

Little Rock Port Complex Freight Study

Pulaski County



January 2006



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In Cooperation with:
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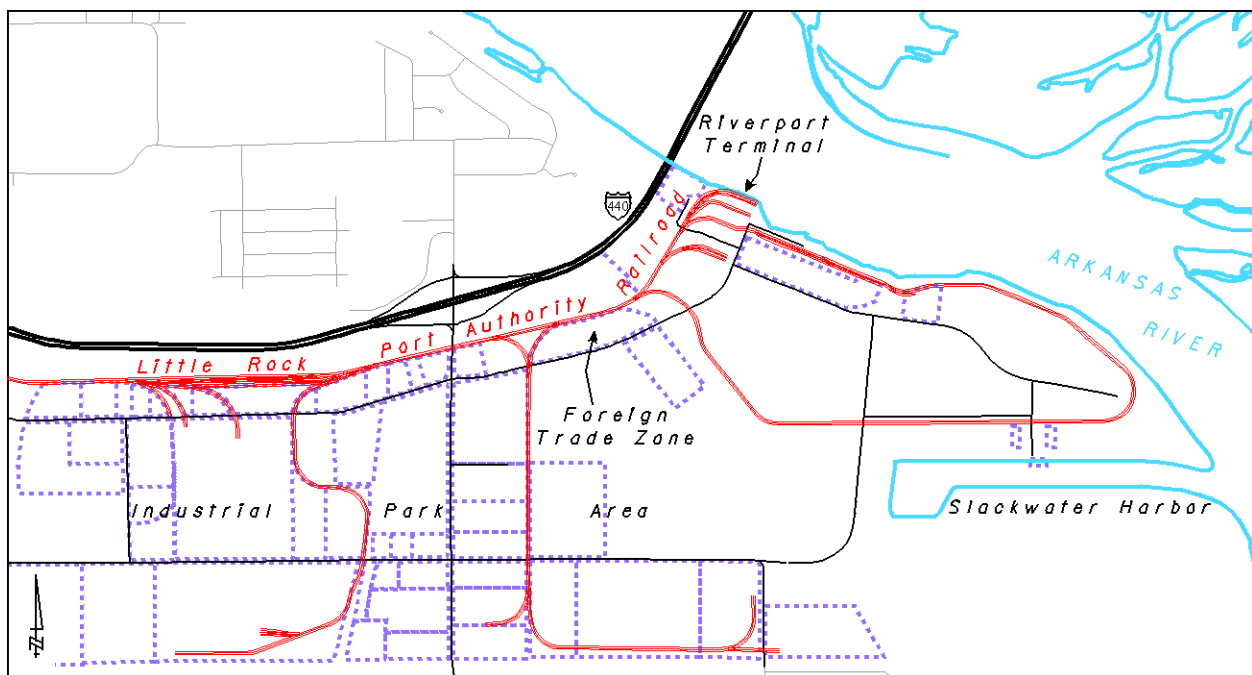
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Executive Summary

The Little Rock Port Complex (Complex) is the freight transportation center for central Arkansas, providing dedicated facilities and support services for domestic and international shipments. The Complex has an industrial park, a Foreign Trade Zone, a Class III¹ railroad, on-site trucking companies, a riverport terminal and a slackwater harbor. The site plan for the Complex is shown in Figure 1. The Little Rock Port Authority Board of Directors oversees operation of the Complex.

Figure 1
Complex Site Plan



Study Objective and Authorization

Demands on the Complex's freight transportation infrastructure are changing due to shifting regional patterns of goods movement. Some of the causes are the growth of international trade, changes in inventory handling practices, the shift from a manufacturing to a service economy and the advent of freight logistics. All of these factors have affected the way goods are shipped and the origin and destination for shipments in the region served by the Little Rock Port Authority.

¹ Railroads are classified based on annual operating revenues:

Class I – Carriers generating \$261.9 million or more

Class II – Carriers generating at least \$21.0 million but less than \$261.9

Class III – Carriers generating less than \$21.0 million

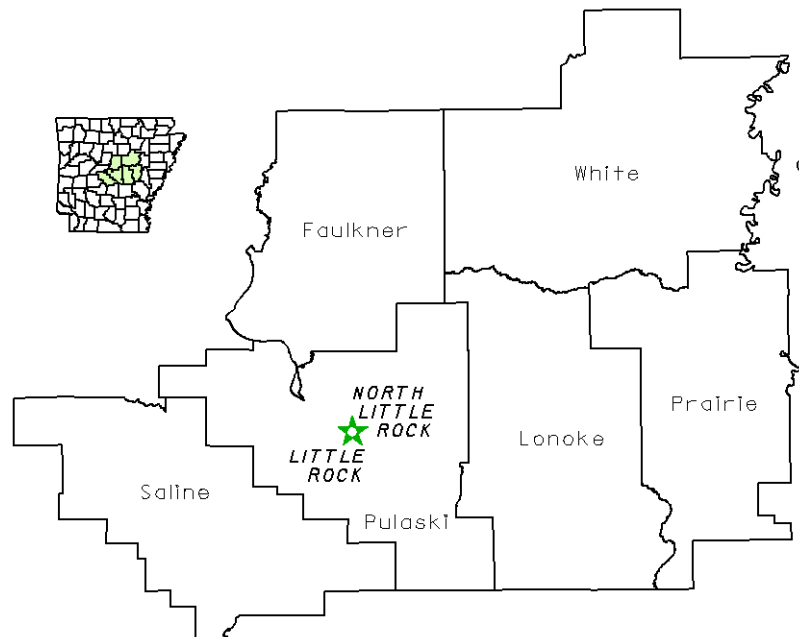
The objective of this study was to provide freight data to the Little Rock Port Authority for their use in determining methods to further position the Complex as the freight transportation and manufacturing hub for central Arkansas. The analysis included: (1) reviewing current operations at the Complex; (2) conducting a shippers' survey to determine possible freight transportation needs for the greater Little Rock area; (3) providing data on regional domestic and international shipments; and (4) determining candidate commodities for water and rail transportation.

The study was prepared as a technical assistance project under the authority of Arkansas Highway Commission Minute Order 2002-069. This Minute Order authorized a comprehensive study of all public ports within the State, and as part of this effort, technical assistance is to be provided, as needed, to each public port on Arkansas' commercially navigable rivers.

Study Area

The study area includes the Cities of Little Rock and North Little Rock, Pulaski County, and the surrounding region of Saline, Faulkner, Lonoke, White, and Prairie Counties. Shippers from this geographic area presently use the facilities at the Little Rock Port Complex. Figure 2 shows the study area.

**Figure 2
Study Area**



Study Method

The sources of information for this study included: (1) data provided by the Little Rock Port Authority; (2) a regional shippers' survey; and (3) the Department's Freight Goods Movement Database.

The Little Rock Port Authority provided information on current conditions at the Complex. The shippers' survey, conducted with assistance from the Little Rock Regional Chamber of Commerce, provided data specific to local freight transportation activities and freight facility and service needs. The Freight Goods Movement Database was used to obtain lists of commodities that enter or leave the study area, the origin or destination of the movements and the means by which goods are shipped.

Study Findings

Major findings from this study include:

- *Freight Transportation Facilities and Services*
 - ✓ The Little Rock Port Complex's freight facilities and services are designed to accommodate the transfer of cargo between freight modes and to support local industries.
 - ✓ The Complex has a riverport, a slackwater harbor and a railroad. A system of local roads links the Complex's industrial park tenants with the water terminals and the railroad for freight shipments.
 - ✓ Facilities at the riverport include truck and rail scales, a roll on-roll off ramp and inside storage. Slackwater harbor amenities include an on-dock crane and two warehouses. The railroad has a marshalling yard and a direct intermodal connection at the riverport via a rail line on the dock for the transfer of freight between rail and barge.
 - ✓ Freight services provided at the two water terminals include inventory management and bagging of commodities. The railroad offers railcar switching, storage and blocking services.²
 - ✓ Several trucking companies located on or near the Complex's property provide local drayage and long-haul service.
 - ✓ Foreign Trade Zone #14 is located in the Complex.³
- *Commodities*
 - ✓ Leading commodities handled at the water terminals are cement, fertilizer, rock and steel products.
 - ✓ Chief commodities moved by rail are peanut products, minerals and steel products.
- *Freight Shipping Advantages*
 - ✓ The Little Rock Port Complex offers domestic and international freight shipping advantages. The advantages are its strategic geographic location to regional market areas and gateway cities⁴ and its excellent access to national freight transportation systems (Interstate Highway System, national air cargo service, the Nation's inland waterway system and Class I railroads).
 - ✓ The Complex is situated next to Interstate 440. I-440 connects with Interstates 30 and 40, providing access to regional and national markets for truck freight

² Blocking is the grouping of railcars for movement to another location.

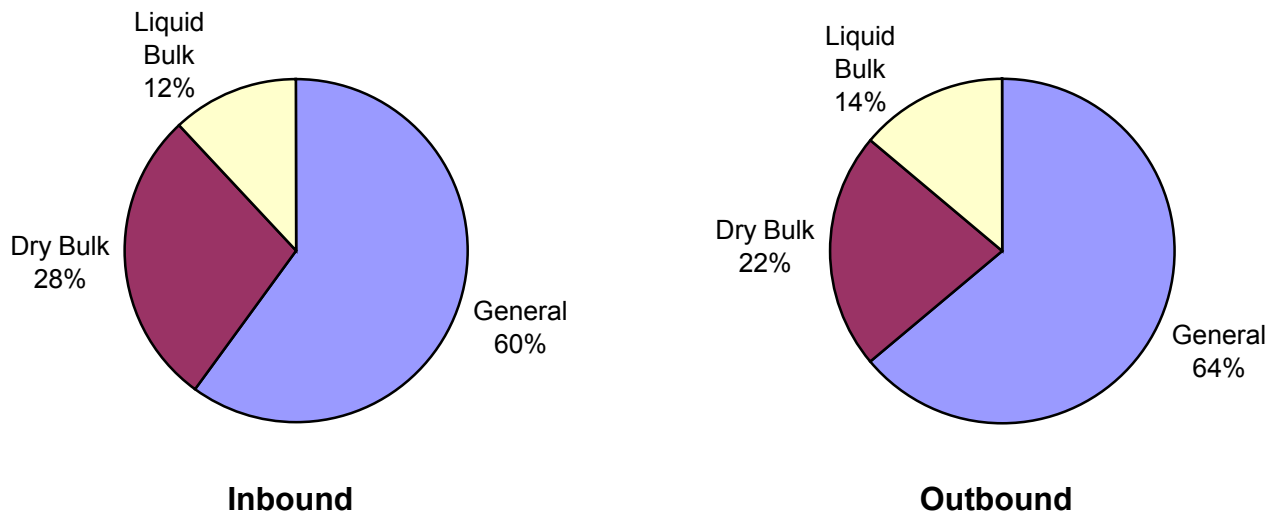
³ A Foreign Trade Zone is a U.S. stateside site that is considered outside U.S. Customs territory and that is used to enhance import and re-export activities.

⁴ Gateway cities are locations that serve as staging areas for imported and exported goods. Examples are the Mexican border crossing towns of Eagle Pass and Laredo, Texas and the deep-water gulf port of New Orleans, Louisiana.

deliveries. The Complex has a National Highway System (NHS) freight intermodal connector route.⁵

- ✓ The Little Rock National Airport is less than one mile from the Complex. Several national air cargo carriers serve the airport. The DHL/Airborne Express air cargo facility is located on Complex property.
- ✓ The two water terminals are linked to the Nation’s inland waterway system via the Arkansas River for domestic and import/export shipments. The Mississippi River is used to access the deep draft ports of the Gulf of Mexico.
- ✓ The Complex is served by two Class I railroads (Union Pacific Railroad and BNSF Railway), which provide nationwide long-haul service, shipments of goods to Canada and Mexico and freight exchanges at coastal ports.
- *Shippers’ Survey*
 - ✓ General freight shipments (inbound and outbound) are the main shipment type for the study area.

**Figure 3
Shipments by Freight Type**

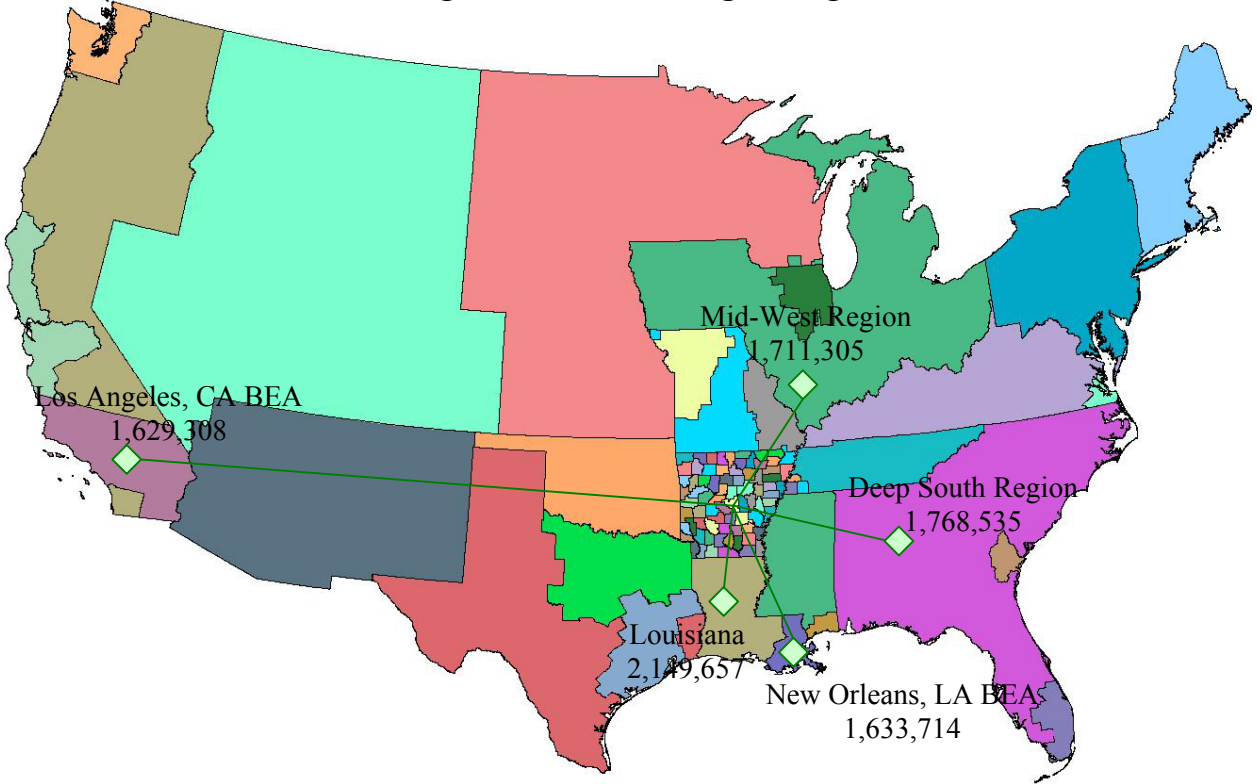


- ✓ The most cited freight facility need is additional warehouse space.
- ✓ Transfers between modes (truck, rail or water) were the most needed freight service.
- *Domestic and International Shipments*
 - ✓ Truck transportation is the mode used most often for domestic shipments, both inbound and outbound.
 - ✓ The leading out-of-state origin for freight to the study area is Louisiana. Crittenden County is the top in-state origin.
 - ✓ The Deep South Region is the main out-of-state destination for freight from the study area and Mississippi County is the foremost in-state destination.
 - ✓ Figures 4 and 5 show the top domestic commodity or activity by freight mode. Redistribution of freight involves shipments to and from warehouses and drayage between modes.

⁵ NHS intermodal connector routes are the roads leading to major intermodal terminals (passenger or freight), as defined by the Federal Highway Administration.

Figure 4
Inbound Domestic Freight Patterns
(Annual Tonnage)

Leading Out-of-State Freight Origins



Freight Shipments
By Mode with Top Commodity or Activity

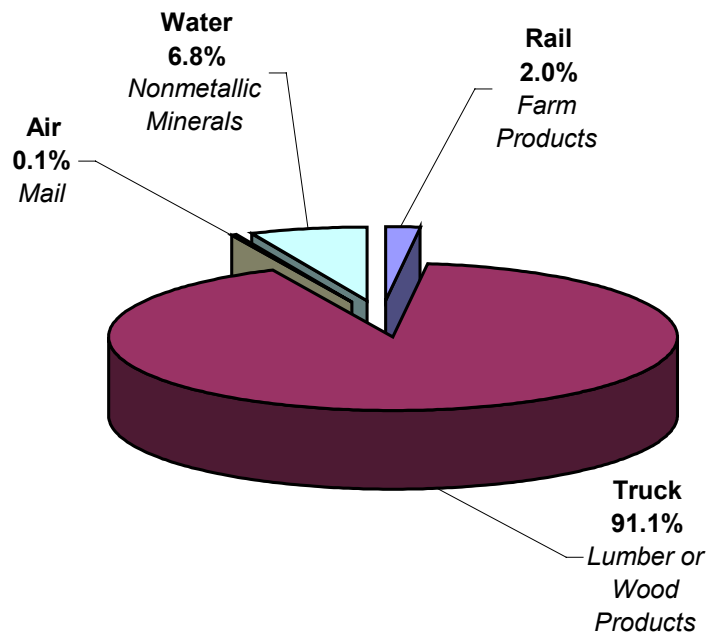
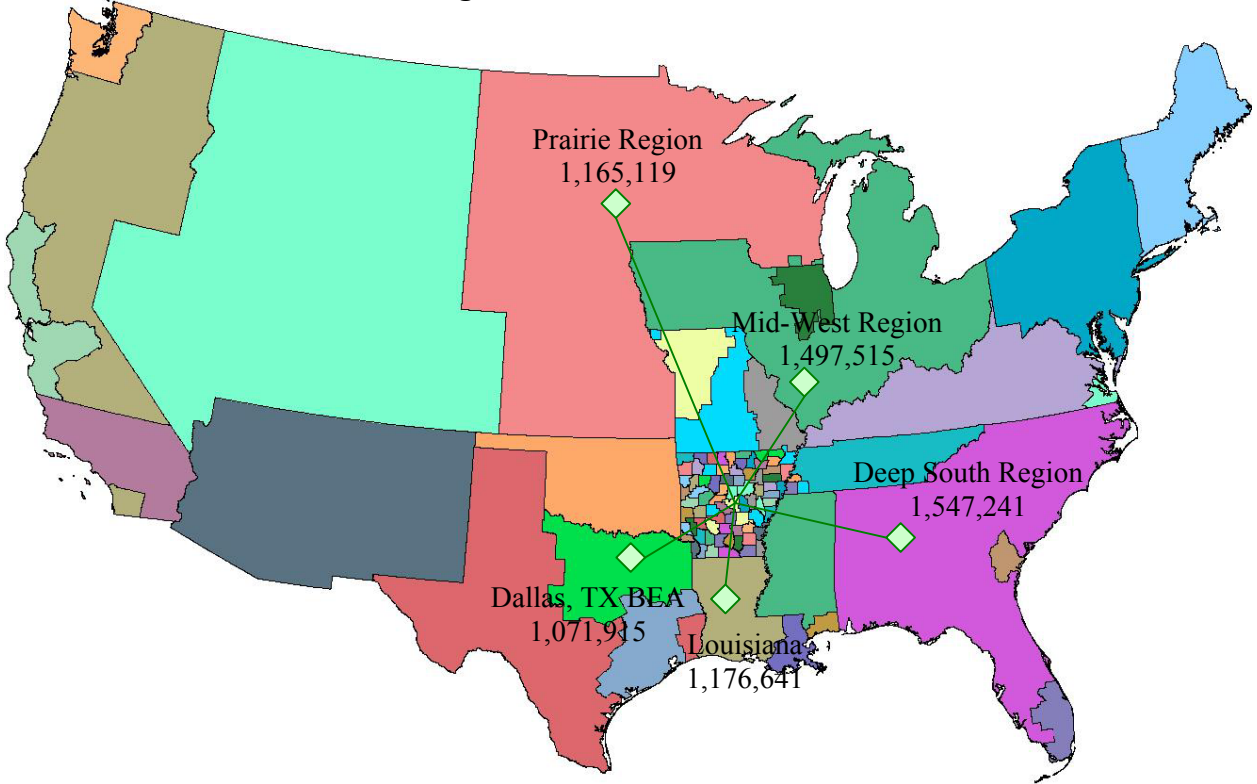
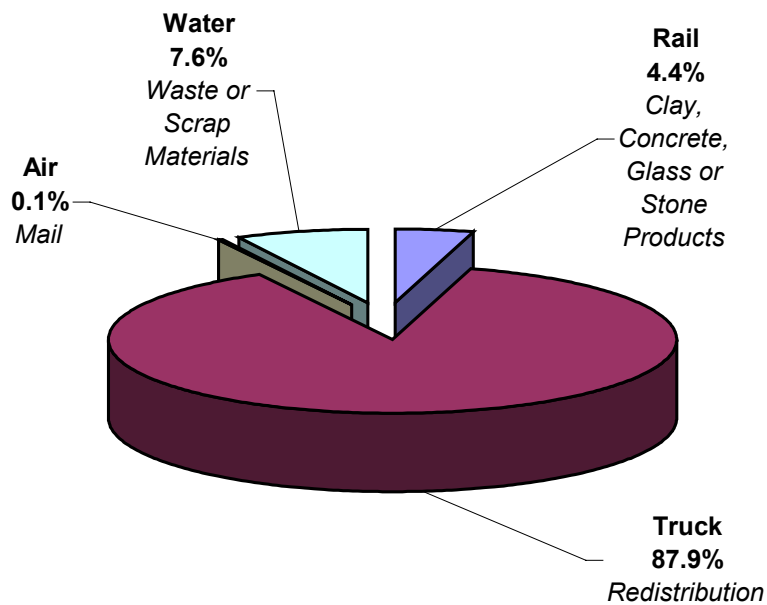


Figure 5
Outbound Domestic Freight Patterns
(Annual Tonnage)

Leading Out-of-State Destinations

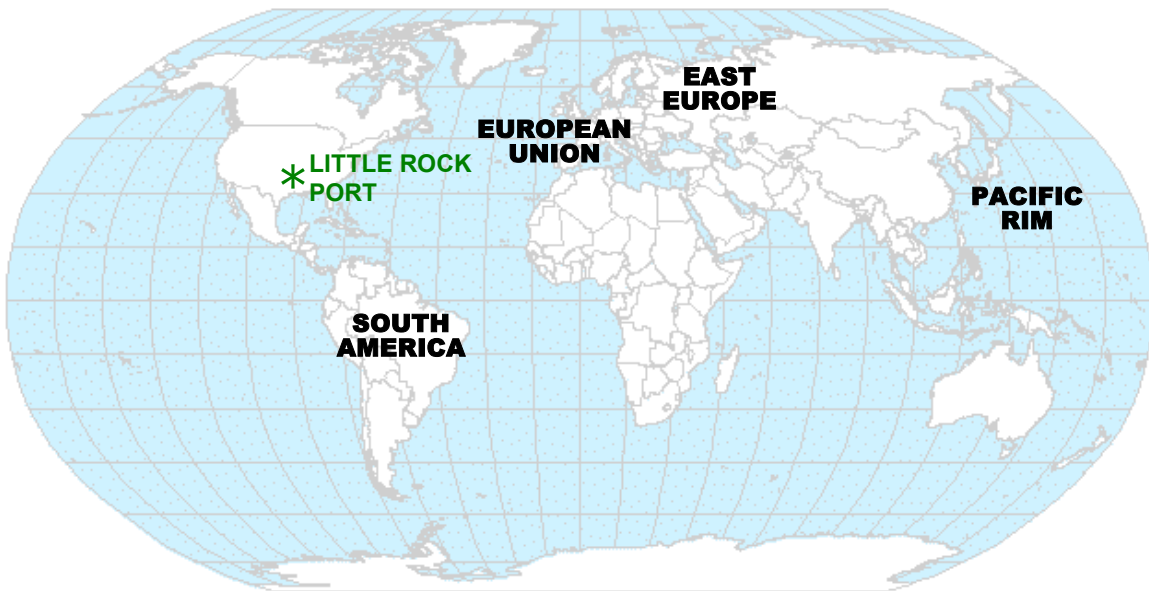


Freight Shipments
By Mode with Top Commodity or Activity



- ✓ Arkansas' top foreign trade partners are Canada and Mexico.
- ✓ Pulaski County ships and receives the largest amount of freight to and from Canada and Mexico, when compared to the other counties in the study area.
- ✓ Truck is the primary mode of transportation for products shipped to and from Canada.
- ✓ Truck transportation is the chief mode for shipments from Mexico. Rail transportation is the main mode for shipments to Mexico.
- ✓ The leading commodity imported to the study area from Canada is Pulp and Paper Products. The major commodity exported to Canada is Food Products.
- ✓ The top commodity imported to the study area from Mexico is Food Products. The leading export is Clay, Concrete, Glass or Stone Products.
- ✓ Excluding trade with Canada and Mexico, major coastal Gateway Business Economic Areas (BEAs)⁶ are used by Arkansas shippers for import and export activities. Other major regions of the world that trade with the study area are shown in Figure 6: Pacific Rim (China-Japan-Philippines), European Union (United Kingdom-Germany-France), East Europe (Bulgaria-Romania) and South America (Colombia-Venezuela-Chile).

**Figure 6
World Market Areas**



- ✓ The top two coastal Gateway BEAs for inbound shipments to the study area are New Orleans, Louisiana and Los Angeles, California. The principal BEAs for outbound shipments are Houston, Texas and New Orleans, Louisiana.
- ✓ Truck is the primary mode used for shipments between the study area and these international gateways.

⁶ A BEA is a group of counties or parishes that share similar economic characteristics, as defined by the U.S. Department of Commerce.

- *Potential Cargo Shipments*

An examination of freight databases revealed additional opportunities for transit by water or rail.

- ✓ Cargo, such as Primary Metal, Fabricated Metal and Chemical Products, which is now shipped by truck to locations near the Inland Waterways System, would be suitable for waterborne transportation.
- ✓ The top three potential rail commodities for the study area (inbound and outbound shipments) are Food, Lumber or Wood and Chemical Products.
- ✓ An opportunity exists for intermodal rail transportation, COFC (container on flatcar) or TOFC (trailer on flatcar), especially for shipments that are transported over 500 miles.



Little Rock Port Complex Intermodal Lift

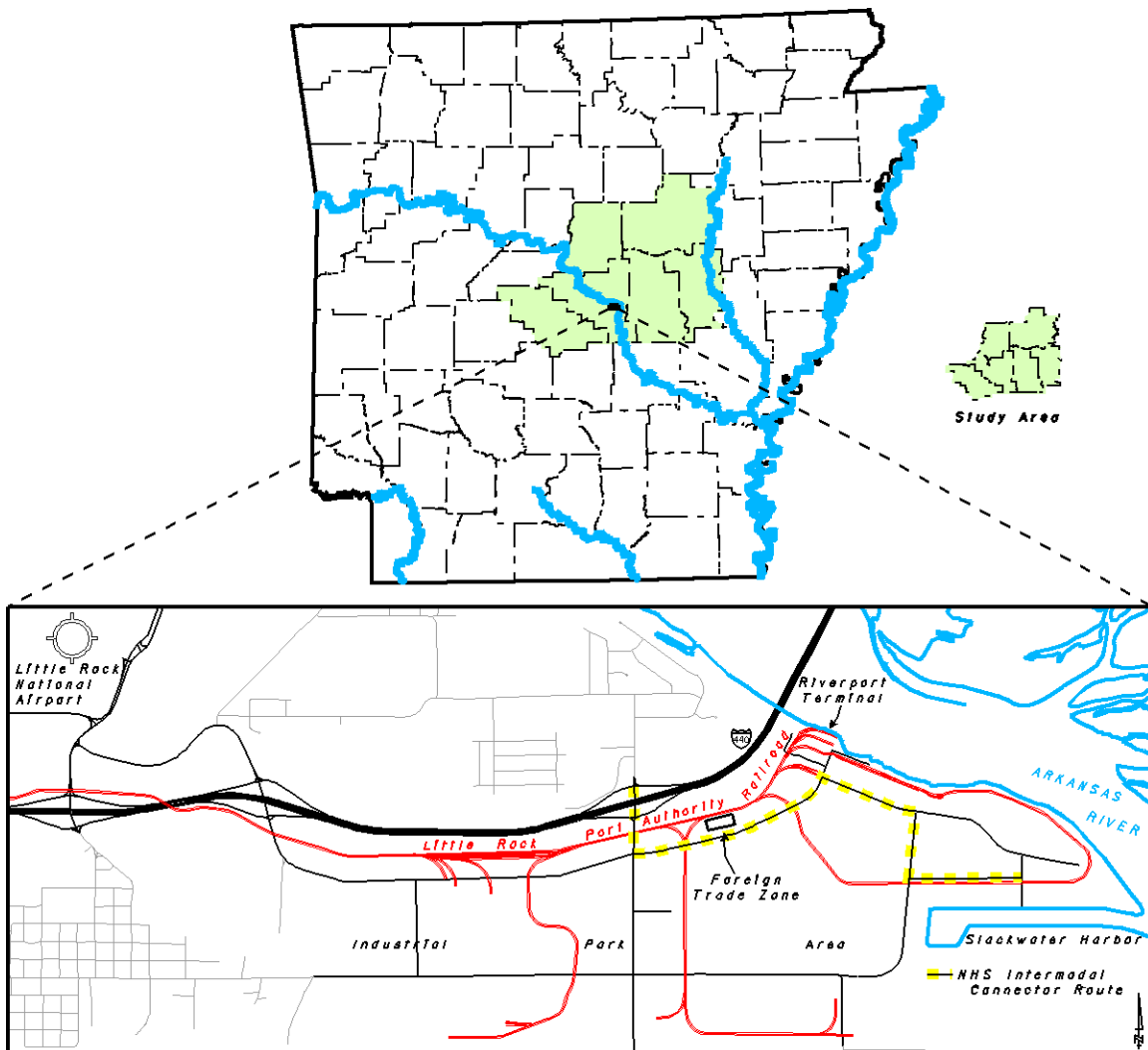
Section I Little Rock Port Complex Profile

The following is a general overview of current conditions and operations at the Little Rock Port Complex (Complex). The evaluation includes a review of the Complex's facilities and services, commodity types handled and annual tonnage moved through the public facilities. Also provided is a description of the Complex's freight transportation location advantage via the freight modes of truck, water (barge) and rail.

Overview

The Little Rock Port Complex is located in the northeastern section of the City of Little Rock in Pulaski County and is situated south of Interstate 440 on the Arkansas River. The Little Rock National Airport is less than one mile from the Complex. The Little Rock Port Authority Board of Directors oversees the operation of the Complex.

**Figure 7
Little Rock Port Complex Vicinity Map**



Interstate 440 connects with Interstates 30 and 40 providing access to regional and national markets for truck freight deliveries. In addition to the Interstate Highway System, the Complex has a National Highway System (NHS) freight intermodal connector.

Facilities and Services

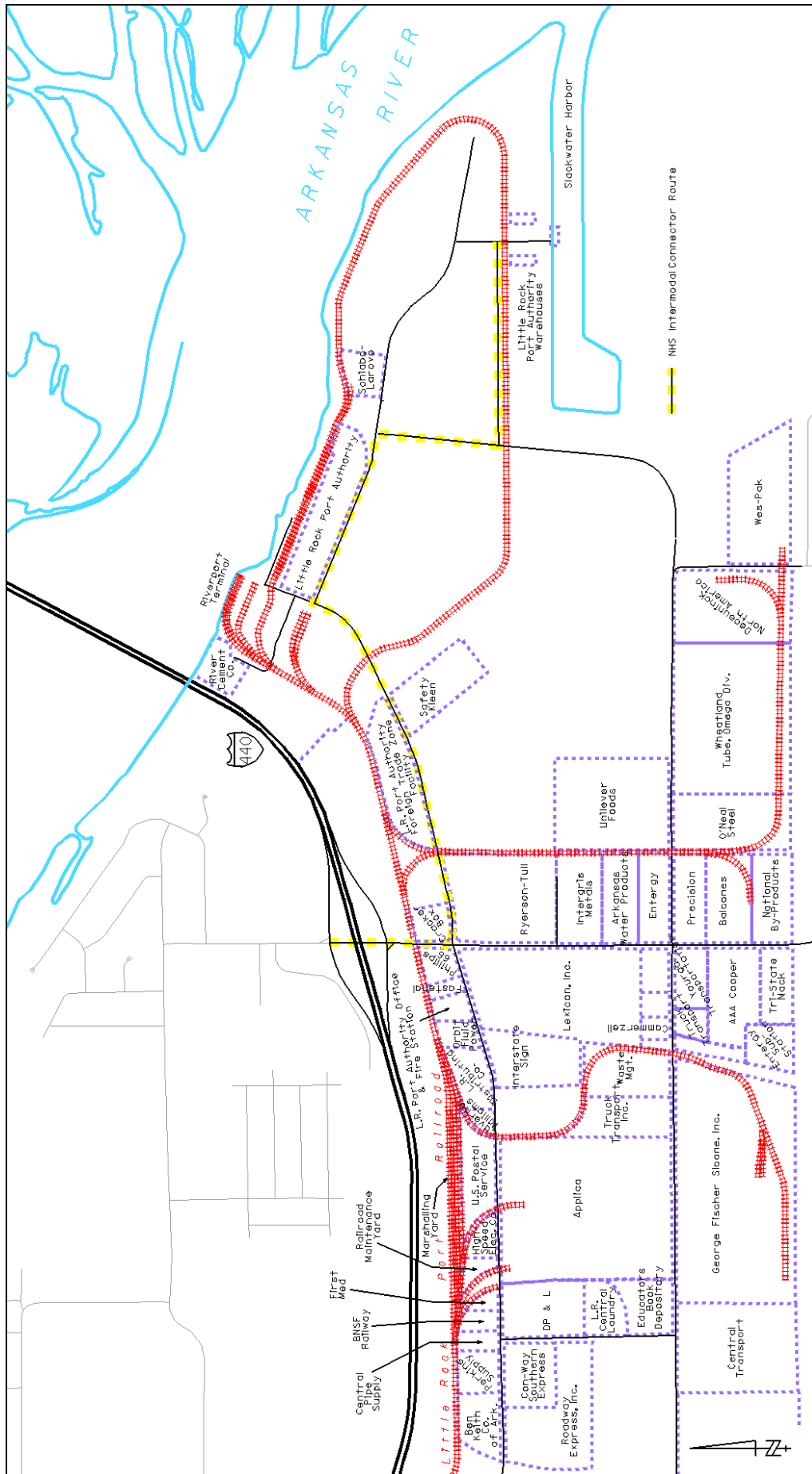
The Complex features a 1500-acre industrial park with over thirty industries. Several trucking companies have on-site terminals to support manufacturing activities. Foreign Trade Zone #14 is situated at the Complex on 25 acres with a 104,000 square-foot general-purpose building. The Port Authority office building houses an adjacent fire station.

The Complex has a riverport, a slackwater harbor and a railroad. A system of roads links the industrial park with Complex facilities. The riverport has a concrete dock with a 75-foot x 230-foot working surface. The concrete dock at the harbor has a 100-foot x 200-foot working surface. The railroad infrastructure consists of 13.6 miles of track (main line and spur lines) and a marshalling yard where railcars are interchanged with two Class I railroads. The railroad has a direct intermodal connection at the riverport through a rail line on the riverport dock. Rail access is also available at the harbor.

At the riverport, facilities include truck and rail scales, a roll on-roll off ramp, COFC (container on rail flatcar) lift, and inside and outside storage. Slackwater harbor amenities include a 50-ton crane and two 26,000 square-foot warehouses. The harbor is 4,000 feet long, 300 feet wide and 15 feet deep. The turning basin is 550 feet wide. The harbor, built in 1991, had remained undeveloped until recently. Major investments over the past three years have established the harbor area as an international export center and manufacturing site. The investments included access improvements (extending the rail line to the harbor with a loop returning it to the main line near the riverport and connecting Slackwater Harbor Drive to Frazier Pike Road), construction of the harbor dock and warehouses and various other utility and site work.

Services available at the riverport and harbor include chemical and grain packaging from rail, truck or barge, equipment rental, warehousing, drayage and barge fleet and cleaning. A general layout of the Complex is shown in Figure 8. Photos of the riverport, slackwater harbor and railroad are provided in Appendix A.

**Figure 8
Little Rock Port Complex
Facilities Layout**



Current Commodities

Table 1 lists commodities shipped via the Little Rock Port Authority Railroad. Major commodities shipped by rail are peanut products, minerals and steel products.

Table 1
Rail Commodities and Annual Carloads (2004)

<u>Commodities</u>	<u>Annual Carloads</u>
Peanuts, Oil, Peanut Butter	731
Alumina	482
Steel	363
Ammonium Sulfate	226
Alumite (Chicken Feed)	226
Paper Products	200
PVC	165
Recycle Paper Products	152
Roofing Granules	134
Potash	72
Ammonium Nitrate	46
Waste Oil	43
Scrap Stainless Steel	22
Miscellaneous	<u>725</u>
Total Annual Carloads	3,587

In addition to routine cargo, one-time shipments are handled by the Port railroad. The movement, in 2003, of military vehicles and equipment in support of the eventual deployment for duty in Iraq of the Arkansas Army National Guard's 39th Infantry Brigade (shown below) is an example.



Current commodities shipped through the riverport, with a seven-year annual tonnage history, are listed in Table 2. Chief inbound commodities for 2004 were cement and fertilizer. Top outbound commodities are steel products and rock.

Table 2
Waterborne Commodities and Annual Tonnage (2004)

<u>Commodities</u>	<u>Inbound (Annual Tonnage)</u>
Cement	198,286
Fertilizer	101,131
Steel Products	85,529
Aluminum	<u>60,675</u>
<i>Total Annual Inbound Tonnage</i>	445,621
<u>Commodities</u>	<u>Outbound (Annual Tonnage)</u>
Steel Products	61,792
Rock	38,566
Fertilizer	<u>13,243</u>
<i>Total Annual Outbound Tonnage</i>	113,601
 Total Tonnage	 559,222

<u>Year</u>	<u>Annual Tonnage (Inbound/Outbound)</u>
1998	460,898
1999	409,945
2000	403,730
2001	390,119
2002	384,678
2003	434,171
2004	559,222

The importance of the Complex's river terminals to local shippers is illustrated by the record barge tonnage handled in 2004. Almost 560,000 tons of cargo were shipped, an increase of about 30 percent compared to the previous year.

As with rail transportation, single, one-time waterborne shipments are handled at the Complex. The picture below shows roller coaster equipment for an amusement park that was delivered at the harbor in 2003.



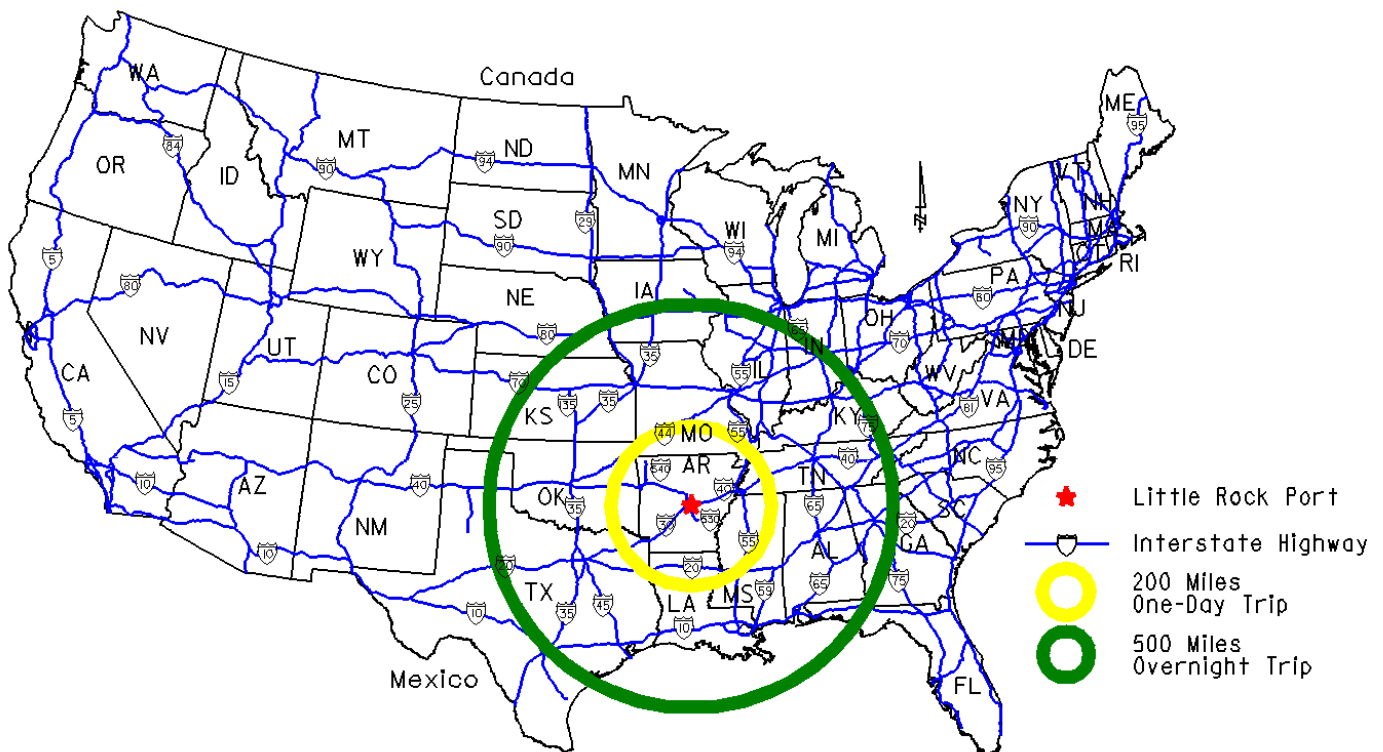
Transportation Location Advantage

The Complex is favorably located in relation to major regional U.S. market areas and gateway cities for domestic and international shipments via highway (truck), water and rail transportation.

Truck Transportation

The Little Rock area has easy access to regional markets and gateway cities for truck freight deliveries via the Interstate Highway System. With a direct link to Interstate 440, the Complex has excellent access to regional market cities such as Dallas, Texas and Saint Louis, Missouri and to gateway cities like Houston, Texas and New Orleans, Louisiana. Figure 9 illustrates this strategic geographic location and depicts areas that can be reached from Little Rock during a typical one-day truck delivery (200 miles) or an overnight truck trip (500 miles).

**Figure 9
Location Advantage to Regional Markets**



Waterborne Transportation

The riverport terminal, located at river mile 112.8, and the slackwater harbor at river mile 111.0, are situated on the Arkansas River, which is part of the Nation's inland waterway system. This system provides an excellent means for transporting bulk commodities and oversized cargo within the United States and for accessing deepwater ports for overseas shipments. It reaches from the Great Lakes to the Gulf of Mexico and traverses over 20 states. Figure 10 exhibits potential market areas for waterborne commerce from the Complex and typical river barge transit times.

A unique feature of the Little Rock Port Railroad is its intermodal connection (rail to barge terminals at the riverport and the harbor). This connection offers shippers a cost-effective method to access global market areas through the Arkansas and Mississippi Rivers and the international deep draft ports in south Louisiana.

Rail Intermodal Transportation

Currently, central Arkansas does not have a rail intermodal terminal that is operated by a Class I railroad. Shippers from the area that want to use this service truck their shipments to and from the West Memphis area where two Class I railroads operate rail intermodal terminals. This situation causes shippers to pay higher drayage costs and adds additional truck traffic on Interstate 40 between Little Rock and West Memphis. The two rail intermodal terminals are UP's Ebony Intermodal Terminal at Marion and BNSF's Harvard Yard at Sunset.

Section II Study Area Freight Activity

Shipping patterns for the study area are described in this section. The presentation contains data on shipment types, the general composition (commodity) or activity, freight mode used and the origin and destination. An assessment of freight facilities and service needs is also included, as well as identification of potential water and rail transportation shipments. The shippers' survey and the Department's Freight Goods Movement Database were the sources of information. A copy of the survey form is included as Appendix B. A description of the freight database is provided in Appendix C, with a listing of annual tonnage for the leading commodities traveling into and out of the study area by four-digit Standard Transportation Commodity Code (STCC). For discussion purposes, domestic shipments refer to goods and commodities that are transported within the United States. International shipments are those that travel to or from another country, such as Mexico and Canada, or elsewhere in the world.

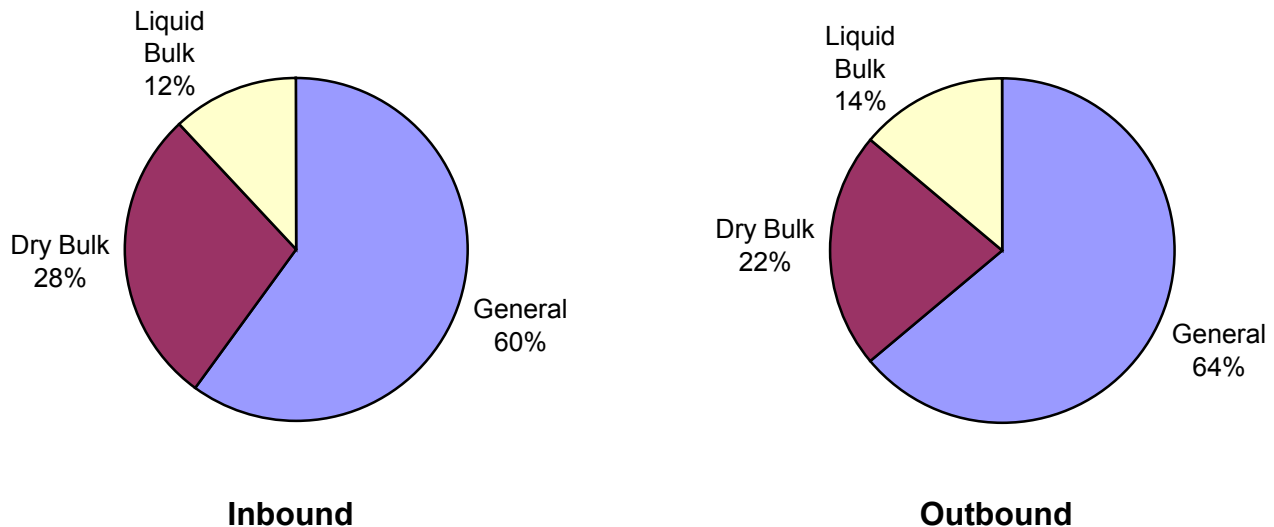
Shippers' Survey

Regional manufacturers and processors were surveyed to determine present freight shipment types and the importance of selected freight facilities and services.

Freight Shipment Types

Figure 12 shows inbound and outbound shipments by freight type, as reported through the survey. General freight, representing 60% of inbound shipments and 64% of outbound shipments, is the study area's leading freight shipment type.

**Figure 12
Shipments by Freight Type**



General Freight consists of semi-manufactured products, packaged (boxes and drums) manufactured goods and self-packaged items (boats and cars). General freight is the type of cargo that is most often hauled in containers.

Bulk Cargo (liquid and dry) is composed of basic commodities that are generally in an unpackaged condition (grains, chemicals or other materials that are voluminous or loose) and shipped in large equipment (railcars, river barges and chemical trucks).

Freight Facilities and Services

Respondents to the survey rated the importance of selected freight facilities and services to support their current operations and to expand their business. Additional warehouse space is the freight facility need that was cited most often. Transfers between truck, rail or water were mentioned as the most needed freight service. Results are provided in Table 3.

**Table 3
Freight Facilities and Services**

<u>Facility</u>	<u>Very Important</u>	<u>Moderately Important</u>	<u>Limited Importance</u>
• Warehouse Space			
✓ Traditional	35%	50%	15%
✓ Climate Controlled	0%	17%	83%
✓ Bonded	10%	12%	78%
✓ Freezer	0%	8%	92%
• Dry or Liquid Bulk Tanks	12%	25%	63%
• Truck Scale	15%	25%	60%
• Rail Siding	27%	22%	51%
• Transload Facility	5%	20%	75%
<u>Service</u>			
• Container Pool	15%	32%	53%
• Intermodal Shipment*	25%	25%	50%
• Product Sorting and Segregation	10%	22%	68%
• Labeling, Bagging and Repackaging	12%	26%	62%
• Truck, Rail or Water Transfers	25%	45%	30%

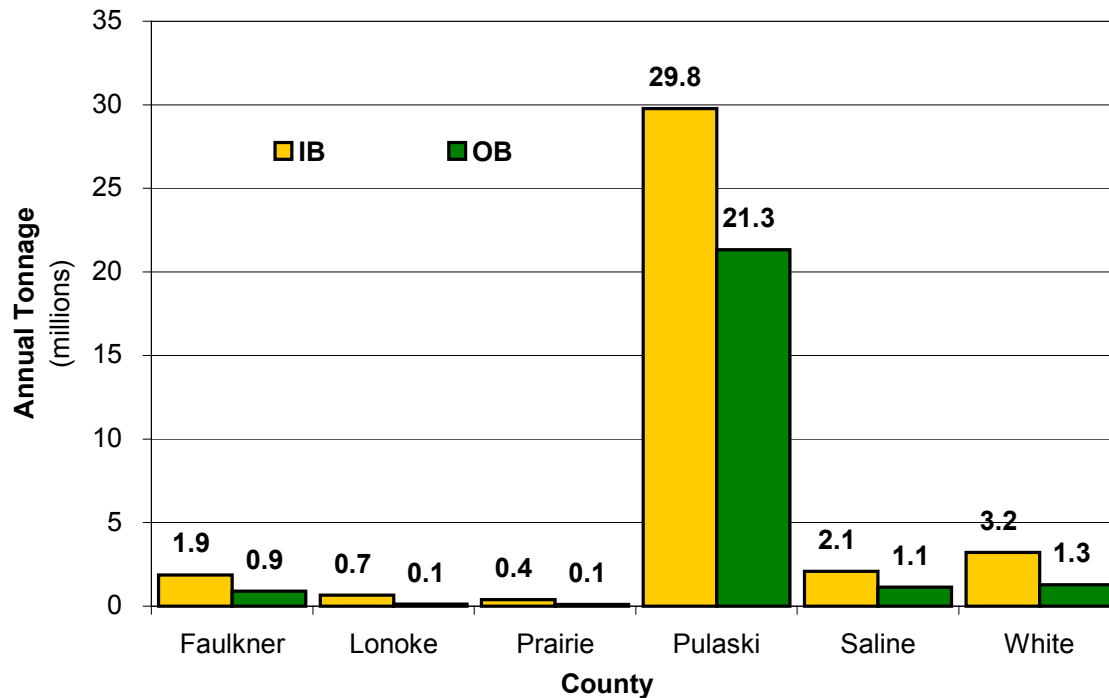
*Intermodal Shipment – Combination of freight modes (truck/rail, truck/barge and rail/barge/truck).

Domestic Freight Shipments

Inbound/Outbound Shipments

Figure 13 shows annual tonnages moved into and out of the study area counties. (Note: Freight movements between study area counties or within the same county are not included.) Pulaski County has the vast majority of all freight shipments.

Figure 13
Volume of Freight Cargo
By County

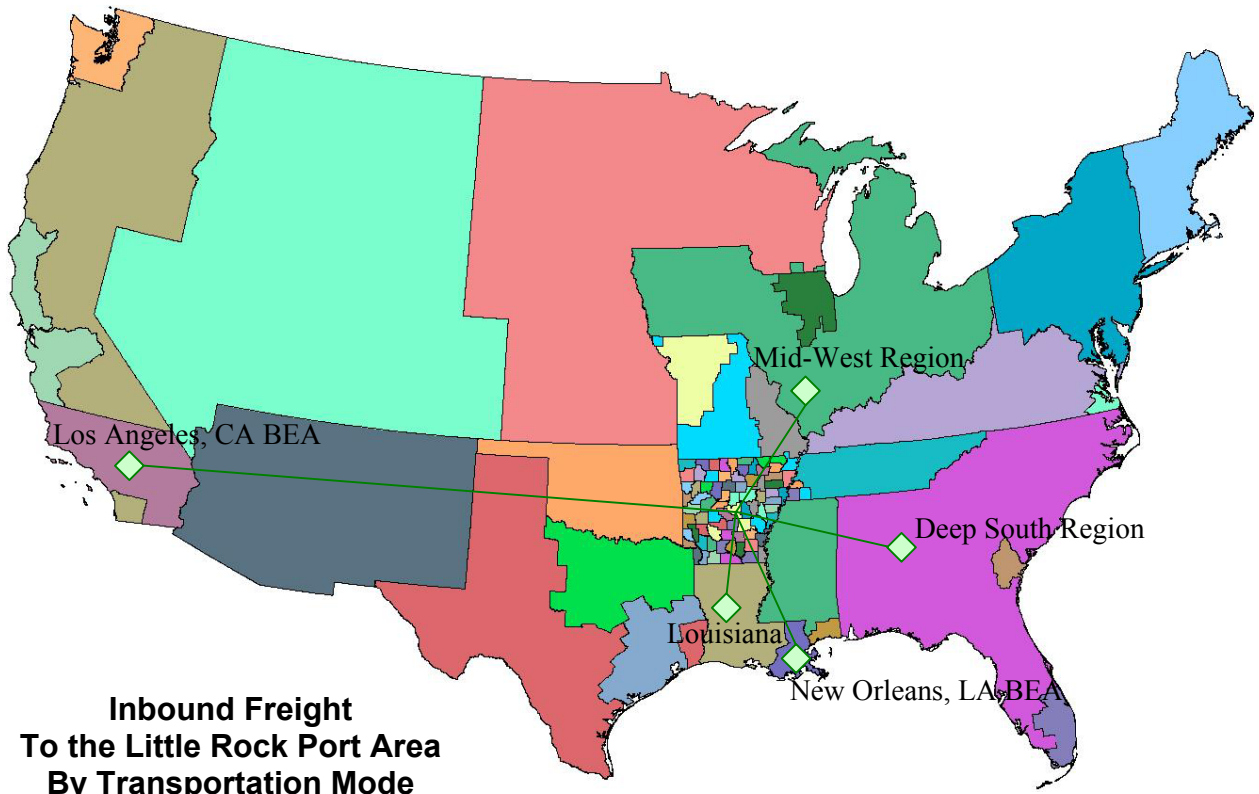


Source: Freight Goods Movement Database

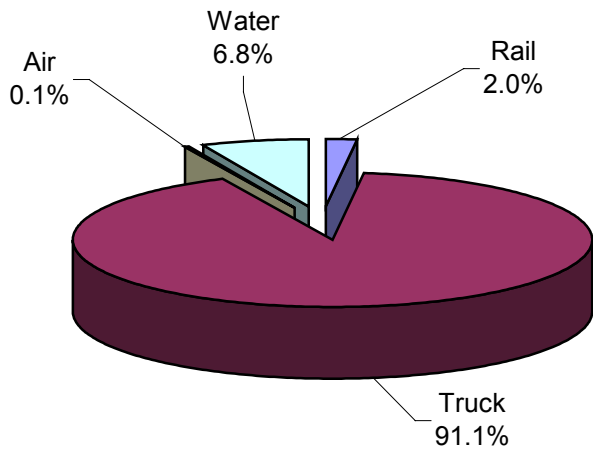
Figures 14 and 15 show the modes of transportation and percentages that each is used for freight entering and leaving the study area by truck, rail, water or air. These figures also depict the leading locations for inbound and outbound freight shipments.

Truck transportation is used most for domestic freight movements. The top out-of-state origin for freight shipments to the study area is Louisiana. Crittenden County is the chief in-state origin. The Deep South Region is the main out-of-state destination for freight from the study area and Mississippi County is the top in-state destination.

Figure 14
Inbound Domestic Freight
(Annual Tonnage)



Inbound Freight To the Little Rock Port Area
By Transportation Mode
(Based on Annual Tonnage)



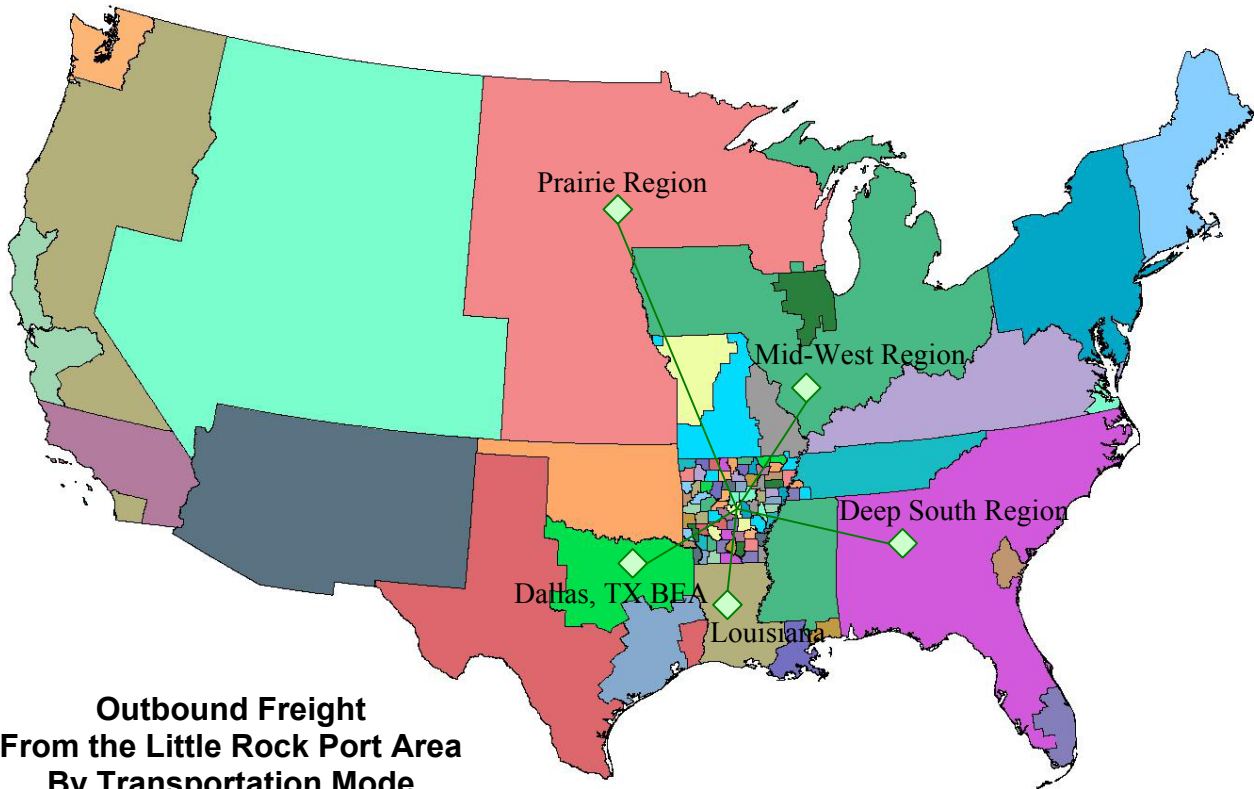
Top Originations

Outside Arkansas	Annual Tonnage
Louisiana	2,149,657
Deep South Region	1,768,535
Mid-West Region	1,711,305
New Orleans, LA BEA	1,633,714
Los Angeles, CA BEA	1,629,308

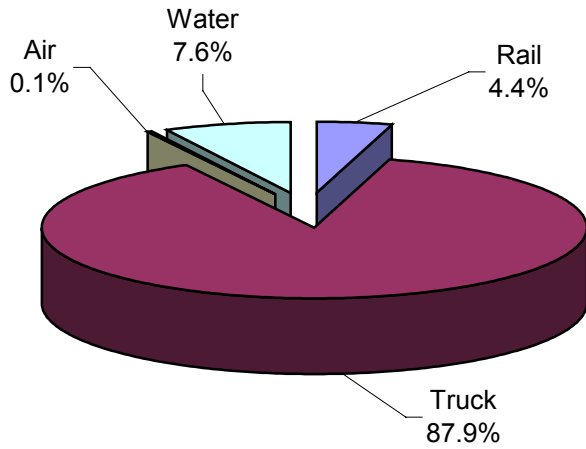
In-State	Annual Tonnage
Crittenden County	1,355,116
Union County	1,350,500

Source: Freight Goods Movement Database

Figure 15
Outbound Domestic Freight
(Annual Tonnage)



Outbound Freight
From the Little Rock Port Area
By Transportation Mode
(Based on Annual Tonnage)



Top Destinations

Outside Arkansas	Annual Tonnage
Deep South Region	1,547,241
Mid-West Region	1,497,515
Louisiana	1,176,641
Prairie Region	1,165,119
Dallas, TX BEA	1,071,915

In-State	Annual Tonnage
Mississippi County	1,106,148
Sebastian County	665,652

Source: Freight Goods Movement Database

Commodities Shipped

Based on the total tonnages handled annually, Table 4 lists the top five inbound and outbound commodities or activity for each of the four freight modes (truck-rail-water-air).

Table 4
Top Commodities or Activity

Inbound Shipments			
<u>Truck</u>	<u>Rail</u>	<u>Water</u>	<u>Air</u>
1. Lumber or Wood Products	1. Farm Products	1. Nonmetallic Minerals	1. Mail
2. Food Products	2. Chemical Products	2. Waste or Scrap Materials	2. Chemical Products
3. Chemical Products	3. Pulp or Paper Products	3. Metallic Ores	3. Machinery
4. Redistribution	4. Food Products	4. Primary Metal Products	4. Miscellaneous Mixed Shipments
5. Clay, Concrete, Glass or Stone Products	5. Primary Metal Products	5. Chemical Products	5. Transportation Equipment

Outbound Shipments			
<u>Truck</u>	<u>Rail</u>	<u>Water</u>	<u>Air</u>
1. Redistribution	1. Clay, Concrete, Glass or Stone Products	1. Waste or Scrap Materials	1. Mail
2. Lumber or Wood Products	2. Nonmetallic Minerals	2. Nonmetallic Minerals	2. Machinery
3. Food Products	3. Metallic Ores	3. Farm Products	3. Printed Matter
4. Clay, Concrete, Glass or Stone Products	4. Food Products	4. Chemical Products	4. Fabricated Metal Products
5. Chemical Products	5. Pulp or Paper Products	5. Petroleum or Coal Products	5. Transportation Equipment

Source: Freight Goods Movement Database

Lumber or Wood Products form the principal inbound commodity moved by truck. The major outbound truck activity is the redistribution of freight, which involves shipments to and from warehouses and drayage between modes. By rail, Farm Products are the main inbound cargo. Clay, Concrete, Glass or Stone Products compose the primary outbound rail shipments. Nonmetallic Minerals is the leading category transported into the study area by water, while Waste or Scrap Materials is the top outbound shipment. Mail is the leading item for both inbound and outbound movements by air.

International Freight Movements

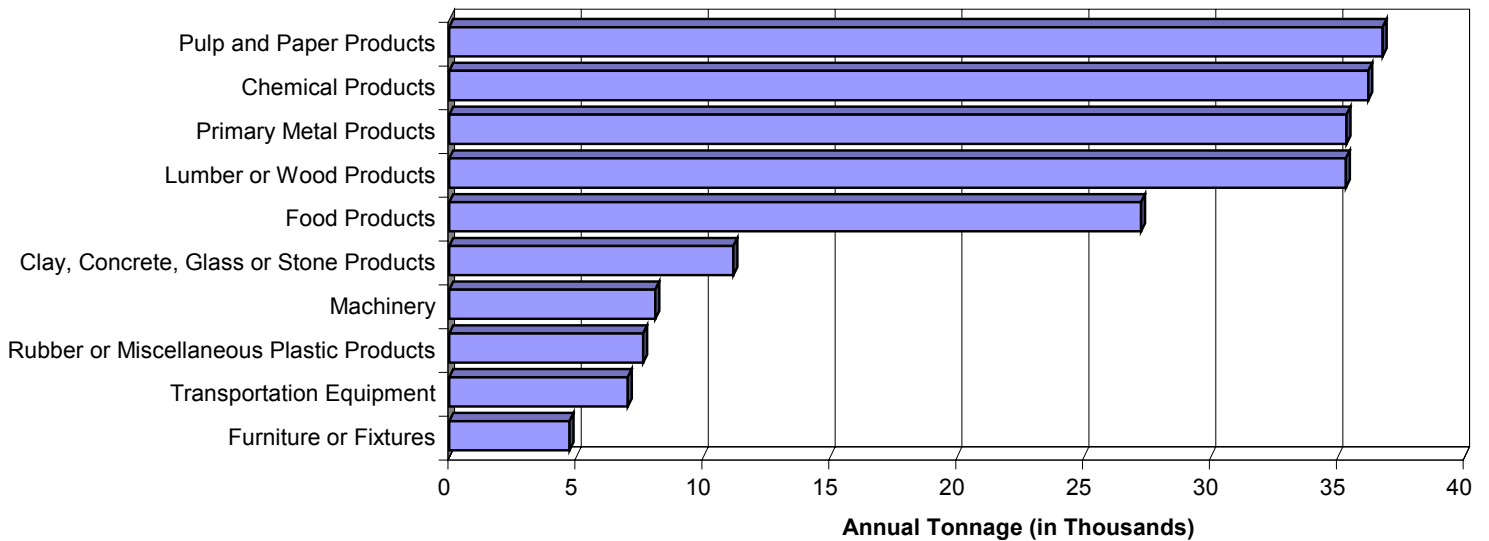
International trade is an important component of Arkansas' economy, providing additional market areas for products produced here. An examination of international freight shipping activity for the study area was made. The analysis included a review of imports and exports to Canada and Mexico and trade via Gateway BEAs. Trade data

compiled by the Arkansas Department of Economic Development (ADED) shows that Canada is Arkansas' top foreign trade partner and Mexico is second. Trade to other parts of the world primarily travels through coastal Gateway BEAs.

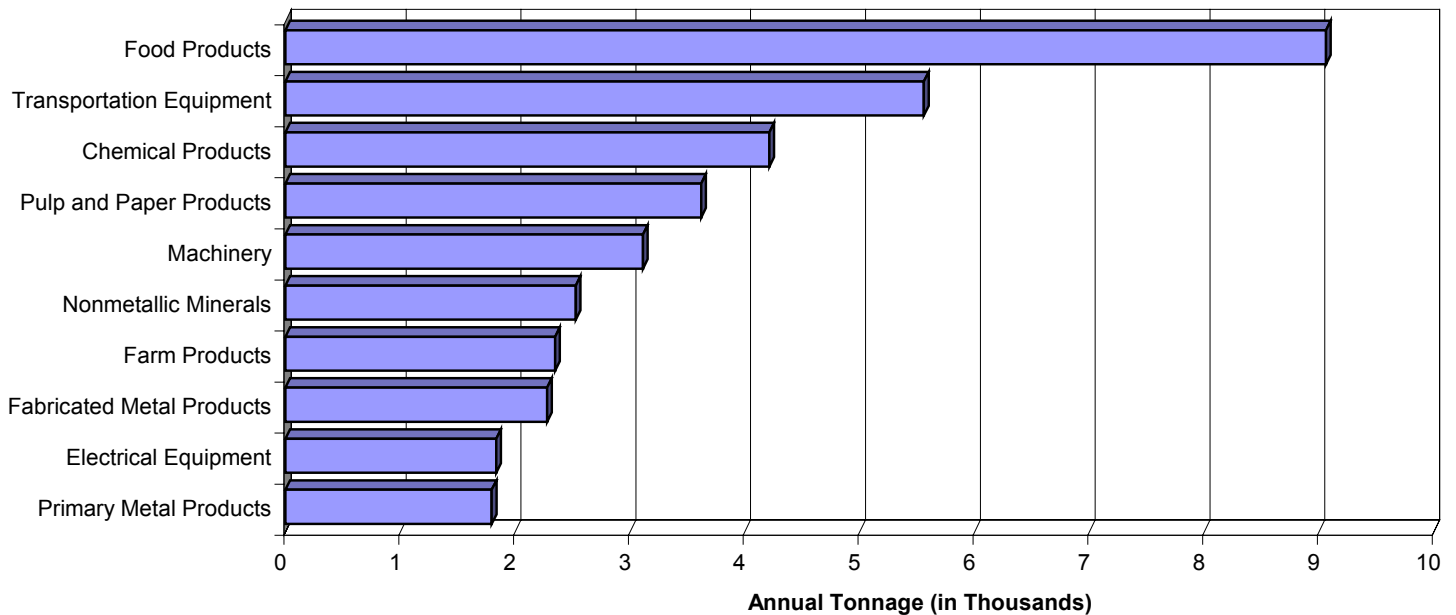
Trade with Canada

Pulp and Paper, Chemical, Primary Metals and Lumber and Wood Products are the four major types of commodities imported to the study area from Canada (Figure 16). Food Products compose the major commodity group exported to Canada from the study area, followed by transportation equipment (Figure 17).

**Figure 16
Inbound Commodities from Canada**



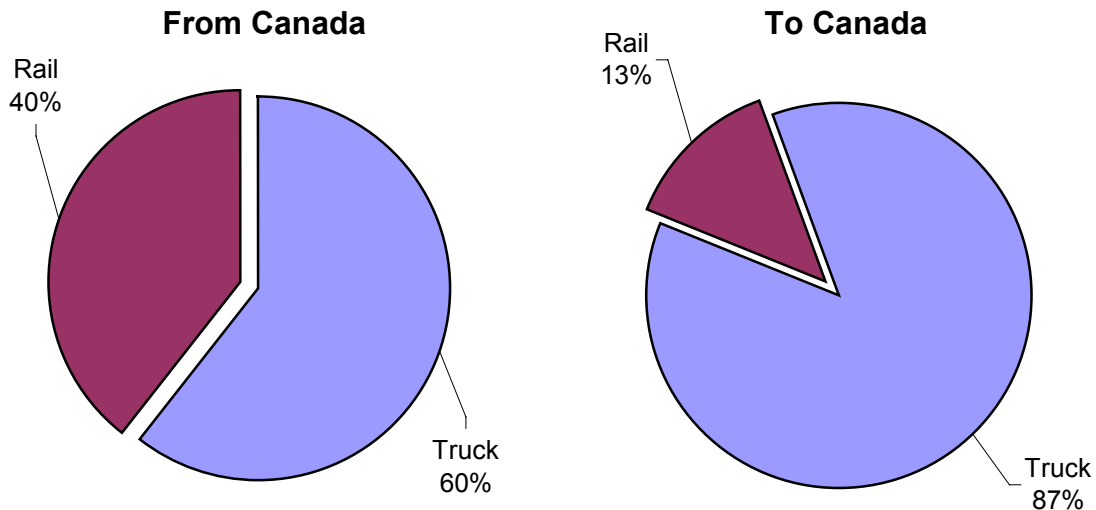
**Figure 17
Outbound Commodities to Canada**



Source: Freight Goods Movement Database

Truck is the primary mode of transportation for products shipped between Canada and the study area as shown in Figure 18.

Figure 18
Canadian Trade
Freight Transportation Usage



Source: Freight Goods Movement Database

Trade with Mexico

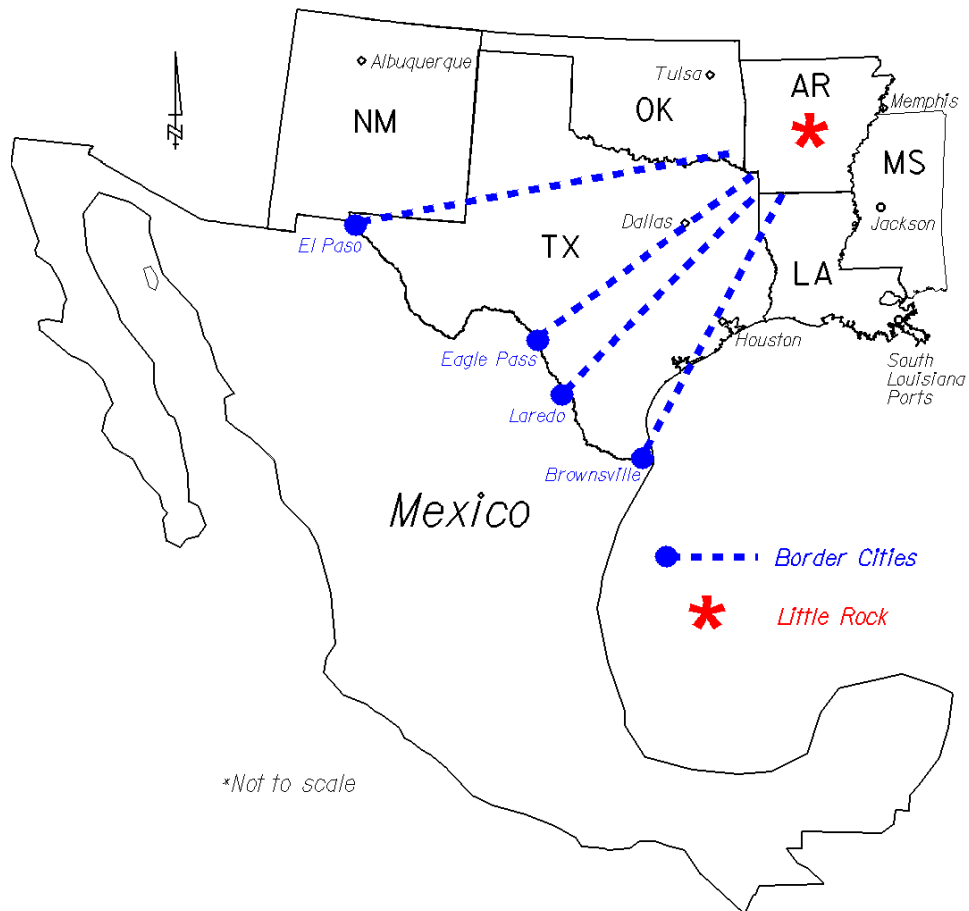
A study, entitled *The Latin American Trade and Transportation Study (LATTS)*, revealed valuable freight flow patterns for Arkansas regarding trade with Mexico. Some major findings are listed below.

Cross-Border Trade with Mexico

- Primary U.S./Mexico crossing sites are located in south Texas (Figure 19).
 - ✓ Eagle Pass, Texas
 - ✓ Laredo, Texas
 - ✓ Brownsville, Texas
 - ✓ El Paso, Texas
- More goods are exported to Mexico than are imported.

For the Little Rock Port's study area, exports to Mexico represent 68% of Mexican trade, while imports from Mexico are 32%.

Figure 19
Primary U.S./Mexico Crossing Locations



The top ten commodities imported from Mexico to the study area are shown in Figure 20. Farm Products compose the leading inbound commodity. Figure 21 shows the top ten commodities exported to Mexico from the study area. The major commodities shipped to Mexico are Clay, Concrete, Glass or Stone and Farm Products.

Figure 20
Inbound Commodities from Mexico

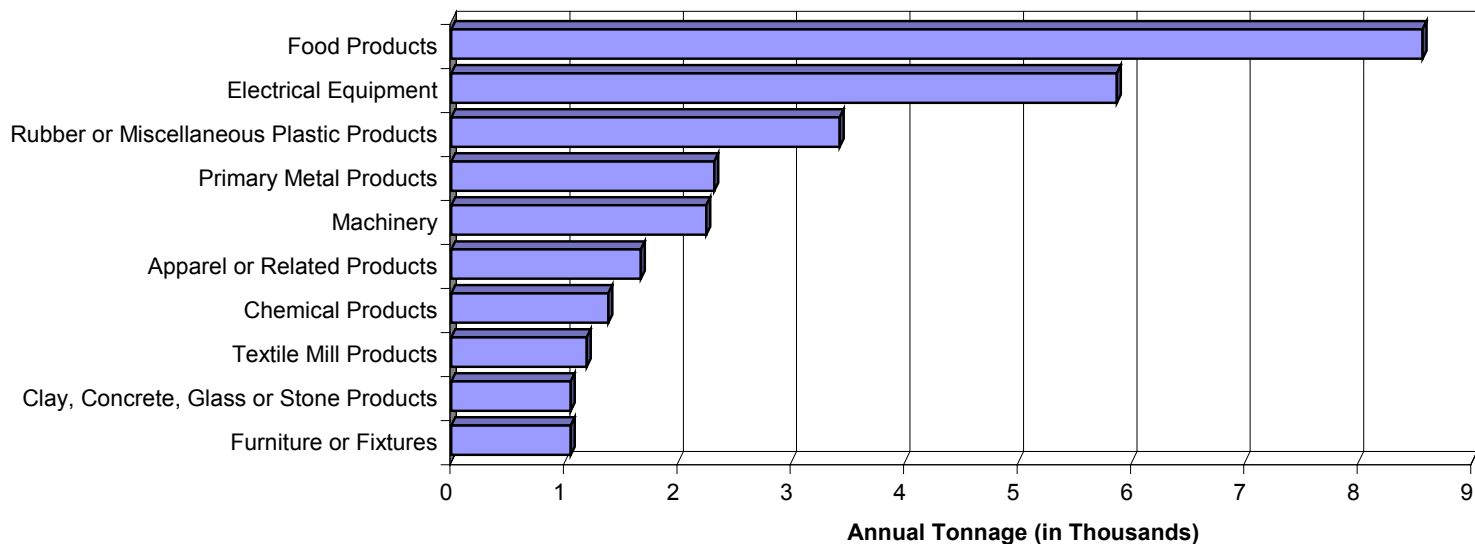
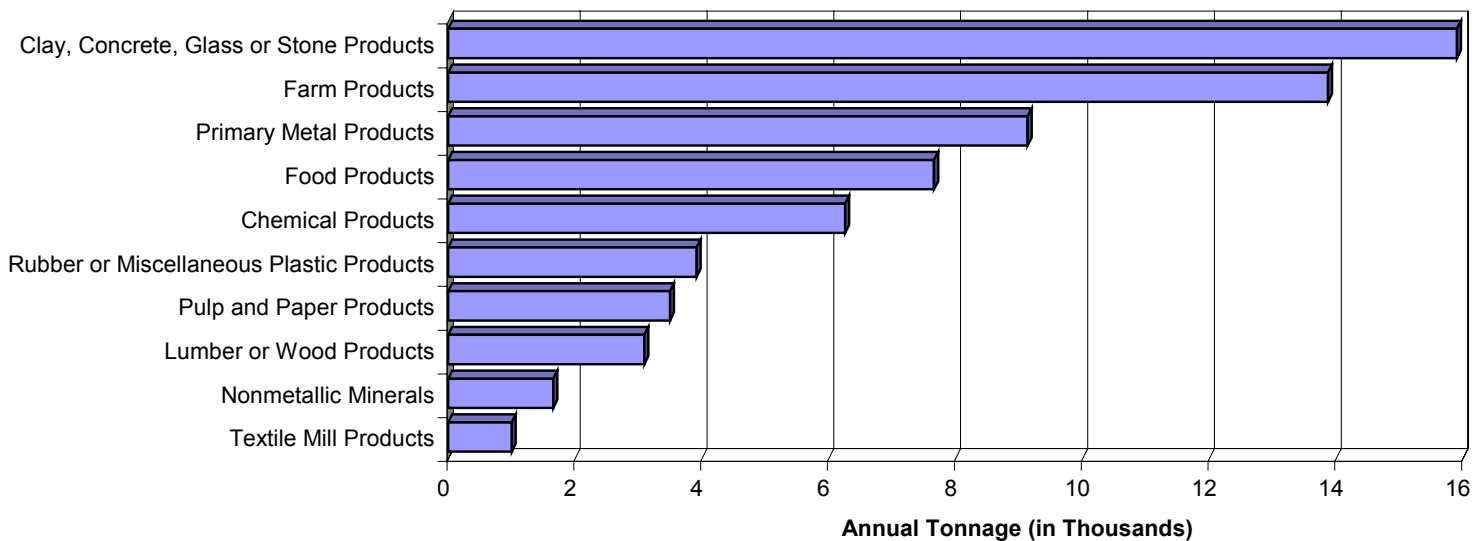


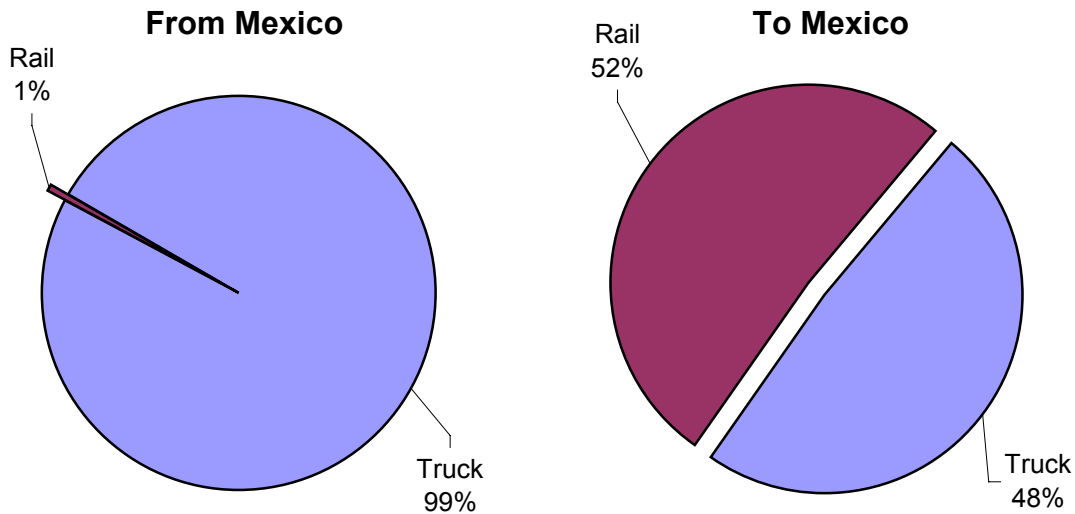
Figure 21
Outbound Commodities to Mexico



Source: Freight Goods Movement Database

As shown in Figure 22, trucks are the dominant mode of transportation used for shipments from Mexico while rail transportation leads for freight shipments to Mexico.

Figure 22
Mexican Trade
Freight Transportation Usage



Source: Freight Goods Movement Database

Trade via Coastal Gateway Business Economic Areas (BEAs)

The LATTs study and data provided by ADED was used to identify the major Gateway BEAs for Arkansas’ imports and exports, excluding trade with Canada and Mexico (see following list). Coastal Gateway BEAs are the leading locations where international trade, other than that with Canada or Mexico, leaves and enters the U.S. A coastal Gateway BEA is a location where a significant amount of freight is interchanged between container ships and other modes of transportation. Provided for comparison purposes is the national ranking for these BEAs based on container throughput.

<u>Coastal Gateway BEA</u>	<u>National Ranking</u>
• Los Angeles, CA	
✓ Port of Long Beach	1
✓ Port of Los Angeles	2
• San Francisco/Oakland, CA	5
• Seattle, WA	6
• Norfolk, VA	8
• Houston, TX	10
• Miami, FL	11
• Savannah, GA	13
• New Orleans, LA	19
• Biloxi/Gulfport, MS	25

Figure 23 depicts regions of the world where leading international trade partners for the study area (other than Canada and Mexico) are located. Annual tonnage, by freight mode, between the study area and the Gateway BEAs is listed in Table 5. The top two coastal Gateway BEAs for inbound shipments to the study area are New Orleans, Louisiana and Los Angeles, California. Trucks are the chief mode of transportation for all shipments. The principal coastal Gateway BEAs for outbound shipments are Houston, Texas and New Orleans, Louisiana.

Figure 23
Locations of Leading International Trade Partners



Table 5
Annual Tonnage Shipped Between Study Area and Coastal Gateway BEAs

<u>Inbound Shipments (Origin)</u>	<u>Rail</u>	<u>Truck</u>	<u>Air</u>	<u>Water</u>	<u>BEA Totals</u>
Biloxi, MS BEA	0	34,221	0	3,819	38,040
Houston, TX BEA	105,896	1,151,144	168	42,514	1,299,722
Los Angeles, CA BEA	3,200	1,625,664	444	0	1,629,308
Miami, FL BEA	0	36,339	7	0	36,346
New Orleans, LA BEA	11,384	956,978	5	695,347	1,663,714
Norfolk, VA BEA	0	61,002	0	0	61,002
San Francisco, CA BEA	0	65,015	2	0	65,017
Savannah, GA BEA	0	39,321	0	0	39,321
Seattle, WA BEA	4,216	751,585	10	0	755,811
<i>Totals by Mode</i>	124,696	4,721,269	636	741,680	5,588,281
<u>Outbound Shipments (Destination)</u>	<u>Rail</u>	<u>Truck</u>	<u>Air</u>	<u>Water</u>	<u>BEA Totals</u>
Biloxi, MS BEA	0	94,924	0	6,344	101,268
Houston, TX BEA	111,284	630,964	563	37,816	780,627
Los Angeles, CA BEA	6,172	196,573	1,062	0	203,807
Miami, FL BEA	0	43,093	0	0	43,093
New Orleans, LA BEA	45,872	346,818	6	316,038	708,734
Norfolk, VA BEA	0	12,886	0	0	12,886
San Francisco, CA BEA	806	64,273	107	0	65,186
Savannah, GA BEA	8,096	37,270	0	0	45,366
Seattle, WA BEA	0	29,501	2	0	29,503
<i>Totals by Mode</i>	172,230	1,456,302	1,740	360,198	1,990,470

Source: Freight Goods Movement Database

Potential Cargo Shipments

A review of the Department's Freight Goods Movement Database was made to evaluate existing commodities shipped into and out of the study area for possible alternate transportation or development of new demand. Attention was paid to the type of commodity or activity, the distances traveled and the volume of freight being transported.

Potential Waterborne Cargo

Freight consisting of a large volume of a bulk commodity or cargo that cannot easily be subdivided is considered suitable for waterborne transportation. Waterborne freight also should not have a time-sensitive nature and both ends of the trip should be located near a navigable waterway. Table 6 presents the annual tonnage for three commodities that, based on the above factors, are suitable for waterborne transportation. Current annual tonnage is the volume that is shipped now by water. The volume listed as potential waterborne freight is the amount of these commodities that are now shipped by truck to and from the study area.

**Table 6
Waterborne Cargo Shipments (Annual Tonnage)**

Origin	Commodities	Inbound	
		Current	Potential
Louisiana	Chemical Products	0	687,577
	Primary Metal Products	9,972	20,253
	Fabricated Metal Products	12,841	3,883
Deep South Region	Chemical Products	0	121,407
	Primary Metal Products	31,131	62,821
	Fabricated Metal Products	8,202	83,765
Mississippi	Chemical Products	5,434	278,572
	Primary Metal Products	0	26,552
	Fabricated Metal Products	0	77,001
Mid-West Region	Chemical Products	10,372	317,380
	Primary Metal Products	16,269	109,986
	Fabricated Metal Products	8,342	244,185
Houston, TX BEA	Chemical Products	0	504,324
	Primary Metal Products	463	10,337
	Fabricated Metal Products	344	28,961
Destination	Commodities	Outbound	
		Current	Potential
Mid-West Region	Chemical Products	0	138,754
	Primary Metal Products	0	42,672
	Fabricated Metal Products	0	37,184
Deep South Region	Chemical Products	0	49,157
	Primary Metal Products	0	74,758
	Fabricated Metal Products	0	99,896
Prairie Region	Chemical Products	0	27,715
	Primary Metal Products	0	70,244
	Fabricated Metal Products	0	35,066
St. Louis, MO BEA	Chemical Products	0	32,334
	Primary Metal Products	0	76,002
	Fabricated Metal Products	0	26,939
Houston, TX BEA	Chemical Products	0	38,748
	Primary Metal Products	0	6,522
	Fabricated Metal Products	0	6,467

Source: Freight Goods Movement Database

Potential Rail Cargo

Generally, a 500-mile distance is considered to be the range for a one-day truck movement. Beyond this distance, additional days are needed and the use of another mode is often considered. Table 7 lists the top three commodities for five areas, all located over 500 miles from the Little Rock Port. Current annual tonnage is the volume that is now shipped by rail. Potential volumes are for freight currently shipped by truck

from and to the areas listed. In addition to traditional railcar delivery, these shipments would be suitable for intermodal rail movements using Container on Flatcar (COFC) or Trailer on Flatcar (TOFC) service.

**Table 7
Rail Cargo Shipments and Activities (Annual Tonnage)**

Origin	Commodities	Inbound	
		Current	Potential
Deep South Region	Lumber or Wood Products	1,450	388,291
	Pulp and Paper Products	16,170	190,762
	Clay, Concrete, Glass or Stone Products	0	167,206
Los Angeles, CA BEA	Furniture or Fixtures	0	234,808
	Electrical Equipment	0	188,160
	Rubber or Miscellaneous Plastic Products	0	172,872
Mid-West Region	Chemical Products	3,904	317,380
	Food Products	23,796	256,265
	Fabricated Metal Products	0	244,185
Texas	Chemical Products	3,848	325,867
	Food Products	0	188,237
	Lumber or Wood Products	0	137,152
Seattle, WA BEA	Pulp and Paper Products	0	158,096
	Fabricated Metal Products	0	146,595
	Food Products	0	126,592
Destination	Commodities	Outbound	
		Current	Potential
Mid-West Region	Redistribution	0	405,979
	Lumber or Wood Products	0	286,283
	Food Products	5,380	198,936
Deep South Region	Redistribution	0	277,308
	Clay, Concrete, Glass or Stone Products	275,040	154,898
	Lumber or Wood Products	0	146,135
Prairie Region	Lumber or Wood Products	0	223,921
	Redistribution	0	213,790
	Food Products	0	152,888
Texas	Redistribution	0	189,258
	Clay, Concrete, Glass or Stone Products	67,098	120,787
	Lumber or Wood Products	3,676	82,508
Mid-Atlantic Region	Chemical Products	0	97,632
	Lumber or Wood Products	0	61,276
	Food Products	2,574	46,885

Source: Freight Goods Movement Database

Section III Summary

The objective of this study was to provide freight data to the Little Rock Port Authority for use in determining methods for enhancing the Complex as a manufacturing center and a regional freight transportation hub. This was accomplished through:

- (1) a survey of current and potential shippers – the present types of freight shipments and the importance of selected freight facilities and services were determined;
- (2) an analysis of domestic and international freight movements – data on freight mode used, commodities shipped and origin and destination of shipments were evaluated; and
- (3) the identification of potential rail and water freight shipments – freight currently moved by truck that could use another mode for transportation was identified.

Major Findings

- Freight facilities and services at the Complex are designed to complement the transfer of cargo between modes and to support the operation of local industries.
- Freight transportation facilities and services include a riverport and a slackwater harbor, a railroad and a Foreign Trade Zone. Examples of services offered are inventory management, product bagging and railcar switching, storage and blocking for movements to another location.
- The Little Rock area is centrally located to regional marketplaces and to gateway cities for cost-effective and timely freight shipments. The Complex is located next to an Interstate Highway and the Inland Waterway System and has prime access to the National Railroad Network and to air cargo service.
- Based on survey results, the study area's primary type of freight shipment is general cargo. The most needed improvements include more warehouse space and the ability to handle more transfers between different transportation modes.
- Truck transportation is the most often used mode for domestic and international shipments.
- Pulaski County is the leading origin and destination for all shipments in the study area, based on annual tonnages.
- The top potential waterborne commodity shipment for the study area is Chemical Products.
- The foremost potential rail commodity shipment for the study area is Food Products.

Appendix A
Little Rock Port Complex Photographs

Little Rock Port Complex Photographs



Main Warehouse and Riverport Dock



Outside Storage and Bagging Warehouse at Riverport

Little Rock Port Complex Photographs (continued)



Port Facility Entrance from Lindsey Road



Unloading Scrap Steel at New Harbor

Little Rock Port Complex Photographs (continued)



Rail Marshalling Yard



Rail Line at Riverport Dock

Little Rock Port Complex Photographs (continued)



Railcar by Port Warehouse



Rail Tank Cars at COFC Lift

Appendix B
Shippers' Survey

Greater Little Rock Freight Study Questionnaire



Optional

Name of Company _____
 Contact Person _____
 Type of Business (Manufacturing, Retail, etc.) _____

Type(s) of inbound freight (please indicate by check mark)
 General Dry Bulk _____ Type of Product(s)
 Refrigerated Liquid Bulk _____
 Freight mode(s) used for shipment
 Truck Intermodal _____ Primary Origin(s)
 Rail Air _____
 Barge Pipeline _____
 Annual Shipments* _____

**Indicate amounts and units (tons, gallons, bushels, etc.)*

Type(s) of outbound freight (please indicate by check mark)
 General Dry Bulk _____ Type of Product (s)
 Refrigerated Liquid Bulk _____
 Freight mode(s) used for shipment
 Truck Intermodal _____ Primary Destination(s)
 Rail Air _____
 Barge Pipeline _____
 Annual Shipments* _____

Please rate the need for the following freight facilities and services to support your current operations and to expand your business.

1 (very important) 2 (moderately important) 3 (limited importance)

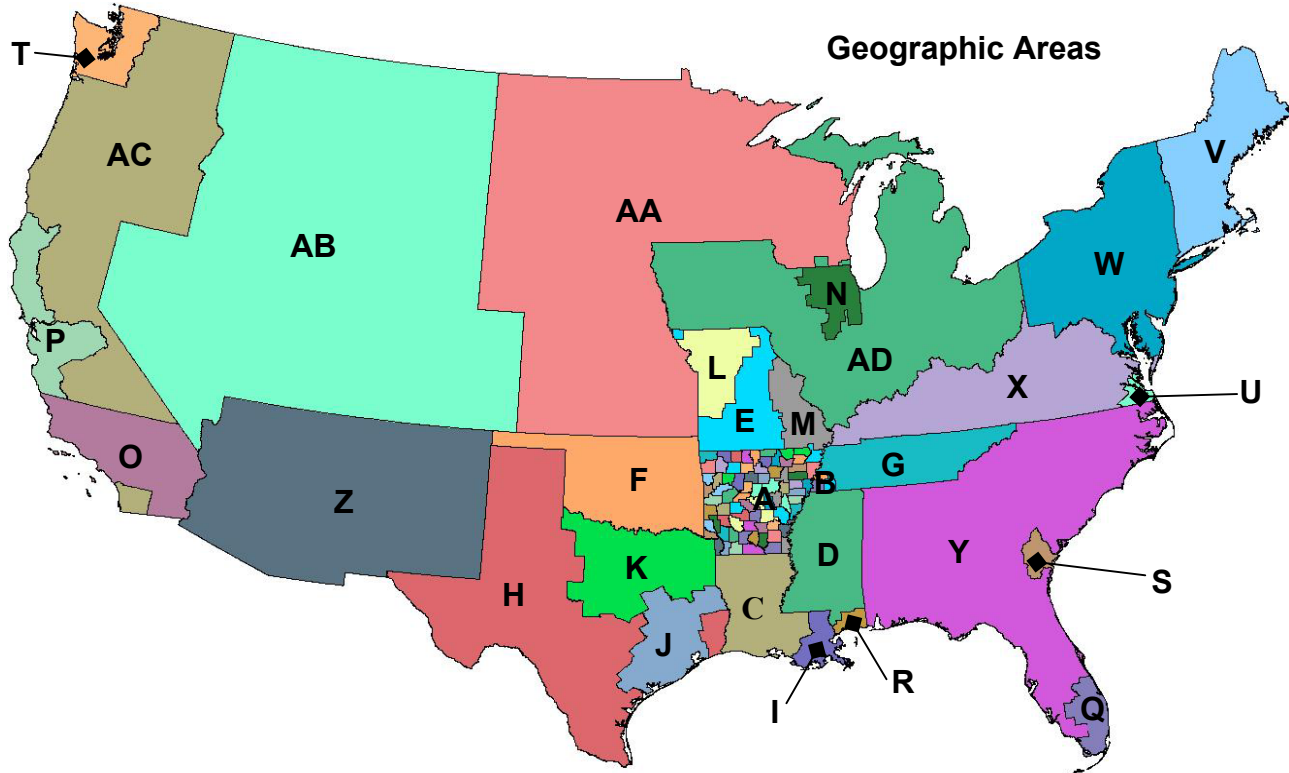
- | <u>Facility</u> | <u>Importance</u> |
|-------------------------------------|-------------------|
| • Additional warehouse space | |
| ✓ Traditional | _____ |
| ✓ Climate control | _____ |
| ✓ Bonded | _____ |
| ✓ Freezer | _____ |
| • Dry or liquid bulk tanks | _____ |
| • Truck scale | _____ |
| • Grain bins | _____ |
| • Rail siding | _____ |
| • Truck cross-dock terminal | _____ |
| • Transload facility | _____ |
| <u>Service</u> | <u>Importance</u> |
| • Container pool service | _____ |
| • Intermodal service | _____ |
| • Product sorting and segregation | _____ |
| • Labeling, bagging and repackaging | _____ |
| • Truck, rail or water transfers | _____ |

Would local access to a Foreign Trade Zone be useful? _____ Yes _____ No
 Are you aware of the shipping opportunities at the Little Rock Port? _____ Yes _____ No

Appendix C
Geographic Areas and Regional Freight Volumes

Freight Goods Movement Database

The geographic areas for the Department's Freight Goods Movement Database are shown below. Annual tonnage information is provided by freight mode for each of these areas, which include nine regions, selected Business Economic Areas (BEAs), the states surrounding Arkansas, three counties in Tennessee (Shelby, Tipton, and Fayette), and all counties in Arkansas. A BEA is a group of counties or parishes that share similar economic characteristics as defined by the U.S. Department of Commerce. Commodities and activities are identified at the four-digit Standard Transportation Commodity Code (STCC) level.



Counties: **A** *Arkansas* – All
B *Tennessee* – Shelby, Tipton, Fayette

Surrounding States: **C** Louisiana
D Mississippi
E Missouri
F Oklahoma
G Tennessee
H Texas

BEAs: **I** New Orleans
J Houston
K Dallas/Fort Worth
L Kansas City
M St. Louis
N Chicago
O Los Angeles
P San Francisco
Q Miami
R Biloxi/Gulfport
S Savannah
T Seattle
U Norfolk

Regions: **V** New England ME, NH, VT, MA, RI, CT
W Mid-Atlantic NY, NJ, DE, PA, MD, DC
X Southeast VA, WV, KY
Y Deep South FL, GA, NC, SC, AL
Z Southwest AZ, NM
AA Prairie WI, MN, ND, SD, NE, KS
AB Mountain States MT, ID, WY, CO, UT, NV
AC Pacific OR, WA, CA
AD Mid-West IA, IL, IN, OH, MI

Table C-1
Leading Inbound Commodities and Activities for the Little Rock Port Study Area
(Faulkner, Lonoke, Prairie, Pulaski, Saline and White Counties)

STCC	Commodity or Activity	Annual Tonnage
24	Lumber or Wood Products	7,943,855
2411	Primary Forest Materials	4,685,836
2421	Lumber or Dimension Stock	280,242
2429	Miscellaneous Sawmill or Planing Mill Products	1,039,750
2431	Millwork or Cabinetwork	22,529
2432	Plywood or Veneer	380,251
2433	Prefabricated Wood Buildings	204,270
2434	Kitchen Cabinets	21,290
2439	Structural Wood Products	17,039
2441	Wood Containers or Box Shooks	14,660
2491	Treated Wood Products	468,459
2492	Rattan or Bamboo Ware	73,119
2493	Lasts or Related Products	73,132
2494	Cork Products	75,607
2495	Hand Tool Handles	73,117
2496	Scaffolding Equipment or Ladders	73,135
2497	Wooden Ware or Flatware	73,304
2498	Other Wood Products	160,296
2499	Miscellaneous Wood Products	207,819
20	Food Products	6,415,016
2011	Meat, Fresh or Chilled	75,032
2012	Meat Fresh-Frozen	77,495
2013	Meat Products	90,870
2014	Animal By-products, Inedible	128,353
2015	Dressed Poultry, Fresh or Chilled	134,754
2016	Dressed Poultry, Fresh-Frozen	107,311
2017	Processed Poultry or Eggs	93,218
2021	Creamery Butter	5,556
2023	Condensed, Evaporated or Dry Milk	16,998
2024	Ice Cream or Related Frozen Desserts	9,056
2025	Cheese or Special Dairy Products	48,982
2026	Processed Milk	337,357
2032	Canned Specialties	45,563
2033	Canned Fruits or Vegetables	83,120
2034	Dehydrated or Dried Fruits or Vegetables	20,711
2035	Pickled Fruits or Vegetables	22,022
2036	Processed Fish Products	15,934
2037	Frozen Fruit or Vegetables	64,107

Table C-1 -- continued
Leading Inbound Commodities and Activities for the Little Rock Port Study Area
(Faulkner, Lonoke, Prairie, Pulaski, Saline and White Counties)

STCC	Commodity or Activity	Annual Tonnage
2038	Frozen Specialties	46,999
2039	Canned or Preserved Food, Mixed	24,753
2041	Flour or Other Grain Mill Products	301,274
2042	Prepared or Canned Feed	816,897
2043	Cereal Preparations	46,476
2044	Milled Rice	66,137
2045	Blended or Prepared Flour	25,393
2046	Wet Corn Milling or Milo Products	270,304
2047	Dog, Cat or Other Pet Foods	51,558
2051	Bread or Other Bakery Products	14,624
2052	Biscuits, Crackers or Pretzels	61,468
2061	Sugar Mill Products or By-products	732,851
2062	Sugar, Refined Cane or Beet	20,623
2071	Candy or Other Confectionery Products	135,724
2082	Malt Liquors	72,514
2083	Malt	1,294
2084	Wines	25,596
2085	Distilled or Blended Liquors	37,894
2086	Soft Drinks or Mineral Water	697,126
2087	Miscellaneous Flavoring Extracts	63,777
2091	Cottonseed Oil or By-products	114,240
2092	Soybean Oil or By-products	705,450
2093	Nut or Vegetable Oils or By-products	6,190
2094	Marine Fats or Oils	16,667
2095	Roasted or Instant Coffee	110,462
2096	Margarine	46,152
2097	Ice	89,510
2098	Macaroni, Spaghetti	36,691
2099	Miscellaneous Food Preparations	399,933
28	Chemical Products	3,976,210
2812	Potassium or Sodium Compounds	1,354,150
2813	Industrial Gases	472,258
2814	Crude Products of Coal, Tar, Natural Gas or Petroleum	95,793
2815	Cyclic Intermediates or Dyes	31,649
2816	Inorganic Pigments	6,634
2818	Miscellaneous Industrial Organic Chemicals	159,819
2819	Miscellaneous Industrial Inorganic Chemicals	36,294
2821	Plastic Materials or Synthetic Fibres	289,052
2831	Drugs	230,184

Table C-1 -- continued
Leading Inbound Commodities and Activities for the Little Rock Port Study Area
(Faulkner, Lonoke, Prairie, Pulaski, Saline and White Counties)

STCC	Commodity or Activity	Annual Tonnage
2841	Soap or Other Detergents	5
2842	Specialty Cleaning Preparations	2
2843	Surface Active Agents	1,674
2844	Cosmetics	39,688
2851	Paints	49,270
2861	Gum or Wood Chemicals	2,262
2871	Fertilizers	303,571
2879	Miscellaneous Agricultural Chemicals	571,493
2891	Adhesives	73,963
2892	Explosives	72,635
2893	Printing Ink	37,937
2899	Other Chemical Preparations	147,877
50	Redistribution	3,720,178
5010	Warehouse and Distribution Center	3,454,647
5020	Rail Intermodal Drayage	258,166
5030	Air Freight Drayage	7,365
32	Clay, Concrete, Glass or Stone Products	3,234,630
3200	Clay, Concrete, Glass or Stone Products	5
3211	Flat Glass	42,258
3221	Glass Containers	39,692
3229	Miscellaneous Glassware	48,161
3241	Portland Cement	547,865
3251	Clay Brick or Tile	187,065
3253	Ceramic Floor or Wall Tile	35,032
3255	Refractories	41,795
3259	Miscellaneous Structural Clay Products	6,679
3261	Vitreous China Plumbing Fixtures	3,849
3262	Vitreous China Kitchen Articles	24
3264	Porcelain Electrical Supplies	3,103
3271	Concrete Products	338,064
3273	Ready-mix Concrete, Wet	1,276,070
3274	Lime or Lime Plaster	527
3275	Gypsum Products	105,814
3281	Cut Stone or Stone Products	87,836
3291	Abrasive Products	27,291
3292	Asbestos Products	9,849
3293	Gaskets or Packing	13
3295	Nonmetallic Minerals	355,051

Table C-1 -- continued
Leading Inbound Commodities and Activities for the Little Rock Port Study Area
(Faulkner, Lonoke, Prairie, Pulaski, Saline and White Counties)

STCC	Commodity or Activity	Annual Tonnage
3296	Mineral Wool	70,317
3299	Miscellaneous Nonmetallic Mineral Products	8,270
29	<i>Petroleum or Coal Products</i>	1,966,894
2911	Petroleum Refining Products	532,069
2912	Liquefied Gases	1,212,960
2951	Asphalt Paving Blocks or Mixtures	161,871
2952	Asphalt Coatings or Felts	54,374
2991	Miscellaneous Coal or Petroleum Products	5,620
08	<i>Forest Products</i>	1,775,644
0800	Forest Products	1,775,644
34	<i>Fabricated Metal Products</i>	1,585,544
3421	Cutlery	909
3423	Edge or Hand Tools	72
3425	Hand Saws or Saw Blades	430
3428	Builders or Cabinet Hardware	20,028
3429	Miscellaneous Hardware	20,121
3431	Metal Sanitary Ware	226
3432	Plumbing Fixture Fittings	4,123
3433	Heating Equipment	31,586
3441	Fabricated Structural Metal Products	110,423
3442	Metal Doors	42,087
3443	Fabricated Plate Products	255,341
3444	Sheet Metal Products	64,368
3446	Architectural Metal Work	74,172
3449	Miscellaneous Metal Work	137,614
3452	Bolts or Other Industrial Fasteners	1,683
3461	Metal Stampings	133,128
3481	Miscellaneous Fabricated Wire Products	89,312
3491	Metal Shipping Containers	67,935
3492	Metal Safes or Vaults	51,175
3493	Steel Springs	44
3494	Valves or Pipe Fittings	134,365
3499	Other Fabricated Metal Products	346,402
33	<i>Primary Metal Products</i>	1,370,192
3311	Blast Furnace or Coke Oven Products	63,250
3312	Primary Iron or Steel Products	332,930
3313	Electrometallurgical Products	647,523
3315	Steel Wire, Nails or Spikes	10,848

Table C-1 -- continued
Leading Inbound Commodities and Activities for the Little Rock Port Study Area
(Faulkner, Lonoke, Prairie, Pulaski, Saline and White Counties)

STCC	Commodity or Activity	Annual Tonnage
3321	Iron or Steel Castings	62,817
3331	Primary Copper Smelter Products	2,333
3332	Primary Lead Smelter Products	27,855
3333	Primary Zinc Smelter Products	2,304
3334	Primary Aluminum Smelter Products	43,707
3339	Miscellaneous Primary Nonferrous Metal Smelter Products	6,290
3351	Copper or Alloy Basic Shapes	26,440
3352	Aluminum or Alloy Basic Shapes	37,815
3356	Miscellaneous Nonferrous Metal Basic Shapes	4,738
3357	Nonferrous Metal or Insulated Wire	53,689
3361	Aluminum or Alloy Castings	13,414
3362	Copper or Alloy Castings	326
3369	Miscellaneous Nonferrous Metal Castings	307
3391	Iron or Steel Forgings	14,291
3399	Miscellaneous Primary Metal Products	19,315
26	<i>Pulp or Paper Products</i>	1,216,326
2611	Pulp or Pulp Mill Products	73,983
2621	Paper	167,267
2631	Fibreboard, Paperboard or Pulpboard	173,366
2642	Envelopes	16,681
2643	Paper Bags	73,817
2644	Wallpaper	74,962
2645	Die-cut Paper or Paperboard Products	9,591
2646	Pressed or Molded Pulp Goods	12,179
2647	Sanitary Paper Products	38,628
2649	Miscellaneous Converted Paper Products	50,451
2651	Containers or Boxes	412,330
2654	Sanitary Food Containers	25,272
2655	Fibre Cans	12,127
2661	Building Paper or Building Board	75,672

Table C-2
Leading Outbound Commodities and Activities for the Little Rock Port Study Area
(Faulkner, Lonoke, Prairie, Pulaski, Saline and White Counties)

STCC	Commodity or Activity	Annual Tonnage
50	Redistribution	6,575,570
5010	Warehouse and Distribution Center	6,246,096
5020	Rail Intermodal Drayage	298,654
5030	Air Freight Drayage	30,820
24	Lumber or Wood Products	4,508,174
2411	Primary Forest Materials	2,599,218
2421	Lumber or Dimension Stock	118,944
2429	Miscellaneous Sawmill or Planing Mill Products	594,506
2431	Millwork or Cabinetwork	22,136
2432	Plywood or Veneer	137,038
2433	Prefabricated Wood Buildings	22,867
2434	Kitchen Cabinets	1,498
2439	Structural Wood Products	1,076
2441	Wood Containers or Box Shooks	5,105
2491	Treated Wood Products	134,674
2492	Rattan or Bamboo Ware	155,467
2493	Lasts or Related Products	155,467
2494	Cork Products	47,733
2495	Hand Tool Handles	155,467
2496	Scaffolding Equipment or Ladders	155,133
2497	Wooden Ware or Flatware	36,636
2498	Other Wood Products	69,881
2499	Miscellaneous Wood Products	95,328
32	Clay, Concrete, Glass or Stone Products	4,188,887
3211	Flat Glass	22,661
3221	Glass Containers	39,377
3229	Miscellaneous Glassware	36,222
3241	Portland Cement	201,828
3251	Clay Brick or Tile	101,239
3253	Ceramic Floor or Wall Tile	19,851
3255	Refractories	20,097
3261	Vitreous China Plumbing Fixtures	1
3264	Porcelain Electrical Supplies	12
3271	Concrete Products	238,503
3273	Ready-mix Concrete, Wet	1,996,709
3274	Lime or Lime Plaster	112
3275	Gypsum Products	59,499
3281	Cut Stone or Stone Products	31,405

Table C-2 -- continued
Leading Outbound Commodities and Activities for the Little Rock Port Study Area
(Faulkner, Lonoke, Prairie, Pulaski, Saline and White Counties)

STCC	Commodity or Activity	Annual Tonnage
3291	Abrasive Products	4,027
3292	Asbestos Products	1,126
3295	Nonmetallic Minerals	1,363,137
3296	Mineral Wool	46,786
3299	Miscellaneous Nonmetallic Mineral Products	6,295
20	Food Products	3,215,811
2011	Meat, Fresh or Chilled	7,632
2012	Meat Fresh-Frozen	8,104
2013	Meat Products	6,972
2014	Animal By-products, Inedible	89,839
2015	Dressed Poultry, Fresh or Chilled	146,485
2016	Dressed Poultry, Fresh-Frozen	107,980
2017	Processed Poultry or Eggs	137,184
2023	Condensed, Evaporated or Dry Milk	154
2024	Ice Cream or Related Frozen Desserts	4,039
2025	Cheese or Special Dairy Products	5,362
2026	Processed Milk	21,925
2031	Canned or Cured Sea Foods	260,462
2032	Canned Specialties	26,224
2033	Canned Fruits or Vegetables	61,944
2034	Dehydrated or Dried Fruits or Vegetables	122
2035	Pickled Fruits or Vegetables	3,110
2036	Processed Fish Products	19,932
2037	Frozen Fruit or Vegetables	2,115
2038	Frozen Specialties	3,056
2039	Canned or Preserved Food, Mixed	122,348
2041	Flour or Other Grain Mill Products	35,280
2042	Prepared or Canned Feed	302,625
2043	Cereal Preparations	9,902
2044	Milled Rice	75,973
2045	Blended or Prepared Flour	2,948
2046	Wet Corn Milling or Milo Products	91,633
2047	Dog, Cat or Other Pet Foods	33,917
2051	Bread or Other Bakery Products	1,217
2052	Biscuits, Crackers or Pretzels	13,281
2061	Sugar Mill Products or By-products	770,871
2062	Sugar, Refined Cane or Beet	6,412
2071	Candy or Other Confectionery Products	1,334
2082	Malt Liquors	1,411

Table C-2 -- continued
Leading Outbound Commodities and Activities for the Little Rock Port Study Area
(Faulkner, Lonoke, Prairie, Pulaski, Saline and White Counties)

STCC	Commodity or Activity	Annual Tonnage
2083	Malt	9,545
2084	Wines	163
2085	Distilled or Blended Liquors	7,217
2086	Soft Drinks or Mineral Water	191,648
2087	Miscellaneous Flavoring Extracts	13,363
2091	Cottonseed Oil or By-products	41,501
2092	Soybean Oil or By-products	212,530
2093	Nut or Vegetable Oils or By-products	27,588
2094	Marine Fats or Oils	2,396
2095	Roasted or Instant Coffee	27,873
2096	Margarine	24,946
2097	Ice	17,029
2098	Macaroni, Spaghetti	4,015
2099	Miscellaneous Food Preparations	254,204
14	<i>Nonmetallic Minerals</i>	1,338,207
1421	Broken Stone or Riprap	958,571
1441	Gravel or Sand	352,356
1471	Chemical or Fertilizer Minerals, Crude	27,280
40	<i>Waste or Scrap Materials</i>	1,196,140
4021	Metal Scrap, Waste or Tailings	19,723
4024	Paper Waste or Scrap	19,296
4029	Miscellaneous Waste or Scrap	1,157,121
28	<i>Chemical Products</i>	1,069,781
2812	Potassium or Sodium Compounds	537,183
2813	Industrial Gases	31,771
2816	Inorganic Pigments	1,462
2818	Miscellaneous Industrial Organic Chemicals	26,229
2819	Miscellaneous Industrial Inorganic Chemicals	8,023
2821	Plastic Materials or Synthetic Fibres	37,569
2843	Surface Active Agents	2,894
2844	Cosmetics	47,804
2851	Paints	14,980
2871	Fertilizers	58,814
2879	Miscellaneous Agricultural Chemicals	235,207
2891	Adhesives	4,855
2892	Explosives	1,195
2893	Printing Ink	2,183
2899	Other Chemical Preparations	59,612

Table C-2 -- continued
Leading Outbound Commodities and Activities for the Little Rock Port Study Area
(Faulkner, Lonoke, Prairie, Pulaski, Saline and White Counties)

<u>STCC</u>	<u>Commodity or Activity</u>	<u>Annual Tonnage</u>
26	<i>Pulp or Paper Products</i>	682,196
2621	Paper	2,756
2631	Fibreboard, Paperboard or Pulpboard	66,310
2642	Envelopes	319
2643	Paper Bags	74,962
2644	Wallpaper	106,803
2645	Die-cut Paper or Paperboard Products	447
2646	Pressed or Molded Pulp Goods	6,877
2647	Sanitary Paper Products	39,291
2649	Miscellaneous Converted Paper Products	8,731
2651	Containers or Boxes	246,956
2654	Sanitary Food Containers	15,793
2655	Fibre Cans	5,766
2661	Building Paper or Building Board	107,185
08	<i>Forest Products</i>	654,951
0800	Forest Products	654,951
01	<i>Farm Products</i>	464,547
0110	Field Crops	44,985
0113	Grain	207,753
0114	Oil Kernels	140,082
0120	Fresh Fruits or Tree Nuts	1,128
0129	Miscellaneous Fresh Fruits or Tree Nuts	10
0133	Leafy Fresh Vegetables	72
0139	Miscellaneous Fresh Vegetables	120
0140	Livestock or Livestock Products	50,376
0150	Poultry or Poultry Products	20,021
34	<i>Fabricated Metal Products</i>	429,482
3411	Metal Cans	79
3421	Cutlery	7
3423	Edge or Hand Tools	4
3428	Builders or Cabinet Hardware	2,502
3429	Miscellaneous Hardware	2,517
3431	Metal Sanitary Ware	2,448
3432	Plumbing Fixture Fittings	11,545
3433	Heating Equipment	6,329
3441	Fabricated Structural Metal Products	16,814
3442	Metal Doors	26,534
3443	Fabricated Plate Products	2,335

Table C-2 -- continued
Leading Outbound Commodities and Activities for the Little Rock Port Study Area
(Faulkner, Lonoke, Prairie, Pulaski, Saline and White Counties)

<u>STCC</u>	<u>Commodity or Activity</u>	<u>Annual Tonnage</u>
3444	Sheet Metal Products	34,005
3446	Architectural Metal Work	929
3449	Miscellaneous Metal Work	113,781
3452	Bolts or Other Industrial Fasteners	2,362
3461	Metal Stampings	86,944
3481	Miscellaneous Fabricated Wire Products	6,626
3491	Metal Shipping Containers	27,804
3492	Metal Safes or Vaults	8,689
3493	Steel Springs	7
3494	Valves or Pipe Fittings	24,898
3499	Other Fabricated Metal Products	52,323

Appendix D
Freight Transportation Glossary

Transportation Freight Glossary

AAR – Association of American Railroads

AASHTO – American Association of State Highway and Transportation Officials

abandonment – decision of a carrier to discontinue service over a route (Surface Transportation Board permission is required)

accessorial service – service rendered by a carrier, other than a transportation service, such as warehousing service

ad valorem tax – a charge collected by a government that is calculated on the value of goods

ADT – Average Daily Traffic

air cargo – freight, mail, and express packages transported by air

AMTRAK – the nation's rail passenger service

back haul – the return movement of a vehicle from the shipment's destination to its origin

barge – a flat-bottomed vessel used chiefly on inland waterways to transport commodities. Four common types are:

- open hopper – a barge with an open cargo area used to carry materials like coal, crushed rock, scrap metal or any material that does not need to be protected from the weather
- covered hopper – a barge like an open hopper except with a watertight cover to protect the cargo in the hold from the weather, commonly used to carry commodities such as grains and dry chemicals
- deck – a barge with no cargo hold, but with a heavily plated, well supported deck to which cargo is tied, commonly used to move machinery, construction materials, or heavy equipment
- tank – a barge used to transport liquids like petroleum products and liquid chemicals

barge fleeting area – temporary mooring area used to make up multi-barge tows

bill of lading – a contract document between carrier and shipper

blocking – the grouping of railcars for movement to another location

broker – an intermediary between the shipper and the carrier

breakbulk – the separation of a bulk load into smaller shipments

cargo – four types:

- bulk cargo – basic commodities in an unpacked condition (grains, coals, or other materials that are voluminous and loose)
- general cargo – large units of semi-manufactured commodities which are packaged in boxes and drums or self-packaged
- neo-bulk cargo – a limited number of commodities such as scrap metal, lumber, automobiles, or paper
- outside cargo – general cargo that is so heavy or large it cannot be accommodated or handled by normal means, and requires use of special loading and/or transportation equipment

cargo movements – three types

- online movements – cargo is transported by a single carrier
- single mode movements – cargo is transported by one or more carriers of a single mode
- intermodal movements – cargo is transported by two or more modes, involving the transfer of cargo between modes

circuitous route – indirect freight route

CL – carload or container load

Class I Railroad – railroad that provides national rail service

Class II Railroad – railroad that provides regional rail service (none in Arkansas)

Class III Railroad – railroad that provides local rail service

COFC – container on (rail) flatcar

consignee – party to whom articles are shipped

common carrier – for-hire carrier that serves the general public

consignor – party by whom articles are shipped

container terminal – area designated for the storage of containerized freight

contract carrier – for-hire carrier that serves shippers through contract arrangements

Customs duty (or tariff) – amount payable to the government on goods imported or exported

dead head – one leg of a freight movement on which the trailer or container is empty

demurrage – a fee levied by a shipping company when shipping equipment (railcar, container, etc.) in which goods were shipped is detained and not returned by a specified date agreed upon by contract

distribution warehouse – a warehouse used to store finished goods and to assemble customer orders

dock – a general term for a structure at which vessels berth or tie-up

double lockage – a method for moving a large tow through a lock with a smaller capacity by breaking the tow in half and sending half at a time

double stack – stacking containers, frequently with different lengths, on a railcar

draft – the depth to which a vessel lies below the water surface

drawback – a refund of duty taxes, which may be obtained when goods are exported or destroyed under certain conditions

drayage – freight hauled by a motor carrier

duty – see Customs duty

exclusive use – carrier vehicles assigned to a specific shipper for its sole use

FHWA – Federal Highway Administration

Foreign Trade Zone – designated area where imported goods or products for export can be stored, displayed, sold, and/or manufactured without being subject to certain quota restrictions and some Customs formalities

FRA – Federal Railroad Administration

freight forwarder – a person engaged in consolidating small shipments of goods for transport as a single shipment

gateway – point where freight moving between territories is interchanged

harbor – an area of water off the main channel and out of the current

head of navigation – the farthest point of navigation from the mouth of a river

inland waterways – the system of lakes, streams, rivers and canals used to transport freight

interchange – transfer of cargo between carriers

intermodal transfer – transfer of commodities between two modes

intermodal transportation facility – freight exchange terminal that also provides warehousing and transfer loading

JIT (just-in-time) – inventory system used by manufacturers and distributors to minimize levels of inventories, for which reliable transportation is essential

LCL – shipments of less than rail carload volume

lead time – total time that elapses from placement of an order until the goods are received

line haul – movement of freight from one point to another

lock – a structure built in a river to allow movement between two pools of water with different elevation heights

logistics channel – network of intermediaries engaged in transfer, storage, handling and communication functions that contribute to the efficient flow of goods

LTL – less than truckload (shipment)

marshalling yard – a series of parallel rail tracks where railcars are stored and grouped for distribution

multimodal – moving cargo from origin to destination by more than one freight transportation mode

outsourcing – contracting with an outside firm for services (e.g., shipping, packaging, storage, billing and/or inventory control)

piggyback – shipment of truck trailers and containers on railroad flatcars; also called TOFC (trailer on flat car)

port – an area with marine terminal facilities for transferring cargo between marine vessels and land transportation

port terminal – waterfront buildings, structures and equipment used for the transfer, handling, delivery and reception of waterborne freight

railcars – seven types:

- box car – closed car used for hauling freight
- compartmentizer car – box car equipped with movable bulkheads which can be used to divide the car into separate compartments
- compartment tank car – tank car which has compartments or separate tanks in which different kinds or grades of liquids may be transported
- flatcar – car without sides, top or ends, used for machinery, stone, etc.
- gondola – open top car having sides and ends
- hopper car – car with floor sloping to one or more hoppers through which contents may be unloaded by gravity
- tank car – car used for transporting bulk liquids

rail weight – the weight of rail measured in pounds per yard

relay terminal – motor carrier terminal where a fresh driver is substituted for a driver who has driven the maximum hours permitted

river mile – the location of a marine activity based upon the distance along the deepest part of the navigation channel measured from the mouth of the river

seamless service – level of cooperation among intermodal carriers that makes the modal transfer smooth and effortless with no shipment delay

shippers – individuals or business that purchase transportation services for their goods or commodities

shippers' association – a non-profit entity that represents the interests of a number of shippers

side tracks – rail tracks used for storage, loading or unloading which connect with other railroad tracks

spur tracks – rail tracks extending from and connected at only one end with another track

stevedore – a person or company employed to load or unload waterborne cargo

tariff – also called a Customs duty

team track – rail tracks on which railcars are placed for the use of the public in loading and unloading freight

TEU – Twenty-Foot Equivalent Unit. A TEU is equivalent to a 20-foot container

through movement – shipment of a container inspected and sealed by Customs at the factory site and then transported without the need of further inspection until arrival at the destination

TL – truck load (shipment)

TOFC – trailer on flatcar (also called piggyback service)

tow – barges and a towboat tied together, acting as a single vessel with the towboat as the power unit

towboat – a compact shallow-draft vessel with square bow for pushing tows of barges on inland waterways

tramp loading site – loading site that allows for transfers of bulk commodities and containers between trucks and trains

transit shed – a building designed to provide temporary accommodations and sorting space for cargo being transferred to or from a freight mode

transit time – total time that elapses from pickup to delivery of a shipment

transload site – a location where products are temporarily stored and then loaded into a railcar, truck or container

truck cross-dock terminal – a location where cargo is transferred between long-haul trucks and small delivery trucks, as part of a freight consolidation service

unit trains – large shipments treated as a single unit (e.g., a multi-car train where all cars carry wood chips to a paper mill)

warehouse – a building in which goods may be stored over a period of time as necessary to make further distribution

wharfage – a charge assessed by a pier or dock owner on freight handled over their pier or dock

Little Rock Port Complex Freight Study



Arkansas State Highway and Transportation Department