Current Regional Freight and Goods Flow Profile

Central Florida Regional Freight Study

technical report

CAMBRIDGE SYSTEMATICS

Current Regional Freight and Goods Flow Profile

Central Florida Regional Freight Study

prepared for

MetroPlan Orlando
DOT District 5, Lake-Sumter MPO, Space Coast TPO and Volusia TPO

prepared by

Cambridge Systematics, Inc.
100 CambridgePark Drive, Suite 400
Cambridge, MA 02140

with

HDR Engineering, Inc.
Canin Associates
Aviation Analytics

date

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1.0 Introduction

1.1 DATA AND METHODOLOGY

The study area is comprised of seven counties in the Central Florida region. This area includes Brevard, Lake, Orange, Osceola, Seminole, Sumter, and Volusia counties, and is shown in Figure 1.1. Throughout the remainder of this report the words "region" or "regional" will refer to this seven-county study area.

The data source for the analysis in this report is the Florida Trade and Logistics database provided by Florida Department of Transportation (FDOT) for truck, air and waterborne freight movements, and the Surface Transportation Board (STB) Full Carload Waybill Sample for rail flows. The Florida Trade and Logistics database was developed for the Florida Trade and Logistics Study commissioned by the Florida Chamber of Commerce Foundation and the Florida Department of Transportation. The base year for this database was normalized to 2010 and forecasts were developed for 10-, 25-, and 50-year time periods. It used IHS Global Insight TRANSEARCH commodity flow data to describe the truck and domestic air cargo flows; and used the Journal of Commerce's Port Import Export Reporting System (PIERS) data to describe Florida's international waterborne imports and exports. Rail freight flows were analyzed with the 2009 Surface Transportation Board Full Carload Waybill Sample.

Figure 1.1   Central Florida Study Region
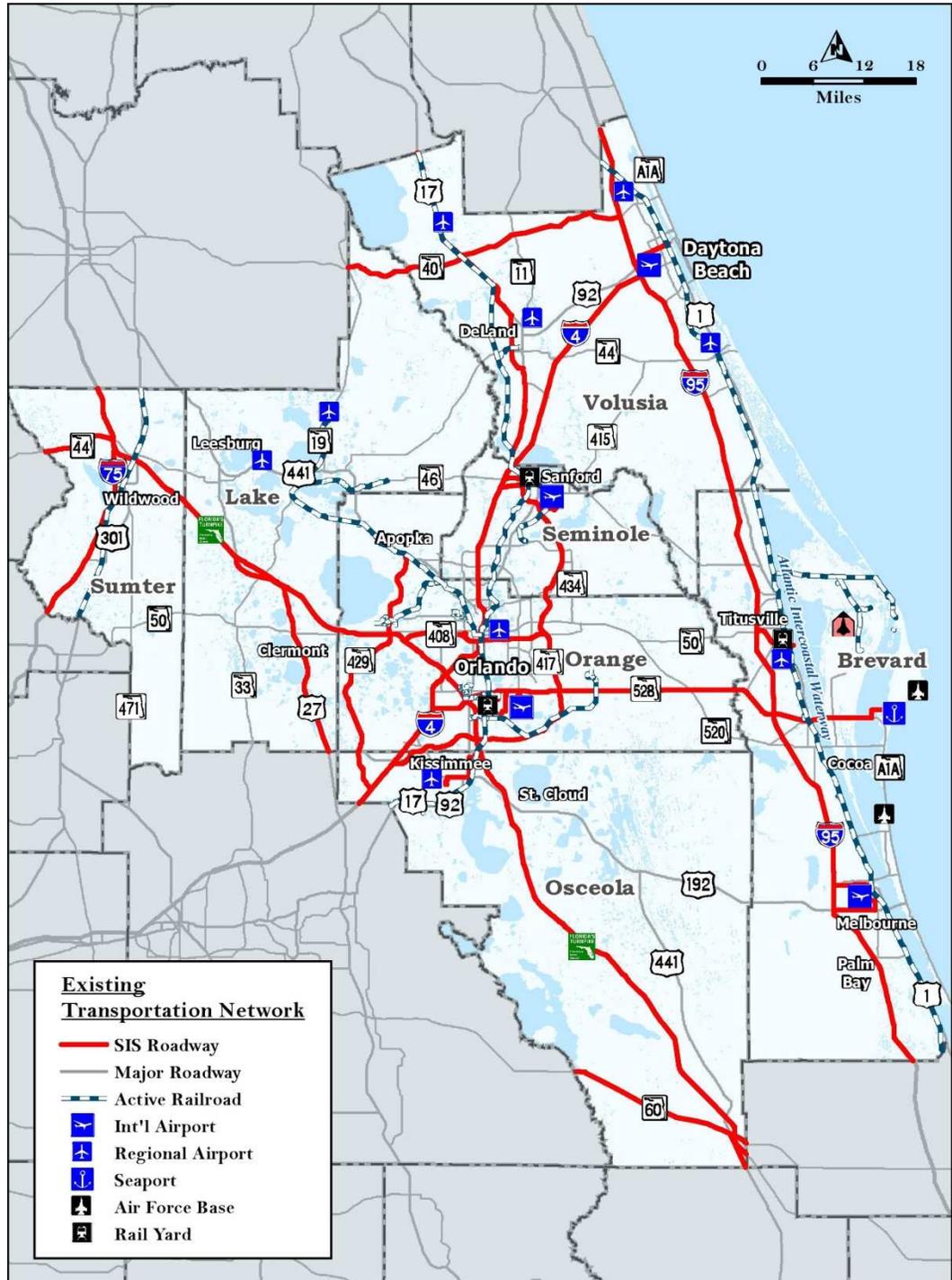
1.2 KEY FINDINGS

A summary of key commodity flow analysis findings are presented below. More detailed analysis follows in Section 2.0.

Commodity Flow Summary

- Nearly 202 million tons of inbound, outbound, intraregional, and through freight moved over the Central Florida study region's transportation network in 2010. Nineteen percent of this traffic was inbound, 11 percent was outbound, 10 percent was intraregional, and 60 percent was through traffic.

- When measured by weight, 95 percent of the regional freight moved by truck, 4 percent rail, 1 percent water, and less than 1 percent air in 2010.

- Orange County is the largest freight generator and receiver within the region. It accounted for more than 45 percent of all inbound tonnage and over 40 percent of all outbound tonnage in 2010. Brevard County accounted for 23 percent of all outbound tonnage.

Truck Flows

- In 2010, over 191 million tons of inbound, outbound, intraregional, and through freight was hauled by truck over the region's roadway infrastructure.

- Fifteen percent of this traffic was inbound, 12 percent was outbound, 11 percent was intraregional, and 62 percent was moving through the region (i.e., had both an origin and a destination outside of the study area).

Rail Flows

- In 2010, more than 9 million tons of inbound, outbound, and intraregional freight was hauled by rail over the region's rail network. Ninety-five percent of this traffic was inbound, and 5 percent was outbound.

- By weight, the rail freight was 92 percent carload, and 8 percent intermodal. By number of railcars, 62 percent was carload, and 38 percent was intermodal.

Top Commodities

- The top three commodity groups moving inbound, outbound and intraregionally in 2010 are nonmetallic ores and minerals, clay, concrete, glass and stone products, and warehoused goods (defined here as freight flows to and from distribution centers or via intermodal facilities and typically represents consumer goods). Together they account for more 70 percent of total commodities by weight.

- In 2010, the top truck commodity was nonmetallic ores and minerals, which accounted for 30 percent of total truck tonnage (i.e., sum of inbound, outbound, and intraregional truck tonnage). Clay, concrete, glass and stone products were second (25 percent of total truck tonnage), and warehoused goods (19 percent of total truck tonnage) was third.

- In 2010, the top rail commodity was nonmetallic ores and minerals, which accounted for 47 percent of the region's total rail tonnage (i.e., sum of inbound and outbound rail tonnage). Coal was second (25 percent of total rail tonnage), and food and kindred products were third (6 percent of total rail tonnage).

Top Trading Partners

- The top three trading partners of the study region – Miami-Dade County, Marion County, and Polk County – account for about 28 percent of total inbound and outbound freight flows by weight.

- In 2010, the top commodity group moved to and from the region's top trading partner (Miami-Dade County) was nonmetallic ores and minerals, accounting for 38 percent of total tonnage. This was followed by warehoused goods, at 34 percent, and clay, concrete, glass and stone products at 11 percent.

- In 2010, the top commodity group moved to and from the region's second largest trading partner (Marion County) was nonmetallic ores and minerals, accounting for 79 percent of total tonnage. This was followed by clay, concrete, glass, and stone products at 15 percent and warehoused goods at 3 percent.

- In 2010, the top commodity group moved to and from region's third largest trading partner (Polk County) was clay, concrete, glass, and stone products, accounting for 40 percent of total tonnage. This was followed by warehoused goods at 27 percent and nonmetallic ores and minerals at 18 percent.

2.0 Regional Commodity Flow Analysis

2.1 OVERVIEW

In 2010, 202.3 million tons of freight moved into, out of, within, or through the study region. Approximately 37.9 million tons (19 percent) traveled inbound, 23 million tons (11 percent) traveled outbound, and 20.5 million tons (10 percent) traveled from one point within the region to another point within the region. Through freight accounted for 120.6 million tons or nearly 60 percent of the total.

2.2 DIRECTIONAL ANALYSIS

Directional analysis describes and compares the magnitude of freight, in terms of weight, moving over the region's transportation infrastructure by direction. It also can help reveal the underlying economic structure of the region. Every freight shipment can be categorized as moving in one of four directions – inbound, outbound, intraregional, or through. Freight flows are assigned a direction according to the following definitions:

- Inbound freight movements originate outside of the region and terminate within the region. Inbound freight represents imports to the region. Because consumers and businesses must pay for goods received, inbound freight also is associated with a corresponding outflow of dollars from the region.

- Outbound freight movements originate within the region and terminate outside of the region. Outbound freight represents exports from the region and is considered wealth-generating freight because it is associated with an inflow of dollars to the region.

- Intraregional freight movements originate and terminate within the region. Intraregional freight moves represent the degree to which the region is trading with itself. It is associated with neither imports nor exports, but reflects the level to which the region is able to supply the goods it needs (both consumer and production materials) from within its boundaries.

- Through freight movements originate outside of the region, traverse the region, and terminate outside of the region. Through freight moves, while very important for the national and global economy, do not directly impact the regional economy to a significant degree; however, the movement of through freight does utilize and impact the regional transportation system as a means to reach its final destination.

In 2010, more than 202 million tons of freight moved over the region's transportation system. Table 2.1 displays freight flows by weight and direction in 2010 while Figure 2.1 graphically displays the proportion of regional freight tonnage by direction.

The largest component of total regional freight is traveling through the region (60 percent of the 2010 total). Inbound freight is the second largest component (19 percent of the 2010 total) which indicates that the Central Florida study region is a net importer of goods. Inbound freight utilizes that part of the transportation network that provides access to distribution centers and retail nodes (finished consumer goods), as well as manufacturing facilities, port terminals, and cargo airports in the region.

Outbound freight is the third largest component (11 percent of the 2010 total). Outbound freight utilizes that part of the transportation network that provides access to national markets and gateways, manufacturing facilities, port terminals, and cargo airports in the region. Intraregional freight accounts for 10 percent of the total freight movements.

Table 2.1　Total Tonnage by Direction
Tons in Thousands

Direction	2010[a]
Inbound	37,936
Outbound	23,142
Intraregional	20,560
Through[b]	120,640
Total	**202,278**

Source:　2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a]　The base year for the rail data is 2009.

[b]　Through rail moves were not included due to the inability to estimate it with the full Surface Transportation Board (STB) Waybill dataset. Therefore, the total through tonnage shown here likely underestimates actual through tonnage due to the lack of through rail data.

Figure 2.1   Direction of Total Freight Flows by Weight
2010
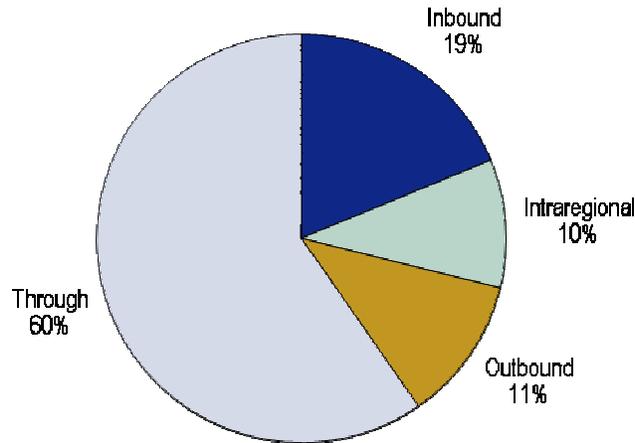
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Directional Analysis – Inbound Freight

Terminating Counties for Total Inbound Freight

Figure 2.2 graphically presents, by county, the distribution of total inbound tonnage for 2010. Orange County alone accounts for nearly 45 percent of all inbound tonnage to the region or 17 million tons in 2010. Brevard and Seminole counties received 16 percent and 14 percent of inbound tonnage respectively (6 million tons and 5 million tons respectively), while Lake County received 11 percent (4 million tons). The remaining counties (Volusia, Osceola, and Sumter) combined accounted for 15 percent or 5.4 million tons of inbound tonnage in 2010.

Figure 2.2   Terminating Counties for Total Inbound Freight by Weight
2010

Source: Cambridge Systematics with 2010 FDOT Trade and Logistics dataset and 2009 full Surface
Transportation Board (STB) Waybill dataset.

Directional Analysis – Outbound Freight

Originating Counties for Total Outbound Freight

Figure 2.3 graphically presents, by county, the distribution of total outbound tonnage for 2010. Orange County accounted for 40 percent (9.3 million tons) of outbound freight tonnage originating from the region in 2010. Brevard County is next accounting for 23 percent (5.4 million tons) of the outbound freight tonnage in 2010. Sumter and Volusia counties represented 11 percent and 10 percent respectively (2.5 million and 2.2 million tons respectively). The remaining share of the outbound freight movements in 2010 originated is split 8 percent from Lake County, 7 percent from Seminole and 1 percent from Osceola County.

Figure 2.3   Originating Counties for Total Outbound Freight by Weight
2010

Source: Cambridge Systematics with 2010 FDOT Trade and Logistics dataset and 2009 full Surface
Transportation Board (STB) Waybill dataset.

Directional Analysis – Intraregional Freight

To understand more about how intraregional freight moves within a region, a ranked list of origin-destination pairs was developed (see Table 2.2 below). Within the study region, the origin-destination pair with the greatest level in intraregional freight by weight is movements from Brevard County to Orange County (18 percent of the intraregional moves or 3.6 million tons). This is expected due to the Port-related activity in Brevard County and the large freight market in Orange County. About 13 percent (2.6 million tons) of all intraregional freight by weight moved in 2010 were between origins and destinations within Orange County, again not surprising given the overall level of population and employment in the county. The third and fourth most significant origin-destination pairs are Lake County to Orange County, and intracounty movements within Brevard County (i.e., Brevard County origins to Brevard County destinations).

All of the intraregional freight is handled by trucks and a relatively large proportion by weight of these moves are nonmetallic ores and minerals, and clay, concrete, glass or stone products, indicative of construction activity.

Table 2.2   Top 10 Origin-Destination Pairs for Total Intraregional Traffic by Weight
2010, Tons in Thousands

Origin	Destination	Truck	Rail[a]	Air	Air-Truck	Water	Total
Brevard County	Orange County	3,640	–	–	0	–	3,640
Orange County	Orange County	2,554	–	–	30	–	2,584
Lake County	Orange County	1,734	–	–	0	–	1,734
Brevard County	Brevard County	1,388	–	–	–	–	1,388
Orange County	Seminole County	1,247	–	–	0	–	1,247
Sumter County	Lake County	1,207	–	–	–	–	1,207
Lake County	Lake County	832	–	–	–	–	832
Brevard County	Seminole County	824	–	–	–	–	824
Sumter County	Orange County	805	–	–	–	–	805
Orange County	Brevard County	659	–	–	0	–	660
All Others		5,639	–	–	0	–	5,640
Total		**20,529**	**–**	**–**	**31**	**–**	**20,560**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] The base year for the rail data is 2009.

2.3 MODE SHARE ANALYSIS

Freight utilizes different modes of transportation. This section will analyze the regional movement of freight via the roadways, railways, water, and air. Mode share analysis enables better understanding of how the region's transportation infrastructure is impacted by freight movement.

Mode Share Analysis – All Directions (Inbound, Outbound, Intraregional, and Through)

Table 2.3 and Figure 2.4 display the breakdown of total freight tonnage by mode for 2010. Clearly, trucks are the dominant mode of freight transportation throughout the region. About 95 percent of all freight tonnage was moved by truck in 2010. Like most regions, Central Florida is dependent on trucks for movement of most of its freight, particularly those shipments that both originate and terminate within the region. This total is reasonable since trucks normally provide the last link in the transportation chain, transporting all types of commodities from their intermediate destinations, such as seaports or rail terminals, to their final destinations.

Rail is the second most common mode transporting nearly 4 percent of the freight tonnage, not including rail traffic that simply moves through the region. International waterborne freight through Port Canaveral follows, accounting for 1 percent of the tonnage. The remaining share of the region's tonnage, less than 1 percent, is air cargo.

Table 2.3   Summary of Regional Freight Flows by Weight
2010, Tons in Thousands (Exclusive of through rail tons)

Direction	Truck	Rail[a]	Air	Air-Truck	Water	Total
Inbound	28,695	8,530	42	50	620	37,936
Intraregional	20,529	-	-	31	-	20,560
Outbound	22,568	480	13	63	18	23,142
Through	119,460	N/A[b]	-	38	1,142	120,640
Total	**191,252**	**9,010**	**55**	**182**	**1,780**	**202,278**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] The base year for the rail data is 2009.

[b] Through rail moves were not included due to the inability to estimate it with the full Surface Transportation Board (STB) Waybill dataset. Therefore, the total through tonnage shown here likely underestimates actual through tonnage due to the lack of through rail data.

Figure 2.4   Mode Share by Weight – All Directions
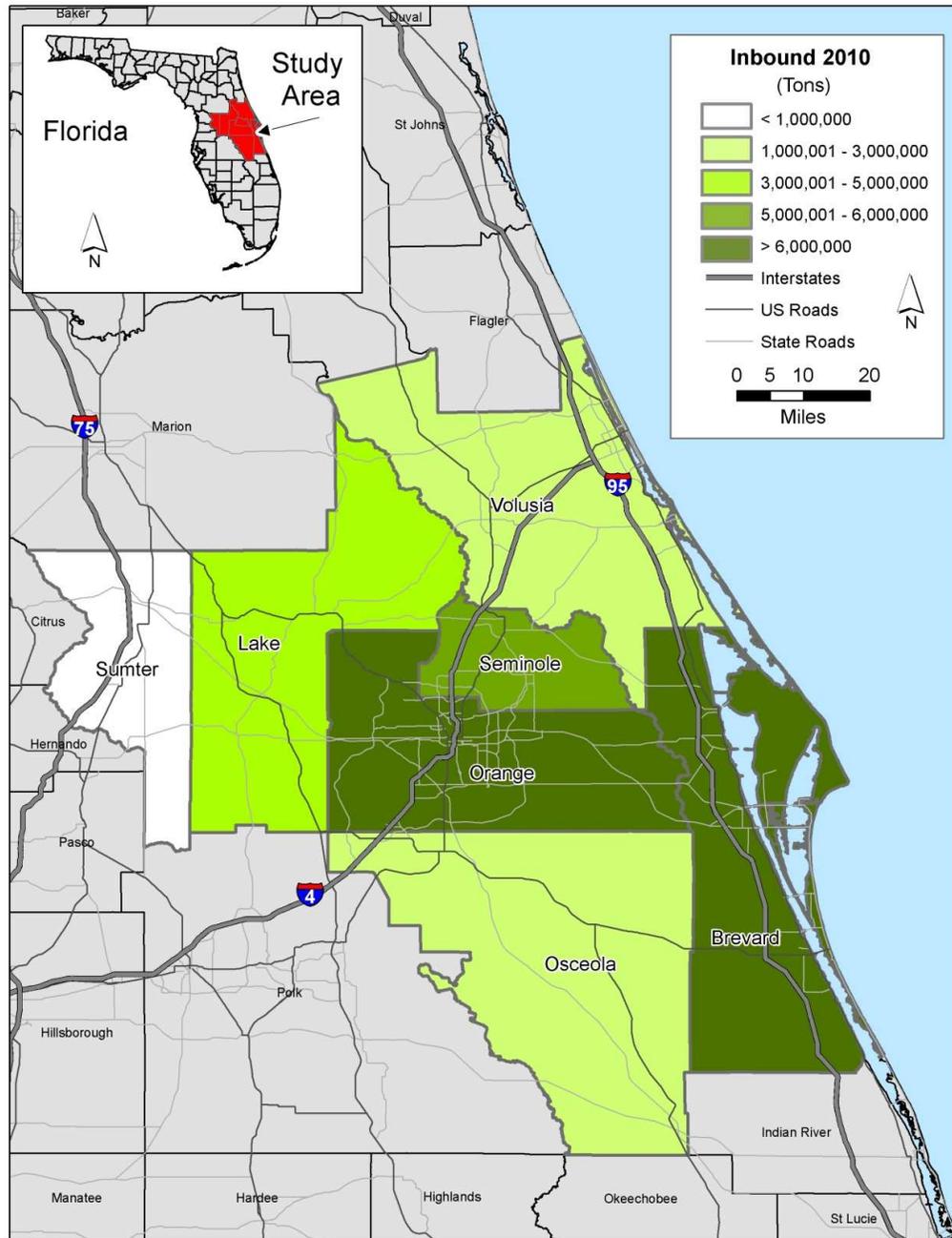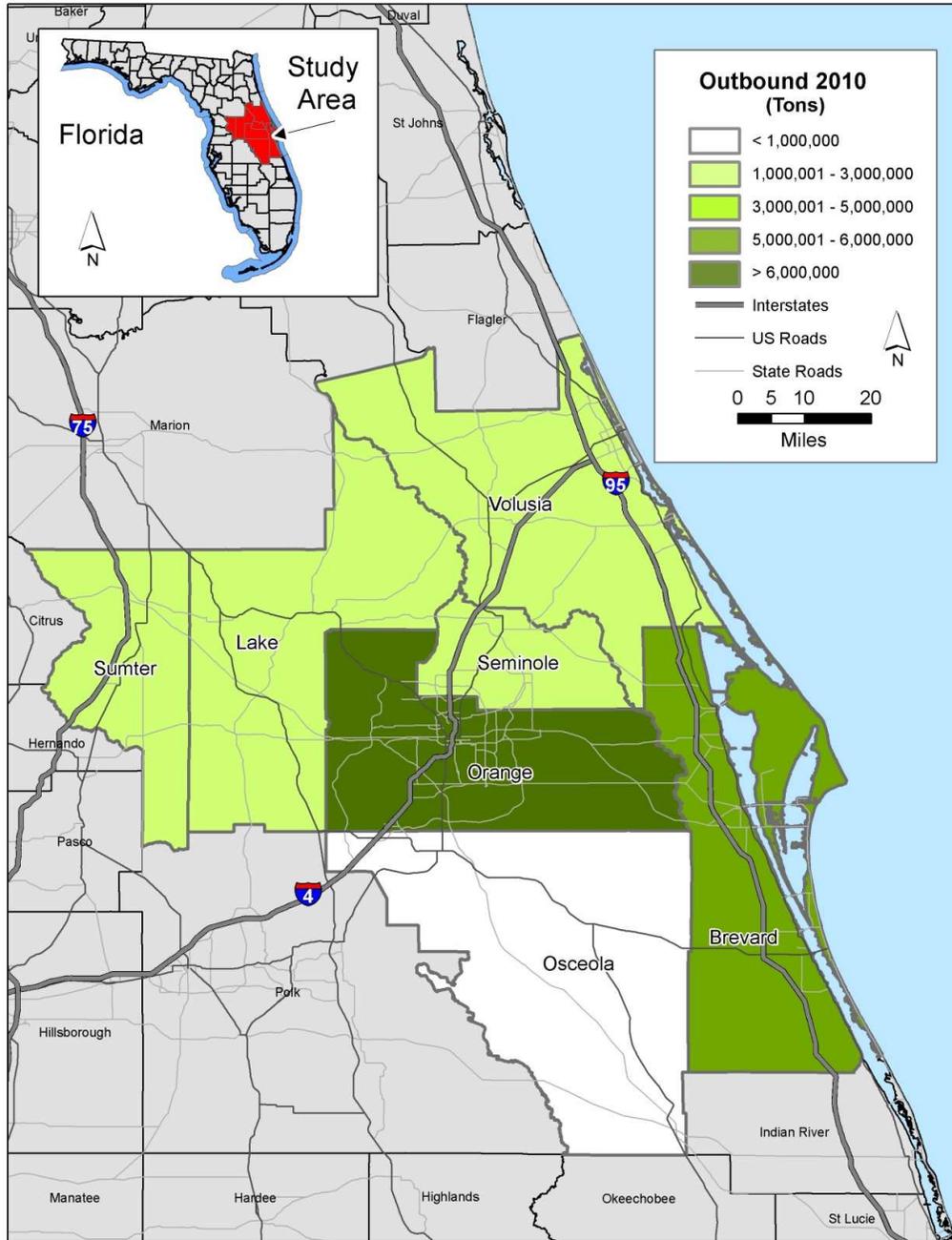*2010 (Exclusive of through rail tons)*
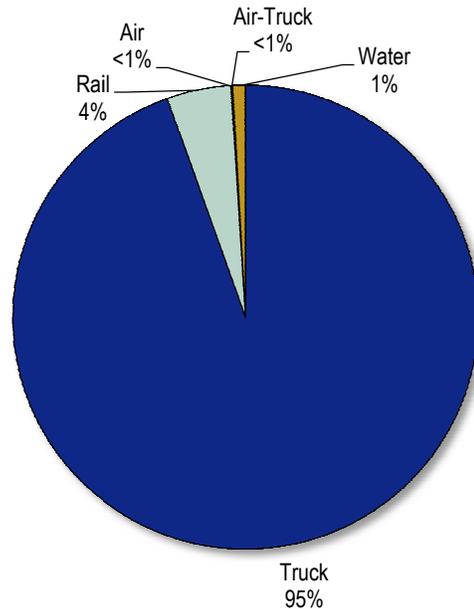
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Mode Share Analysis – Inbound

Figure 2.5 shows the mode share by weight for freight moving in the inbound direction. Compared to total freight tonnage (all directions), a greater proportion of inbound freight arrives via the rail, water and air modes. The reasons for this become apparent when analyzing the commodity mix of inbound freight (discussed in some detail in Section 2.4) as compared to that of total freight. For example, two of the top inbound commodities are nonmetallic ores and minerals (transported primarily by truck and rail and some water) and coal (transported primarily by rail). These two commodities are a greater proportion of inbound freight than they are of total freight which partly explains why the rail and water modes account for a greater share of inbound tonnage than they do for total tonnage. Air cargo is mostly inbound mail.

Figure 2.5   Mode Share by Weight – Inbound
2010
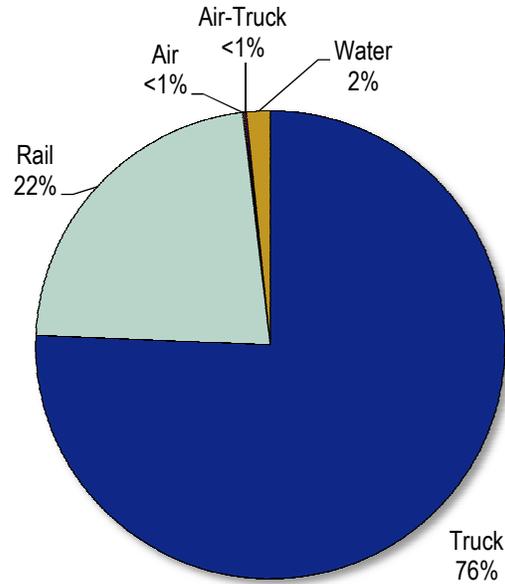
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill
dataset.

Mode Share Analysis – Outbound

Figure 2.6 shows the mode share by weight for freight moving in the outbound direction. Compared to total freight tonnage (all directions), a slightly greater proportion of outbound freight (98 percent) was shipped via truck in 2010. A smaller proportion moved via train or water. When analyzing the commodity mix originating in the region (discussed in Section 2.4) the traffic related to warehouse and distribution activities accounts for a larger share of the outbound freight than of the total freight. This commodity group is transported entirely by truck. Also, the heavier loads such as clay, concrete, glass or stone products, and nonmetallic ores and minerals are mostly transported by truck for the outbound traffic; and in the case of the inbound moves the share of rail for these same commodity groups is considerably larger.

Figure 2.6   Mode Share by Weight – Outbound
2010
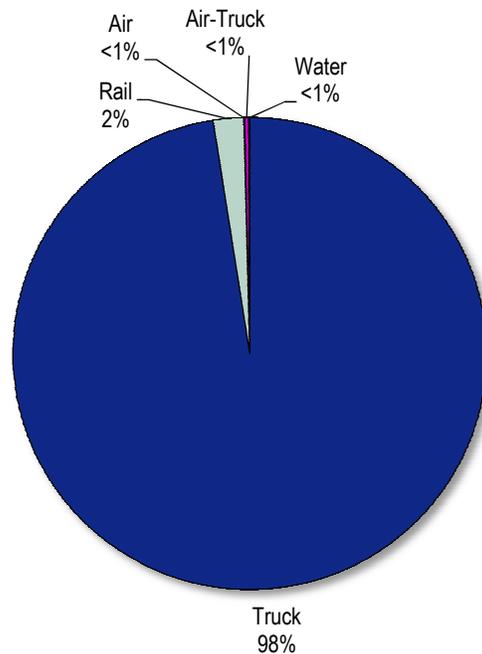
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Mode Share Analysis – Intraregional

Over 99 percent of the intraregional freight was moved by truck in 2010. This makes sense because the rail, water, and air modes are much less likely to haul freight short distances. This is reflected in the types of commodities hauled intraregionally (nonmetallic minerals; clay, concrete, glass, and stone products; food and kindred products; and warehoused goods) as described in Section 2.4. These commodities primarily serve local consumers and the local construction sector.

Mode Share Analysis – Truck Mode

As shown previously in Table 2.3 and Figure 2.4, 191 million tons or 95 percent of the total freight tonnage moving into, out of, within and through the region is transported by truck. Of that share 62 percent is through traffic, 15 percent is inbound and 12 percent and 11 percent respectively are outbound and intraregional traffic (see Figure 2.7). Inbound and outbound truck flows are fairly even, allowing for balanced trade lanes. This allows carriers a better opportunity to reduce empty hauls which leads to more competitive trucking rates for the region's shippers.

Figure 2.7   Direction of Truck Freight Flows by Weight
2010
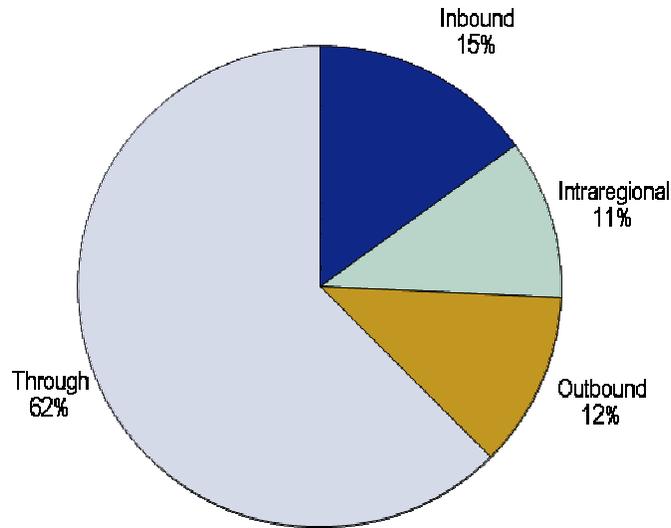
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Mode Share Analysis – Rail Mode

As shown previously in Table 2.3 and Figure 2.8, 9 million tons or 4 percent of the total freight tonnage moving in the region is transported by rail. Of that share 95 percent of the total rail tonnage is inbound and the rest is outbound. Table 2.4 and Figure 2.9 show the directional split of the rail tonnage and the railcars for both carload and intermodal rail equipment. About 96 percent of the carload tonnage and railcars are outbound. However a smaller proportion of the intermodal tonnage and railcars, 75 percent and 68 percent respectively, are outbound.   This is because miscellaneous mixed shipments (i.e., intermodal shipments), food and other consumer products, which account for most of the total intermodal traffic, are a greater proportion of the inbound intermodal rail freight than they are of the outbound intermodal freight. Most of the intermodal outbound shipments are empty containers, miscellaneous mixed shipments, and chemicals.

Table 2.4   Summary of Rail Freight Flows by Weight and Units
2009, Tons and Units in Thousands (Exclusive of through tons)

Direction	Tons			Units		
	Carload	Intermodal	Total	Carload	Intermodal	Total
Inbound	8,006	523	8,530	88	38	126
Outbound	304	176	480	4	18	22
Total	**8,311**	**699**	**9,010**	**92**	**56**	**148**

Source: 2009 Full Surface Transportation Board (STB) Waybill dataset.

Figure 2.8   Direction of Rail Freight Flows by Weight and Units
2009 (Exclusive of through traffic)
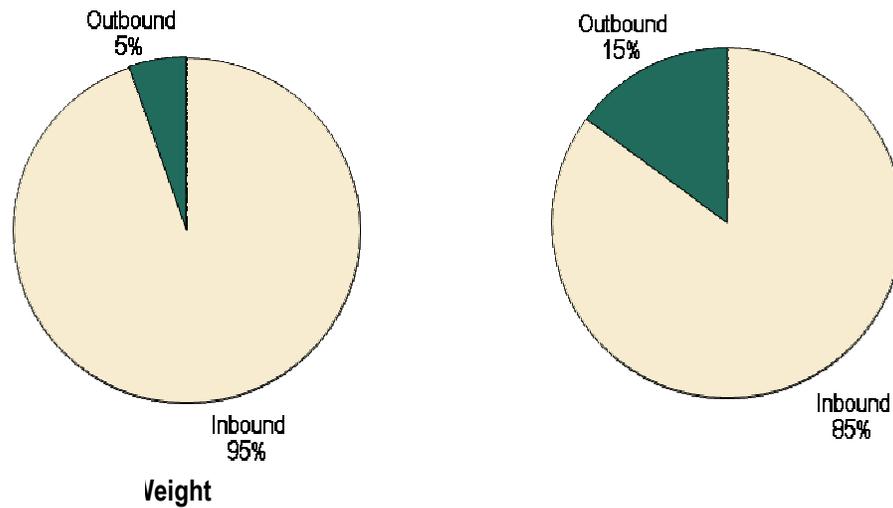
Source: 2009 full Surface Transportation Board (STB) Waybill dataset.

By type of rail equipment – carload or intermodal container – the data show that 92 percent of tonnage is carried in railcars and 9 percent in intermodal containers, as charted in Figure 2.9. However, intermodal containers (which for this statistic include both containers and truck trailers moved on flat cars) account for 38 percent of all rail equipment units moved in the study region. The shares are illustrated in Figure 2.9.   The disparity between the share of intermodal tonnage and intermodal units is due to the fact that intermodal shipments tend to be higher-value and lower-weight freight (such as consumer goods that require more packaging and have a low weight-to-volume ratio), while carload shipments tend to be heavier and lower value freight (such as coal and nonmetallic minerals that require little or no packaging and have a high weight-to-volume ratio).

Figure 2.9   Intermodal/Carload Rail Freight Flows by Weight and Units
2009 (Exclusive of through traffic)

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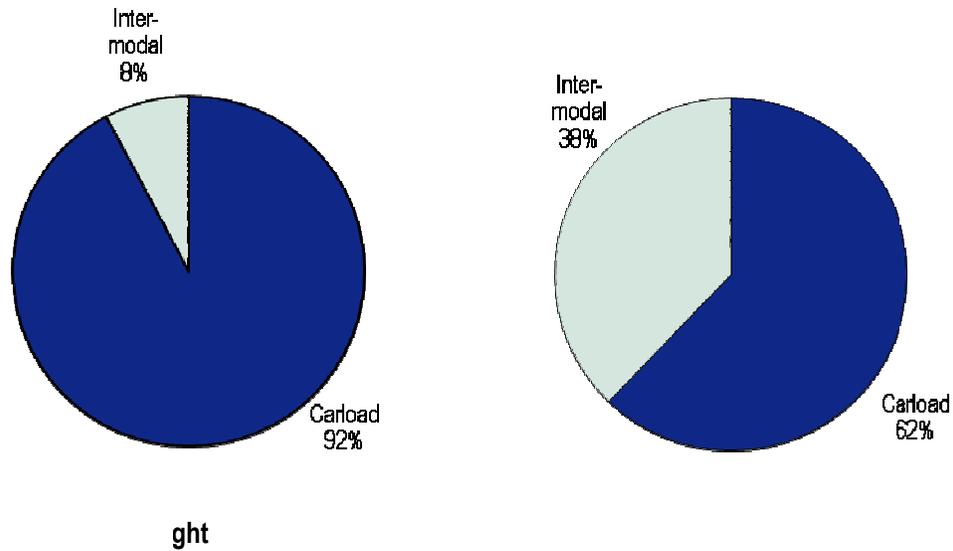
Source: 2009 full Surface Transportation Board (STB) Waybill dataset.

2.4   ANALYSIS BY COMMODITY TYPE

It is also important to understand the types of commodities being moved along the study region's freight transportation infrastructure. The TRANSEARCH data as well as the Carload Waybill Sample data provides commodity information at the two-digit Standard Transportation Commodity Code (STCC) level. A complete list of commodity groups by STCC number is shown in Table 2.5.

Table 2.5   Major Commodity Groups

STCC2	Commodity Description	STCC2	Commodity Description
01	Farm Products	32	Clay, Concrete, Glass, or Stone Products
08	Forest Products	33	Primary Metal Products
09	Fish or Other Marine Products	34	Fabricated Metal Products
10	Metallic Ores	35	Machinery; Except Electrical
11	Coal	36	Electrical Machinery, Equipment, or Supplies
13	Crude Petroleum, Natural Gas, or Gasoline	37	Transportation Equipment
14	Nonmetallic Minerals	38	Instruments, Optical Goods, Watches, or Clocks
19	Ordnance or Accessories	39	Miscellaneous Manufactured Products
20	Food or Kindred Products	40	Waste or Scrap Materials
21	Tobacco Products	41	Miscellaneous Freight Shipments

STCC2	Commodity Description	STCC2	Commodity Description
22	Textile Mill Products	42	Empty Shipping Containers
23	Apparel	43	Mail
24	Lumber or Wood Products	44	Freight Forwarder Traffic
25	Furniture or Fixtures	45	Shipper Association or Similar Traffic
26	Pulp, Paper, or Allied Products	46	Miscellaneous Mixed Shipments
27	Printed Matter	47	Small Packaged Freight Shipments
28	Chemicals or Allied Products	48	Hazardous Waste
29	Petroleum or Coal Products	49	Hazardous Materials
30	Rubber or Miscellaneous Plastics Products	50	Warehoused Goods
31	Leather		

Source: Association of American Railroads Standard Transportation Commodity Code (STCC).

Total Commodities

Overview

The top commodities by weight transported into, out of and within the region via all modes are shown in Table 2.6 and Figure 2.10. The largest commodity group in terms of tonnage is nonmetallic ores and minerals accounting for 32 percent (26.3 million tons) of the total tons moved inbound, outbound and intraregionally in 2010. It is followed by clay, concrete, glass or stone products, and warehoused goods which make up 22 percent (18.2 million tons) and 17 percent (13.7 million tons) respectively. Food or kindred products, and petroleum or coal products, comprise 8 percent and 5 percent respectively of the total tons shipped. The remaining top commodities, chemicals, coal, lumber or wood products, printed matter, farm products, and others, account for 16 percent or 13.2 million tons in 2010.

It should be noted that three of the top 10 commodities (nonmetallic minerals; clay, concrete, glass, and stone; and coal) are heavy and have relatively low value compared to finished or intermediate manufactured goods (petroleum and coal products, chemical products, and warehoused goods). Shippers of basic materials, such as coal, tend to be more concerned with minimizing the cost of transportation rather than speed of delivery, while shippers of manufactured goods tend to emphasize travel times and reliability over per-ton mile transport cost.

Table 2.6   Top 10 Commodities by Weight – Inbound, Outbound, and Intraregional

2010, Tons in Thousands

Commodity	STCC2	Truck	Rail[a]	Air	Air-Truck	Water	Total
Nonmetallic Ores and Minerals	14	21,811	4,259	-	-	242	26,312
Clay, Concrete, Glass, Stone Products	32	17,681	365	0	-	175	18,222
Warehoused Goods	50	13,512	-	-	144	-	13,656
Food and Kindred Products	20	5,549	518	0	-	1	6,068
Petroleum or Coal Products	29	4,172	26	0	-	0	4,198
Chemicals or Allied Products	28	1,838	351	6	-	187	2,381
Coal	11	-	2,282	-	-	-	2,282
Lumber or Wood Products	24	1,709	43	0	-	0	1,752
Printed Matter	27	966	3	1	-	13	982
Farm Products	01	853	25	1	-	-	879
All Others		3,701	1,138	46	-	20	4,906
Total		**71,791**	**9,010**	**55**	**144**	**638**	**81,638**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a]   The base year for the rail data is 2009.

Figure 2.10   Top 10 Commodities by Weight – Inbound, Outbound, and Intraregional
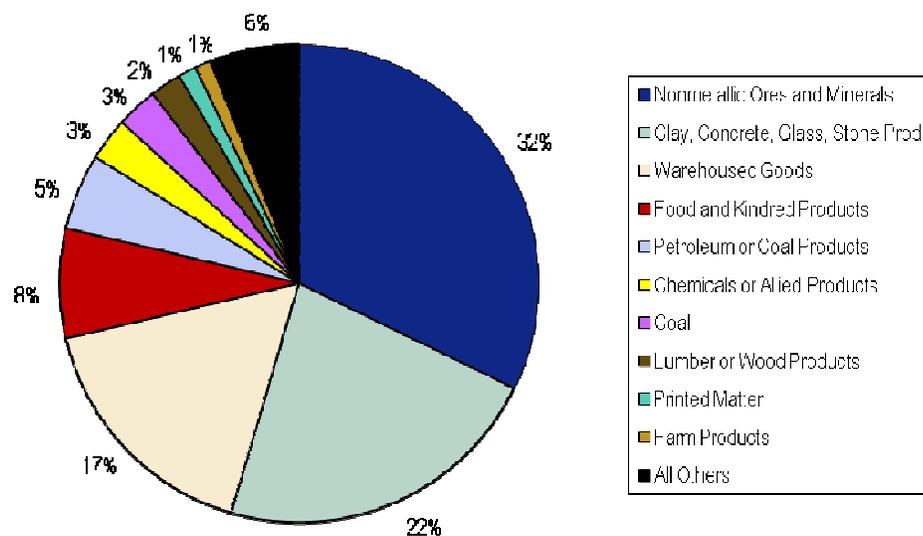
2010

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Inbound Commodities

Inbound shipments are regional imports and represent consumer goods for the regions' residents and visitors and inputs for the regions producers. Inbound freight in 2010 totaled 38 million tons, a 19 percent share of the freight tonnage moved in the region. The top 10 inbound commodities detailed in Table 2.7 and Figure 2.11 represent 93 percent of the total inbound tons. Nonmetallic ores and minerals is the top commodity group accounting for 11.4 million tons, 30 percent of the inbound tonnage. Clay concrete, glass or stone products, and warehoused goods follow, accounting for 19 percent (6.6 million tons) and 14 percent (5.3 million tons) respectively. Food and kindred products represents 9 percent of the inbound tonnage. Coal, and petroleum and coal products, together amount to 13 percent.

Table 2.7   Top 10 Commodities by Weight – Inbound
2010, Tons in Thousands

Commodity	STCC2	Truck	Rail[a]	Air	Air-Truck	Water	Total
Nonmetallic Ores and Minerals	14	6,876	4,258	-	-	242	11,376
Clay, Concrete, Glass, Stone Products	32	6,568	337	0	-	175	7,080
Warehoused Goods	50	5,315	-	-	50	-	5,365
Food and Kindred Products	20	2,867	493	0	-	-	3,361
Petroleum or Coal Products	29	2,610	26	0	-	-	2,637
Coal	11	-	2,282	-	-	-	2,282
Chemicals or Allied Products	28	624	302	4	-	187	1,117
Lumber or Wood Products	24	967	43	0	-	-	1,010
Primary Metal Products	33	743	43	0	-	-	785
Farm Products	01	369	24	0	-	-	394
All Others		1,756	720	36	-	16	2,529
Total		**28,695**	**8,530**	**42**	**50**	**620**	**37,936**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] The base year for the rail data is 2009.

Figure 2.11   Top 10 Commodities by Weight – Inbound
2010
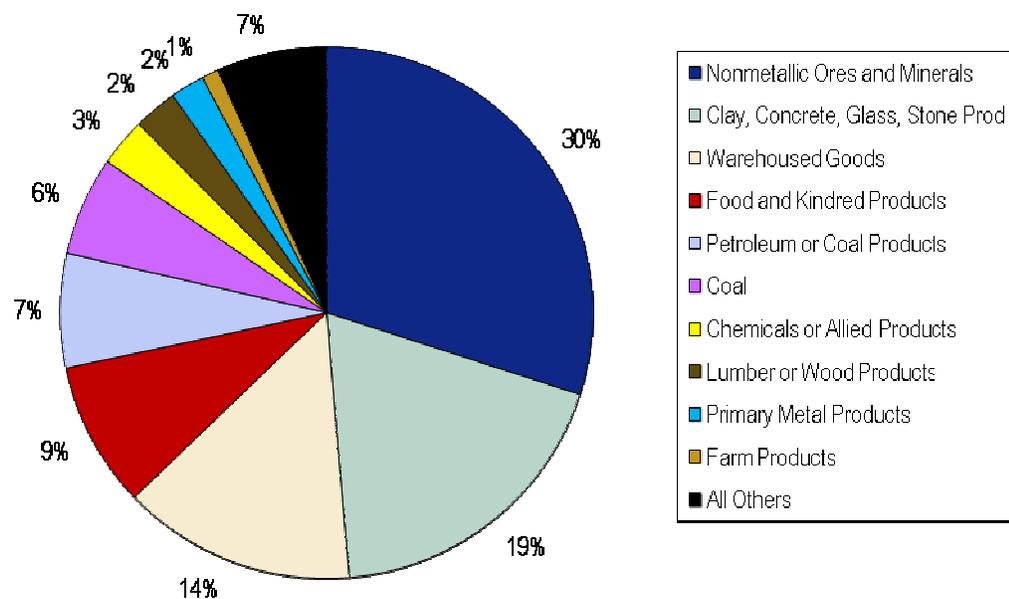
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Outbound Commodities

Table 2.8 and Figure 2.12 present the 2010 top outbound commodities by weight. These shipments, totaling 23 million tons, represent regional exports or wealth-generating freight. Ensuring efficient freight transportation for these exported goods is of great importance to producers and, therefore, is critical to the economic competitiveness of the region. The top outbound commodities are warehouse and distribution goods representing 32 percent (7.5 million tons) of the outbound tons; clay, concrete, glass or stone products accounting for 20 percent (4.5 million tons); and, nonmetallic ores and minerals accounting for 15 percent (3.5 million tons). The commodity groups are displayed graphically in Figure 2.13.

Table 2.8 Top 10 Commodities by Weight – Outbound
2010, Tons in Thousands

Commodity	STCC2	Truck	Rail[a]	Air	Air-Truck	Water	Total
Warehoused Goods	50	7,440	-	-	63	-	7,504
Clay, Concrete, Glass, Stone Products	32	4,492	28	-	-	0	4,520
Nonmetallic Ores and Minerals	14	3,544	1	-	-	-	3,544
Food and Kindred Products	20	1,855	25	-	-	1	1,880
Chemicals or Allied Products	28	1,198	49	1	-	0	1,248
Petroleum or Coal Products	29	803	-	-	-	0	803
Lumber or Wood Products	24	692	-	0	-	0	692
Printed Matter	27	591	-	0	-	-	591
Farm Products	01	479	0	1	-	-	480
Fabricated Metal Products	34	370	-	0	-	0	370
All Others		1,106	378	11	-	17	1,511
Total		**22,568**	**480**	**13**	**63**	**18**	**23,142**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] The base year for the rail data is 2009.

Figure 2.12   Top 10 Commodities by Weight – Outbound
2010
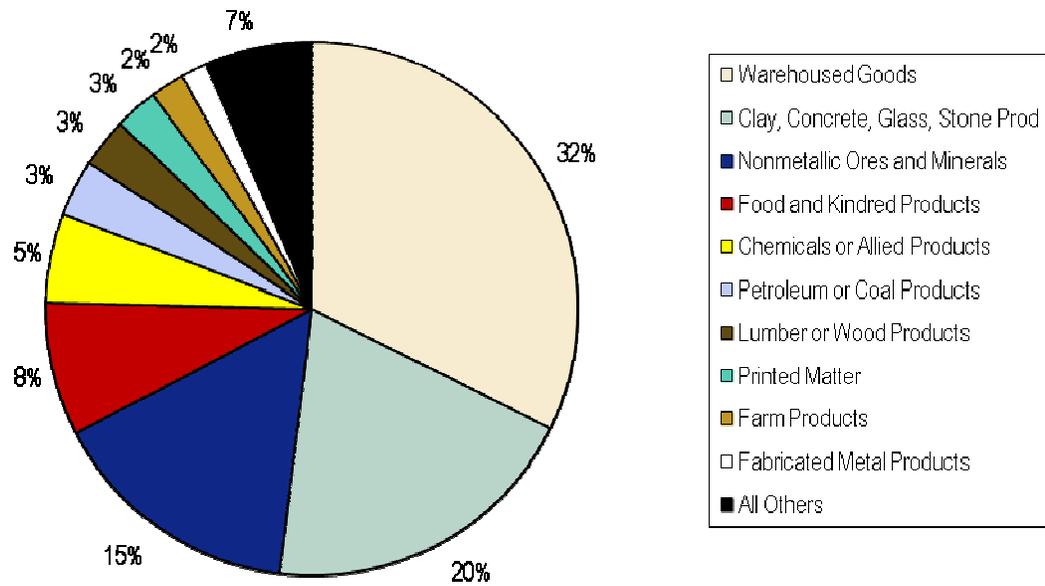
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Intraregional Commodities

Table 2.9 and Figure 2.13 summarize the level of intraregional freight movement in 2010. These shipments, totaling 21 million tons, are essential for meeting the demands of local producers, and supporting local construction activity and personal consumption within the region. The top intraregional commodities are nonmetallic ores and minerals (11 million tons), and clay, concrete, glass, and stone products (6.6 million tons) together accounting for 88 percent of the intraregional tonnage (both essential for the local construction industry). Food and kindred products, warehoused goods, and petroleum and coal products each account for 800 thousand tons or a 4 percent share of the intraregional moves.

Table 2.9   Top 10 Commodities by Weight – Intraregional
2010, Tons in Thousands

Commodity	STCC2	Truck	Rail[a]	Air	Air-Truck	Water	Total
Nonmetallic Ores and Minerals	14	11,392	-	-	-	-	11,392
Clay, Concrete, Glass, Stone Products	32	6,622	-	-	-	-	6,622
Food and Kindred Products	20	827	-	-	-	-	827
Warehoused Goods	50	757	-	-	31	-	788
Petroleum or Coal Products	29	759	-	-	-	-	759
Lumber or Wood Products	24	51	-	-	-	-	51
Printed Matter	27	35	-	-	-	-	35
Fabricated Metal Products	34	21	-	-	-	-	21
Chemicals or Allied Products	28	16	-	-	-	-	16
Pulp, Paper or Allied Products	26	14	-	-	-	-	14
All Others		35	-	-	-	-	35
Total		**20,529**	**-**	**-**	**31**	**-**	**20,560**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a]   The base year for the rail data is 2009.

Figure 2.13   Top 10 Commodities by Weight – Intraregional
2010
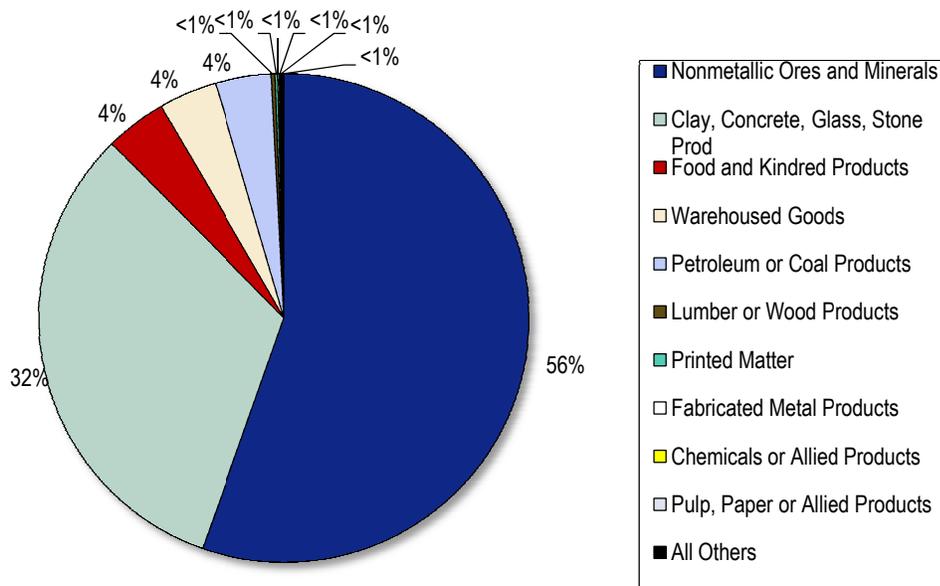
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

2.5   ANALYSIS BY TRADING PARTNER

In addition to the analysis by mode and commodity summarized in the previous sections, it is also important to identify the region's key trading partners.   A better understanding of where the region's shipments are originating and terminating is a critical step to understanding length of haul, market penetration, and modal preference.   Key trading partners are identified by combining the inbound and outbound freight flows between the study area and the trading partner region and highlighting the trading partner regions with the largest freight flows.

Trading Partners

The "trading partners" (external to the Central Florida study region) consist of the counties within Florida, the Bureau of Economic Analysis (BEA) regions in the rest of the U.S., and the neighboring countries of Canada and Mexico.[1]

The top trading partners for freight movements into and out of the region by weight in 2010 are shown in Table 2.10.   Figures 2.14 and 2.15 display the information geographically.   The top three trading partners are Miami-Dade County, Marion County, and Polk County.   These Floridian counties account for 28 percent (17 million tons) of total inbound and outbound flows by weight.   The fact that seven of the top 10 trading partners are other counties within Florida is evidence that the Central Florida study region is particularly important economically to the State of Florida.

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[1] Flows originating or terminating in Canada or Mexico only include rail and waterborne movements.

Table 2.10   Top 10 Trading Partners by Total Weight
2010, Tons in Thousands

Trading Partner	Total[a]	Percent of Total	Inbound	Percent of Inbound	Outbound	Percent of Outbound
Miami-Dade County, FL	6,522	11%	4,880	13%	1,642	7%
Marion County, FL	5,778	9%	5,206	14%	572	2%
Polk County, FL	5,102	8%	2,388	6%	2,714	12%
Hillsborough County, FL	3,681	6%	2,031	5%	1,650	7%
Atlanta, GA	2,406	4%	1,738	5%	668	3%
Duval County, FL	2,137	3%	1,070	3%	1,067	5%
Lexington, KY	2,001	3%	1,987	5%	14	0%
Hernando County, FL	1,873	3%	1,292	3%	581	3%
Hamilton County, FL	1,823	3%	0	0%	1,823	8%
Savannah, GA	1,806	3%	1,620	4%	187	1%
Other	27,950	46%	15,725	41%	12,225	53%
Total	**61,078**	**100%**	**37,936**	**100%**	**23,142**	**100%**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] Total tonnage is the sum of the inbound and outbound tonnage.

Figure 2.14   Trading Partners by Weight
2010

Source: Cambridge Systematics with 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Figure 2.15   Trading Partners by Weight – Florida Counties and Adjacent BEA
2010
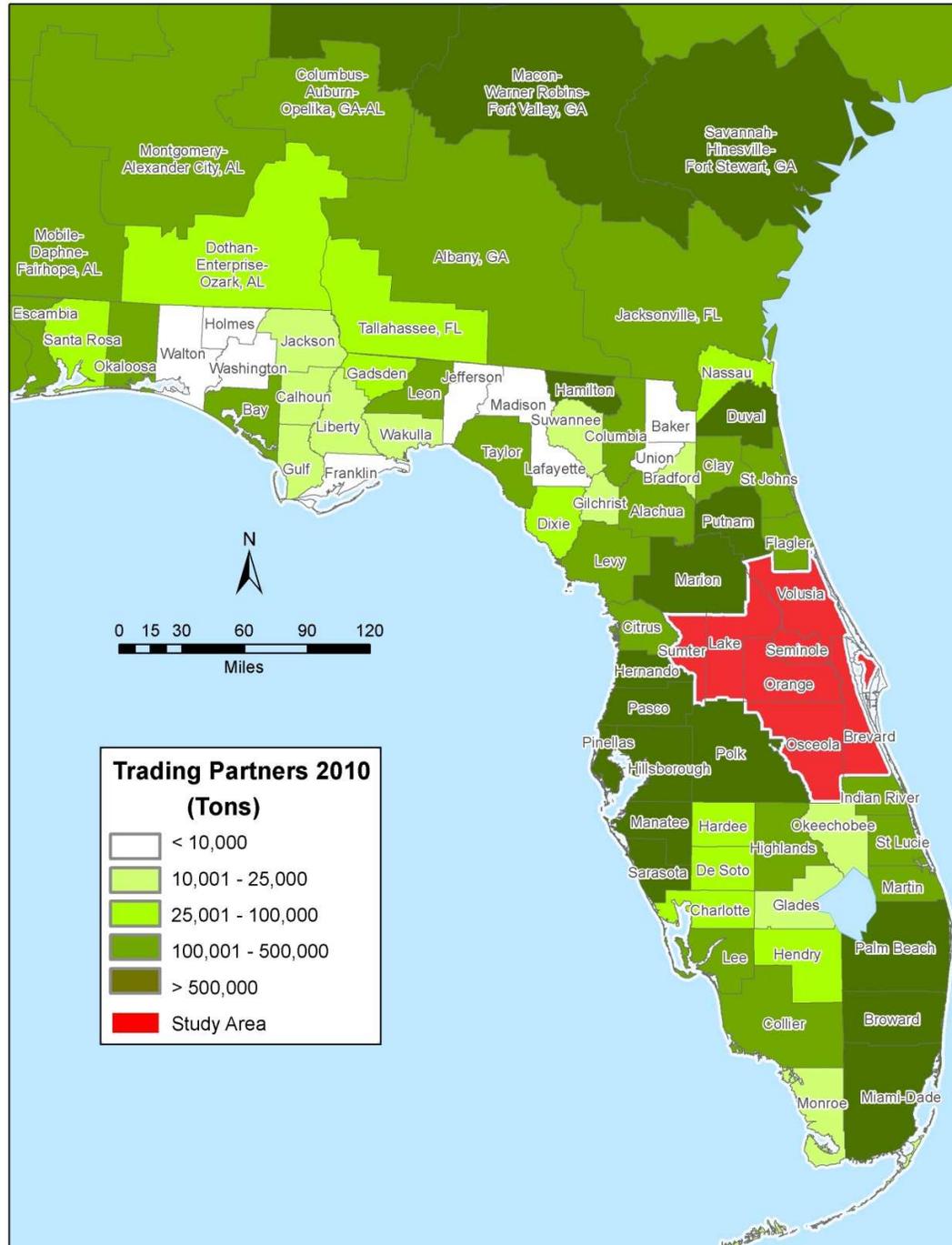
Source: Cambridge Systematics with 2010 FDOT Trade and Logistics dataset and 2009 full Surface
Transportation Board (STB) Waybill dataset.

Trading Partner – Miami-Dade County

Miami-Dade County in Florida is the region's top trading partner. Table 2.11 and Figure 2.16 show the commodity composition of this trade. In 2010, the top commodity groups moving to and from Miami-Dade County were nonmetallic ores and minerals, and warehoused goods, together accounting for 71 percent of total trade by weight. Nearly all shipments of nonmetallic minerals traded between Miami-Dade and the study region are inbound and transported to the region by rail. In fact, 42 percent of all trade between the study region and Miami-Dade County is moved by rail. Trucks haul nearly 59 percent of all goods traded with Miami-Dade County.

Table 2.11   Top 10 Central Florida/Miami-Dade County Commodities by Total Weight
2010

Commodity	STCC2	Truck	Rail[a]	Air	Air-Truck	Water	Total
Nonmetallic Ores/Minerals	14	4	2,453	-	-	-	2,458
Warehoused Goods	50	2,171	-	-	34	-	2,205
Clay, Concrete, Glass, Stone Products	32	495	252	-	-	-	747
Food and Kindred Products	20	291	-	-	-	-	291
Petroleum or Coal Products	29	111	-	-	-	-	111
Printed Matter	27	101	-	-	-	-	101
Fabricated Metal Products	34	100	-	-	-	-	100
Chemicals or Allied Products	28	99	-	0	-	-	99
Pulp, Paper or Allied Products	26	88	-	-	-	-	88
Lumber or Wood Products	24	84	-	-	-	-	84
Other Commodities		235	3	0	-	-	238
Total		**3,780**	**2,708**	**0**	**34**	**-**	**6,522**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] The base year for the rail data is 2009.

**Figure 2.16   Top 10 Central Florida/Miami-Dade County Commodities by Total
Weight**
2010
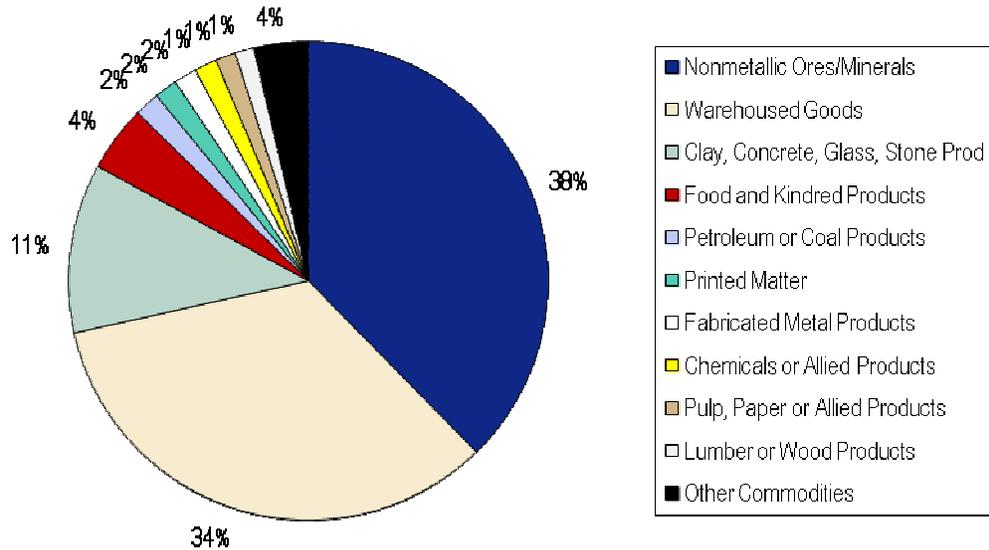
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill
dataset.

Trading Partner – Marion County

Marion County in Florida, which is adjacent to the region, is the second top
trading partner of the region. The trade between Marion County and the study
region is mostly inbound, such is the case with the trade between Miami-Dade
County and the region. The top 10 commodities by weight in 2010 moving
between the region and Marion County are detailed in Table 2.12. Figure 2.17
displays the same information graphically. The top commodity group was
nonmetallic ores and minerals. These shipments represent 79 percent of the
trade and are hauled to and from Marion County by truck. Nearly all of the
moves from Marion County to the study region serve the construction industry
in the region (95 percent are shipments of nonmetallic minerals, and clay,
concrete, glass and stone products).

Table 2.12   Top 10 Central Florida/Marion County Commodities by Total Weight
2010, Tons in Thousands

Commodity	STCC2	Truck	Rail[a]	Air	Air-Truck	Water	Total
Nonmetallic Ores or Minerals	14	4,591	-	-	-	-	4,591
Clay, Concrete, Glass, Stone Products	32	879	-	-	-	-	879
Warehoused Goods	50	148	-	-	0	-	149
Food and Kindred Products	20	65	-	-	-	-	65
Petroleum or Coal Products	29	42	-	-	-	-	42
Lumber or Wood Products	24	34	-	-	-	-	34
Fabricated Metal Products	34	5	-	-	-	-	5
Printed Matter	27	4	-	-	-	-	4
Pulp, Paper or Allied Products	26	2	-	-	-	-	2
Chemicals or Allied Products	28	2	-	-	-	-	2
Other Commodities		5	-	0	-	-	5
Total		**5,777**	**-**	**0**	**0**	**-**	**5,778**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a]   The base year for the rail data is 2009.

Figure 2.17   Top 10 Central Florida/Marion County Commodities by Total Weight
2010
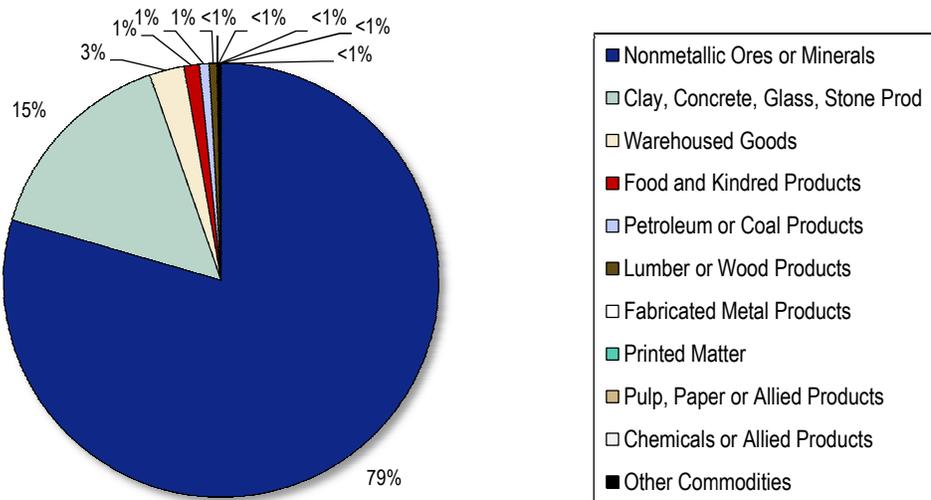
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Trading Partner – Polk County

Polk County, Florida, is the region's third largest trading partner. The inbound and outbound trade between the study region and Polk County is balanced (53 percent is outbound). Nearly all goods are transported by truck, which is expected since Polk County is adjacent to the region and the haul distance is usually less than 100 miles. Table 2.13 details the top commodities by weight moved in 2010 between Polk County and the region. The top commodities included clay, concrete, glass and stone products, warehouse and distribution goods, and nonmetallic ores and minerals. These shipments account for 85 percent of the moves to and from Polk County.

Table 2.13   Top 10 Central Florida/Polk County Commodities by Total Weight
2010, Tons in Thousands

Commodity	STCC2	Truck	Rail[a]	Air	Air-Truck	Water	Total
Clay, Concrete, Glass, Stone Products	32	2,024	-	-	-	-	2,024
Warehoused Goods	50	1,401	-	-	0	-	1,401
Nonmetallic Ores/Minerals	14	918	-	-	-	-	918
Food and Kindred Products	20	366	-	-	-	-	366
Chemicals or Allied Products	28	158	-	-	-	-	158
Petroleum or Coal Products	29	129	-	-	-	-	129
Lumber or Wood Products	24	36	-	-	-	-	36
Pulp, Paper or Allied Products	26	20	-	-	-	-	20
Printed Matter	27	15	-	-	-	-	15
Fabricated Metal Products	34	11	-	-	-	-	11
Other Commodities		22	3	-	-	-	25
Total		**5,099**	**3**	**-**	**0**	**-**	**5,102**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a]   The base year for the rail data is 2009.

Figure 2.18   Top 10 Central Florida/Polk County Commodities by Total Weight
2010
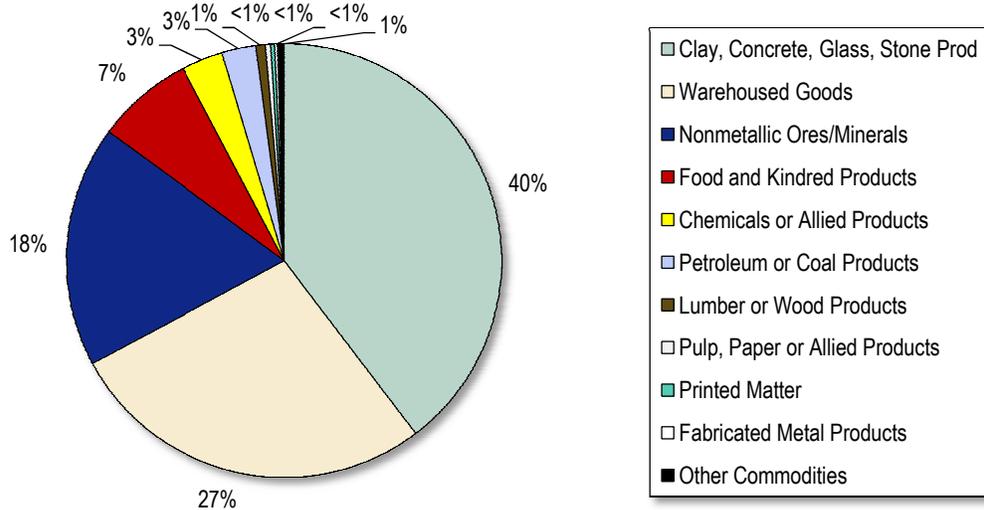
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

3.0 County Freight Movement Profiles

To better understand which portions of the Central Florida study region are impacted by which types of freight movement, county-level freight profiles were developed. This section of the report describes the existing conditions in freight tonnage for each of the seven counties in the study region. Table 3.1 and Figure 3.1 show 2010 freight tonnage for inbound, outbound, and intracounty movements for each of the seven counties in the study region. Orange County is the jurisdiction with the highest level of freight accounting for 40 percent of the freight tonnage moving into, out of and within the region. Brevard County with Port Canaveral follows, accounting for 20 percent of the freight activity inbound, outbound and intraregionally.

The following sections provide summaries for each of the seven counties in the study area. Each summary provides data on freight flows by mode, direction, and commodity type for each county. The summaries also describe the trade flow surplus or deficit within each county[2] which can help determine whether a county is a net producer (surplus) or consumer (deficit). Trade deficits can affect the net flow of capital to a region that provides the revenue for local governments and businesses to make investments and plan for future growth. The consumption patterns of visitors and tourists to many counties in Central Florida may also contribute to the trade imbalance of many commodities, such as consumer products, which may be mitigated with outside revenue.

Table 3.1   Inbound, Outbound, and Intracounty Freight Flows by County
2010, Tons in Thousands

Direction	Brevard	Lake	Orange	Osceola	Seminole	Sumter	Volusia
Inbound	7,292	5,611	23,920	2,598	8,474	1,079	3,907
Outbound	10,422	4,777	12,104	458	2,074	5,009	3,388
Intracounty	1,388	832	2,584	12	171	3	471
Total	**19,101**	**11,221**	**38,608**	**3,068**	**10,719**	**6,091**	**7,766**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

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[2] If a particular county exports more freight tonnage than it imports, the trade flow is termed a surplus (net inflow of capital to the county from outside the county). If a county imports more freight tonnage than it exports, the flow is termed a deficit (net outflow of capital to purchase commodities from outside).

Figure 3.1   Inbound, Outbound, and Intracounty Freight Flows by County
2010
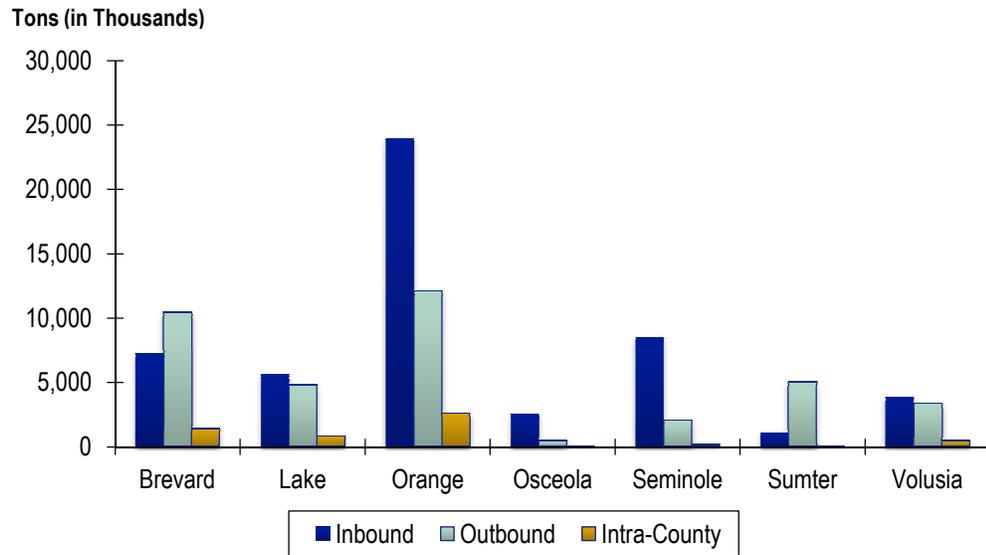
Tons (in Thousands)

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

3.1   BREVARD COUNTY

Directional Analysis – Brevard County

In 2010, 42 million tons moved into, out of, within, and through Brevard County. Table 3.2, Figure 3.2 and Figure 3.3 display this county's freight flows by mode and direction. About 7 million tons traveled inbound (17 percent), 10 million tons traveled outbound (25 percent), 1 million tons traveled within the county (3 percent), and 23 million tons traveled through the county (55 percent).

About 90 percent of the freight tonnage associated with Brevard County is transported by truck, 6 percent by rail, and 4 percent by water through Port Canaveral.

Table 3.2   Summary of Brevard County Freight Flows by Weight
*2010, Tons in Thousands*

Direction	Total	Truck	Rail[a]	Air	Air-Truck	Water
Inbound	7,292	4,370	2,456	0	1	465
From Study Region	1,062	1,062	-	-	0	-
Outbound	10,422	10,253	158	0	0	10
To Study Region	5,041	5,041	-	-	0	-
Intracounty	1,388	1,388	-	-	-	-
Through	22,984	21,649	N/A[b]	-	31	1,304
Total	**42,085**	**37,660**	**2,614**	**0**	**31**	**1,780**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] The base year for the rail data is 2009.

[b] Through rail moves were not included due to the inability to estimate it with the full Surface Transportation Board (STB) Waybill dataset. Therefore, the total through tonnage shown here likely underestimates actual through tonnage due to the lack of through rail data.

Figure 3.2   Direction of Total Freight Flows by Weight – Brevard County
2010
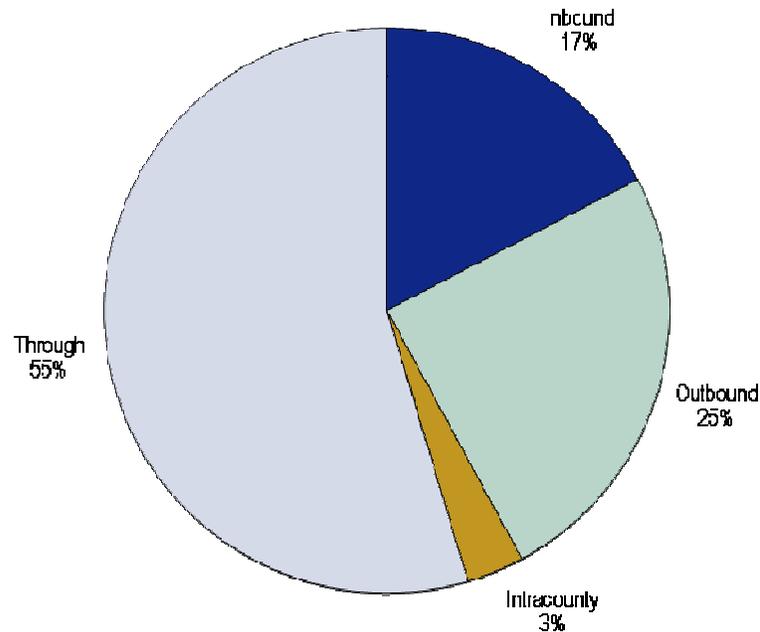
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.
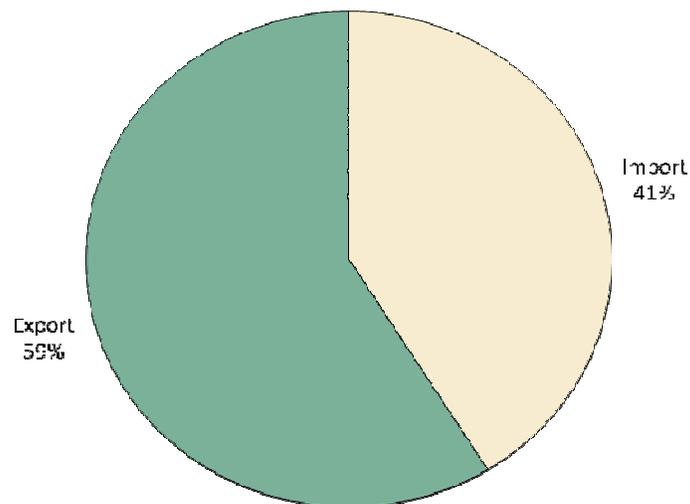
Figure 3.3   Mode Share by Weight – Brevard County
2010
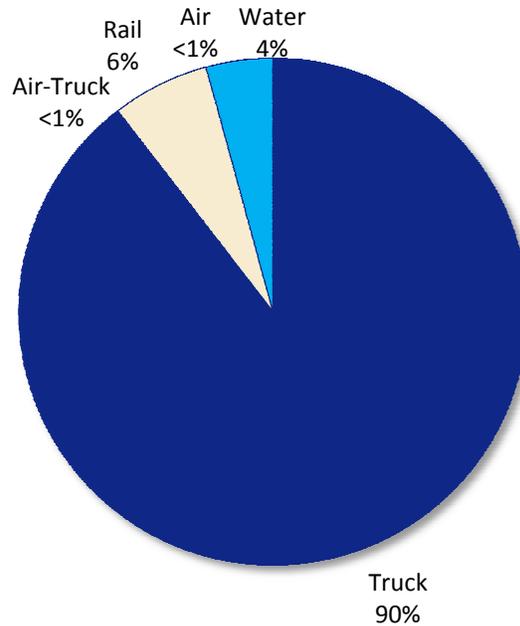
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

The balance of imports (inbound tonnage) to exports (outbound tonnage) is highlighted in Figure 3.4. Brevard County ships more outbound goods than it receives inbound thus translating into a freight surplus of 18 percent.
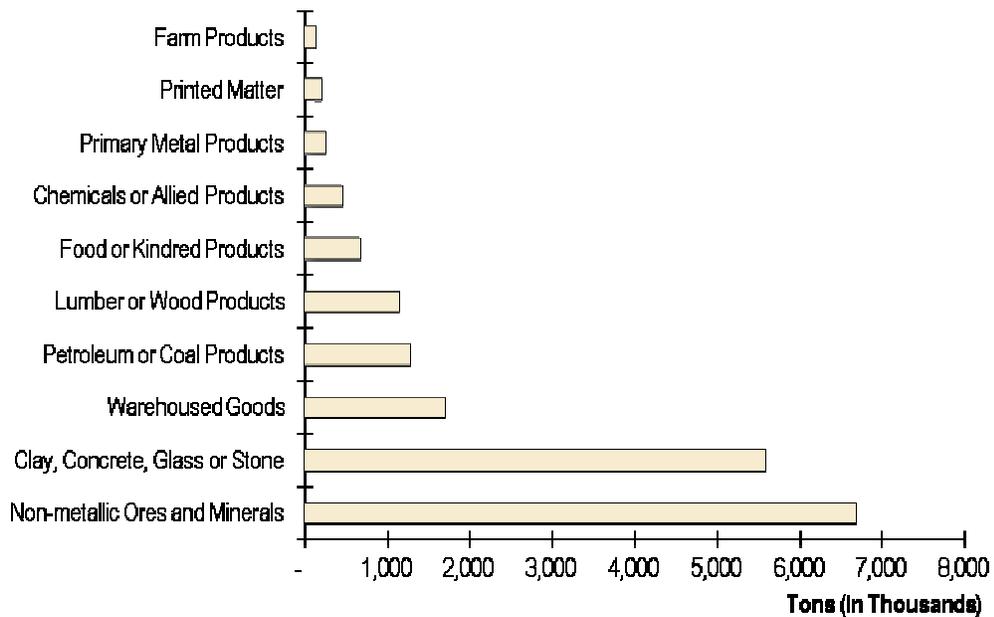
Figure 3.4   Imports/Exports by Weight – Brevard County
2010

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Commodity Analysis – Brevard County

In 2010, more than 19 million tons of freight moved inbound, outbound, and within Brevard County. By weight, nonmetallic minerals, and clay, concrete, glass, or stone products, are the largest commodity groups moved in the county, accounting for more than 12 million tons or approximately 64 percent of total inbound, outbound and intracounty tonnage (see Figure 3.5).

Figure 3.5   Top 10 Commodities by Weight – Brevard County
2010

Note: Sum of inbound, outbound, and intracounty freight.

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

3.2   LAKE COUNTY

Directional Analysis – Lake County

In 2010, 84 million tons of freight moved into, out of, within, and through Lake County. Table 3.3 display Lake County's freight flows by mode and direction. Figures 3.6 and 3.7 display the directional and modal share respectively. Approximately 5.6 million tons (7 percent) traveled inbound, 4.8 million tons (6 percent) traveled outbound, and 800,000 tons (1 percent) traveled from one point within the county to another. Through freight accounted for 72.8 million tons or 86 percent of the total. All freight was transported by truck.

Table 3.3   Summary of Lake County Freight Flows by Weight
*2010, Tons in Thousands*

Direction	Total	Truck	Rail[a]	Air	Air-Truck	Water
Inbound	5,611	5,611	N/A-	-	0	-
From Study Region	1,627	1,627	N/A	-	0	-
Outbound	4,777	4,777	N/A	-	0	-
To Study Region	2,908	2,908	N/A	-	0	-
Intracounty	832	832	N/A	-	-	-
Through	72,765	72,757	N/A[b]	-	8	-
Total	**83,985**	**83,978**	**N/A-**	**-**	**8**	**-**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] Rail data by tonnage for Lake County is not reported in the STB Waybill database due to reporting requirements. In interviews, Florida Central Railroad reported approximately 5,000 carloads of traffic on its lines in Lake County, 90 percent of which was inbound and 10 percent outbound. All of their traffic is interchanged at the Taft Yard.

[b] Through rail moves were not included due to the inability to estimate it with the full Surface Transportation Board (STB) Waybill dataset. Therefore, the total through tonnage shown here likely underestimates actual through tonnage due to the lack of through rail data.

Figure 3.6   Direction of Total Freight Flows by Weight – Lake County
2010 (Exclusive of rail tonnage)
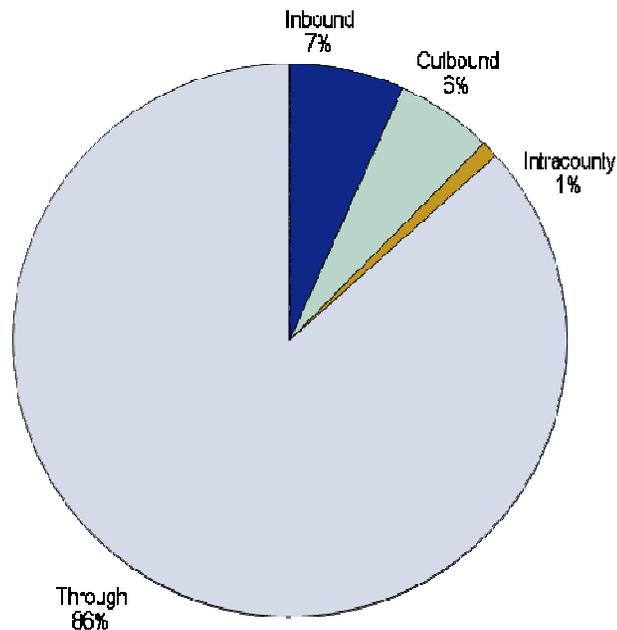
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Figure 3.7   Mode Share by Weight – Lake County
2010 (Exclusive of rail tonnage)
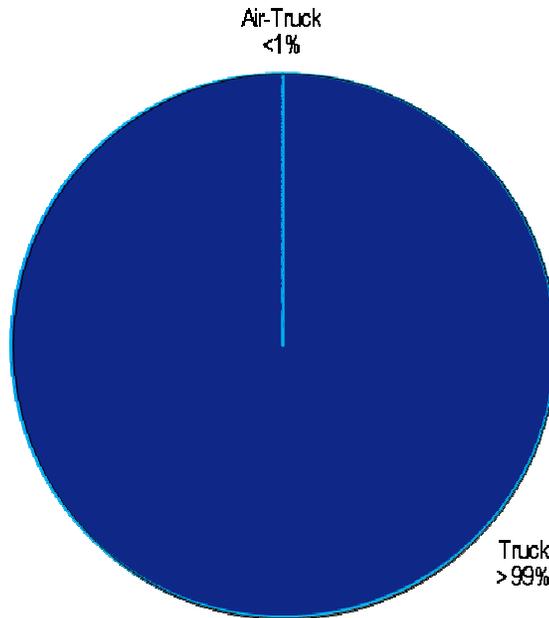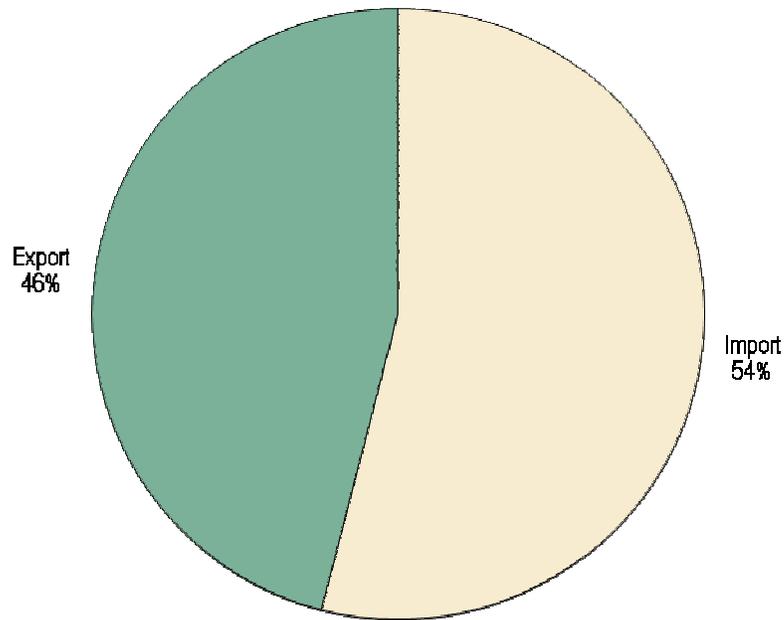

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill
          dataset.

Figure 3.8 highlights the balance of imports (inbound tonnage) to exports (outbound tonnage) and shows that Lake County businesses receive slightly more inbound goods than they ship outbound, thus translating into a freight trade deficit of only 8 percent. This represents a somewhat balanced trade lane which allows for better opportunities for carriers to match inbound and outbound loads, reducing empty hauls and the associated vehicle miles traveled (VMT) by trucks. As a result, regional shippers benefit from more competitive shipping terms and carriers from reduced operational costs, since there is revenue associated with both the inbound and outbound portion of the trip.

Although rail tonnage data are not available for Lake County, Florida Central Railroad indicated that 90 percent of its traffic by carload is inbound while only 10 percent is outbound. Thus, while the trucking market may represent a relatively balanced market, there is significant imbalance in the rail market in the county.

Figure 3.8   Imports/Exports – Lake County
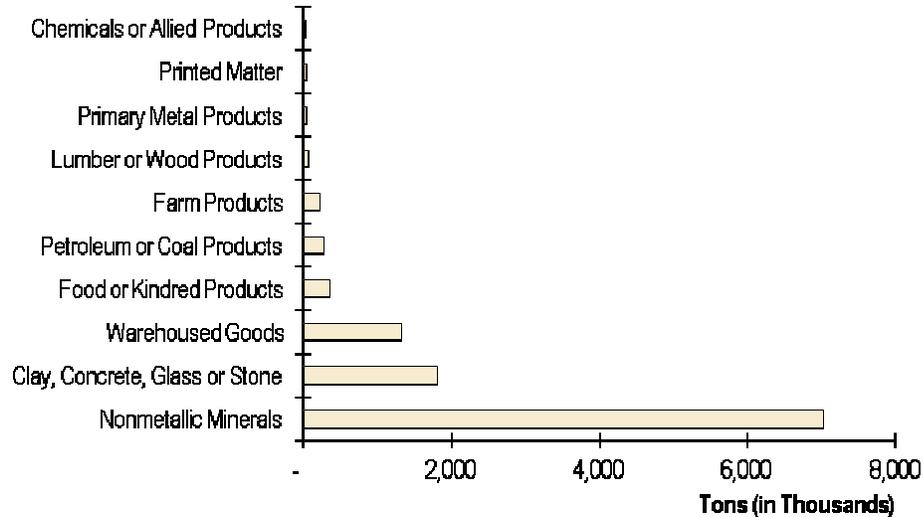*2010 (Exclusive of rail tonnage)*

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Commodity Analysis – Lake County

In 2010, about 11.2 million tons of freight moved inbound, outbound, and within Lake County. Nonmetallic minerals; clay, concrete, glass, and stone products; and warehouse and distribution goods combined account for 10.1 million tons or 90 percent of total inbound, outbound and intracounty tonnage (see Figure 3.9).

This data are exclusive of rail tonnage. Based on interviews with the Florida Central Railroad, the approximately 5,000 carload of rail freight moving into and out of Lake County are comprised of about 20 percent food product, 20 percent scrap metal, 20 percent chemicals and 20 percent fertilizer and lumber.

Figure 3.9   Commodities – Lake County
2010

Note: Sum of inbound, outbound, and intracounty freight.

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

3.3   ORANGE COUNTY

Directional Analysis – Orange County

In 2010, 132 million tons of freight moved into, out of, within, and through Orange County. Table 3.4 details the freight tonnage by direction and mode. Figures 3.10 and 3.11 present the same information graphically. Approximately 24 million tons (18 percent) traveled inbound, 12 million tons (9 percent) traveled outbound, and 2.5 million tons (2 percent) traveled from one point within the county to another. Through freight accounted for 94 million tons or 71 percent of the total. The modal breakdown of the tonnage associated with Orange County in 2010 was 96 percent by truck, 4 percent by rail and less than 0.1 percent by air (see Figure 3.11).

Table 3.4   Summary of Orange County Freight Flows by Weight
*2010, Tons in Thousands*

Direction	Total	Truck	Rail[a]	Air	Air-Truck	Water
Inbound	23,920	19,560	4,269	42	49	-
From Study Region	7,088	7,087	-	-	0	-
Outbound	12,104	11,756	271	13	64	-
To Study Region	2,802	2,801	-	-	1	-
Intracounty	2,584	2,554	-	-	30	-
Through	93,832	93,824	N/A[b]	-	8	-
Total	**132,440**	**127,695**	**4,540**	**54**	**151**	**-**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a]   The base year for the rail data is 2009.

[b]   Through rail moves were not included due to the inability to estimate it with the full Surface Transportation Board (STB) Waybill dataset. Therefore, the total through tonnage shown here likely underestimates actual through tonnage due to the lack of through rail data.

Figure 3.10   Direction of Total Freight Flows by Weight – Orange County
2010
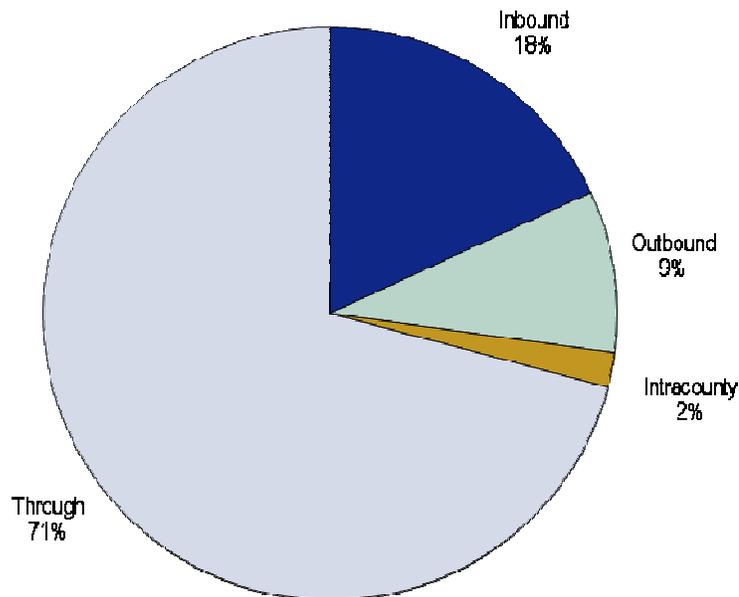
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.
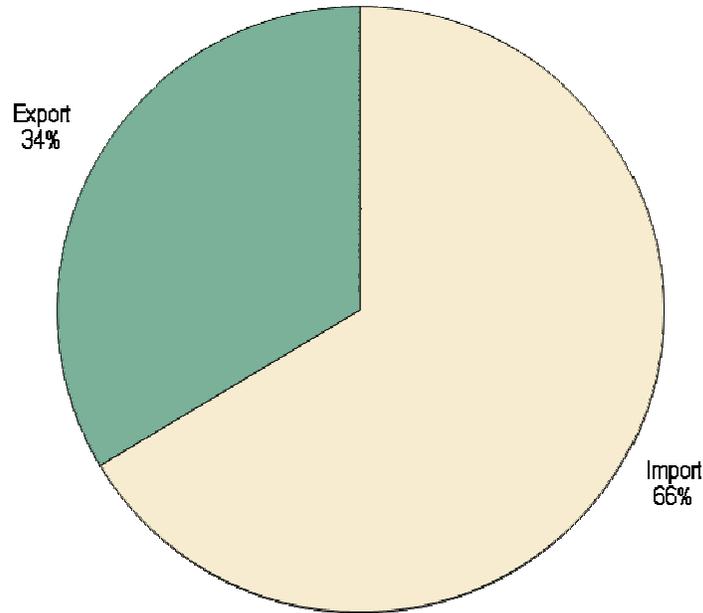
Figure 3.11 Mode Share by Weight – Orange County
2010
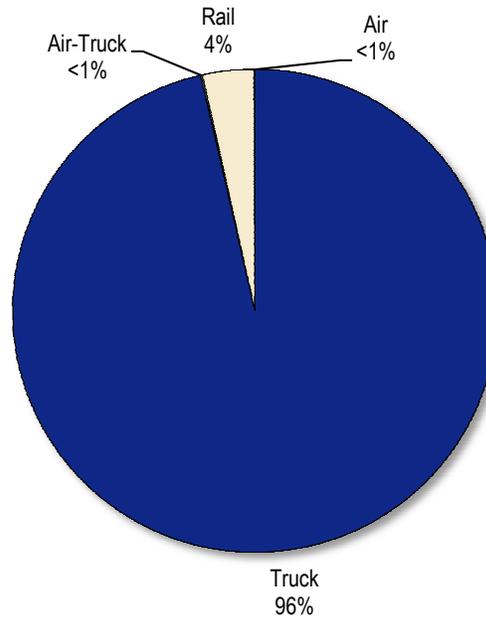
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Figure 3.12 highlights the balance of imports (inbound tonnage) to exports (outbound tonnage) and shows that Orange County businesses receive more inbound goods than they ship outbound thus translating into a freight trade deficit of 32 percent. Although this is a relatively low deficit compared to many other counties in the study area (e.g. 70 percent for Osceola and 60 percent for Seminole counties) it reflects a strong imbalance toward consumption over production in the county and could over time lead to outflows of capital from the area. However, the strong role of the tourism industry in Orange County likely mitigates much of this imbalance with many commodities consumed by visitors to Orange County (with capital from outside the region). Increasing production of commodities such as manufactured products and other goods for export in Orange County could reduce the trade deficit and/or lead to more locally produced goods being consumed in county, potentially reducing overall VMT associated with trucks.

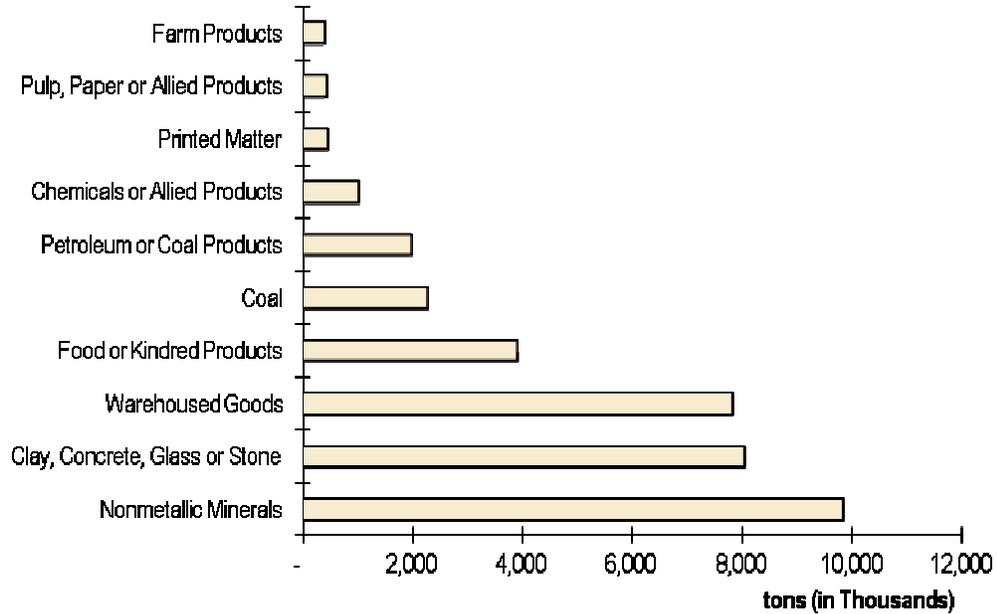**Figure 3.12 Imports/Exports – Orange County**
2010

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Commodity Analysis – Orange County

In 2010, about 38.6 million tons of freight moved inbound, outbound, and within Orange County. By weight, nonmetallic minerals, and clay, concrete, glass or stone products are the top commodity groups, accounting for 17.8 million tons or 46 percent of the total tonnage. Warehouse and distribution goods, and food and kindred products are also top commodity groups, accounting for 11.7 million tons or 30 percent of the total tonnage (see Figure 3.13).

Figure 3.13 Commodities – Orange County
2010

Note: Sum of inbound, outbound, and intracounty freight

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

3.4 OSCEOLA COUNTY

Directional Analysis – Osceola County

In 2010, 96 million tons of freight moved into, out of, within, and through Osceola County. Table 3.5 displays the freight tonnage by direction and modes. Approximately 2.6 million tons (3 percent) traveled inbound, 458 thousand tons (less than one percent) traveled outbound, and 12,000 tons (less than 1 percent) traveled from one point within the county to another.   Through freight accounted for 93 million tons or 97 percent of the total (see Figure 3.14). Nearly all freight associated with Osceola County is transported by truck (see Figure 3.15).

Table 3.5   Summary of Osceola County Freight Flows by Weight
*2010, Tons in Thousands*

Direction	Total	Truck	Rail[a]	Air	Air-Truck	Water
Inbound	2,598	2,535	62	-	0	-
From Study Region	818	818	-	-	0	-
Outbound	458	458	-	-	0	-
To Study Region	220	220	-	-	0	-
Intracounty	12	12	-	-	-	-
Through	93,139	93,020	N/A[b]	-	119	-
Total	**96,207**	**96,025**	**62**	**0**	**120**	**0**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] The base year for the rail data is 2009.

[b] Through rail moves were not included due to the inability to estimate it with the full Surface Transportation Board (STB) Waybill dataset. Therefore, the total through tonnage shown here likely underestimates actual through tonnage due to the lack of through rail data.

Figure 3.14   Direction of Total Freight Flows by Weight – Osceola County
2010
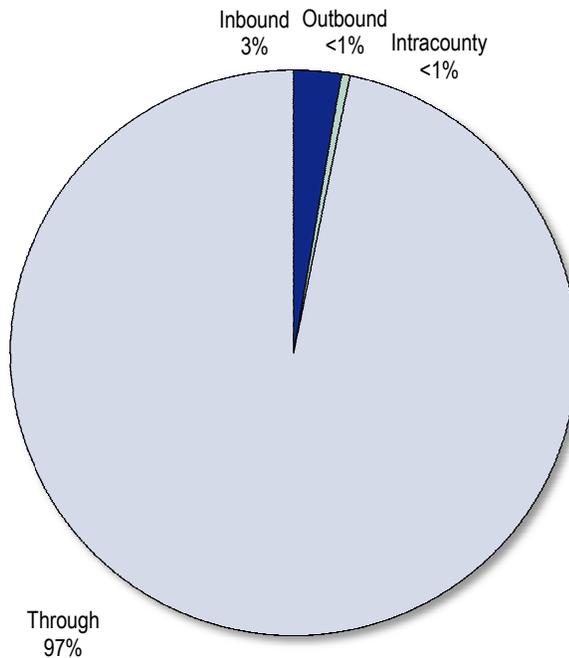
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.
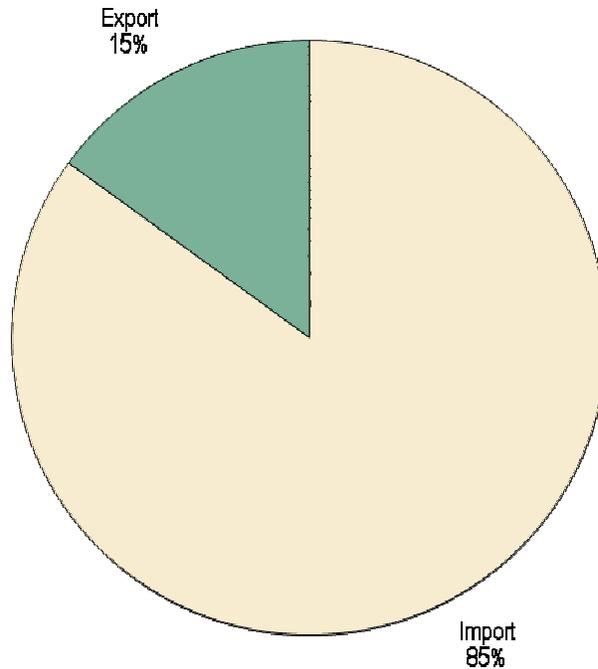
Figure 3.15 Mode Share by Weight – Osceola County
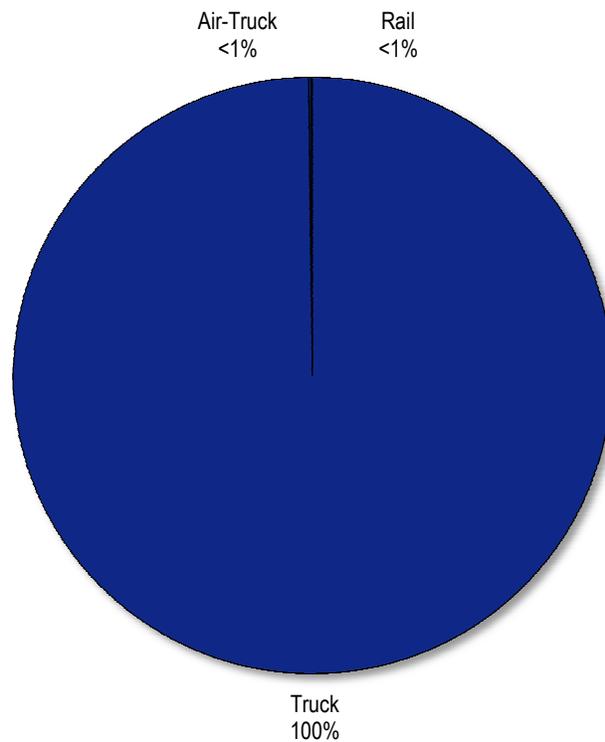
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Figure 3.16 highlights the balance of imports (inbound tonnage) to exports (outbound tonnage) and shows that Osceola County businesses receive more inbound goods than they ship outbound, thus translating into a freight trade deficit of 70 percent.

Figure 3.16   Imports/Exports – Osceola County
2010

Commodity Analysis –Osceola County

In 2010, about 3 million tons of freight moved inbound, outbound, and within Osceola County.   Nonmetallic minerals, and clay, concrete, glass, and stone products combined account for 2.3 million tons or 74 percent of total tonnage reflecting the relative strength of the construction industry in the county (see Figure 3.17).

Figure 3.17   Commodities – Osceola County
2010
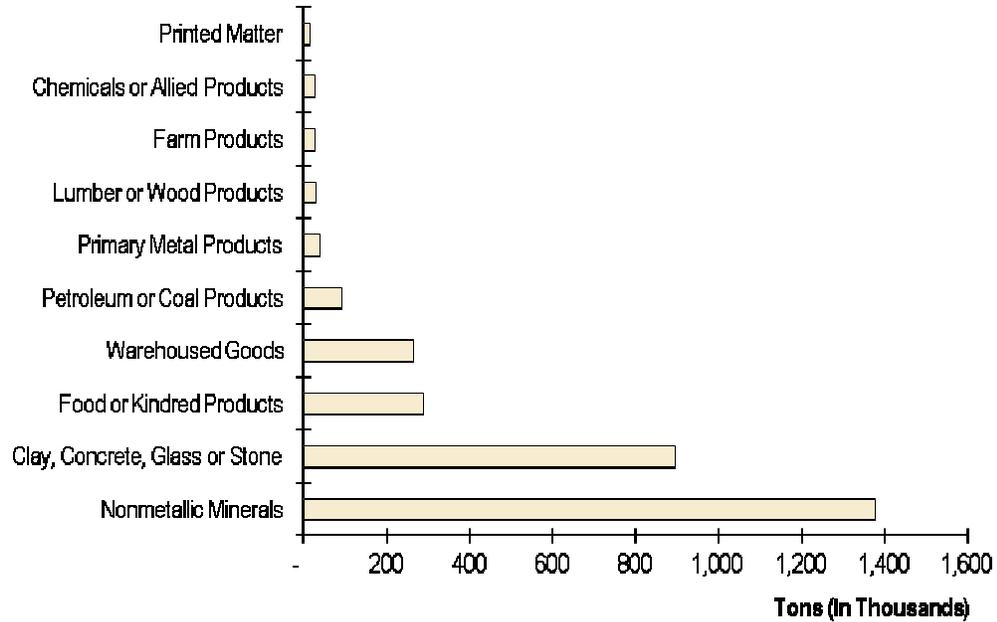
Note: Sum of inbound, outbound, and intracounty freight

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

3.5   SEMINOLE COUNTY

Directional Analysis – Seminole County

In 2010, 39.5 million tons of freight moved into, out of, within, and through Seminole County. Table 3.6 details the county's freight moves by direction and mode. Figures 3.18 and 3.19 display the information graphically. Approximately 8.5 million tons (21 percent) traveled inbound, 2.1 million tons (5 percent) traveled outbound, and 171,000 tons (less than 1 percent) traveled from one point within the county to another. Through freight accounted for 28.8 million tons or 73 percent of the total. About 99 percent of the freight associated with Seminole County was transported by truck and approximately 1 percent by rail.

Table 3.6   Summary of Seminole County Freight Flows by Weight
*2010, Tons in Thousands*

Direction	Total	Truck	Rail[a]	Air	Air-Truck	Water
Inbound	8,474	8,191	283	0	0	-
From Study Region	3,096	3,096	-	-	0	-
Outbound	2,074	2,063	11	0	0	-
To Study Region	530	530	-	-	0	-
Intracounty	171	171	-	-	0	-
Through	28,829	28,828	N/A[b]	-	1	-
Total	**39,549**	**39,253**	**294**	**0**	**1**	**-**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill
        dataset.

[a] The base year for the rail data is 2009.

[b] Through rail moves were not included due to the inability to estimate it with the full Surface Transportation
    Board (STB) Waybill dataset. Therefore, the total through tonnage shown here likely underestimates
    actual through tonnage due to the lack of through rail data.

Figure 3.18   Direction of Total Freight Flows by Weight – Seminole County
2010
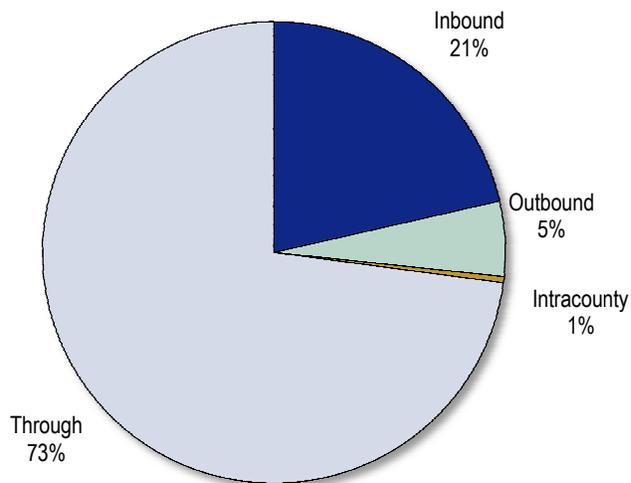
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill
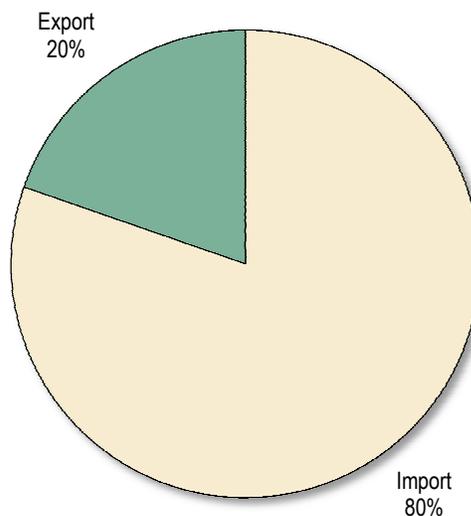   dataset.

Figure 3.19 Mode Share by Weight – Seminole County
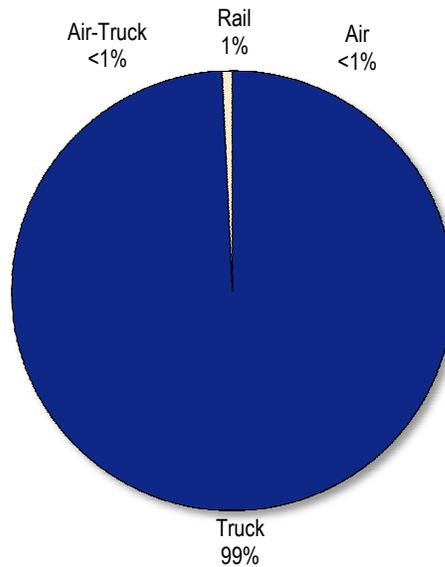
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Figure 3.20 highlights the balance of imports (inbound tonnage) to exports (outbound tonnage) and shows that Seminole County businesses receive more inbound goods than they ship outbound, thus translating into a freight trade deficit of 60 percent.

Figure 3.20   Imports/Exports – Seminole County
            2010

Current Regional Freight and Goods Flow Profile

Commodity Analysis –Seminole County

In 2010, about 10.7 million tons of freight moved inbound, outbound, and within Seminole County. Clay, concrete, glass, and stone products, and nonmetallic minerals combined account for 6.7 million tons or 63 percent of total tonnage reflecting the strength of the construction industry in the county (see Figure 3.21).

Figure 3.21   Commodities – Seminole County
2010
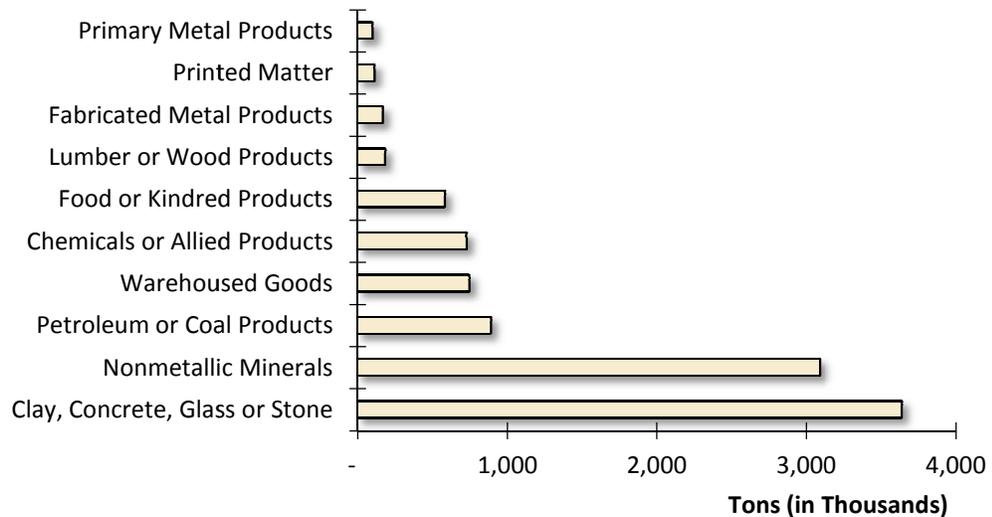
Note: Sum of inbound, outbound, and intracounty freight

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

3.6   SUMTER COUNTY

Directional Analysis – Sumter County

In 2010, 100 million tons of freight moved into, out of, within, and through Sumter County. Table 3.7 details the county's freight moves by direction and mode. Figures 3.22 and 3.23 display the information graphically. Approximately 1.1 million tons (1 percent) traveled inbound, 5 million tons (5 percent) traveled outbound, and 3,000 tons (less than 1 percent) traveled from one point within the county to another. Through freight accounted for 94 million tons or 94 percent of the total. About 99 percent of the total freight tonnage was transported by truck and 1 percent by rail.

Table 3.7   Summary of Sumter County Freight Flows by Weight
*2010, Tons in Thousands*

Direction	Total	Truck	Rail[a]	Air	Air-Truck	Water
Inbound	1,079	394	685	-	0	-
From Study Region	119	119	-	-	0	-
Outbound	5,009	4,982	28	-	0	-
To Study Region	2,464	2,464	-	-	-	-
Intracounty	3	3	-	-	-	-
Through	94,284	94,276	N/A[b]	-	8	-
Total	**100,375**	**99,655**	**713**	**-**	**8**	**-**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] The base year for the rail data is 2009.

[b] Through rail moves were not included due to the inability to estimate it with the full Surface Transportation Board (STB) Waybill dataset. Therefore, the total through tonnage shown here likely underestimates actual through tonnage due to the lack of through rail data.

Figure 3.22   Direction of Total Freight Flows by Weight – Sumter County
2010
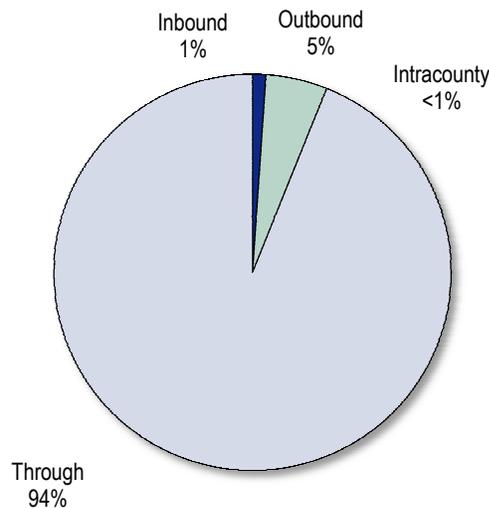
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.
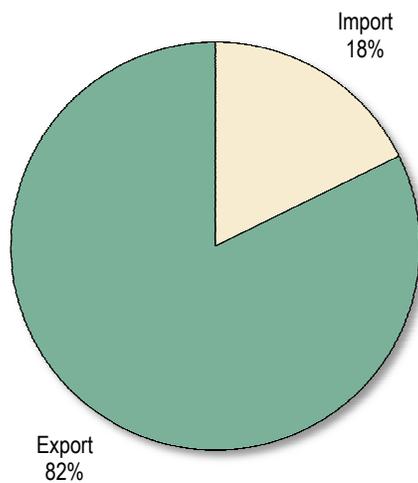
Figure 3.23 Mode Share by Weight – Sumter County
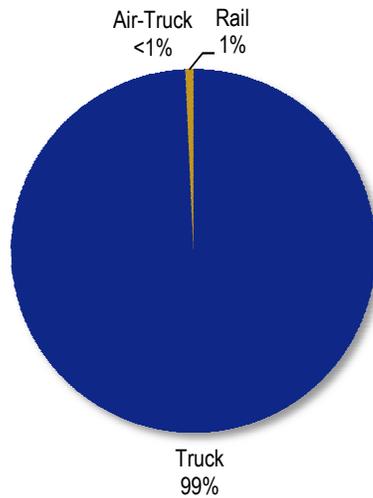
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Figure 3.24 highlights the balance of imports (inbound tonnage) to exports (outbound tonnage) and shows that Sumter County businesses ship more outbound goods than they receive inbound thus translating into a freight trade surplus of 64 percent.

Figure 3.24 Imports/Exports – Sumter County
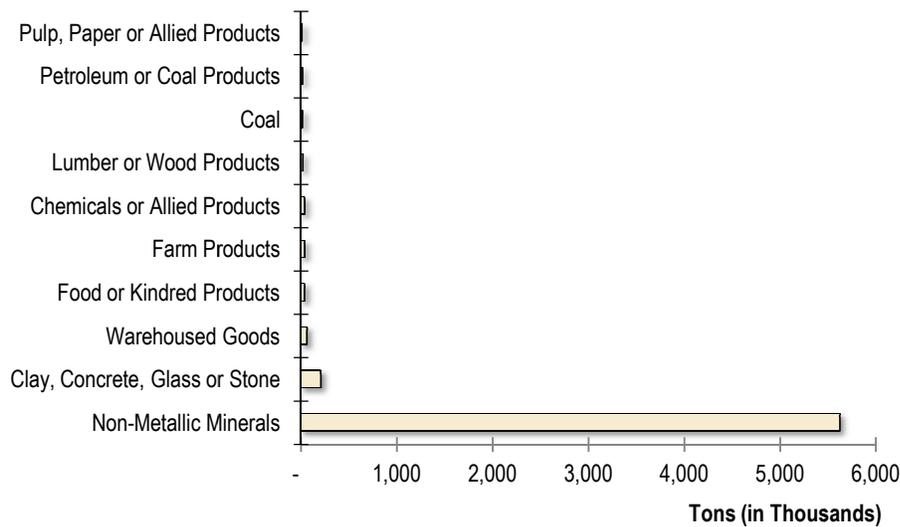*2010*

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Commodity Analysis –Sumter County

In 2010, about 6.1 million tons of freight moved inbound, outbound, and within Sumter County. By weight, the construction industry is the single largest freight generator in the county as evidenced by the fact that nonmetallic minerals account for 5.6 million tons or approximately 92 percent of total tonnage (see Figure 3.25).

Figure 3.25   Commodities – Sumter County
2010

Note: Sum of inbound, outbound, and intracounty freight

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

3.7   VOLUSIA COUNTY

Directional Analysis – Volusia County

In 2010, 58.9 million tons of freight moved into, out of, within, and through Volusia County. Table 3.8 details the county's freight moves by direction and mode. Figures 3.26 and 3.27 display the information graphically. Approximately 3.9 million tons (6 percent) traveled inbound, 3.4 million tons (6 percent) traveled outbound, and 471,000 tons (less than 1 percent) traveled from one point within the county to another. Through freight accounted for 51 million tons or 87 percent of the total. About 99 percent of the total freight tonnage was transported by truck and 1 percent by rail.

Table 3.8   Summary of Volusia County Freight Flows by Weight
*2010, Tons in Thousands*

Direction	Total	Truck	Rail[a]	Air	Air-Truck	Water
Inbound	3,907	3,131	775	-	1	-
From Study Region	1,288	1,288	-	0	0	-
Outbound	3,388	3,375	12	-	0	-
To Study Region	1,133	1,133	-	0	0	-
Intracounty	471	471	-	0	-	-
Through	51,117	51,086	N/A[b]	0	30	-
Total	**58,883**	**58,064**	**787**	**0**	**31**	**-**

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

[a] The base year for the rail data is 2009.

[b] Through rail moves were not included due to the inability to estimate it with the full Surface Transportation Board (STB) Waybill dataset. Therefore, the total through tonnage shown here likely underestimates actual through tonnage due to the lack of through rail data.

Figure 3.26   Direction of Total Freight Flows by Weight – Volusia County
2010
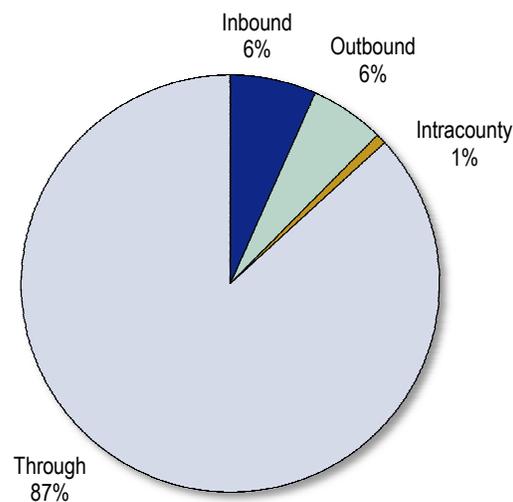
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.
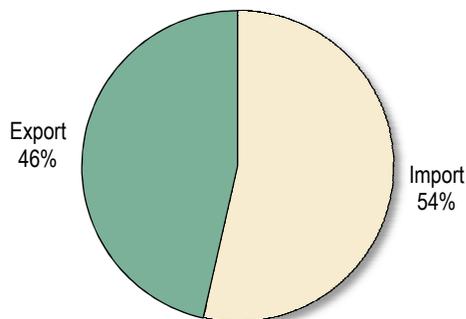
Figure 3.27   Mode Share by Weight – Volusia County
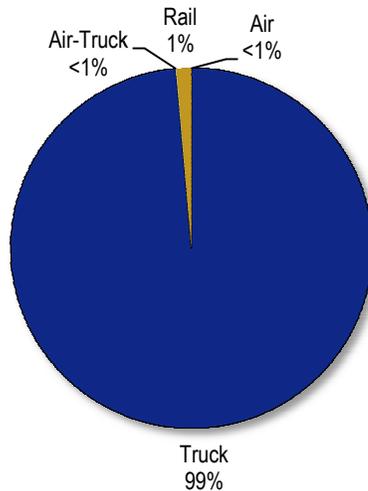
Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Figure 3.28 highlights the balance of imports (inbound tonnage) to exports (outbound tonnage) and shows that Volusia County businesses receive more inbound goods than they ship outbound, thus translating into a freight trade deficit of only 8 percent. This represents a fairly balanced trade lane which allows for better opportunities for carriers to match inbound and outbound loads, reducing empty hauls. As a result, regional shippers benefit from more competitive shipping terms.
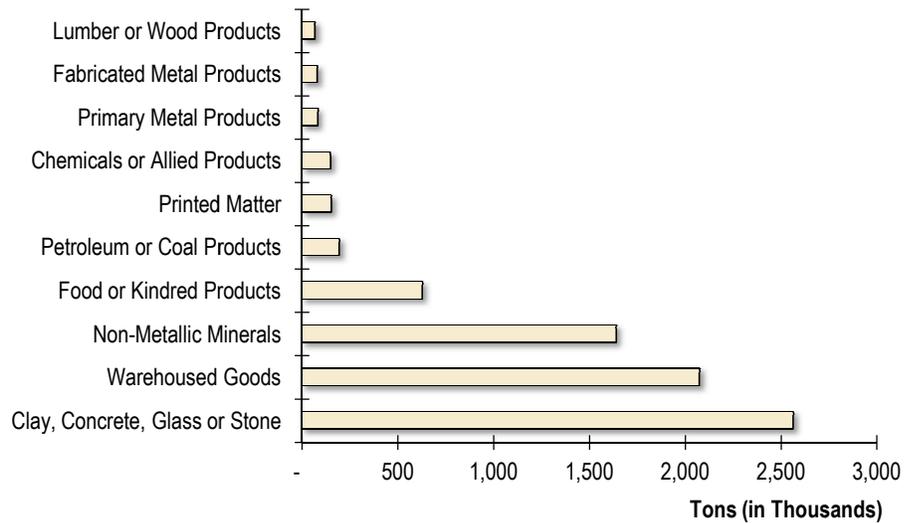
Figure 3.28   Imports/Exports – Volusia County
2010

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.

Commodity Analysis –Volusia County

In 2010, about 7.8 million tons of freight moved inbound, outbound, and within Volusia County. Nonmetallic minerals; warehouse and distribution goods; and clay, concrete, glass, and stone products, combined account for 6.3 million tons or 81 percent of total inbound, outbound and intracounty tonnage (see Figure 3.29).

Figure 3.29 Commodities – Volusia County
2010

Note: Sum of inbound, outbound, and intracounty freight

Source: 2010 FDOT Trade and Logistics dataset and 2009 full Surface Transportation Board (STB) Waybill dataset.