage cost makes it less competitive with normal truckload service.

    Container on barge will likely focus on major cities for the same reason as intermodal. For example, UP and BNSF do not want ramps with less than 300,000 lifts per year (and several full trains originating and terminating at the hub daily). Volume is crucial to a profitable operation.

    In some cases, a small port might handle a periodic volume move, but the costs of demurrage for barge, containers, and chassis would have to be overcome. This could be for a PL480 foreign aid shipment or perhaps for cotton, etc."
  - Lack of barge operators willing to operate on the Missouri River is a major impediment to gaining barge traffic.

- What is needed for Missouri ports to compete in global economy and foreign shipments?
  - First step is to have a river, which is primarily dedicated to navigational use.
  - More financial support from the State of Missouri.
  - Attract container-on-barge up river. Right now, they terminate just north of St Louis.
  - Continue promoting Port facilities.
  - Infrastructure and equipment for loading/unloading containers.
  - Infrastructure placement and the funds to provide the infrastructure will enable the ports to compete more effectively for foreign shipments.
  - Information connecting potential MO shippers with foreign shippers (of containers).
  - Investment focused on projects that will earn a good direct return to the Port, thus earning an ongoing profit, which can be used for maintenance and local match to future growth projects' capital improvement grants.
  - The ability to handle containers.

Figure 43, Mississippi River and Pemiscot County Port Authority

- What is the best way to market advantages of Missouri ports?
    - Use new and existing promotional materials.
    - Media, Internet Services, Factual Packages, Trade Shows, as well as promotions via federal and state congressional folks.
    - MPAA website, MO DED's website, MoDOT website.
    - Individual port efforts targeted to each ports' specific markets.
    - To show the advantages of efficiency associated with barge shipping, i.e., cost effectiveness, energy effectiveness, and freeing up interstate and highway systems. There must be a certainty that barge traffic can logistically handle in a timely manner.
- How can state government best support port growth and development?
    - Be an advocate for emphasizing navigation use of the Missouri River, including guaranteed navigation seasons, guaranteeing depths of the Missouri River, and encouragement of barge towing companies to re-enter and utilize the Missouri River for barge transport.
    - By supporting the MODOT port efforts and providing new economic development incentives specifically designed for ports. Infrastructure grant funding is key.
    - Support Capital Improvement Program.
    - Additional funding.
    - Continue to work to support funding for public port development.
    - Capital funding for infrastructure placement at the port sites as well as a cumulative effort to market the great commodity of the river systems.
    - By fully funding MoDOT Multimodal's Capital Improvement Grant program to provide critically needed basic infrastructure for all public ports in MO.
    - Provide a steady source of multi-year capital improvement funds focused on projects with good returns.
    - Provide incentives for companies to ship by barge versus by rail and truck. Provide incentives to companies which do tows and supply barges to make expanding their services more profitable. Continue to fight the Missouri River battle. Provide capital funds.

Bottom line, Missouri's Public Port Authorities are a diverse group with big business operations and big business needs. Port Authorities on the Missouri River most need reliable transportation on the Missouri River.

Figure 44, St Louis Waterway Commerce.

Conclusions:

Importance:

1. Waterway transportation is an important part of a total transportation system. It is able to carry the largest cargo at the least costs, in a grade-separated system that connects Missouri to the wealth of the global market place.
2. One full, standard tow between St Louis and Kansas City frees up 900 semi trucks to carry other loads, and is equal to a convoy of trucks 45 miles long on I-70 that would burn 75,000 more gallons of fuel, increase congestion, and increase safety problems.
3. In Missouri, 39 counties are waterway counties with another 44 close enough to benefit from waterways, which is about 70% of Missouri.
4. Missouri's waterways carry more then 34 million tons of cargo annually, worth an estimated $2 billion annually.
5. Missouri's Public Port Authorities reported more than 2.7 million of tons of cargo annually; worth an estimated $190 millions annually, primarily farm supplies and products.
6. Cost savings are most beneficial to Missouri Farmers as primary users of waterway and by reducing the transportation costs of bulk fertilizers, feed, and crops.
7. The Missouri River has a potential to reach more farmers than either the Arkansas or Illinois Rivers, carry cargo equal to 80% of a busy interstate parallel to I-70, improve farm economies in most Missouri counties, and carry cargo worth billions of dollars per year.

Needs:

1. Different ports have different needs totaling millions of dollars per year and the needs should be evaluated on an individual basis.
2. Infrastructure improvements are the most common need, as are short-term needs.
3. Most of the individual port needs, and most of the cargo, are on the Mississippi River, especially south of St Louis.
4. Improved navigation on the Missouri River is a common economic need for more than 23 Missouri counties, more than 50 small Missouri communities, 3 public ports, dozens of private ports, and farmers in most Missouri counties.

Figure 45, St Joseph's Highway, Railway, and Waterway Transportation Networks.

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Missouri Public Port Authorities:
Assessment of Importance and Needs

Appendix A: Blank Survey Form.

Appendix B: Survey Responses.

- Ports Surveyed in 2005.
- Reported Service Areas.
- Reported Customers.
- Reported Services.
- Reported Commodity Peaks.
- Potential Commodities Reported.
- Potential Tenants Reported.
- Reported Infrastructure Status and Needs.
- Reported Equipment Status and Needs.
- Reported Support Facilities Status and Needs.
- Reported Economic Impacts.
- Reported Landside Access Issues.
- Reported Waterside Access Issues.

MoDOT Survey of Public Port Authorities

Missouri Department of Transportation, 2005

General Information:

Public Port Authority Name: _____

Contact Person's Name: _____ Title: _____

Contact's Address: _____

City: _____ State: ____ Zip: _____

Phone Number: _____ Fax: _____

E-Mail Address: _____

Port Located on River: _____ at Mile Marker: _____

Stevedore Company: _____

Current Size of Port Authority Land: _____ acres

How many acres of Porth Authority land are available for:

Industrial development on-site: _____ acres

Industrial development off-site: _____ acres

Commercial development on-site: _____ acres

Commercial development off-stie: _____ acres

Does the Port Authority have a Master Plan? Yes No
(If yes, please provide a copy.)

Does the Port Authority have a Capital Improvement Plan? Yes No
(If yes, please provide a copy.)

Are maps, charts and aerial photographs of the Port available? Yes No
(If yes, please provide copies.)

Public Port Authority's Service Area, Customers, and Services:

Please list the geographic areas served by the Public Port Authority by State and County. List as many as apply:

State:	County:
MO	

Please list the Port Authority's major customer types (shippers, co-ops, grain companies, etc):

Customers:

Please list services available at the Public Port Authority (fleeting, fueling, repairs, towing, bagging, etc):

Services:

MoDOT Survey of Public Port Authorities

Public Port Authority's Existing Inbound Commodities:

Total of all inbound commodities handled (tons per year):

Year:	Total (tons):
2004	
2003	
2002	
2001	
2000	

Howard/Cooper County Region Inbound

Please detail the Public Port Authority's top five inbound commodities:

	Rank:	Commodity:	Tonnage:	Origin County:	State:	Country:
2004						
2003				Howard/Cooper County Regional Port Authority		Inbound
2002				Howard/Cooper County Regional Port Authority		Inbound
2001				Howard/Cooper County Regional Port Authority		Inbound
2000				Howard/Cooper County Regional Port Authority		Inbound

Please detail seasonal peaks for major inbound commodities:

Rank:	Commodity:	Peak Months:	Peak Tons:
1			
2			
3			
4			
5			

Public Port Authority's Existing Outbound Commodities:

Total of all outbound commodities handled (tons per year):

Year:	Total (tons):
2004	
2003	
2002	
2001	
2000	

Howard/Cooper County Region Outbound

Please detail the Public Port Authority's top five outbound commodities:

2004

Rank:	Commodity:	Tonnage:	Origin County:	State:	Country:

2003 Howard/Cooper County Regional Port Authority Outbound

2002 Howard/Cooper County Regional Port Authority Outbound

1					
2					
3					
4					
5					

2001

2000 Howard/Cooper County Regional Port Authority Outbound

1					
2					
3					
4					
5					

Please detail seasonal peaks for major outbound commodities:

Rank:	Commodity:	Peak Months:	Peak Tons:
1			
2			
3			
4			
5			

Potential Commodities or Tenants:

For any major cargo losses of the past five years, please detail the loss, any needs that could be met to recapture losses, and any other reasons for the loss.

Year(s):	Commodity:	Tonnage:	In or Out:	Needs to Recapture Losses:

Reasons or Comments:

What types of commodities would the Port Authority like to handle in the future, and what is needed to attract the commodity to the port (such as a climate controlled warehouse or rail service)?

	Commodity:	Tonnage:	In or Out:	Needs to Attract the Commodity:
Future				

Comments:

Future				
Future				
Future				

For any major existing tenants lost or potential tenant opportunities missed in the past five years, please detail the lost / missed tenant and reasons for the loss:

Lost/Missed:	Year:	Tenant (type and size):	Reasons or comments:

Infrastructure Status and Needs:

Please list infrastructure needs by type (general, road, etc). Add more as needed. For each, indicate the existing infrastructure's condition (good, fair, or poor). Indicate what needs to be done (repair, improve, replace, add to, etc). Estimate the quanity (number, miles, feet, etc) and unit of measure. Estimate the costs of meeting the needs, and finnally indicate the priority of the need according to:

Critical - unsafe condition or could fail at any time.
Immediate - (1-2 years) required to maintain minimal port operations.
Short term - (3-5 years) level of deficiency affects ability to serve customer needs.
Long term - (5+ years) needed to support future growth and attract new business.

Infrastructure General

2005 Howard/Cooper County Regional Port Authority

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
Dock					
Electric Lines					
Gas Lines					
Mooring Dolphins					
Sewer Lines					
Water Lines					
Water Tower					

Infrastructure Rail

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
Bridge					
Main Line					
Marshalling Yard					
Spur Track					

Infrastructure Road (on-site)

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
At-Grade Crossing					
Bridge					
Main					
Secondary					

Other Infrastructure Items

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
Infrastructure Other					

Equipment Status and Needs:

Please list equipment needs by type (general, crane, etc). Add more as needed. For each, indicate the existing equipment's condition (good, fair, or poor). Indicate what needs to be done (repair, improve, replace, add to, etc). Estimate the quanity (number, miles, feet, etc) and unit of measure. Estimate the costs of meeting the needs, and finnally indicate the priority of the need according to: Critical - unsafe condition or could fail at any time. Immediate - (1-2 years) required to maintain minimal port operations. Short term - (3-5 years) level of deficiency affects ability to serve customer needs. Long term - (5+ years) needed to support future growth and attract new business.

Equipment General

2005 Howard/Cooper County Regional Port Authority

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
Clamshell Basket					
Fork Lift					
Grapple					
Hooks					
Magnets					
Skid Loader					
Slings					
Spreader Bars					

Equipment Crane

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
Container					
Crawler					
Gantry					
Mobile					
Overhead Bridge					

Equipment Conveyer

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
Covered					
Open					

Other Equipment Items:

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
Equipment Other					

Support Facilities Status and Needs:

Please list facility needs by type (general, crane, etc). Add more as needed. For each, indicate the existing facility's condition (good, fair, or poor). Indicate what needs to be done (repair, improve, replace, add to, etc). Estimate the quanity (number, miles, feet, etc) and unit of measure. Estimate the costs of meeting the needs, and finnally indicate the priority of the need according to: Critical - unsafe condition or could fail at any time. Immediate - (1-2 years) required to maintain minimal port operations. Short term - (3-5 years) level of deficiency affects ability to serve customer needs. Long term - (5+ years) needed to support future growth and attract new business.

Support Facilities General 2005 Howard/Cooper County Regional Port Author

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
Bagging Facility					
Barge Cleaning					
Dry Bulk Tank					
Fire Station					
Foreign Trade Building					
Fuel Depot					
Grain Bins					
Liquid Bulk Tank					
Maintenance Shop					
Office Building					
Rail to Barge Terminal					
Transit Shed					
Transload Facility					
Truck Dump with Pit					
Truck Scale					
Truck Staging Area					
Truck to Barge Termina					

Support Facilities Warehouse 2005 Howard/Cooper County Regional Port Author

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
Climate Control					
Cold					
Dry					

Other Support Facilities: 2005 Howard/Cooper County Regional Port Author

Items:	Condition:	Need to...	Quantity:	Estimated Cost ($):	Priority:
Support Faciliti Other					

Economic Impact, 2005:

Please provide the following infomation for use in estimating the economic impact of the port:

Number of full time employees of the port:

Number of part time employees of the port:

Total annual payroll for port employees:

Number of employees working at the port but employed by others, estimated:

Number of businesses that depend on the port, estimated:

What are the primary sources of revenues for the port?:

What are annual expenditures for the following?

Supplies, Materials, or Tools:

Fuel:

Dock Operations:

Repairs or Maintenance-of-way:

Leases or Rentals:

Insurance:

Administration:

Others:

Access Issues, Landside, 2005:

Nearest Interstate highway, Name: Miles away:

Nearest US highway, Name: Miles away:

Nearest Class I railroad, Name: Miles away:

Problems with highways / railroads?

What is the name of the road primarily used to access the port

What is the condition of the access road?

New - needs no repairs. Good - repairs can wait. Moderate - needs minor repairs. Poor - needs significant repairs. Bad - needs reconstruction.

Specific condition problems?

How is the capacity of the access road?

Good - rarely congested. Moderate - ocasionally congested. Poor - usually congested.

Specific capacity problems?

Estimate or report average annual truck traffic?

(number)

What is the lowest weight limit, of access road bridges?

(tons)

Specific bridge probelms?

What is the condition of access road signs?

New, good, moderate, poor, or bad.

Specific sign problems?

Access Issues, Landside, 2005 (continued):

Does the port have rail service Yes No

If the port has rail service, then by which railroad(s)?

Specific railroad problems

Access Issues, Waterside, 2005:

What is the maintained depth of channel (feet)?

Specific channel problems?

What is the length of channel width (feet)?

What is the turning basin's maximum length (feet)?

Specific turning basin problems?:

What is the turning basin's maximum width (feet)?

What is the mean depth at the dock (feet)?

Specific dock problems?:

Specific dredging problems?:

What is the largest vessel and number of barges that can be accommodated?

Specific vessel size problems?:

Public Port Authority Development Issues, 2005:

What is the port's top infrastructure repair or replacement need to retain existing business?

What is the port's top infrastructure need to attract new business?

What is the port's top equipment repair or replacement need to retain existing business?

What is the port's top equipment need to attract new business?

What is the port's top support facility repair or replacement need to retain existing business?

What is the port's top support facility need to attract new business?

Other Issues, 2005:

What major disadvantage does the port have when competing for new cargo shipments or industrial development (such as freight rates, equipment condition, highway access, railway access, etc)?

What does the port need to develop its maximum potential?

Please describe any laws, regulations or environmental constraints that may be impeding port growth:

Is the lack of rail, truck, and barge intermodal service a major impediment to current port operations? If so, please describe:

What is needed for Missouri Public Port Authorities to effectively compete in the global economy (compete for foreign shipments)?

What is the best way to market advantages of Missouri Public Port Authorities?

How can Missouri's state government best support growth and development of Missouri Public Port Authorities?

Thank you for your time completing the survey and helping improve Missouri's ports. If you have any questions or comments, please contact:

Sherrie Martin
Waterways Program Manager
(573) 751-8620
Sherrie.Martin@modot.mo.gov

MoDOT, Multimodal Operations
2217 St Mary's Blvd
PO Box 270
Jefferson City, MO 65102

Appendix B, Port's Surveyed in 2005.

City of St. Louis Port Authority.

Mr. Nick Nichols.
1015 Locust, Suite 1200,
St. Louis, MO 63101.
Phone: (314) 622-3400 Fax: (314) 231-2341
e-mail: stlport@stlouis.missouri.org

The City of St Louis Port Authority did not answer many of the survey questions, nor did it request financial assistance.

Howard/Cooper County Regional Port Authority.

Mr. Roy Humphreys, Office Manager.
609 Main Street,
Boonville, MO 65233.
Phone: (660) 882-5858 Fax: (660) 882-5858
e-mail: howcoop_port@sbcglobal.net
On the Missouri at mile marker 196.45.

Port size, in acres: 32.
The port has maps, charts, or photographs.
Stevedore(s): Interstate Marine Terminals.

Jefferson County Port Authority.

Ms. Rosie Buchanan, Assistant Executive Director.
P.O. Box 603 ,
Hillsboro, MO 63050.
Phone: (636) 797-5336 Fax: (636) 797-5080
e-mail: rbuchanan@jeffcomo.org

The Jefferson County Port Authority does not yet have a port facility. Thus, many of the survey questions did not apply.

Kansas City Port Authority.

Mr. Pat Sterrett.
10 Petticoat Lane, Suite 250,
Kansas City, MO 64106-2103.
Phone: (816) 221-0636 Fax: (816) 221-0189
e-mail: psterrett@edckc.com
On the Missouri at mile marker 367.1.

Port size, in acres: 11.
On-site acres available for industry: 1.
The port has maps, charts, or photographs.
Stevedore(s): MWT Bulk Services LLC.

Lewis County-Canton Port Authority.

Mr. Dick Pulse.
P.O. Box 282,
Canton, MO 63435.
Phone: (573) 288-5463 Fax: (573) 288-5665
e-mail: lpa@nemonet.com

The Lewis County-Canton Port Authority has one private port tenant, so it's answers were about a private port and beyond the scope of this survey.

Marion County Port Authority.

Mr. George Walley, Executive Director.
201 N 3rd St, Ste 220,
Hannibal, MO 63401.
Phone: (573) 221-1033 Fax: (573) 221-3389
e-mail: nemodev@nemonet.com
On the Upper Mississippi at mile marker 319.

Port size, in acres: 1200.
On-site acres available for industry: 800.
Off-site acres available for industry: 1000.
On-site acres available for commerce: 100.
The port has a Master Plan.
The port has a Capital Plan.
The port has maps, charts, or photographs.
Stevedore(s): None at this time.

Mid-America Port Commission.

Capt. Mark McNally, Executive Director.
P.O. Box 361,
Monroe City, MO 63456-0361.
Phone: (217) 222-3111 Fax: (217) 222-1113
e-mail: maiaport@adams.net
On the Upper Mississippi at mile marker 324.

The port has maps, charts, or photographs.
Stevedore(s): None.

The Mid-America Port Commission does not yet have a port facility in Missouri. Thus, many of the survey questions did not apply.

Mississippi County Port Authority.

Mr. Leon Steinbrueck, Project Manager.
P.O. Box 705,
Dexter, MO 63841.
Phone: (573) 624-7505 Fax: (573) 624-7505
e-mail: lesjes@newwavecomm.net
On the Lower Mississippi at mile marker 946.

Port size, in acres: 18.
On-site acres available for industry: 18.
Off-site acres available for industry: 100.
On-site acres available for commerce: 18.
Off-site acres available for commerce: 18.
The port has a Master Plan.
The port has a Capital Plan.

New Bourbon Regional Port Authority.

Mr. Ron Steele, Economic Development Planner.
P.O. Box 366,
Perryville, MO 63775.
Phone: (573) 547-8357 Fax: (573) 547-7283
e-mail: semorpc@semorpc.org
On the Upper Mississippi at mile marker 120.5.

Port size, in acres: 72.
Off-site acres available for industry: 20.
Off-site acres available for commerce: 20.
The port has a Master Plan.
The port has maps, charts, or photographs.
Stevedore(s): Ste. Genevieve Sand and Material Company Inc.

New Madrid County Port Authority.

Ms. Timmie Hunter, Executive Director.
435 Main Street,
New Madrid, MO 63869.
Phone: (573) 748-2530 Fax: (573) 748-7220
e-mail: nmcopa@sheltonbbs.com
On the Lower Mississippi at mile marker 885.

Port size, in acres: 80.
On-site acres available for industry: 35.
The port has a Master Plan.
The port has a Capital Plan.
The port has maps, charts, or photographs.
Stevedore(s): St. Jude & New Madrid Harbor Service.

Pemiscot County Port Authority.

Mr. David Madison, Executive Director.
619 Ward Avenue,
Caruthersville, MO 63830.
Phone: (573) 333-4125 Fax: (573) 333-4216
e-mail: pemiscotport@yahoo.com
On the Lower Mississippi at mile marker 849.9.

Port size, in acres: 83.
On-site acres available for industry: 20.
The port has a Capital Plan.
The port has maps, charts, or photographs.
Stevedore(s): Wepfer Marine.

Southeast Missouri Regional Port Authority.

Mr. Dan Overbey, Executive Director.
10 Bill Bess Drive,
Scott City, MO 63780.
Phone: (573) 264-4045 Fax: (573) 264-2727
e-mail: semoport@semoport.com
On the Mississippi UMR at mile marker 48.

Port size, in acres: 500.
On-site acres available for industry: 40.
Off-site acres available for industry: 70.
On-site acres available for commerce: 5.
Off-site acres available for commerce: 10.
The port has a Master Plan.
The port has a Capital Plan.
The port has maps, charts, or photographs.
Stevedore(s): Girardeau Stevedores, First Missouri Terminals, Consolidated Grain and Barge.

St. Joseph Regional Port Authority.

Mr. Brad Lau, Executive Director.
3003 Frederick Avenue,
St. Joseph, MO 64506.
Phone: (816) 232-4461 Fax: (816) 364-4873
e-mail: blau@stjoseph.com
On the Missouri at mile marker 448.

Port size, in acres: 15.
On-site acres available for industry: 10.
Off-site acres available for industry: 37.
Off-site acres available for commerce: 9.5.
The port has a Master Plan.
The port has a Capital Plan.
The port has maps, charts, or photographs.
Stevedore(s): Kinder-Morgan Terminals.

St. Louis County Port Authority.

Ms. Jackie Wellington.
121 S. Meramec Ave., Suite 900,
Clayton, MO 63105.
Phone: (314) 615-7663 Fax: (314) 615-7666
e-mail: jwellington@stlouisco.com

St Louis County Port Authority does not have port facilities. Thus, many of the survey questions did not apply.

Summary of Reported Service Areas.

Please list the geographic areas served by the Public Port Authority by State and County. List as many as apply:

Howard/Cooper County Regional Port

MO: Cooper,
Howard,

Jefferson County Port Authority.

MO: Jefferson,

Kansas City Port Authority.

KS: Johnson,
Leavenworth,
Wyandotte,
MO: Bates,
Cass,
Clay,
Jackson,
Platte,

Marion County Port Authority.

MO: Lewis,
Marion,
Monroe,
Ralls,
Shelby,

Mid-America Port Commission.

IA: Des Moines,
Henry,
Jefferson,
Lee,
Van Buren,
Wapello,
IL: Adams,
Brown,
Cass,
Hancock,
Henderson,
Mercer,
Morgan,
Pike,
Schuyler,
Scott,
Warren,
MO: Clark,
Knox,
Lewis,
Marion,
Monroe,
Pike,
Ralls,
Scotland,
Shelby,

Mississippi County Port Authority.

MO: Mississippi,

New Bourbon Regional Port Authority.

MO: Perry,
Ste Genevieve,

New Madrid County Port Authority.

AR: Craighead,
Mississippi,
MO: Butler,
Dunklin,
Mississippi,
New Madrid,
Pemiscot,
Scott,
Stoddard,

Pemiscot County Port Authority.

AR: 14 counties,
KY: 4 counties,
MO: 23 counties,
TN: 11 counties,

Southeast Missouri Regional Port Auth

IL: Alexander,
Jackson,
Pulaski,
Union,

MO: Bollinger,
Cape Girardeau,
Madison,
Mississippi,
New Madrid,
Perry,
Scott,
St Francois,
Ste Genevieve,
Stoddard,
Wayne,

St. Joseph Regional Port Authority.

MO: Andrew,
Buchanan,
DeKalb,

St. Louis County Port Authority.

MO: St Louis County,

Summary of Reported Customers.

Please list the Port Authority's major customer types:

Howard/Cooper County Regional Port Authority.

Area farmers
Interstate Marine Terminals
MFA Inc.

Kansas City Port Authority.

Shippers

Marion County Port Authority.

BASF
CF Ammonia
MFA
Northeast Power Coop

New Madrid County Port Authority.

Grain company
Mill

Pemiscot County Port Authority.

1 barge lid manufacturer
1 grain exporter
2 dry fertilizer importers

Southeast Missouri Regional Port Authority.

Corn mill
Fertilizer distributor
Grain elevator
Public terminal
Team tracks
Wood chip mill

St. Joseph Regional Port Authority.

Ivy Steel
LMP Steel
United Suppliers, Fertilizer Div

Summary of Reported Services.

Please list services available at the Public Port Authority (fleeting, fueling, repairs, towing, bagging, etc):

Howard/Cooper County Regional Port Authority.

Grain bin facilities.
Loading and unloading bulk commodities.

Kansas City Port Authority.

Barge cleaning.
Product bagging.
Product Handling.
Product Storage.
Transloading.

Marion County Port Authority.

Ammonia unloading.
Coal unloading.
Urea unloading.

New Bourbon Regional Port Authority.

Barge fleeting.
Inbound conveyor.

New Madrid County Port Authority.

Barge docking.
Boat docking.
Commodity movement.
Fleeting.
Loading / Unloading.
Public dock.
Rail services.
Repairs.

Pemiscot County Port Authority.

Barge cleaning.
Barge fleeting.
Towing.

Southeast Missouri Regional Port Authority.

Barge - rail - truck transport.
Barge fleeting.
Barge repairs.
Dock - gen, dry, project cargoes.
Outdoor storage.
Railroad scale.
Slackwater harbor.
Team tracks.
Truck scale.

St. Joseph Regional Port Authority.

On/off loading.

Summary of Reported Commodity Peaks.

Please detail seasonal peaks for major inbound and outbound commodities:

Howard/Cooper County Regional Port Authority.

In/Outbound	Rank	Commodity	Peak Months
Inbound	1	Fertilizer	Mar-May and Sep-Nov
	2	Molasses	Jun-Sep
Outbound	1	Grain	Sep-Nov

Kansas City Port Authority.

In/Outbound	Rank	Commodity	Peak Months
Inbound	1	Fertilizer	February - June
	2	Fertilizer	August-October

New Bourbon Regional Port Authority.

In/Outbound	Rank	Commodity	Peak Months
Inbound	1	Pet coke	Oct 2003
	2	Pet coke	June 2001
	3	Pet coke	Aug 2002
	4	Pet coke	Oct 2002
	5	Sand	May 2001

New Madrid County Port Authority.

In/Outbound	Rank	Commodity	Peak Months
Inbound	1	Rice	September/October
Outbound	1	Cotton Seed	January

Pemiscot County Port Authority.

In/Outbound	Rank	Commodity	Peak Months
Outbound	1	Soybeans	Oct., Nov.
	2	Corn	Sept., Aug.
	3	Wheat	June
	4	Milo	Sept., Aug.
	5	Rice	Jan., Feb., Mar., Apr.

Southeast Missouri Regional Port Authority.

In/Outbound	Rank	Commodity	Peak Months
Inbound	1	Dry fertilizer	March-April
	2	Sulfate	Steady
	3	Liquid fertilizer	March-April
	4	Ammonium Nitrate	March-April
	5	Salt	October-January
Outbound	1	Corn	October, January
	2	Beans	October, January
	3	Sand	April
	4	Mulch	Steady
	5	Wheat	June

Summary of Potential Commodities Reported.

Lost: For any major cargo losses of the past five years, please detail the loss, any needs that could be met to recapture losses, and any other reasons for the loss.

Future: What types of commodities would the Port Authority like to handle in the future, and what is needed to attract the commodity to the port?

Howard/Cooper County Regional Port Authority.

Lost:

Comments: Currently there is very little river transportation occurring on the Missouri River and most grain and fertilizer which the port had previously transported by barge is now being done by train or truck. The reason for this loss is due to the recurring conflict of recreational uses versus navigational use of the river, the endangered species act, the navigation season on the Missouri River is variable and the river depth is variable, affecting the interest of barge towing companies to operate on the Missouri River.

Future:

Comments: Until the Missouri River navigation season becomes more defined, it will be difficult to attract new commodities to the port.

Jefferson County Port Authority.

Future: Wet or Dry Cargo.

Needs: A physical port facility.
Comments: Jefferson County does not have a port facility at this time.

Kansas City Port Authority.

Lost in 2004: Inbound, 40,000 tons, Fertilizer.

Needs: Open river to barge traffic.
Comments: River was not reliably accessible to commercial barge traffic due to inconsistent water flow.

Lost in 2003: 10,000 tons, Fertilizer.

Needs: Open river to barge traffic.
Comments: River was not reliably accessible to commercial barge traffic due to inconsistent water flow.

Future: In & Out, Containerized Bulk Commodity.

Needs: Improved handling systems, cranes, conveyors, facilities, etc.

Mid-America Port Commission.

Future: Inbound, Container on Barge.

Needs: Specialized Handling Equipment (Rail mounted translating crane).

New Bourbon Regional Port Authority.

Future: Outbound, 100,000 tons, Trap rock.

Needs: Outbound Conveyor System.

New Madrid County Port Authority.

Lost in 2004: 50,000 tons, Steel.

Needs: General Cargo Dock being incapable of handling a load lift of more than 20 tons for a single lift.

Comments: The New Madrid County Port Authority has lost over 250,000 tons of steel over the past five years due to the lift load capacity at the General Cargo Dock being incapable of handling a load lift of more than 20 tons for a single lift. The dock must be upgraded in order for the New Madrid County Port Authority to recapture the losses. However, we are continually turning customers away and the upgrade would have a big impact on the tonnage movement at the harbor site.

Lost in 2003: 50,000 tons, Steel.

Lost in 2002: 50,000 tons, Steel.

Needs: General Cargo Dock being incapable of handling a load lift of more than 20 tons for a single lift.

Lost in 2001: 50,000 tons, Steel.

Lost in 2000: 50,000 tons, Steel.

Future: Additional farming commodities.

Comments: The New Madrid County Port Authority would like to handle additional farming commodities as well as steel and aluminum. In order to increase commodity movement at the port, the existing rail at the harbor site must be extended to the general cargo dock and the dock upgraded for tonnage lift and with a H-Crane in order to handle containers while moving commodities from barge to rail or truck. A warehouse is also needed at this site.

Future: Aluminum.

Future: Steel.

Pemiscot County Port Authority.

Future: In & Out, 1,000,000 tons, Containers.

Needs: A second cargo dock, cranes, yard, and office.

Southeast Missouri Regional Port Authority.

Lost in 2005: Outbound, 100,000 tons, Soy Diesel.

Needs: More room, road, rail, water, sewer, and storm drainage.

Comments: In by rail, out by truck and barge. Prospect is interested in Semo Port, but decided to pursue other locations in Iowa first. Port site, which is filled above flood level, is barely large enough and still needs road, rail, water, sewer, and storm drainage.

Southeast Missouri Regional Port Authority.

Lost in 1998: Inbound, 300,000 tons, Steel.

Needs: Better rail road rates.
Comments: In by barge, out by rail and truck. Terminal company was referred by Union Pacific Railroad. Desire was to compete for Nucor Steel (Blytheville, AR) outbound steel, which primarily moves by BNSF railway and truck. Steel would move by barge to terminal, then by UP Railway. Terminal chose a St. Louis site for better overall rates (barge to St Louis, switch rates to eastern railroads). From Semo port, UP rail rates to IL interchange points made higher overall rates.

Lost in 1997: Inbound, 600,000 tons, Iron Ore.

Needs: Lower costs.
Comments: In by barge, out by rail. Barge line wanted a cost proposal for barge-to-rail transfer of direct reduced iron ore from Gulf points to a steel company in Chicago. Barge line was referred by Union Pacific Railroad. Requirements were to keep product dry, move when northern rivers froze, etc. Final choice was barge all the way to Chicago and on ground storage at steel mill (much cheaper alternative).

Lost in 1994: Inbound, 500,000 tons, Pasta.

Needs: At the time, sewer, electric, gas, or railroad, and acres above flood for sale.
Comments: In by barge, out by rail and truck. Client was lost because the port, at that time did not have sewer, electric, gas or railroad. The prospect wanted 100 acres, however the Port did not have 100 acres filled above the flood elevation. Prospect also wanted to buy the property and the Port was only willing to lease property. The location consultant said that Semo Port was initially rated #1 of 19 sites, but was dropped due to a lack of land filled above flood elevation.

Future: In & Out, Liquids.

Needs: Liquid dock.

Future: In & Out, Lumber.

Needs: Reload operator.

Future: In & Out, Metals.

Needs: Warehouse.

St. Joseph Regional Port Authority.

Future:

Comments: There has been an interest in Weyerhaeuser bringing raw material paper by bulk to their corrugated cardboard manufacturing plant in St. Joseph. River limitations and limited barge arrangements could not be made. Other types of commodities likely for St. Joseph.

Summary of Potential Tenants.

For any major existing tenants lost or potential tenant opportunities missed in the past five years, please detail the lost / missed tenant and reasons for the loss:

Howard/Cooper County Regional Port Authority.

None, the only item which the port has to lease is its grain factility. There has been no loss of tenancy and the grain facility is under lease through September 30, 2018.

Jefferson County Port Authority.

Missed in 2004, Manufacturer tenant.

Needed shipping facility/port.

Missed in 2005, Steel Manufacturing Co tenant.

Needed shipping facility/port.

New Madrid County Port Authority.

Missed in 2001, Grain related tenant.

The New Madrid County Port Authority missed a large industry in 2001. The industry was grain related and would have employed approximately 18 employees. The industry went bankrupt.

Missed in 2004, Confidential tenant.

The New Madrid County Port Authority missed another large industry in 2004. This industry is confidential but would have employed approximately 25 employees. The New Madrid County Port Authority is still trying to acquire this industry. Infrastructure placement would be required.

Pemiscot County Port Authority.

Missed in 2000, Cottonseed proc. (150M ton) tenant.

Rail incomplete.

Missed in 2001, Steel fabricator (100M ton) tenant.

Rail incomplete.

Missed in 2002, Mineral shipper (50M ton) tenant.

Rail incomplete.

Missed in 2002, Cottonseed (80M ton) tenant.

Rail incomplete.

Missed in 2003, Cottonseed (75M ton) tenant.

Rail incomplete.

Missed in 2004, Elevator (100M ton) tenant.

Rail incomplete.

Southeast Missouri Regional Port Authority.

Lost , Mill and bagging plant tenant.

Two tenants closed for market reasons unrelated to Port Facilities. The wood chip mill has reopened under new ownership. The bagging plant has a new owner who plans to convert it to a corn mill.

Summary of Reported Infrastructure Status and Needs.

Please list infrastructure needs by type (general, road, etc). Add more as needed. For each, indicate the existing infrastructure's condition (good, fair, or poor). Indicate what needs to be done (repair, improve, replace, add to, etc). Estimate the quanity (number, miles, feet, etc) and unit of measure. Estimate the costs of meeting the needs, and finnally indicate the priority of the need according to:

Critical - unsafe condition or could fail at any time.
Immediate - (1-2 years) required to maintain minimal port operations.
Short term - (3-5 years) level of deficiency affects ability to serve customer needs.
Long term - (5+ years) needed to support future growth and attract new business.

Howard/Cooper County Regional Port Authority.

Top infrastructure repair or replacement need, to retain existing business:

Increase capacity of grain and storage handling at the grain facility by addition of grain bins. Requires purchase or long term lease of additional land.

Infrastructure General.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Dock	Fair			
	Electric Lines	Fair			
	Grain facility	Fair			

Infrastructure Road (on-site).

Priority	Asset	Condition	Need Type	Need Number	Cost
	Main	Good			
	Secondary	Fair			

Jefferson County Port Authority.

Top infrastructure repair or replacement need, to retain existing business:

Priority need of physical port facility.

Top infrastructure need, to attract new business:

Transportation (highway, rail and barge transportation).

Infrastructure General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	Mooring Dolphins	Poor	Add to		$1,000,000
Short-term	Electric Lines	Fair	Improve		$1,000,000
Short-term	Gas Lines	Fair	Add to		$1,000,000
Short-term	Sewer Lines	Fair	Add to		$1,000,000
Short-term	Water Lines	Fair	Add to		$1,000,000

Infrastructure Other.

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	Building Construction	Poor	Add to	1	$1,000,000
Immediate	Land Purchase	Poor	Add to	100 Acre	$3,000,000

Infrastructure Rail.

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	Spur Track	Fair	Add to		$1,000,000

Kansas City Port Authority.

Infrastructure General.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Mooring Dolphins	Fair	Repair		

Infrastructure Rail.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Spur Track	Fair	Repair		

Marion County Port Authority.

Top infrastructure repair or replacement need, to retain existing business:

Existing business can live with current conditions.

Top infrastructure need, to attract new business:

Modification of Dock and Levee to allow larger barges and for Multi-Modal container operations. More rail spurs.

Infrastructure General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Dock	Fair	Add to	1	$3,000,000
Long-term	Electric Lines	Good	Add to	1	$250,000
Long-term	Gas Lines	Good	Add to	1	$50,000
Long-term	Mooring Dolphins	Fair	Add to	1	$500,000
Long-term	Sewer Lines	Good	Add to	1 mile	$200,000
Long-term	Steam Line	Good	Add to	1 mile	$500,000
Long-term	Water Lines	Good	Add to	1 mile	$200,000

Infrastructure Other.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Levee Modifications	Good	Add to	1	$2,500,000

Infrastructure Rail.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Marshalling Yard	Poor	Add to	1	$500,000
Long-term	Spur Track	Good	Add to	1 mile	$1,000,000
	Main Line	Good			

Infrastructure Road (on-site).

Priority	Asset	Condition	Need Type	Need Number	Cost
	At-Grade Crossing	Good			
	Main	Good			
	Secondary	Good	Improve	2 miles	$2,000,000

Mississippi County Port Authority.

Top infrastructure need, to attract new business:

Slack water harbor.

Infrastructure General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	Water Tower	None	Add to	5000 Gall	$50,000
	Dock	Not Feasible			
	Electric Lines	Grant Approved			
	Water Lines	Within a year			

Infrastructure Road (on-site).

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	Secondary	Poor	Improve	4 miles	

New Bourbon Regional Port Authority.

Top infrastructure need, to attract new business:

Slackwater harbor and dock.

Infrastructure General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Dock	None	Construct	1	$2,802,467
Short-term	Electric Lines	None	Construct	1.4 Miles	$36,000
Short-term	Harbor Excavation	None	Construct	1	$2,393,000
Short-term	Mooring Dolphins	None	Construct	2	$289,000
Short-term	Sewer Lines	None	Construct	3.2 Miles	$591,000
Short-term	Water Lines	None	Construct	3.2 Miles	

Infrastructure Rail.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Spur Track	None	Construct		$3,000,000

New Madrid County Port Authority.

Top infrastructure repair or replacement need, to retain existing business:

General cargo dock tonnage lift capacity increased.

Top infrastructure need, to attract new business:

Extending rail service, and levee road paving.

Infrastructure General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Critical	Water Lines	None	Add to	?	$297,000
Short-term	Dock	Good	Improve	All	$1,460,000

Infrastructure Rail.

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	Main Line	Good	Add to	2500+ ft	$1,234,000

Infrastructure Road (on-site).

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Main	Poor	Improve	1.6 miles	$2,000,000
Short-term	Secondary	Poor	Improve	0.4 miles	$800,000

Pemiscot County Port Authority.

Top infrastructure repair or replacement need, to retain existing business:

Complete rail spur.

Infrastructure General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Dock	Good	Add to	1	$500,000
Long-term	Mooring Dolphins	Good	Repair		$150,000
	Electric Lines	Good			
	Gas Lines	Good			
	Sewer Lines	Good			
	Water Lines	Good			
	Water Tower	Good			

Infrastructure Rail.

Priority	Asset	Condition	Need Type	Need Number	Cost
Critical	Spur Track	Fair	Add to	15000	$2,450,000
Immediate	Marshalling Yard		Add to	5000	$550,000

Top infrastructure repair or replacement need, to retain existing business:

Cornmill - Street paving, railroad tracks. GSC - paving. Other items per capital plan, see exhibit #2.

Top infrastructure need, to attract new business:

Site fill, road, rail, water, sewer, and storm drainage.

Infrastructure General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Critical	Drainage				$51,000
Critical	Mooring dolphins	None	Build		$70,000
Critical	Sewer lines	Good	Extend		$56,000
Critical	Water lines	Good	Extend		$51,000
Immediate	Dock face surface	Good	Install steel bumpers, paint		$160,000
Immediate	Drainage				$49,000
Immediate	Sewer lines	Good	Extend		$49,000
Immediate	Silt dike				$40,000
Immediate	Water lines	Good	Extend		$49,000
Short-term	Mooring dolphins	None	Build		$128,000
Long-term	Dock crane & shed				$564,000
Long-term	Harbor ramp				$132,827
Long-term	Mooring dolphins	None	Build		$396,000
	Electric Lines	Good	Extend		
	Gas Lines	Good	Extend		
	Water Tower	Good	Nothing		

Infrastructure Rail.

Priority	Asset	Condition	Need Type	Need Number	Cost
Critical	Crossings				$7,500
Critical	North side tracks				$499,000
Critical	Ties				$85,000
Immediate	Br2 fill				$88,217
Immediate	Br3 fill				$150,000
Immediate	Br3 ties				$34,540
Immediate	Co305 rail				$93,954
Immediate	Crossings				$22,500
Immediate	Culverts				$60,000
Immediate	Interchange track				$334,087
Immediate	Marq rail				$77,765
Immediate	Paint steel				$385,000
Immediate	Tankcar unload				$25,000
Immediate	Temp upgrades				$20,000
Immediate	Ties				$50,000
Short-term	Br3 fill				$150,000

Infrastructure Rail.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Br4 fill				$100,766
Short-term	Crossings				$22,500
Short-term	Culverts				$60,000
Short-term	Dock spur				$157,550
Short-term	Grain tracks				$235,620
Short-term	North side tracks				$211,918
Short-term	Temp upgrades				$14,500
Short-term	Ties				$100,000
Long-term	Aux dock spur				$143,750
Long-term	Br3 fill				$229,345
Long-term	Cape yard track				$87,400
Long-term	Crossings				$15,005
Long-term	Culverts				$150,000
Long-term	Dock spur				$123,050
Long-term	Grain tracks				$235,620
Long-term	North side tracks				$419,520
Long-term	Ties				$23,198
	Bridge	Good	Maintain	5	
	Main Line	Good	Upgrade	8 miles	
	Marshalling Yard	Good	Extend		
	Spur Track	Good	Extend		

Infrastructure Road.

Priority	Asset	Condition	Need Type	Need Number	Cost
Critical	Street paving				$359,000
Immediate	NW Rush Rd				$35,190
Immediate	Rt AB				$30,000
Immediate	Street paving				$200,000
Short-term	Street paving				$121,000
Long-term	Street paving				$438,484

Infrastructure Road (on-site).

Priority	Asset	Condition	Need Type	Need Number	Cost
	Main	Good	Maintain		
	Secondary	Fair	Pave		

St. Joseph Regional Port Authority.

Top infrastructure repair or replacement need, to retain existing business:

New access and roadway in port.

Top infrastructure need, to attract new business:

New access and road way in port.

Infrastructure General.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Dock	Good			
	Electric Lines	Good			
	Gas Lines	Good			
	Mooring Dolphins	Good			
	Sewer Lines	Good			
	Water Lines	Good			

Infrastructure Other.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Ferilizer domes		Add to	2	$1,100,000

Infrastructure Rail.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Spur Track	Good			

Infrastructure Road (on-site).

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	At-Grade Crossing	Poor	Improve	2	
Immediate	Main	Poor	Improve	1	$1,568,600
Immediate	Secondary	Poor	Improve	1	

Summary of Reported Equipment Status and Needs.

Please list equipment needs by type (general, crane, etc). Add more as needed. For each, indicate the existing equipment's condition (good, fair, or poor). Indicate what needs to be done (repair, improve, replace, add to, etc). Estimate the quanity (number, miles, feet, etc) and unit of measure. Estimate the costs of meeting the needs, and finnally indicate the priority of the need according to:

Critical - unsafe condition or could fail at any time.
Immediate - (1-2 years) required to maintain minimal port operations.
Short term - (3-5 years) level of deficiency affects ability to serve customer needs.
Long term - (5+ years) needed to support future growth and attract new business.

Howard/Cooper County Regional Port Authority.

Top equipment repair or replacement need to retain existing business:

Improvement of the conveyor systems to move grain between bins and between bins and trucks.

Equipment Conveyer.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Grain	Good			

Kansas City Port Authority.

Equipment Conveyer.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Covered	Fair	Repair		
	Open	Fair	Repair		

Equipment Crane.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Crawler	Good			
	Mobile	Good			

Equipment General.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Clamshell Basket	Good			
	Fork Lift	Good			
	Grapple	Good			
	Hooks	Good			
	Magnets	Good			
	Slings	Good			
	Spreader Bars	Good			

Marion County Port Authority.

Top equipment repair or replacement need to retain existing business:

Nothing critical at this time.

Top equipment need to attract new business:

Container handling equipment and new crane setup.

Equipment Conveyer.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Covered	Fair	Replace	1	$450,000

Equipment Crane.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Crain	Poor	Replace	1	$950,000
	Overhead Bridge	Fair	Replace	1	$400,000

Equipment General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Clamshell Basket	Fair	Replace	1	$50,000

New Bourbon Regional Port Authority.

Top equipment need to attract new business:

Outbound conveyor system.

Equipment Conveyer.

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	Open	None	Construct	1	$1,000,000

New Madrid County Port Authority.

Top equipment repair or replacement need to retain existing business:

Crane replacement.

Top equipment need to attract new business:

Truck Scales.

Equipment Crane.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Container	None	Add to	1	

Equipment General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Containers	None	Add to	10	
Long-term	Fork Lift	None	Add to	1	
Long-term	Skid Loader	None	Add to	1	

Pemiscot County Port Authority.

Top equipment need to attract new business:

Equipment to handle containers.

Equipment Crane.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Container		Purchase	1	$600,000
Short-term	Mobile		Purchase	1	$400,000

Southeast Missouri Regional Port Authority.

Top equipment repair or replacement need to retain existing business:

Railroad upgrades (track & bridges), track maintenance, and equipment.

Top equipment need to attract new business:

Dolphins and liquid dock, warehouse.

Equipment .

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	Equipment				$255,000
Immediate	Equipment				$115,000

Equipment Conveyer.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Rail to barge conveyor				$198,000
Long-term	Barge to rail conveyor				$174,000
	Covered	Good			
	Open	Good			

Equipment Crane.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Crawler	Good			
	Mobile	Good			

Equipment General.

Priority	Asset	Condition	Need Type	Need Number	Cost
	Clamshell Basket	Good			
	Fork Lift	Good			
	Grapple	Good			
	Hooks	Good			
	Skid Loader	Good			
	Slings	Good			
	Spreader Bars	Good			

St. Joseph Regional Port Authority.

Equipment Conveyer.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Open		Add to	1	$400,000

Summary of Reported Support Facilities Status and Needs.

Please list facility needs by type (general, crane, etc). Add more as needed. For each, indicate the existing facility's condition (good, fair, or poor). Indicate what needs to be done (repair, improve, replace, add to, etc). Estimate the quanity (number, miles, feet, etc) and unit of measure. Estimate the costs of meeting the needs, and finnally indicate the priority of the need according to:

Critical - unsafe condition or could fail at any time.
Immediate - (1-2 years) required to maintain minimal port operations.
Short term - (3-5 years) level of deficiency affects ability to serve customer needs.
Long term - (5+ years) needed to support future growth and attract new business.

Howard/Cooper County Regional Port Authority.

Support Facilities General.

Priority	Asset	Condition	Need Type	Need Number	Cost
	155,000 bushel grain bi	Good		1	
	2,200 overhead grain bi	Good		2	
	30,000 bushel grain bins	Good		2	
	Truck Dump with Pit	Good		2	

Kansas City Port Authority.

Support Facilities General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Grain Bins	Fair	Improve		
	Transload Facility	Fair	Improve		
	Truck Scale	Good			

New Bourbon Regional Port Authority.

Support Facilities General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Office Building	None	Construct	1	$170,000

Support Facilities Warehouse.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Dry	None	Construct	1	$556,000

New Madrid County Port Authority.

Top support facility repair or replacement need to retain existing business:

Replacing guard shack.

Top support factility need to attract new business:

Warehouse.

Support Facilities General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	Land	None	Add to	168 acre:	$410,000
Short-term	Guard House	Poor	Replace	1	$317,124
Short-term	Harbor	Good	Improve	All	$39,000
Short-term	Office Building	Good	Improve	All	$35,000
Short-term	Office Building	Good	Improve	All	$56,000
Short-term	Warehouse	None	Add to	1	$616,000
Long-term	Truck Scale	None	Add to	1	$158,000

Pemiscot County Port Authority.

Top support factility need to attract new business:

Transload facility.

Support Facilities General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Maintenance Shop		Build	1	$100,000
Short-term	Office Building		Build	1	$100,000
Short-term	Transload Facility		Build	1	$500,000

Support Facilities Warehouse.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Container yard		Build	1	$500,000

Top support facility repair or replacement need to retain existing business:

Railroad upgrades (track & bridges), support facility (maintenance building).

Top support factility need to attract new business:

Warehouse.

Support Facilities General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Security items				$44,400
	Maintenance Shop	None	Build		
	Office Building	Good			
	Rail to Barge Terminal	by Others	Add Conveyor		
	Transit Shed	None	Build		
	Transload Facility	Good			
	Truck Dump with Pit	by Others			
	Truck Scale	New			
	Truck Staging Area	None	Build		
	Truck to Barge Termina	by Others			

Support Facilities Land.

Priority	Asset	Condition	Need Type	Need Number	Cost
Immediate	Topo maps				$20,000
Short-term	Site fill				$50,000
Long-term	Land purchases				$530,000
Long-term	Site fill				$953,750

Support Facilities Warehouse.

Priority	Asset	Condition	Need Type	Need Number	Cost
Critical	Warehouse				$100,000
Immediate	Warehouse				$500,000
Short-term	Covered Storage				$62,100
Short-term	Open storage				$44,147
Long-term	Covered Storage				$62,100
Long-term	Open storage				$44,147

Top support factility need to attract new business:

Covered or indoor storage.

Support Facilities General.

Priority	Asset	Condition	Need Type	Need Number	Cost
Short-term	Truck Staging Area		Improve		
Long-term	Grain Bins		Add to	2	$1,000,000
Long-term	Office Building	Poor	Replace	1	
Long-term	Truck Scale		Add to	1	

Support Facilities Other.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term			Improve		

Support Facilities Warehouse.

Priority	Asset	Condition	Need Type	Need Number	Cost
Long-term	Climate Control		Add to		

Summary of Reported Economic Impacts. 2005.

Please provide infomation for use in estimating the economic impact of the port:

City of St. Louis Port Authority.

The City of St Louis Port Authority did not answer many of the survey questions, nor did it request financial assistance.

Howard/Cooper County Regional Port Authority.

The port has 0 full time employees.
The port has 1 part time employees.
An estimated 6 other people are employed by others at the port.

Primary sources of revenues for the port:

Rental from grain bin facility being fixed rent and through-put. MoDOT grant funds, installment payments from sale of equipment no longer needed by the Port Authority.

The port has total annual expenditures of $68,452.

Jefferson County Port Authority.

The Jefferson County Port Authority does not yet have a port facility. Thus, many of the survey questions did not apply.

Kansas City Port Authority.

The port has 5 full time employees.
The port has 1 part time employees.
The port's payroll is $300,000 annually.
An estimated 0 other people are employed by others at the port.
An estimated 6 other businesses depend on the port.

Primary sources of revenues for the port:

Bulk commodity storage and handling.

The port has total annual expenditures of $450,000.

Lewis County-Canton Port Authority.

The Lewis County-Canton Port Authority has one private port tenant, so it's answers were about a private port and beyond the scope of this survey.

Marion County Port Authority.

The port has 0 full time employees.
The port has 0 part time employees.
The port's payroll is $0 annually.
An estimated 300 other people are employed by others at the port.
An estimated 3 other businesses depend on the port.

Primary sources of revenues for the port:

At this time only the MODOT admin grant has funded administrative efforts along with inkind donations from Northeast Missouri Development.

Mid-America Port Commission.

The Mid-America Port Commission does not yet have a port facility in Missouri. Thus, many of the survey questions did not apply.

The port has 1 full time employees.
The port has 1 part time employees.
The port's payroll is $75,000 annually.

Primary sources of revenues for the port:

IA, MO and IL administrative funding.

The port has total annual expenditures of $104,364.

Mississippi County Port Authority.

The port has 0 full time employees.
The port has 0 part time employees.
The port's payroll is $0 annually.
An estimated 0 other people are employed by others at the port.
An estimated 0 other businesses depend on the port.

Primary sources of revenues for the port:

MoDOT subsidy and Ingram Barge lease.

New Bourbon Regional Port Authority.

The port has 0 full time employees.
The port has 0 part time employees.
The port's payroll is $0 annually.
An estimated 0 other people are employed by others at the port.
An estimated 0 other businesses depend on the port.

New Madrid County Port Authority.

The port has 2 full time employees.
The port has 0 part time employees.
The port's payroll is $67,004 annually.
An estimated 97 other people are employed by others at the port.
An estimated 103 other businesses depend on the port.

Primary sources of revenues for the port:

Grants, land lease, and thru-put fees.

The port has total annual expenditures of $179,293.

Pemiscot County Port Authority.

The port has 1 full time employees.
The port has 1 part time employees.
The port's payroll is $80,000 annually.
An estimated 80 other people are employed by others at the port.
An estimated 60 other businesses depend on the port.

Primary sources of revenues for the port:

Throughput fees, land rents, and grants.

The port has total annual expenditures of $43,195.

Southeast Missouri Regional Port Authority.

The port has 3 full time employees.
The port has 4 part time employees.
The port's payroll is $209,466 annually.
An estimated 203 other people are employed by others at the port.

Primary sources of revenues for the port:

Land leases, tonnage rents, railroad income.

The port has total annual expenditures of $365,400.

St. Joseph Regional Port Authority.

The port has 1 part time employees.
The port's payroll is $20,000 annually.
An estimated 3 other people are employed by others at the port.
An estimated 4 other businesses depend on the port.

Primary sources of revenues for the port:

> Missouri state admin grant funds, operating fees from operator, and federal and state capital grant funds.

The port has total annual expenditures of $30,000.

St. Louis County Port Authority.

St Louis County Port Authority does not have port facilities. Thus, many of the survey questions did not apply.

City of St. Louis Port Authority.

The City of St Louis Port Authority did not answer many of the survey questions, nor did it request financial assistance.

Howard/Cooper County Regional Port Authority.

Access Routes:

Nearest Interstate highway is 1-70 at 2.5 miles away.
Nearest US highway is US 40 at 0.25 miles away.
Nearest Class I railroad is Union Pacific at 0.5 miles away.

Access roads:

The road used to primarily access the port is US 40.

Access road conditions are Good.

Access road capacity is Good, with annual truck traffic of 5,000.

Access road bridges:

Access bridge problems: Access road bridge is the Missouri River bridge at Boonville which has no stated tonnage limit.

Access road signs:

Access road sign conditions are Good.

Access by rail:

The port has railroad service, provided by Union Pacific Railroad.

Railroad access problems: The rail service is approximately 1/2 mile from the port facility, on the other side of the river, and requires additional transport from the port facility to the rail.

Jefferson County Port Authority.

The Jefferson County Port Authority does not yet have a port facility. Thus, many of the survey questions did not apply.

Access Routes:

Nearest Interstate highway is I-55 at 2 miles away.
Nearest US highway is US 61 / 67 at 2 miles away.
Nearest Class I railroad is Union Pacific at 2 miles away.

Problems with highways or railways: No facility exists. When built, will need access roads capable of handling heavy truck traffic to site.

Kansas City Port Authority.

Access Routes:

Nearest Interstate highway is I-35, I-70 at 1 miles away.
Nearest Class I railroad is Union Pacific at 0 miles away.

Access roads:

The road used to primarily access the port is Woodswether Road.
Access road conditions are Moderate.
Access road capacity is Moderate.

Access road bridges:

The lowest weight limit of access road bridges is 25 tons.

Access road signs:

Access road sign conditions are Moderate.

Access by rail:

The port has railroad service, provided by Union Pacific.
Railroad access problems: Sporadic switching service.

Lewis County-Canton Port Authority.

The Lewis County-Canton Port Authority has one private port tenant, so it's answers were about a private port and beyond the scope of this survey.

Marion County Port Authority.

Access Routes:

Nearest Interstate highway is I-72 at 12 miles away.
Nearest US highway is US 61 at 4 miles away.
Nearest Class I railroad is BNSF at 0.1 miles away.

Problems with highways or railways: None, high quality industrial grade. Main Line Rail onsite

Access roads:

The road used to primarily access the port is Hwy 168 & Route JJ.

Access road conditions are Good.

Access road problems: None, they are in excellent condition and above the 500 year flood level.

Access road capacity is Good.

Access road capacity problems: None.

Access road bridges:

The lowest weight limit of access road bridges is 80,000 tons.

Access bridge problems: None.

Access road signs:

Access road sign conditions are Good.

Access road sign problems: None.

Access by rail:

The port has railroad service, provided by BNSF.

Railroad access problems: None.

Mid-America Port Commission.

The Mid-America Port Commission does not yet have a port facility in Missouri. Thus, many of the survey questions did not apply.

Access Routes:

Nearest Interstate highway is 172 at 5 miles away.
Nearest US highway is US 61 at 3 miles away.
Nearest Class I railroad is BNSF at 2 miles away.

Access roads:

The road used to primarily access the port is Radio Road.

Access road conditions are Moderate.

Access road problems: Planned improvements to be made to 1.5 miles from port.

Access road capacity is Moderate.

Access road bridges:

The lowest weight limit of access road bridges is 20 tons.

Access bridge problems: Current Bridge to be replaced.

Access road signs:

Access road sign conditions are Poor.

Access road sign problems: Lack of signage.

Mississippi County Port Authority.

Access Routes:

Nearest Interstate highway is I-57 at 10 miles away.
Nearest US highway is US 60 at 4 miles away.
Problems with highways or railways: No rail system available in the county.

Access roads:

The road used to primarily access the port is County roads 301, 302, and 304.
Access road conditions are Moderate.
Access road problems: Width of the roadway is a problem, but not critical.
Access road capacity is Good.
Access road capacity problems: Farm and agriculture related truck traffic.

Access road bridges:

The lowest weight limit of access road bridges is 40 tons.
Access bridge problems: None.

Access road signs:

Access road sign conditions are Good.
Access road sign problems: None.

New Bourbon Regional Port Authority.

Access Routes:

Nearest Interstate highway is I-55 at 7 miles away.
Nearest US highway is US 61 at 1.7 miles away.
Nearest Class I railroad is BNSF at 1.6 miles away.

Access roads:

The road used to primarily access the port is Cottonwood Road.
Access road conditions are Moderate.
Access road problems: Road will have to be widened.
Access road capacity is Good.

Access road signs:

Access road sign conditions are Moderate.

Access by rail:

The port has railroad service, provided by Burlington Northern & Santa Fe.
Railroad access problems: Need rail spur to port site.

New Madrid County Port Authority.

Access Routes:

Nearest Interstate highway is I-55 at 1.5 miles away.
Nearest US highway is US 61 at 2 miles away.
Nearest Class I railroad is Union Pacific at 0 miles away.

Access roads:

The road used to primarily access the port is St Francis Mainline Levee Road.

Access road conditions are Bad.

Access road problems: Gravel, pothole ridden, and small shoulder.

Access road capacity is Moderate, with annual truck traffic of 10,089.

Access road capacity problems: Seasonal congestion.

Access road signs:

Access road sign conditions are Poor.

Access road sign problems: Missing.

Access by rail:

The port has railroad service, provided by Union Pacific.

Railroad access problems: Need to extend the service.

Pemiscot County Port Authority.

Access Routes:

Nearest Interstate highway is I-55 at 2 miles away.
Nearest US highway is US 412 at 3 miles away.
Nearest Class I railroad is BNSF at 3 miles away.

Problems with highways or railways: Rail spur incomplete; connects to BNSF, but does not yet reach port.

Access roads:

The road used to primarily access the port is State Route D.

Access road conditions are New.

Access road capacity is Good, with annual truck traffic of 24,000.

Access road bridges:

The lowest weight limit of access road bridges is 100 tons.

Access road signs:

Access road sign conditions are Good.

Access by rail:

The port has railroad service, provided by BNSF.

Railroad access problems: Rail spur incomplete. It does not yet connect to port.

Southeast Missouri Regional Port Authority.

Access Routes:

Nearest Interstate highway is I-55 at 4 miles away.
Nearest US highway is US 60 at 20 miles away.
Nearest Class I railroad is BNSF, UP at 0 miles away.

Access roads:

The road used to primarily access the port is MO Rte AB.

Access road conditions are Good.

Access road problems: Needs mowing.

Access road capacity is Good.

Access road capacity problems: No.

Access road bridges:

Access bridge problems: No, weight limit is the maximum MO gross weight.

Access road signs:

Access road sign conditions are Good.

Access road sign problems: When knocked down, MoDOT does not repair for days.

Access by rail:

The port has railroad service, provided by Semo Port Railroad, Inc. (SE) connects to BNSF and UP.

Railroad access problems: General railroad situation.

St. Joseph Regional Port Authority.

Access Routes:

Nearest Interstate highway is I-229 at 0.1 miles away.
Nearest US highway is US 36 at 0.1 miles away.
Nearest Class I railroad is Union Pacific at 0 miles away.

Access roads:

The road used to primarily access the port is Monterey.

Access road conditions are Bad.

Access road problems: Terrible access and very poor road. Funding is partially in place for improvement.

Access road capacity is Poor.

Access road signs:

Access road sign conditions are Bad.

Access by rail:

The port has railroad service, provided by Union Pacific.

Railroad access problems: Rates are higher than in St. Joseph and have cost business. Sometimes it's cheaper to truck from Kansas City.

St. Louis County Port Authority.

St Louis County Port Authority does not have port facilities. Thus, many of the survey questions did not apply.

City of St. Louis Port Authority.

The City of St Louis Port Authority did not answer many of the survey questions, nor did it request financial assistance.

Howard/Cooper County Regional Port Authority.

Channel:

Channel is maintained at 8 feet deep.

Channel is 300 feet wide.

Dock:

Average depth at the dock is 20 feet.

Largest vessel and number of barges that can be accommodated: 2 barges at dock, 100 by 30 by 6 ft draft vessel.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?

As relates to industrial development, lack of land and infrastructure would be the major impediment. As related to competition for new cargo shipment, the major disadvantage would be due to usage of the Missouri River. The on-going debate between recreational versus navigational use of the river, the endangered species act, the variable navigation system, invariable depth of the channel of the Missouri River, all of which reduce the interest of barge towing companies.

What does the port need to develop to maiximum potential?

Change of philosophy as to use of river which will emphasize navigational use, guarantee length of seasons, and river depths. Increase grain storage and handling capacity.

What laws, regulations or environmental constraints are impeding port growth?

Usage of the Missouri River. The on-going debate between recreational versus navigational use of the river. The endangered species act, the variable navigation system, and invariable depth of the channel of the Missouri River.

What is needed for Port Authorities to effectively compete for foreign shipments?

First step is to have a river which is primarily dedicated to navigational use as described above.

How can Missouri state government best support growth and development of Port Authorities?

Be an advocate for emphasizing navigation use of the Missouri River, including guaranteed navigation seasons, guaranteeing depths of the Missouri River, and encouragement of barge towing companies to re-enter and utilize the Missouri River for barge transport.

Jefferson County Port Authority.

The Jefferson County Port Authority does not yet have a port facility. Thus, many of the survey questions did not apply.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?

No port facility.

What does the port need to develop to maiximum potential?

A physical port.

Kansas City Port Authority.

Channel:

Channel is maintained at 8.5 feet deep.

Channel problems: The Missouri River is supposed to be maintained at a minimum 8.5 foot channel but has not been done since 1993.

Dock:

Average depth at the dock is 9 feet.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?

Inconsistent or non-existent river access due to lack of water (low flows) and/or poor channel maintenance.

What does the port need to develop to maiximum potential?

River access.

Is the lack of rail, truck, and barge intermodal service impeding port operations?

Yes, see above.

Lewis County-Canton Port Authority.

The Lewis County-Canton Port Authority has one private port tenant, so it's answers were about a private port and beyond the scope of this survey.

Channel:

Channel is maintained at 12 feet deep.

Channel is 500 feet wide.

Channel problems: None.

Dock:

Average depth at the dock is 12 feet.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?

Current docking system and levee system is limiting development opportunities.

What does the port need to develop to maiximum potential?

Redesign and modification of the docking and levee access system.

What laws, regulations or environmental constraints are impeding port growth?

None at this time.

Is the lack of rail, truck, and barge intermodal service impeding port operations?

No, with main line rail, good highway and barge access we are constrained by the comments noted above.

What is needed for Port Authorities to effectively compete for foreign shipments?

More financial support from the State of Missouri.

What is the best way to market advantages of Port Authorities?

Not sure.

How can Missouri state government best support growth and development of Port Authorities?

By supporting the MODOT port efforts and providing new economic development incentives specifically designed for ports. Infrastructure grant funding is key.

Mid-America Port Commission.

The Mid-America Port Commission does not yet have a port facility in Missouri. Thus, many of the survey questions did not apply.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?
Lack of facilities.

What does the port need to develop to maiximum potential?
Acquire land and start building a port.

Is the lack of rail, truck, and barge intermodal service impeding port operations?
Rail spur of 1.75 miles needs to be built to service the port.

What is needed for Port Authorities to effectively compete for foreign shipments?
Attract container-on-barge up the rivers. Right now, they terminate just north of Saint Louis.

How can Missouri state government best support growth and development of Port Authorities?
Support Capital Improvement Program.

Mississippi County Port Authority.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?
Lack of a slack water harbor.

What does the port need to develop to maiximum potential?
Slack water harbor.

Is the lack of rail, truck, and barge intermodal service impeding port operations?
Rail is not available in Mississippi County.

What is needed for Port Authorities to effectively compete for foreign shipments?
Continue promoting Port facilities.

What is the best way to market advantages of Port Authorities?
Use new and existing promotional materials.

How can Missouri state government best support growth and development of Port Authorities?
Additional funding.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?

Lack of harbor, dock & outbound conveyor system.

What does the port need to develop to maiximum potential?

Harbor, dock and outbound conveyor system.

What laws, regulations or environmental constraints are impeding port growth?

None.

What is needed for Port Authorities to effectively compete for foreign shipments?

Infrastructure and equipment for loading/unloading containers.

How can Missouri state government best support growth and development of Port Authorities?

Continue to work to support funding for public port development.

Channel:

Channel is maintained at 9 feet deep.

Channel is 275 feet wide.

Channel problems: Silting in times of low water.

Turning Basin:

The turning basin's maximum width 225 feet.

The turning basin's maximum length 1500 feet.

Dock:

Average depth at the dock is 12 feet.

Dock problems: Load lift capacity must be increased.

Dredging problems: Low river stage during dredging season could cause harbor walls to collapse. Extra precaution had to be taken at the site.

Largest vessel and number of barges that can be accommodated: Large tow boat, 6 to 7 barges.

Vessel size problems: The port will allow for tenants on each side of the harbor to simultaneously load/unload, and vessel size cannot block another tenant from entering or exiting the harbor during this time.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?

Freight rates are normally good for the area, but we must increase the load lift capacity of the dock to compete for new business. We must also pave the levee road and expand rail to provide all the services requested of the port.

Is the lack of rail, truck, and barge intermodal service impeding port operations?

Yes. Numerous times the port has been requested to move a commodity from dock to rail. The inability of the port to provide this service has resulted in the loss of the potential to move the commodity.

What is needed for Port Authorities to effectively compete for foreign shipments?

Infrastructure placement and the funds to provide the infrastructure will enable the ports to compete more effectively for foreign shipments.

What is the best way to market advantages of Port Authorities?

Media, Internet Services, Factual Packages, Trade Shows, as well as promotions via federal and state congressional folks.

How can Missouri state government best support growth and development of Port Authorities?

Capital funding for infrastructure placement at the port sites as well as a cumulative effort to market the great commodity of the river systems.

Channel:

Channel is maintained at 12 feet deep.
Channel is 225 feet wide.

Turning Basin:

The turning basin's maximum width 500 feet.
The turning basin's maximum length 500 feet.

Dock:

Average depth at the dock is 20 feet.
Largest vessel and number of barges that can be accommodated: 9 barges.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?
We lack rail connection to port site.

What does the port need to develop to maiximum potential?
To complete rail spur.

Is the lack of rail, truck, and barge intermodal service impeding port operations?
Lack of rail connection to port site.

What is needed for Port Authorities to effectively compete for foreign shipments?
Information connecting potential MO shippers with foreign shippers (of containers).

What is the best way to market advantages of Port Authorities?
MPAA website, MO DED's website, MoDOT website.

How can Missouri state government best support growth and development of Port Authorities?
By fully funding MoDOT Multimodal's Capital Improvement Grant program to provide critically needed basic infrastructure for all public ports in MO.

Channel:

Channel is maintained at 9 feet deep.

Channel is 130 feet wide.

Channel problems: None, Corps does a great job.

Dock:

Average depth at the dock is 9 feet.

Dredging problems: None, Corps does a great job.

Largest vessel and number of barges that can be accommodated: Harbor has 15 barge spots.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?

Semo Port has excellent access to barge, rail and truck. It needs to develop additional industrial sites with fill, roads, railroad track, water, sewer, and storm drainage. The Semo Port Railroad (SE) needs upgrades to track and bridges. Additional cargo handling facilities are needed to expand capacity, improve efficiency, and minimize environmental impact.

What laws, regulations or environmental constraints are impeding port growth?

Corp of Engineers' permit procedures often require a year or more to process and can add significant delay to projects. See exhibits.

Is the lack of rail, truck, and barge intermodal service impeding port operations?

If "intermodal" is defined as containers or piggyback trailers, the lack of intermodal has not hurt. Semo Port has intermodal hubs available in Memphis TN, Marion AR, and the St Louis MO areas. Containers and trailers can be dragged from those ramps, but drayage cost makes it less competitive with normal truckload service.

Container on barge will likely focus on major cities for the same reason as intermodal. For example, UP and BNSF do not want ramps with less than 300,000 lifts per year (and several full trains originating and terminating at the hub daily). Volume is crucial to a profitable operation.

In some cases, a small port might handle a periodic volume move, but the costs of demurrage for barge, containers and chassis would have to be overcome. This could be for a PL480 foreign aid shipment or perhaps for cotton, etc.

What is needed for Port Authorities to effectively compete for foreign shipments?

Investment focused on projects that will earn a good direct return to the Port, thus earning an ongoing profit which can be used for maintenance and local match to future growth projects' capital improvement grants.

What is the best way to market advantages of Port Authorities?

Individual port efforts targeted to each ports' specific markets.

How can Missouri state government best support growth and development of Port Authorities?

Provide a steady source of multi-year capital improvement funds focused on projects with good returns.

St. Joseph Regional Port Authority.

Channel:

Channel is maintained at 9 feet deep.

Other Issues:

What major disadvantage does the port have when competing for cargo or development?

Lack of barge operators on the Missouri River.

What laws, regulations or environmental constraints are impeding port growth?

US Fish and Wildlife - Endangered Species Act.

Is the lack of rail, truck, and barge intermodal service impeding port operations?

Lack of barge operators willing to operate on the Missouri River is a major impediment to gaining barge traffic.

What is needed for Port Authorities to effectively compete for foreign shipments?

The ability to handle containers.

What is the best way to market advantages of Port Authorities?

English US

How can Missouri state government best support growth and development of Port Authorities?

Provide incentives for companies to ship by barge versus by rail and truck. Provide incentives to companies which do tows and supply barges to make expanding their services more profitable. Continue to fight the Missouri River battle. Provide capital funds.

St. Louis County Port Authority.

St Louis County Port Authority does not have port facilities. Thus, many of the survey questions did not apply.