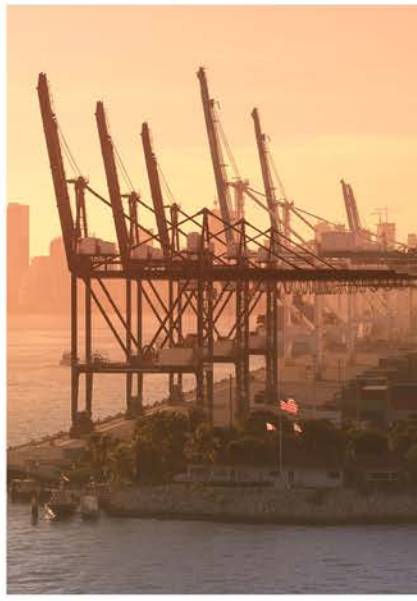


Statewide Commodity Flow Analysis

February 2021

Final Report

FDOT

Executive Summary

Understanding commodity flows is critical to freight transportation planning and economic development. This document summarizes the development and implementation of the data analysis for quantifying statewide commodity flow movements using Transearch data. This statewide project was conducted by the FDOT Transportation Data and Analytics Office (TDA) in coordination with the FDOT Freight and Multimodal Operations office (FMO). The analysis developed as part of this project establishes a consistent, data-driven and repeatable set of procedures to objectively understand the commodity flow patterns at the statewide and county levels.

The study process involved the following steps:

- Provide a summary of Transearch data and data attributes.
- Explain the statistical analyses performed to prepare base year (2018) and forecast year data (2030 and 2045).
- Highlight the limitations of Transearch data and key differences between Federal Highway Administration's Freight Analysis Framework (FAF) and Transearch.
- Analyze freight activity in Florida including modal movements that originate and terminate in the state for different commodities.

Transearch data utilized as part of this project, is a proprietary comprehensive U.S. county-level freight movement database produced by IHS Markit. It consists of freight movement data used for freight planning and forecasting and provides detailed information on commodity type, tonnage, value, unit, origin-destination and mode. Transearch includes market-to-market flow data for more than 35 broad commodity categories (400+ subgroups) and seven modes of transportation: For-hire truckload, For-hire less-than-truckload, Private truck, Conventional rail carload, Rail/highway intermodal, Air and Water. Volume levels are developed and presented in terms of annual short tons, and is converted to other measures, such as: Units (i.e., truck counts), Dollar Value, Truck-miles traveled (TMT) and Ton-miles. For each county market, traffic coverage includes flows that are intra-state (internal), inter-state imports (external-to-internal), inter-state exports (internal-to-external), and overhead or through (external-to-external) movements.

The Transearch capability combines primary shipment data obtained from many of the nation's largest rail and truck freight carriers with information from public, commercial, and proprietary sources to generate a base year estimate of freight flows at the county level. **Figure ES 1** illustrates the methodology of data development for base year. Standard Transportation Commodity Codes (STCC) are used in the Transearch development process to organize and present commodity information.

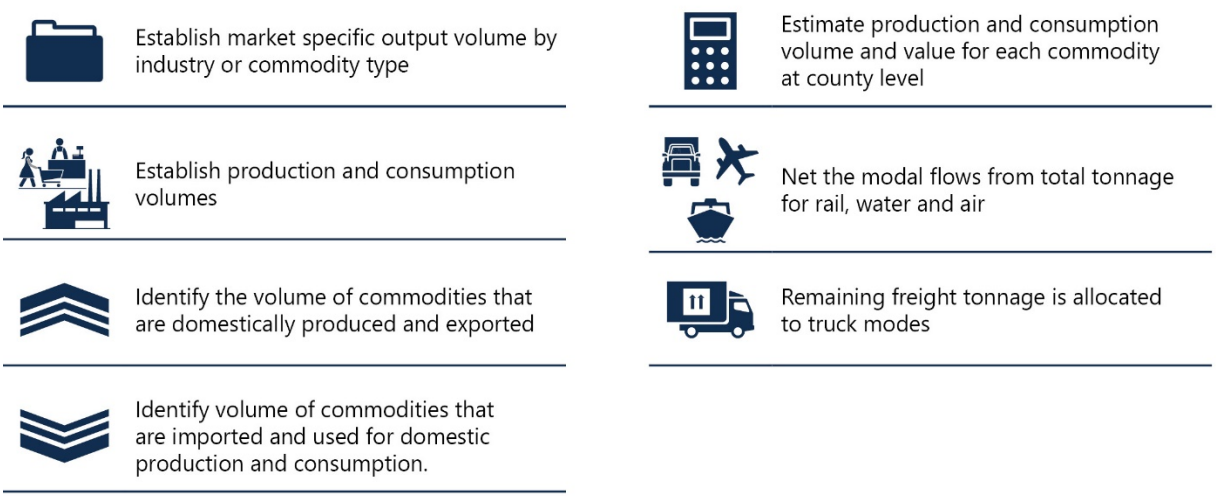


Figure ES 1 | Base Year Transearch Data Development

Once the base year is completed, a separate model is used to produce a 30-year forecast of freight flows. These projections are driven primarily by IHS Global Insight's long-term U.S. Macroeconomic and Business Markets Insights forecasts. The foundation of the approach to freight forecasting is grounded in the disciplined consistency incorporated in IHS's Macro, Regional, Inter-industry, and Intra-state forecast modeling capabilities. This provides a comprehensiveness, consistency, and detail that is unique in the transportation information marketplace. Most importantly, all the detailed freight flow forecasts are derived in a manner that is consistent with the overall path of the economy at a national, regional, and sub-state level. The integrated approach to freight flow forecasting ensures that the forecast is completely consistent with the construction of the base year. **Figure ES 2** illustrates the forecasting methodology.

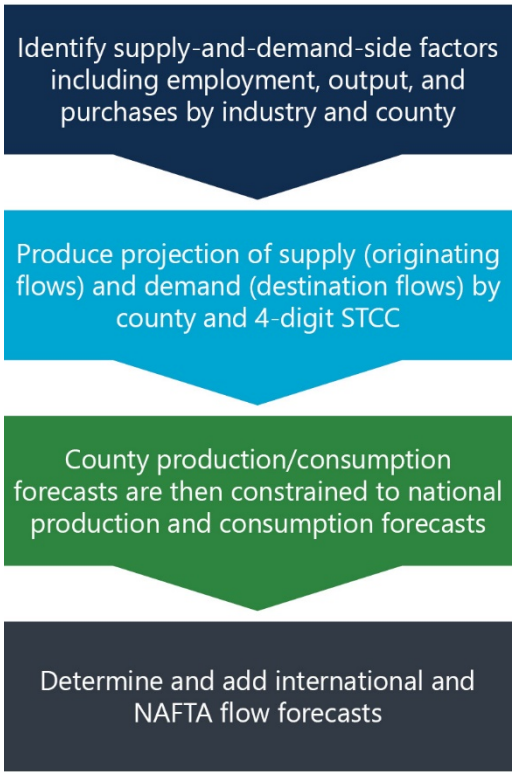


Figure ES 2 | Forecast Year Transearch Data Development

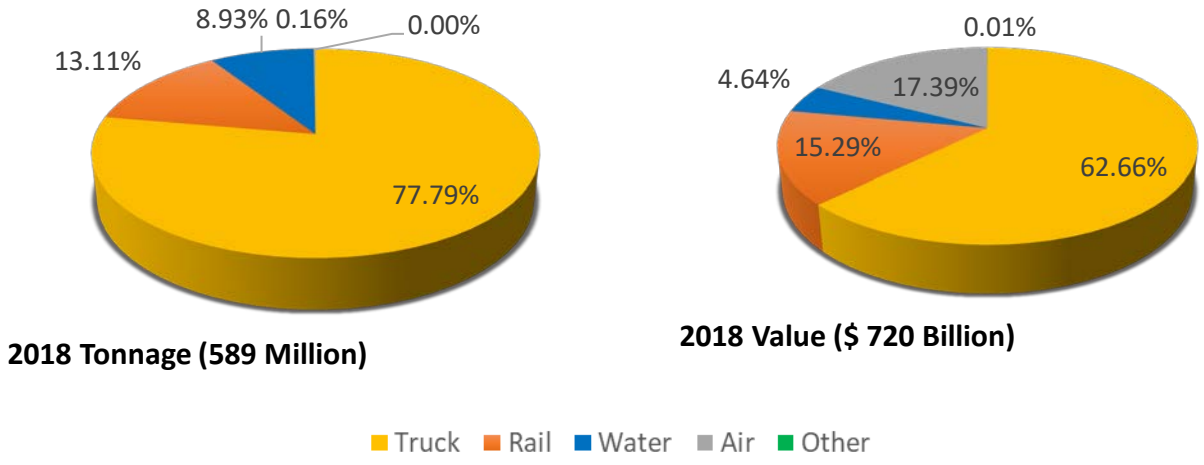
The following sections highlight and summarize key results of the Transearch analysis surrounding intra-state and inter-state commodity movements. **Table ES 1** below, illustrates the statewide tonnage and value statistics which are categorized as inter-state imports, inter-state exports, intra-state movements and intra-county movements. In 2018, the majority of commodity

movements are intra-state (250 million tons) and intra-county movements (109 million tons). Inter-state imports outnumber inter-state exports, 154 million tons to 74 million tons. The 2018 and 2045 statistics clearly indicate that Florida is and will predominantly remain a consumer state. It is important to note that inter-state imports are expected to grow by 20% in tonnage and 47% in value from 2018 to 2045. Similarly, the inter-state exports are expected to grow by 42% in tonnage and 66% in value.

TYPES OF MOVEMENTS	INTER-STATE IMPORTS		INTER-STATE EXPORTS		INTRA-STATE		INTRA-COUNTY	
	2018	2045	2018	2045	2018	2045	2018	2045
TONNAGE	154M	185M	74M	105M	250M	344M	109M	151M
VALUE	$306B	$450B	$137B	$227B	$171B	$257B	$106B	$165B

Table ES 1 | Statewide Commodity Flow Statistics

Figure ES 3 provides the statewide modal splits for 2018. Trucks hauled 77.8% of total commodity tonnage originating or terminating in Florida. Rail (13.1%), Water (8.9%) and Air (0.16%) accounted for the remaining tonnage movement. Similarly, trucks hauled 62.66% of total commodity value followed by Rail (15.29%), Water (4.64%) and Air (17.39%).



*Other includes Foreign Trade Zones and other modes

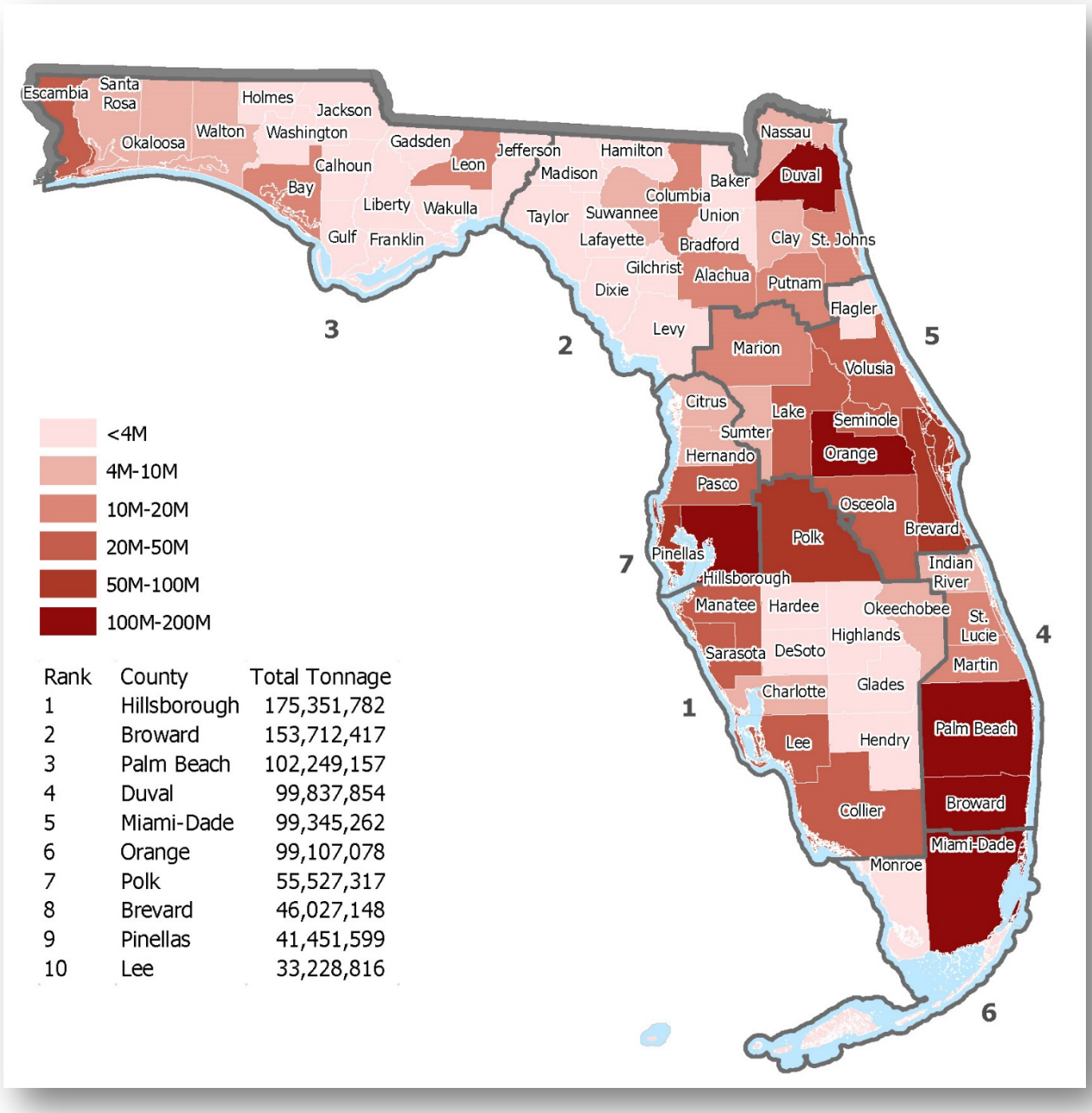
Figure ES 3 | Statewide Modal Splits in Tonnage (Left) and in Value (Right)

Table ES 2 provides top 5 statewide inter-state import/export, intra-state and intra-county commodities in tonnage and value. The percent shares of top commodities indicate that the top 5 commodities constitute more than half of the total commodity flow movements.

Florida Rank	Inter-State Imports		Inter-State Exports	
	% of Total Tons	% of Total Value	% of Total Tons	% of Total Value
1	Petroleum or Coal Products (26.85%)	Transportation Equipment (18.31%)	Clay, Concrete, Glass, Stone (18.12%)	Transportation Equipment (18.73)
2	Nonmetallic Minerals (13.42%)	Food or Kindred Products (9.21%)	Waste or Scrap Materials (17.2%)	Misc. Manufacturing Products (11.08%)
3	Food or Kindred Products (10.98%)	Petroleum or Coal Products (8.93%)	Chemicals or Allied Products (10.57%)	Electrical Equipment (10.01%)
4	Coal (6.58%)	Electrical Equipment (8.86%)	Petroleum or Coal Products (9.63%)	Chemicals or Allied Products (6.74%)
5	Chemicals or Allied Products (6.36%)	Chemicals or Allied Products (7.07%)	Food or Kindred Products (8.95%)	Instruments, Photo & Optical Equipment (6.01%)
Florida Rank	**Intra-State**		**Intra-County**	
	% of Total Tons	% of Total Value	% of Total Tons	% of Total Value
1	Nonmetallic Minerals (39.89%)	Warehouse, Distribution Center (DC) & Drayage Movements (38.09%)	Nonmetallic Minerals (31.65%)	Warehouse, DC & Drayage Movements (50.48%)
2	Clay, Concrete, Glass, Stone (14.37%)	Transportation Equipment (10.18%)	Clay, Concrete, Glass, Stone (17.32%)	Petroleum or Coal Products (8.32%)
3	Warehouse, DC & Drayage Movements (13.13%)	Petroleum or Coal Products (8.59%)	Petroleum or Coal Products (14.06%)	Transportation Equipment (7.22%)
4	Petroleum or Coal Products (11.62%)	Misc. Mixed Shipments (8.43%)	Farm Products (11.88%)	Misc. Mixed Shipments (5.85%)
5	Waste or Scrap Materials (5.58%)	Food or Kindred Products (5.66%)	Warehouse, DC & Drayage Movements (11.60%)	Food or Kindred Products (3.90%)

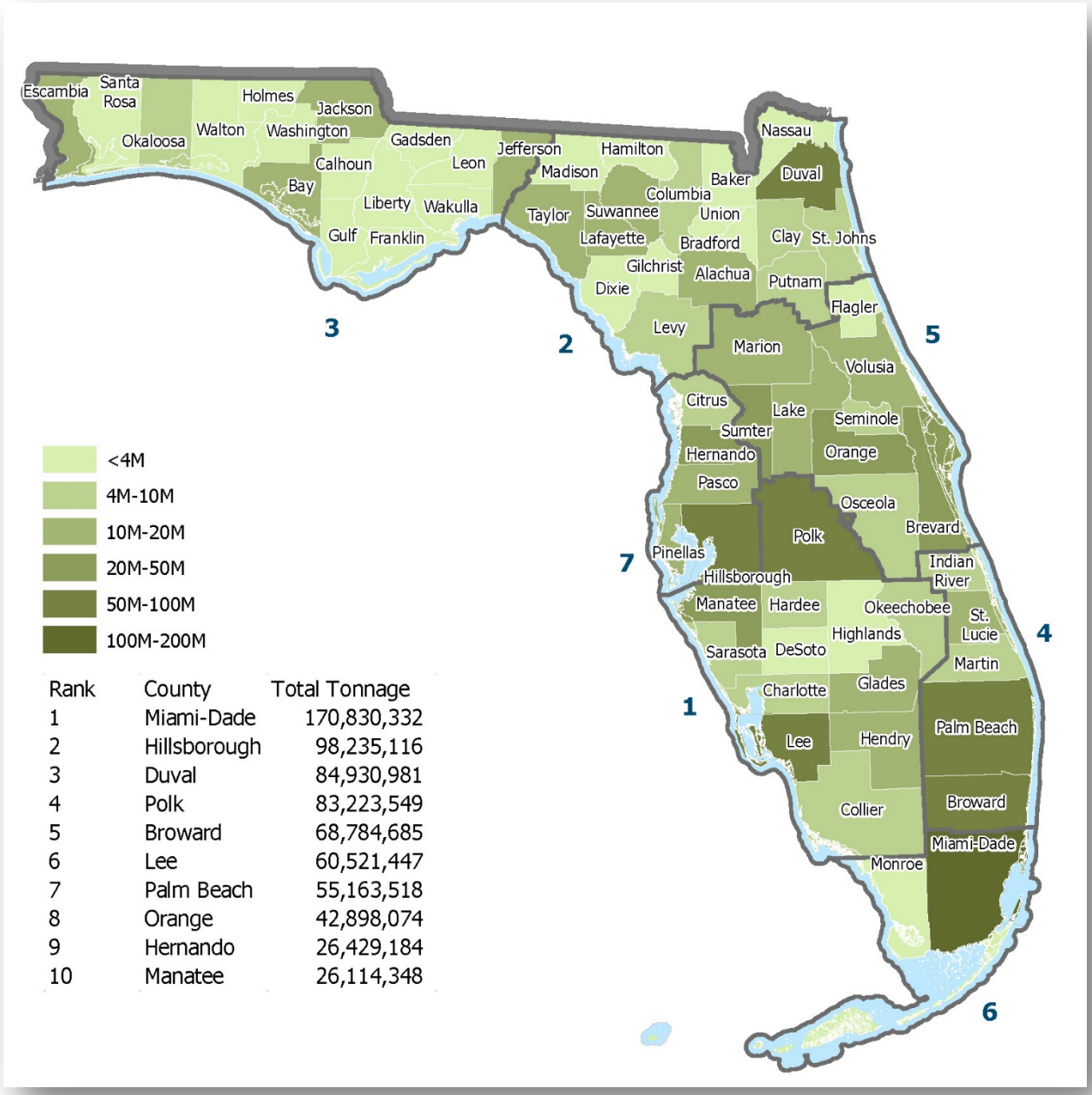
Table ES 2 | Top 5 Statewide Commodities by Tons and Value (2018)

Figure ES 4 and **Figure ES 5** illustrates the total tonnage imports and exports for different counties. Hillsborough, Broward, Palm Beach, Duval, Miami-Dade, Orange, Polk, Brevard, Pinellas and Lee are the top 10 import counties. Miami-Dade, Hillsborough, Duval, Polk, Broward, Lee, Palm Beach, Orange, Hernando and Manatee are the top 10 export counties.



Rank	County	Total Tonnage
1	Hillsborough	175,351,782
2	Broward	153,712,417
3	Palm Beach	102,249,157
4	Duval	99,837,854
5	Miami-Dade	99,345,262
6	Orange	99,107,078
7	Polk	55,527,317
8	Brevard	46,027,148
9	Pinellas	41,451,599
10	Lee	33,228,816

Figure ES 4 | 2018 County Imports in Tonnage



Rank	County	Total Tonnage
1	Miami-Dade	170,830,332
2	Hillsborough	98,235,116
3	Duval	84,930,981
4	Polk	83,223,549
5	Broward	68,784,685
6	Lee	60,521,447
7	Palm Beach	55,163,518
8	Orange	42,898,074
9	Hernando	26,429,184
10	Manatee	26,114,348

Figure ES 5 | 2018 County Exports in Tonnage

Figure ES 6 illustrates the percentage of empty truck trips moving through Florida. The outcomes indicate that the truck trips moving out-of-state and in-state include 29.4% and 16.5% empty trucks respectively. Similarly, the 11.3% of truck miles traveling out-of-state are empty miles and 4.9% of truck miles traveling in-state are empty miles. As expected approximately ½ of the intra-state trips and 40% of the intra-state truck-miles are empty. The percent of intra-

county empty movements is the highest (55.3%) as it includes short-haul and day trip movements.

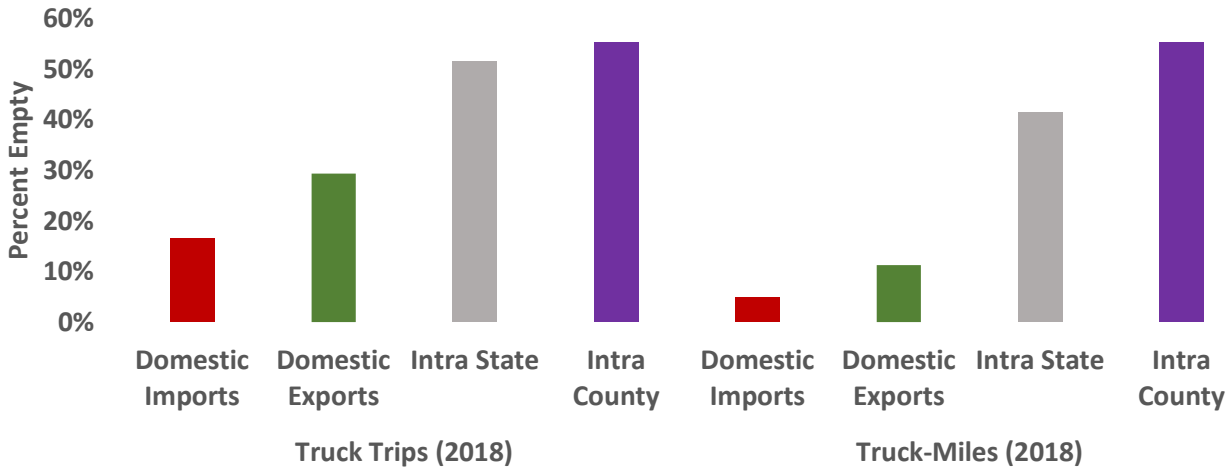


Figure ES 6 | Statewide Empty Truck Trips and Empty Truck-Miles (2018)

Table ES 3 and **Table ES 4** below, provide commodity analysis highlights for five selected commodities: Citrus Fruits (Florida Exports), Waste or Scrap Materials (Florida Exports), Lumber or Wood Products (Florida Exports), Coal (Florida Imports), and Drugs (Florida Imports).

COMMODITIES (FLORIDA EXPORTS):
CITRUS FRUITS

	TOP FL COUNTIES	TOP IMPORTER STATES	HIGHLIGHTS:
1	Polk (15.28%)	Texas (8.40%)	• *Largest citrus producing state (70% of U.S. citrus supply).* • *Florida is second only to Brazil in global orange juice production.* • *$ 9 B citrus industry.* • *Employs nearly 76,000 Floridians.* • *569 K acres of citrus groves and 74+ M citrus trees.* • *Florida counties exported 2.14 M tons of citrus fruits ($ 0.86 B).* • *Citrus exports are forecasted to grow from 2.14 M tons (2018) to 3.71 M tons (2045).*
2	Hendry (12.85%)	New York (7.46%)	
3	Highlands (12.26%)	Pennsylvania (6.33%)	
4	DeSoto (11.44%)	California (6.23%)	
5	Hardee (7.21%)	Illinois (6.21%)	

COMMODITIES (FLORIDA EXPORTS):
WASTE OR SCRAP MATERIALS

	TOP FL COUNTIES	TOP IMPORTER STATES	HIGHLIGHTS:
1	Palm Beach (10.02%)	Texas (12.55%)	• *Florida counties exported 26.62 M tons of waste/scrap materials. 52.33% of county exports are intra-state movements.* • *Five counties which export highest tons per capita of waste/scrap materials are Hamilton (2.35), Monroe (2.22), Manatee (2.15), Collier (2.09) and Palm Beach (1.86).* • *95.23% of waste/scrap materials are hauled by trucks.* • *5% of waste/scrap materials hauled by trucks are exported to a county with a seaport.* • *Waste/Scrap materials are forecasted to grow from 26.62 M tons (2018) to 44.73 M tons (2045).*
2	Miami-Dade (9.87%)	Georgia (11.84%)	
3	Hillsborough (8.74%)	Alabama (9.40%)	
4	Broward (7.85%)	South Carolina (8.52%)	
5	Orange (7.66%)	Pennsylvania (7.45%)	

COMMODITIES (FLORIDA EXPORTS):
LUMBER OF WOOD PRODUCTS

	TOP FL COUNTIES	TOP IMPORTER STATES	HIGHLIGHTS:
1	Jackson (10.30%)	Georgia (42.29%)	• *17.16 M acres (26,807 square miles) of forestland (50 percent of the state's total land area).* • *Florida counties exported 9.3 M tons of lumber/wood products ($ 5 B).* • *47.5% of exported lumber/wood products tonnage are forest materials.* • *59.3% of exported lumber/wood products are intra-state movements.* • *92.92% of lumber/wood products are hauled by trucks. Rail (6.38%) and water (0.7%) are the other major modes.* • *Lumber or wood products exports are forecasted to grow from 9.3 M tons (2018) to 10.61 M tons (2045).*
2	Taylor (8.52%)	Alabama (20.61%)	
3	Polk (6.37%)	North Carolina (4.81%)	
4	Nassau (5.68%)	Texas (4.00%)	
5	Dixie (5.22%)	South Carolina (3.74%)	

Table ES 3 | Example Commodity Analysis Highlights (Florida Exports)

COMMODITIES (FLORIDA IMPORTS):
COAL

	TOP FL COUNTIES	TOP EXPORTER STATES	HIGHLIGHTS:
1	Putnam (27.60%)	Kentucky (36.80%)	• *Florida does not have any coal reserves or production and relies on several other states to meet its limited coal demand.* • *Almost all coal consumed in Florida is used for electricity generation.* • *Florida counties imported 10.1 M tons of coal ($ 0.3 B).* • *67.5% of coal is carried by rail and 32.46% is carried over water.* • *Coal imports are forecasted to decline from 10.1 M tons (2018) to 3.2 M tons (2045).*
2	Orange (17.16%)	Indiana (25.25%)	
3	Hillsborough (14.40%)	Louisiana (18.36%)	
4	Escambia (13.53%)	Alabama (14.62%)	
5	Citrus (12.35%)	Illinois (4.70%)	

COMMODITIES (FLORIDA IMPORTS):
DRUGS

	TOP FL COUNTIES	TOP EXPORTER STATES	HIGHLIGHTS:
1	Miami-Dade (18.02%)	North Carolina (23.79%)	• *Florida counties imported 308.8 K tons of drugs ($ 12.1 B)* • *34.89% of drugs imported tonnage are intra-state movements.* • *Mode splits of drug imports by tonnage are Air (5.2%), Rail (5.98%) and Truck (88.8%). But it is important to note that modal splits of drug imports by value are Air (27.72%), Rail (4.4%) and Truck (67.85%).* • *Drug imports are forecasted to grow from 308.8 K tons (2018) to 779.3 K tons (2045).*
2	Orange (15.14%)	California (11.3%)	
3	Hillsborough (10.33%)	New York (10.73%)	
4	Palm Beach (9.94%)	New Jersey (8.79%)	
5	Broward (8.91%)	Tennessee (7.23%)	

Table ES 4 | Example Commodity Analysis Highlights (Florida Imports)

Additionally, Transearch data developed as part of this project was analyzed to identify the following information for every county and FDOT district:

- Top imports and exports by tonnage and value;
- Top domestic and intra-state trading partners; and
- Major modes of transportation for freight movement.

This information was used to develop County freight brochures and FDOT District freight brochures. **Figure ES 7** illustrates snapshot of a county freight brochure (Hillsborough) using this information.

	IMPORTS		WITHIN COUNTY		EXPORTS	
	2018	2045	2018	2045	2018	2045
Tonnage:	55.73 M	64.09 M	10.05 M	23.14 M	28.3 M	38.05 M
Value:	$ 55.49 B	$ 79.25 B	$ 7.7 B	$ 13.11 B	$ 37.06 B	$ 63.99 B

TOP COMMODITY *by Tonnage, 2018*

Nonmetallic Minerals	20,757,988
Petroleum or Coal Products	15,620,885
Chemicals or Allied Products	4,889,934
Clay, Concrete, Glass, Stone	3,052,420
Warehouse, Distribution Center and Drayage Movements	2,782,051

Petroleum or Coal Products	10,055,702
Clay, Concrete, Glass, Stone	4,786,529
Chemicals or Allied Products	3,954,067
Waste or Scrap Materials	2,325,494
Nonmetallic Minerals	1,851,377

TOP COMMODITY *by Value, 2018*

Petroleum or Coal Products	10,717,097,169
Transportation Equipment	6,632,501,369
Misc. Manufacturing Products	5,687,023,465
Electrical Equipment	5,334,099,209
Warehouse, Distribution Center and Drayage Movements	5,223,077,932

Misc. Manufacturing Products	7,858,390,136
Petroleum or Coal Products	5,599,984,505
Electrical Equipment	5,556,644,328
Warehouse, Distribution Center and Drayage Movements	4,222,426,951
Transportation Equipment	3,355,020,785

Figure ES 7 | Hillsborough County Commodity Flow (County Freight Brochures)

In conclusion, this study provides a comprehensive analysis of commodity flow by tonnage and value for different commodity types and modes. The analysis results will support the implementation of Florida's Freight Mobility and Trade Plan (FMTP) as well as can be used for other freight planning needs.

CONTENTS

FIGURES

TABLES

Glossary of Terms

AAR	Association of American Railroads
BEA	Bureau of Economic Area
BMI	Business Market Insights
BTM	Business Transactions Matrix
BTS	Bureau of Transportation Statistics
CFS	Commodity Flow Survey
DEO	Florida Department of Economic Opportunity
DFC	District Freight Coordinator
DOR	Florida Department of Revenue
ESRI	Environmental Systems Research Institute
FAF	Freight Analysis Framework
FDOT	Florida Department of Transportation
FIPS	Federal Information Processing Standard
FLP	Freight Logistics and Passenger Operations
FMO	Freight and Multimodal Operations
FTP	Florida Transportation Plan
FTZ	Foreign Trade Zone
GDB	Geodatabase
GIS	Geographic Information System
GSP	Gross State Product
IHS	Information Handling Services
MPO	Metropolitan Planning Organization
MSW	Municipal Solid Waste
NAFTA	North American Free Trade Agreement
NAICS	North American Industry Classification System
NEC	Not Elsewhere Classified
NHS	National Highway System
SCTG	Standard Classification of Transported Goods
SIO	Systems Implementation Office
SIS	Strategic Intermodal System
STB	Surface Transportation Board
STCC	Standard Transportation Commodity Code
TAZ	Traffic Analysis Zone
TDA	Transportation Data and Analytics
TEBH	Truck Empty Back Haul
TIGER	Topologically Integrated Geographic Encoding and Referencing
TMT	Truck Miles Traveled
U.S.	United States of America
USD	United States Dollar
VMT	Vehicle Miles Traveled
WTS	World Trade Service

Chapter 1. Introduction

Due to emerging technology and the changing freight landscape (e-commerce, distribution centers, etc.), the freight industry has changed considerably in the last five years. In order to assess the needs of Florida's transportation system related to freight, the Florida Department of Transportation (FDOT) needed to understand recent and projected commodity flow trends to support FDOT business needs. Unfortunately, the Freight Analysis Framework (FAF) is the latest publicly accessible information available (base year - 2012). Also, FAF commodity flow data is not available at county geography which makes it difficult to evaluate freight movements at geographies smaller than the state or FAF regions/zones. As a result, FDOT identified a need to acquire proprietary data to conduct a statewide commodity flow analysis.

The objective of this project is to develop a report on Florida's freight and commodities as it relates to the transportation system. The analysis of Transearch information provided by IHS Markit supports the development of a statewide commodity flow profile as well as county freight brochures. As part of the first task, a project management schedule was established by conducting coordination meetings between the project team members, FDOT task managers and the project stakeholders. The project stakeholders included Transportation Data and Analytics Office, Systems Implementation Office, Freight Logistics and Passenger Operations Office and District Freight Coordinators (DFCs). Subsequently, project kick off meeting and stakeholder meetings were conducted to collect business requirements for data analysis of Florida's commodity flow movements. **Appendix A** includes project schedule, meeting notes, and meeting presentations.

This document is organized in the following five sections:

- **Data Overview:** Provides a summary of Transearch data and data attributes.
- **Data Development Methodology:** Explains the statistical analyses performed to prepare base year (2018) and forecast years (2030 and 2045) data.
- **Data Features:** Highlights the limitations of Transearch data and key differences between Federal Highway Administration's Freight Analysis Framework (FAF) and Transearch.
- **Data Analysis:** Analysis of the freight activity for the state of Florida covering modal movements that originate and terminate in the state for different commodities.
- **Conclusions:** Finally, the document provides a summary of the findings and important conclusions.

Chapter 2. Data Overview

Transearch dataset helps transportation planners, transportation providers, and government agencies analyze current and future freight flows by origin, destination, commodity, and transport mode. Transearch can help users to:

- Prioritize investments;
- Improve competitive positioning;
- Anticipate economic shifts and market changes;
- Track and anticipate freight flows across the United States at the national, state, Bureau of Economic Area (BEA), and county levels;
- Benchmark individual performance relative to the market and determine future market potential; and
- Understand transportation demand by commodity, location, and mode.

The dataset provided as part of this project, is a proprietary comprehensive U.S. county-level freight movement database produced by IHS Markit. It consists of freight movement data used for freight planning and forecasting and provides detailed information on commodity type, tonnage, value, unit, origin-destination and mode. Transearch includes market-to-market flow data for more than 35+ broad commodity categories (400+ subgroups) and seven modes of transportation:

- For-hire truckload;
- For-hire less-than-truckload;
- Private truck;
- Conventional rail carload;
- Rail/highway intermodal;
- Air; and
- Water.

The commodity flows can be divided into four categories: intra-state (internal), domestic imports (external-to-internal), domestic exports (internal-to-external), and overhead or through (external-to-external). The definitions are outlined below:

- **Intra-state (internal):** Freight flows that originated and terminated in the state of Florida.
- **Domestic Imports (external-to-internal):** Freight flows that originated in other states of the U.S. except Florida and are destined to a Florida county.
- **Domestic Exports (internal-to-external):** Freight flows that originated in Florida county and are destined to other states of the U.S. except Florida.

- **Overhead or through (external-to-external):** All domestic and international freight flows that neither originated nor were destined to Florida but passed through the state for some leg of the journey.

Transearch data also includes Rail Carload Waybill information which is a stratified sample of carload waybills for all U.S. rail traffic submitted by those rail carriers terminating 4,500 or more revenue carloads annually. The Transearch data with the Waybill information has limited accessibility and is only available to Florida Department of Transportation (FDOT) staff according to the Freight and Multimodal Office (FMO) and Surface Transportation Board (STB). The attributes of the Transearch data are provided in **Table 1.**

Name	Description
Year	The year the shipment occurred (2018) or is forecasted (2030/2045) to occur.
Origin Region	The study region of the shipment's origin.
Destination Region	The study region of the shipment's destination.
STCC	Standard Transportation Commodity Code (STCC), which describes the commodity shipped.
STCC Description	The full description of the commodity or commodity grouping.
Equipment	The truck type used for the shipment (for truck modes only). Equipment is not identified for other modes.
Trade Type	Signifies if a shipment is an Import, Export, Domestic or North American Free Trade Agreement (NAFTA) movement.
Mode	The transportation mode of the shipment.
Tons	The net annual short tons carried.
Units	The number of annual truckloads (for truck modes). The number of annual carloads or intermodal containers (for rail modes). Units are not calculated for other modes.
Value	Net annual dollar value of shipments (USD).

Table 1 | Transearch Table

2.1. Commodity Flow Measures

The primary measurements of commodity flows are volume (short tons), units (truck counts and rail carloads) and dollar value.

Volume: It is presented in terms of annual short tons (2,000 lbs.). The short tons are converted to other measures, such as units (i.e., truck counts), dollar value, vehicle-miles traveled (VMT), and ton-miles.

Units: For truck and rail modes, the flows are quantified by Units. These are estimated from the tonnage. For truck, the unit is one truck, regardless of size and type, from the straight trucks to double or trip trailers. For rail, the unit is a trailer or container for intermodal flows, and a railcar in all other cases. For other modes, the Units are not calculated.

Value: The other measurement of commodity flow is the total value of goods in U.S Dollars indexed to the same year as the freight flow.

2.2. Commodity Names

Commodity Names in the Transearch database are based on 4-Digit Standard Transportation Commodity Code (STCC) and Commodity Description (STCC Description). These values are assigned by Railinc Corporation, a company that provides rail data and messaging services to the North American freight railway industry and are most used on rail waybills. The company was established as a wholly owned, for-profit subsidiary of the Association of American Railroads (AAR) in 1999. These codes provide information on the type of commodity represented for each record.

Standard Transportation Commodity Codes (STCC) are used in the Transearch development process to organize and present commodity information for a variety for reasons, including:

- The suitability of STCC to transportation and their general adequacy of nested detail;
- The comparability to codes used in production and consumption data;
- Convertibility from international codes;
- Continuity with historical information; and
- Use in the STB Waybill data.

A table of 4-digit STCCs and their descriptions are presented in **Appendix B.**

STCCs up to the 4-digit level of detail are utilized in Transearch. Thus, in the general category of Transportation Equipment, transportation of new motor vehicles (code 3711) is categorized differently from auto parts (code 3714). In some cases where commodity detail at the 4-digit level cannot be determined, three or two-digit STCCs is used.

2.3. Origin and Destination Region

Origin and Destination Regions are:

- County names for Florida origins and destinations.
- Bureau of Economic Analysis (BEA) areas for U.S. (outside Florida) origins and destinations.
- Canadian Metropolitan Areas and Mexican states for Canadian and Mexican origins and destinations.

2.4. Equipment

The Equipment table contains the text descriptions for the truck equipment types in Transearch data from 2018. **Table 2** below presents the fields in the Equipment table and definitions of the equipment types. It should be noted that the equipment types are only available for truck movements.

Equipment	Definition
Auto	Car carrier trailers designed to carry multiple automobiles or other vehicles via truck.
Bulk	Bulk carriers including dry bulk tankers, hoppers and dump trucks.
Dry Van	Box-shaped trailer or semi-trailer used to carry (typically palletized) goods.
Flat	Flatbed trailers with no sides or roof.
Livestock	Livestock haulers used to carry live animals such as cows, pigs or sheep.
Reefer	Refrigerated & freezer trailers.
Specialty	Specialty equipment such as concrete mixers.
Tank	Tanker trailers suitable for carrying bulk liquids.

Table 2 | Equipment Categories

2.5. Modes

The Mode table contains the text descriptions for Transearch modes as well as the mode groups. **Table 3** contains information on Mode fields and descriptions.

Mode Groups	Modes	Description
Truck	Truck Truckload	Common carrier service that typically moves one large shipment per trailer, direct from shipper to receiver with no intermediate handling. Other than a few specialized equipment types, this segment operates all of the different types of trailers (dry van, flatbeds, tanks, reefer, dry bulk, auto carrier).
Truck	Truck Less-than-Truckload	Common carrier service that consolidates smaller shipments and moves through a network of terminals. Exclusively uses dry van equipment and may utilize straight trucks (box trucks) instead of trailers in some metropolitan areas.
Truck	Private Truck	Companies that own and operate (or utilized dedicated contract services with trucking companies) their own fleet of trucks to move their own goods. Retailers, such as Wal-Mart and supermarket chains, are prime examples, in addition to food companies, such as Coca-Cola, Pepsi and Sysco.
Truck	Truck Not Elsewhere	Used primarily for NAFTA truck movements where Transearch does not specify the sub-mode.

	Classified (NEC)	
Rail	Rail Carload	Movements travelling exclusively by rail. Carload traffic is comprised mostly of bulk commodities, such as coal, agricultural product, etc.
Rail	Rail Intermodal	The rail portion of a truck-rail (such as trailer-on-flatcar or container- on-flatcar) shipment. The origin corresponds to the point at which the shipment is put on a rail car, and the destination is the point at which a shipment is taken off the rail car.
Rail	Rail Not Elsewhere Classified (NEC)	Used primarily for NAFTA rail movements where Transearch does not specify carload vs intermodal.
Air	Air	Airport to airport movements of U.S. domestic air cargo. Movements to intermediate air hubs are excluded to determine the final origin & destination of air freight.
Water	Water	Port to port movements via water including barge movements along US inland waterways and movements by ship, e.g. along the Great Lakes or Intra-coastal waterways.
Other	Other	Unknown or unidentified movement. Only present in NAFTA moves where movement is undefined or defined as mail or pipeline by the Bureau of Transportation Statistics (BTS).
Free-Trade Zone	Free Trade Zone	Free trade zone traffic as defined by U.S. Customs. Only present in NAFTA moves to be consistent with publicly available data from BTS.

Table 3 | Mode Categories

2.6. Trade Type

The different Trade Type descriptions are presented in **Table 4**, shows the fields in the Trade Type table as well as the actual data in the table and definitions of the trade types.

Trade Type	Definition
Alaska	Truck movements to the Pacific Northwest eventually destined for Alaska via water.
Domestic	Movements originating and terminating within the United States.
Export	Freight flows terminating at a seaport for export.
Import	Freight flows originating at a seaport, having been imported from Abroad.
NAFTA	Traffic originating or terminating in either Canada or Mexico with the other end of the flow in the US.

Table 4 | Trade Type

Chapter 3. Data Development Methodology

The data development methodology combines primary shipment data obtained from many of the nation's largest rail and truck freight carriers with information from public, commercial, and proprietary sources to generate a base year estimate of freight flows at the county level. Once the base year is completed, a separate model is used to produce a 30-year forecast of freight flows. These projections are driven primarily by IHS Economics' long-term U.S. Macroeconomic and Business Markets Insights forecasts.

3.1. Base Year Transearch Data Development

The methodology of data developed for base year (2018) can be classified into eight steps as illustrated in **Figure 1**.

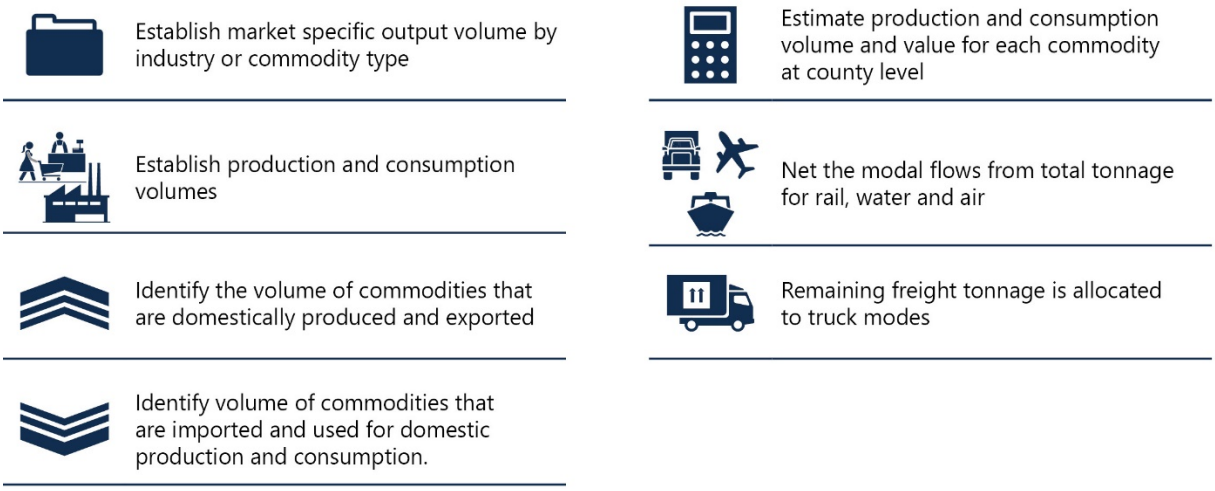


Figure 1 | Base Year Transearch Data Development

Production of base year (2018) of the Transearch database begins by establishing market-specific output volumes by industry or commodity types. For most commodities, including most manufactured goods, this information is drawn from IHS Economics' Business Markets Insights (BMI) database, supplemented by trade association and industry reports and U.S. government-collected data.

- BMI contains a consistent set of historical statistical estimates and forecasts by industry sector at the county level of geographic detail.
- The statistics include the number of business establishments, employees, and sales by industry at the 6-digit NAICS (North American Industrial Classification System) code level.

The Transearch data is based primarily on commodity production estimates from the county-level IHS Global Insight's Business Market Insights (BMI) economic models along with carrier origin and destination (O-D) data from the motor carrier data exchange. The data source used is the Motor Carrier Data Exchange program, which includes annual tonnage or truckloads for each O-D pair with information provided at the zip code level. The Motor Carrier Data Exchange program data are further supplemented as follows. First, for truck trip origins, the dataset is supplemented with proprietary data on industrial output, employment and sales level data from specific locations of manufacturing and distribution facilities. Second, for truck trip destinations / consumption locations, the dataset is supplemented with Bureau of Economic Analysis (BEA)

Industrial Input / Output (I/O) tables. Information from the Input / Output (I/O) tables that are produced by the BEA is a key input to the process of estimating production and consumption volumes:

- The I/O tables contain information on the amount of raw materials that are needed to produce each industry's output. These tables provide information on the number of commodities that are demanded by each industry, as well as the amount of output generated by each industry.
- The application of the I/O information now includes all individually reported NAICS industries. Earlier iterations of Transearch used this detailed information only for the manufacturing sector but relied on a much more aggregate level of detail for non- manufacturing establishments.

For the purpose of producing the Transearch database, the BMI county-level sales information is used in conjunction with the BEA I/O tables to estimate the value of production and consumption for each commodity at the county level. The NAICS commodities are converted to 4-digit Standard Transportation Commodity Codes (STCCs); for each STCC, there is a price per ton, which is used to translate each commodity from nominal dollars into tonnage.

Commodities for which production volumes are not taken from BMI include:

- Agricultural products and livestock (sourced from the U.S. Department of Agriculture);
- Coal and automobiles (sourced from other IHS in-house databases);
- Selected chemicals (sourced from IHS Chemical group); and
- Minerals (sourced from the U.S. Geological Survey).

Using port-level census data, IHS identified the volume of commodities that are domestically produced and exported along with quantities of commodities that are imported and used for domestic production and consumption. Therefore, final county-level production and consumption numbers include imports and exports.

Additional sources of demand include the public sector, households, and the financial sector. This demand is accounted for by using factors to include state and local tax revenues, wages

and salary disbursements (as a proxy for household disposable income), and investments. Once the county-level production and consumption volumes are established, tonnages moving by rail, water, air, and pipeline are netted from the totals (which serve as control totals). These modal volumes are well-defined and reported by government agency data sources. The remaining freight volumes are then allocated to truck distribution patterns. Separate data sources are used to develop NAFTA (activity moving between the United States and Canada or Mexico) goods movement patterns and are included with the U.S. data set.

3.2. Forecast Year Transearch Data Development

Drawing from the highly regarded economic, trade, and industry forecasting models of IHS Economics, Transearch provides a forecast of freight movement that enables the sizing of future freight markets over a 30-year time horizon.

The foundation of the approach to freight forecasting is enabled by using IHS's macroeconomic, regional, inter-industry, and intra-state forecast modeling capabilities. These economic forecasting models are built and maintained with a common framework and perspective that provides a comprehensiveness, consistency, and level of detail that are unique for freight transportation forecasting. Most importantly, this means that the detailed freight flow forecasts are derived in a manner consistent with the path of the economy at the national, regional, and sub-state levels.

The development of the baseline commodity tonnage forecasts uses a multi-step approach. There are two distinct types of forecasting methodologies for both domestic and international forecasts. For domestic forecasts, these steps include:

- Establish national control totals by commodity using the Industrial Production Index of the IHS Macro Model;
- For each commodity, apply specific shipment growth to each destination county from each origin county using the BMI;
- Apply specific purchasing and consumption growth by county and commodity using the Business Transactions Matrix (BTM);
- Summarize and compare the results from steps 2 and 3 with the national controls in Step 1;
- Adjust the resulting freight flows so that the volumes correspond with the national control levels:
    - ✓ For each county and commodity, ratably adjust shipments to match purchases.
    - ✓ For each commodity, adjust so that national control totals are satisfied.

For international forecasts, these steps include:

- Using BTM and BMI data, respectively, impute the growth of imports and exports by county for all commodities by port, and applying IHS WTS forecasts;

- Establish national import and export control numbers for each commodity by port using World Trade Service (WTS); and
- Ratably adjust the import and export forecasts in Step 1 with national controls for each in Step 2.

The methodology of data developed for forecast year (2018) can be summarized into four steps as illustrated in **Figure 2**.

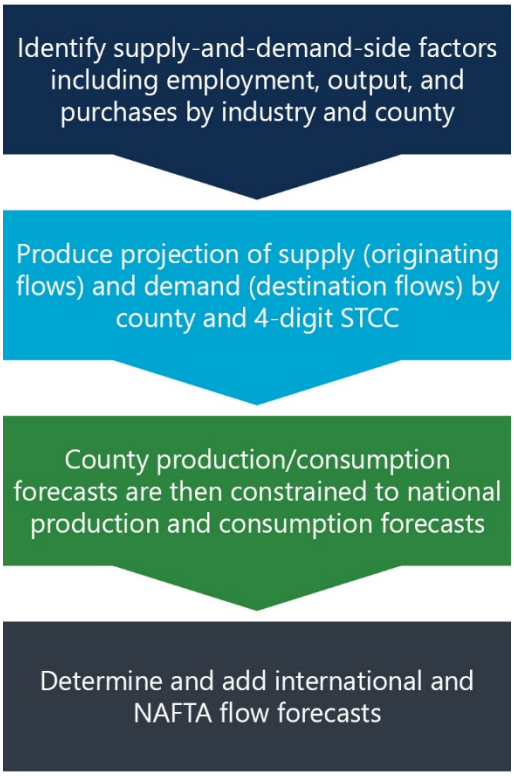


Figure 2 | Forecast Year Transearch Data Development

The following sections will provide greater detail on the domestic and international freight forecasting methodologies.

3.2.1. Domestic Freight Forecast Methodology

The first step in creating the forecast data set is to extract the county-level employment and the U.S. dollar value of output information, by 6-digit NAICS code, from IHS's BMI database. This database covers each of the forecast years from the base year of history through the final year.

The employment data from the BMI is then matched to the commodity categories. The independent forecast variables include data from IHS's BTM database. The BTM input/output (I/O) tables require a similar methodology for translation between industry and commodity.

The total domestic shipment volumes are projected out through the forecast horizon using the forecast information from the BMI, converted to annual growth rates. The result will be a table that shows the shipment tonnage for each county-to-county commodity flow (for each forecast year).

The BTM input/output data will then be integrated with the base-year data, so that for each county/commodity combination there is a complete set of purchased (consumed) goods associated with commodity volumes. The base-year purchase volumes will then be forecasted for each year of the forecast period using the forecasted growth rates in the BTM.

At this point, a national-level freight forecast, based on the most recent IHS U.S. economic data from U.S. Macro Model, will be used to establish aggregate-level benchmark freight volumes for each commodity category. The total base-year freight flows, by commodity, are then initially forecasted using the national level forecasts of output and consumption.

Once these national-level benchmark values are established, the last step is to reconcile and rebalance the original BMI-based county-to-county shipment forecast and the BTM-based county-to-county purchases forecast. This iterative process will yield the detailed county-to-county commodity flow volumes, which are adjusted to and constrained by the national benchmarks established using the IHS Macro Model. A series of tables have been created for analyzing the forecast changes in annual growth rates and are reviewed for validation purposes.

3.2.2. International Freight Forecast Methodology

The procedure for forecasting the international components of the Transearch data is similar in nature to that which is used for the domestic forecast, but some adjustments are required due to the different underlying growth drivers for international business transactions and the additional gateway or port market dimensions that must be incorporated. The process of producing the international forecasts treats the import and export portions of the international data separately, as the treatment of suppliers and consumers is asymmetrical with respect to the level of detail available on each end of the transaction.

The base-year data is maintained in separate files throughout processing for domestic, import, and export freight flows. Unlike the domestic data, the international records contain the gateway or port market identifying where flows enter or exit the United States.

Individual commodity growth rates of U.S. imports and U.S. exports taken from IHS's WTS model, will be applied to the base-year international data to obtain forecast flows by the port commodity combination. The processes and methodologies underlying WTS are described in detail later in this document. To apply the WTS to the base-year data set, the commodity classifications of the WTS have been translated to match the base year commodity categories.

Next, export volume growth is forecasted by county and commodity using BMI export data and WTS foreign import purchases data. For U.S. international import volume growth, also

presented by county and commodity category, the shipment-level import freight flow forecast is a function of the WTS import forecast and the demand for purchases forecasted in the BTM.

Consistent with the domestic forecasts, national-level constraints by commodity category have been applied in an iterative process. Import shipment-level forecasts are controlled by purchases, and export purchases are controlled by shipments. Once the national-level constraint derived using the WTS is applied, a similar process is completed for each port/commodity pair. The resulting file yields the total tonnage for each forecast year for each port/commodity combination.

After employing quality controls, the output of this process includes the international forecasts formatted with annual growth changes for each commodity, port, and commodity pair.

Chapter 4. Data Features

4.1. Difference between Freight Analysis Framework (FAF) and Transearch

The Freight Analysis Framework (FAF), developed by Federal Highway Administration (FHWA) integrates data from a variety of sources to create a comprehensive picture of freight movement among states and major metropolitan areas by all modes of transportation. It is free and provides a snapshot of commodity flows that are shipped to (imports), from (exports), and within (domestic) the United States. FAF provides freight flow information for tonnage, value, and domestic ton-miles by region of origin and destination, commodity type, and mode. The baseline year is 2012 and forecasts on freight flows until 2045 are available in 2013, 2014, 2015 and then at five-year intervals. In terms of the geographic dimension, FAF provides freight trading information between 132 domestic zones (For Florida: Jacksonville, Miami, Orlando, Tampa and remainder of Florida) and 8 foreign zones (Canada, Mexico, Rest of Americas [Virgin Islands and Puerto Rico], Europe, Africa, Asia [Southeast-west/Central/Eastern], and Oceania). In terms of commodity classification, FAF reports freight flows using the Standard Classification of Transported Goods (SCTG) classes, as reported by the Commodity Flow Survey (CFS).

In general, both Transearch and FAF report similar type of information on freight movements such as tons, ton-miles, values, modes, trade type, commodity types etc. However, the databases differ in terms of data collection and construction methodology as well as the reporting criteria. As a result, it is very difficult to make any direct comparison of the quantities of freight movements reported. As such, the difference between Transearch and FAF database are generalized in **Table 5** below.

Consequently, there are two distinct differences to be addressed in detail:

- The scope of the industries or commodities captured
- Variance between tons and ton-miles

HOW DO FAF AND TRANSEARCH COMPARE?

UPDATE SCHEDULE
Transearch is produced each year by IHS, whereas **Freight Analysis Framework (FAF)** is developed every five years by Federal Highway Administration (FHWA).

DATA SOURCES
Transearch is developed using the latest production, consumption and flow data information. On the other hand, **FAF** is produced based on the commodity flow survey.

COMMODITY TYPES
The freight flows in **Transearch** are reported by commodity type based on the Standard Transportation Commodity Code (STCC) in more than 400 categories. **FAF** provides freight flows for 43 commodity types classified by Standard Classification of Transported Goods (SCTG 2-digit) code.

GEOGRAPHIC RESOLUTION
In the State of Florida, **Transearch** is divided at the county level (67 zones) while **FAF** data only contains (5) zones.

SAMPLE SIZE
Transearch is built using an annual sample of approximately 75 million individual truck shipments reported by nationwide and regional motor carriers each year. But, the core of **FAF**, the Commodity Flow Survey, is built from a sample of 6 million shipments spread across all of the transport modes.

SUPPLEMENT DATA
Transearch utilizes a data collection program with most of the Class I rail roads and supplements this with the STB Carload Waybill Sample to fill in any gaps. **FAF** doesn't have supplements to fill this data gap.

INTERMODAL ACTIVITY
Transearch distinguishes each modal leg of rail highway intermodal activity, and the truck drayage of air freight. **FAF** data does not differentiate intermodal activities.

ANALYSIS OPTIONS
FAF does not provide availability of units or rail assignments which are included as **Transearch** analysis options. Similarly, **Transearch** categorizes empty truck trip estimates not available in **FAF** data.

MODE CATEGORIZATION
Transearch distinguishes truckload and less-than-truckload for-hire freight movements, which is very significant due to the different operational characteristics of each of these industry sectors. **FAF** only provides the for-hire categorization.

COST OF ACQUISITION
Transearch database is not a free database. **FAF** data is freely available.

SHIPMENT DISTRIBUTION
Transearch distinguishes traffic originating at primary manufacturing points from traffic moving out of warehouses and distribution centers. **FAF** does not explicitly identify shipments from warehouses and distribution centers.

USAGE RESTRICTIONS
FAF data is unrestricted. **Transearch** users must adhere to restrictions of use defined in licensing agreement.

KEY SIMILARITIES

- They include most of the same commodities. They use many of the same input data sources.
- They present historical not "real time" data.
- Projected national and global economic trends are used.
- Both data sets are large but manageable.
- Both contain thorough documentation.

COMMON LIMITATIONS

- They rely on data samples, which may lack. information for certain industries, geographic areas, or commodities.
- They use modeling processes in which uncertainty is inherent.
- Assumptions and judgement are intrinsic to the estimation process, introducing additional uncertainty.

** Comparison is for 2018 Transearch data and FAF 4 (2012)*

Table 5 | Comparison of Transearch and FAF database

4.1.1. Differences in Scope

FAF provides more complete coverage of Logs, Crude Petroleum, Live Fish, and Waste. There is also a significant difference in Warehouse/Distribution Center truck traffic than Transearch. Transearch does not include coverage of Logs, Crude Petroleum, Live Fish, or Waste, due to the lack of a uniform, geographically detailed, nationwide set of source information. FAF makes estimations of these commodity volumes, generally by taking a national production value, and allocating to specific market areas based on employment levels.

The foundation for FAF is the 2012 Commodity Flow Survey. Due to this methodology, there is a notable difference in how Transearch and FAF address shipments that originate in warehouses and distribution centers. Since the CFS is based on a survey of shipping establishments, an item that moves through multiple facilities as it passes through the supply chain may be captured as individual shipments from each of the intermediate points. To illustrate the difference, consider that X units of a commodity is shipped from location A (production zone) to location E (consumption zone) through three intermediate locations B, C, and D. The FAF flows would represent these flows as X units from A to B, X units form B to C, X units form C to D, and X units form D to E. On the other hand, in Transearch, these flows are only represented as X units from A to E. Thus, FAF would report a total tonnage of 4X units transferred while Transearch would report only a transfer of X units. A more general summary of data sampling procedures in FAF and Transearch is presented in **Figure 3.**

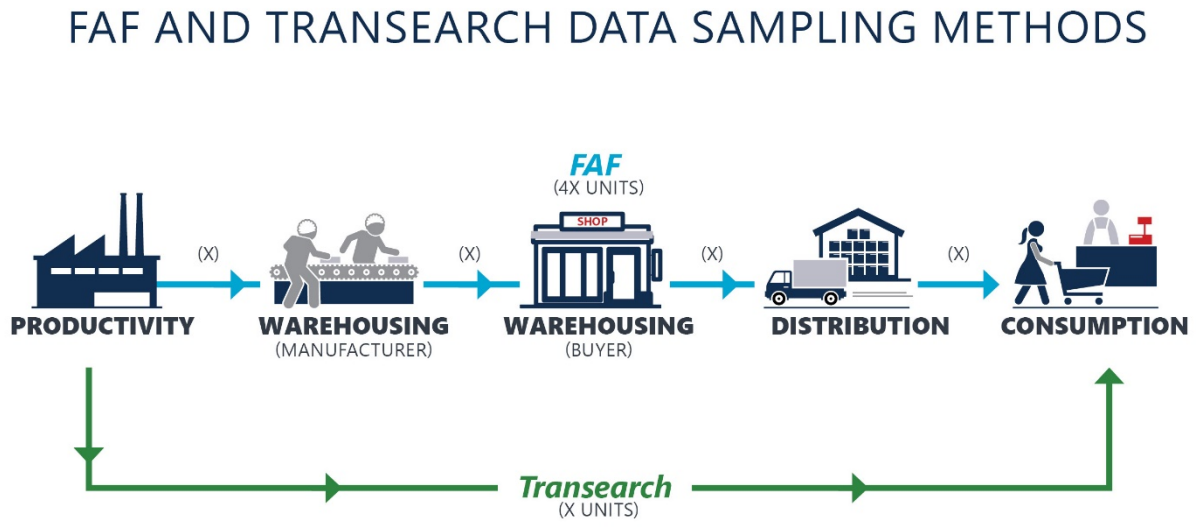


Figure 3 | FAF and Transearch Data Sampling Methods.

From the figure, it is evident that FAF flows are potentially sampled at more intermediate points such as warehousing locations while Transearch flows are considered only at origin and destination. In a nutshell, the FAF identifies multiple flows of the same shipment which results in over-estimating the total tons moved overall.

4.1.2. Tons vs Ton-Miles

As discussed in the previous section, in general, due to differences in how Transearch and FAF capture intermediate shipping activity there may be differences in reported tonnages, but similar reported ton-miles. This difference is further compounded by FAF's efforts to incorporate additional shipping activity from non-manufacturing industries. Since the Transearch follows only the production consumption data, a commodity that moves through multiple facilities as it passes through the supply chain may not be captured as individual shipments from each of the intermediate points. That said, Transearch might not be able to fully capture the freight flow information from the non-manufacturing industry. The construction, retail, services and household & business sectors provide the clearest examples such as:

- Gravel and Crushed Stone;
- Nonmetallic Mineral Products;
- Sand;
- Machinery;
- Articles of Base Metal;
- Fertilizers;
- Natural Gas and Petroleum;
- Agricultural Products;
- Wood Products;
- Waste and Scrap;
- Prepared Foodstuffs;
- Logs;
- Electronic Equipment; and
- Furniture.

For many of these items, Transearch and FAF report reasonably similar ton-miles, despite a much greater difference in tonnage. For example:

- Ton-miles for Nonmetallic mineral products differ by only 4%, although Transearch only captures one-third of the tonnage
- Ton-miles for Agriculture and Food products vary by less than 10%, while Transearch only shows half the tonnage

4.2. Limitation of the Transearch Data

While the Transearch database provides valuable information on the commodity flow movements of a variety OD modes, there are some limitations that should be considered during analyses.

- Transearch does not include coverage of Logs, Crude Petroleum, Live Fish, or Waste, due to the lack of a uniform, geographically detailed, nationwide dataset that reports this information.

- It is important to note here that the OD flows reported in the Transearch data are flows of goods from their production origins to their consumption destinations. Therefore, the commodity flows in the Transearch data do not include intermediate stops (for commodity transfer) between the production origin and consumption destination.
- Transearch database use modeling processes in which uncertainty is inherent and the database cannot be verified.
- Because of the motor carrier data exchange program, some regional or community bias in estimation might exist due to a limited number of carriers providing truck data.
- Transearch provides detailed freight flow information only for the four major modes (i.e., truck, rail, air, and water) of transportation. Consequently, the database cannot be used to study shipment statistics on other modes like pipelines.
- Transearch rely on data samples, which may lack information for certain industries, geographic areas, or commodities (i.e., raw products from fisheries, household goods and others).
- Moreover, Transearch does not provide information on the following movements:

    - ✓ Drayage for inland waterways, pipelines, international air, and rail carload transfers
    - ✓ Non-manufactured goods – primary (raw) products from fisheries and logging camps, and waste.
    - ✓ Small package and mail shipments moved entirely over-the-road.
    - ✓ Military and other government trucks.
    - ✓ Household goods and local service trucks (such as utility repair vehicles).
    - ✓ Domestic pipeline flows (although some cross-border pipeline flows are included).

Nevertheless, the Transearch commodity flow data are developed at the county level as described above. Additionally, Transearch is the most comprehensive U.S. and cross-border freight database available. Despite these limitations, Transearch is utilized by many sectors in the transportation industry as a tool to support planning and forecasting for freight movements.

Chapter 5. Data Analysis

This chapter uses Transearch data to analyze the commodity flows in Florida. It is important to define the following terminologies here:

- **Exports:** Commodity flows moving out of a Florida County.
- **Imports:** Commodity flow moving into a Florida county.
- **Intra-State:** Commodity flows moving in/out of a Florida County to another Florida county.
- **Intra-County:** Commodity flow moving within the same Florida County.
- **Inter-State:** Commodity flows moving in/out of a Florida County to a region outside Florida.
- **Distance**: It is the network distance between two regions.
- **Ton-Miles:** Ton-Miles is calculated as a product of tonnage and the distance between two regions.
- **Truck-Miles:** Truck-Miles is calculated as a product of the number of truck trips and the distance between two regions.

Table 6 below, illustrates the statewide tonnage and value statistics which are categorized as inter-state imports, inter-state exports, intra-state movements and intra-county movements. As expected, in 2018, the majority of commodity movements are intra-state (250 million tons) and intra-county movements (109 million tons). The inter-state imports (154 million tons) highly out number inter-state exports (74 million tons). The 2018 and 2045 statistics clearly indicate that Florida is and will predominantly remain a consumer state. It is important to note that inter-state imports are expected to grow by 20% in tonnage and 47% in value from 2018 to 2045. Similarly, the inter-state exports are expected to grow by 42% in tonnage and 66% in value.

TYPES OF MOVEMENTS	INTER-STATE IMPORTS		INTER-STATE EXPORTS		INTRA-STATE		INTRA-COUNTY	
	2018	2045	2018	2045	2018	2045	2018	2045
TONNAGE	154M	185M	74M	105M	250M	344M	109M	151M
VALUE	$306B	$450B	$137B	$227B	$171B	$257B	$106B	$165B

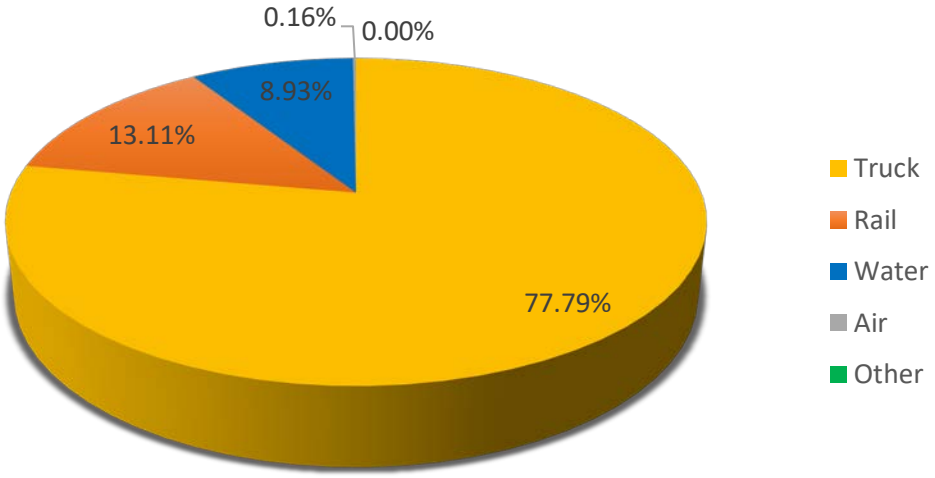
Table 6 | Statewide Commodity Flow Statistics

Subsequent sections provide a comprehensive summary of the current (2018) and forecasted (2045) commodity flows for the state of Florida. Additionally, the modal splits and major commodity types for different commodity flow movements are identified. Transearch data is further analyzed to understand the degree of truck empty haul movements in Florida and to

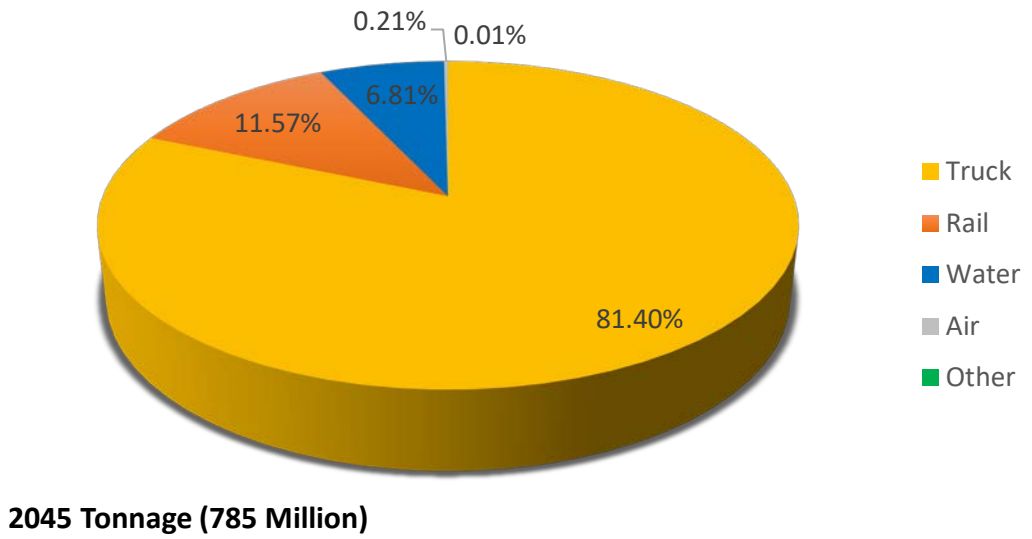
understand the commodity flow patterns for five selected commodities – Citrus Fruits, Waste or Scrap Materials, Lumber or Wood Products, Coal and Drugs. Finally, Transearch data is analyzed to provide commodity flow highlights for every county. These highlights were used in the development of 67 county freight brochures and FDOT district brochures.

5.1. Modal-Share Analysis

Figure 4 provide the modal splits (in tonnage) for 2018 and 2045. In 2018, trucks hauled 77.8% of total commodity tonnage originating or terminating in Florida. Rail (13.1%), Water (8.9%) and Air (0.16%) accounted for the remaining tonnage movement. In 2045, trucks will haul 81.4% of total commodity tonnage originating or terminating in Florida. Rail (11.6%), Water (6.8%) and Air (0.21%) will account for the remaining tonnage movement. These statistics indicate that modal splits are not expected to vary significantly in 2045. Other includes Foreign Trade Zones and other modes. **Appendix C** provides modal splits for every county in 2018.



2018 Tonnage (589 Million)



2045 Tonnage (785 Million)

Figure 4 | Statewide Modal Splits in Tonnage – 2018 (Top) and 2045 (Bottom)

Figure 5 provides the modal splits (in value) for 2018 and 2045. In 2018, trucks hauled 62.66% of total commodity value originating or terminating in Florida. Rail (15.29%), Water (4.64%) and Air (17.39%) accounted for the remaining movement. In 2045, trucks are forecasted to haul 63.8% of total commodity value originating or terminating in Florida. Rail (12.31%), Water (3.19%) and Air (20.68%) will account for the remaining movement.

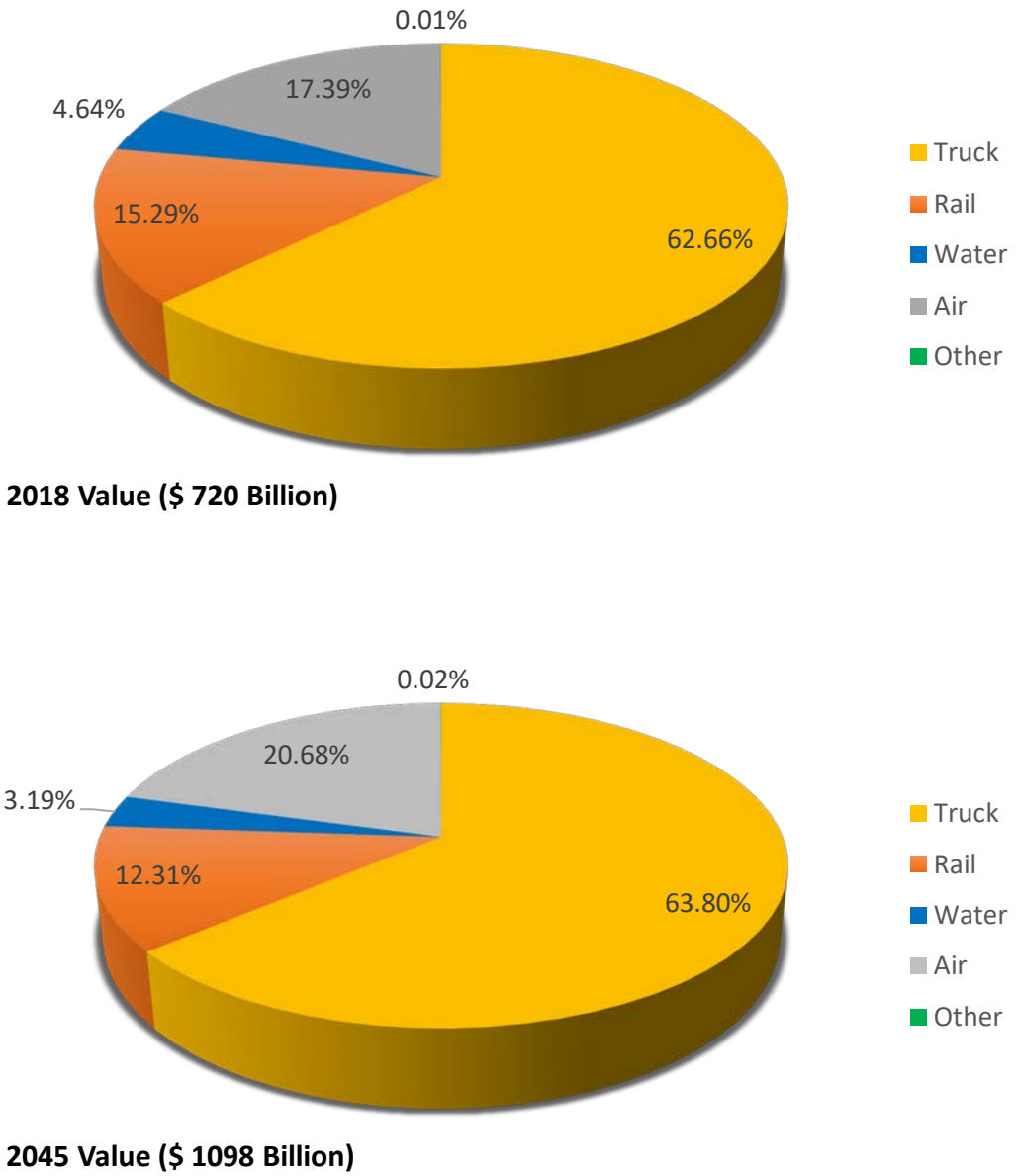


Figure 5 | Statewide Modal Splits in Value – 2018 (Top) and 2045 (Bottom)

Figure 6 illustrates the percent change in statewide tonnage and value for different modes. Truck tonnage is forecasted to grow from 457 million tons in 2018 to 639 tons in 2045. Similarly, rail tonnage (17.9%), water (1.96%), air (72.3%) and other modes (121.7%) are all expected to grow between 2018 and 2045. Similarly, truck value is forecasted to grow from $451.4 billion

tons in 2018 to $700.3 billion in 2045. Similarly, rail value (22.7%), water (4.6%), air (81.29%) and other modes (92.65%) are all expected to grow between 2018 and 2045.

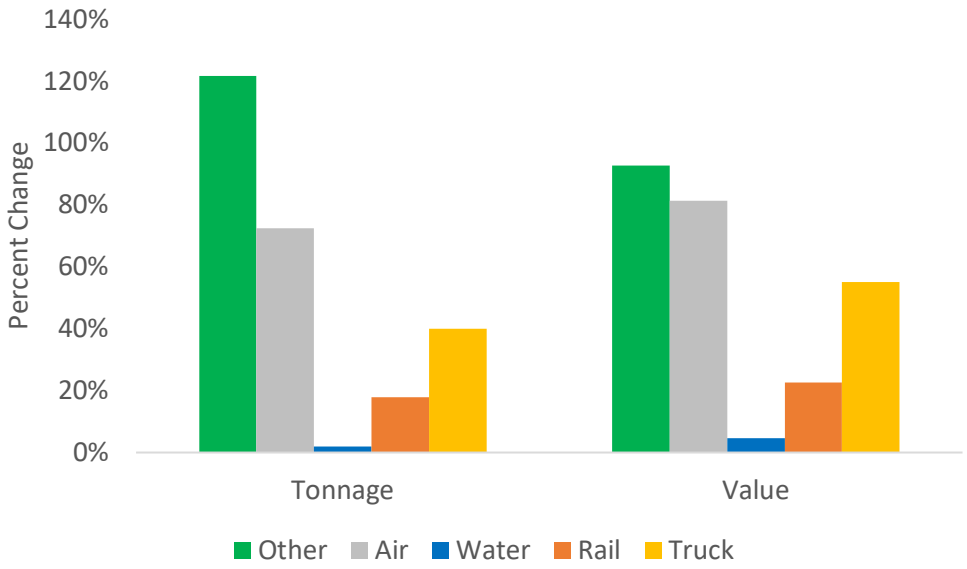


Figure 6 | Percent Change in Statewide Tonnage and Value (2018-2045)

Table 7 illustrates statewide modal splits (2018 tonnage) for different commodity types (STCC2). The majority of commodities are hauled predominantly by trucks. The following commodities, coal (rail), metallic ores (rail), miscellaneous freight (rail), miscellaneous mixed shipments (rail), small package freight shipments (air) and shipping containers (rail), are the exceptions.

Commodity Type (STCC 2)	Truck	Air	Rail	Water	Other
Apparel or Related Products	**55.58%**	0.09%	43.71%	0.63%	0.00%
Chemicals or Allied Products	**42.99%**	0.21%	43.16%	13.60%	0.03%
Clay, Concrete, Glass or Stone	**96.20%**	0.01%	3.52%	0.28%	0.00%
Coal	0.02%	0.00%	**67.33%**	32.65%	0.00%
Electrical Equipment	**83.57%**	6.65%	9.24%	0.53%	0.01%
Fabricated Metal Products	**97.51%**	0.58%	1.58%	0.34%	0.00%
Farm Products	**95.13%**	0.09%	4.10%	0.68%	0.00%
Food or Kindred Products	**83.92%**	0.07%	13.77%	2.20%	0.03%
Forest Products	**99.64%**	0.00%	0.35%	0.01%	0.00%

Fresh Fish or Marine Products	**96.54%**	1.87%	0.00%	1.59%	0.00%
Furniture or Fixtures	**81.94%**	0.38%	15.85%	1.83%	0.00%
Instruments, Photo and Optical Equipment	**84.32%**	13.77%	1.62%	0.29%	0.00%
Leather or Leather Products	**98.74%**	0.31%	0.71%	0.21%	0.03%
Lumber or Wood Products	**90.45%**	0.00%	9.07%	0.48%	0.00%
Machinery	**90.04%**	2.75%	6.47%	0.73%	0.00%
Mail or Contract Traffic	0.00%	**95.69%**	4.31%	0.00%	0.00%
Metallic Ores	39.29%	0.09%	**60.63%**	0.00%	0.00%
Misc. Freight Shipments	0.98%	1.29%	**97.58%**	0.12%	0.04%
Misc. Manufacturing Products	**90.57%**	6.32%	2.69%	0.40%	0.02%
Misc. Mixed Shipments	0.82%	0.19%	**97.18%**	1.80%	0.01%
Nonmetallic Minerals	**78.35%**	0.00%	17.85%	3.80%	0.00%
Ordnance or Accessories	**92.46%**	0.06%	7.33%	0.14%	0.00%
Petroleum or Coal Products	**59.29%**	0.00%	0.69%	40.02%	0.00%
Primary Metal Products	**74.36%**	0.30%	23.34%	2.00%	0.00%
Printed Matter	**96.70%**	0.59%	2.67%	0.03%	0.00%
Pulp, Paper or Allied Products	**58.72%**	0.03%	40.32%	0.92%	0.00%
Rubber or Misc. Plastics	**93.28%**	1.02%	5.38%	0.32%	0.00%
Shipping Containers	0.00%	0.00%	**100.00%**	0.00%	0.00%
Small Packaged Freight Shipments	0.00%	**92.82%**	7.18%	0.00%	0.00%
Textile Mill Products	**90.79%**	4.22%	2.78%	2.21%	0.00%
Tobacco Products	**99.86%**	0.09%	0.00%	0.02%	0.02%
Transportation Equipment	**65.81%**	1.00%	28.32%	4.85%	0.03%
Warehouse, Distribution Center & Drayage Movements	**100.00%**	0.00%	0.00%	0.00%	0.00%
Waste or Scrap Materials	**94.61%**	0.00%	4.59%	0.80%	0.00%

Table 7 | Statewide Mode Splits for Different Commodity Types (2018 tonnage

5.2. Export, Import and Intra-County Movements

Table 8 illustrates the top 10 statewide inter-state import and export commodities by tonnage and value. **Appendix D** provides the top import and exports for every county by tonnage and value.

Florida Rank	Inter-State Imports (Tons)	Inter-State Imports (Value)	Inter-State Exports (Tons)	Inter-State Exports (Value)
1	Petroleum or Coal Products (26.85%)	Transportation Equipment (18.31%)	Clay, Concrete, Glass, Stone (18.12%)	Transportation Equipment (18.73%)
2	Nonmetallic Minerals (13.42%)	Food or Kindred Products (9.21%)	Waste or Scrap Materials (17.20%)	Misc. Manufacturing Products (11.08%)
3	Food or Kindred Products (10.98%)	Petroleum or Coal Products (8.93%)	Chemicals or Allied Products (10.57%)	Electrical Equipment (10.01%)
4	Coal (6.58%)	Electrical Equipment (8.86%)	Petroleum or Coal Products (9.63%)	Chemicals or Allied Products (6.74%)
5	Chemicals or Allied Products (6.36%)	Chemicals or Allied Products (7.07%)	Food or Kindred Products (8.95%)	Instruments, Photo and Optical Equipment (6.01%)
6	Warehouse, Distribution Center and Drayage Movements (6.17%)	Misc. Mixed Shipments (6.74%)	Pulp, Paper Or Allied Products (6.52%)	Machinery (5.43%)
7	Lumber or Wood Products (5.13%)	Misc. Manufacturing Products (6.50%)	Farm Products (6.39%)	Misc. Mixed Shipments (5.42%)
8	Clay, Concrete, Glass, Stone (3.73%)	Machinery (5.72%)	Lumber or Wood Products (5.14%)	Food or Kindred Products (4.12%)
9	Farm Products (3.70%)	Warehouse, Distribution Center and Drayage Movements (4.17%)	Nonmetallic Minerals (4.92%)	Misc. Freight Shipments (3.76%)
10	Transportation Equipment (2.93%)	Instruments, Photo and Optical Equipment (3.50%)	Warehouse, Distribution Center and Drayage Movements (3.04%)	Apparel or Related Products (3.48%)

-	Other Commodities (14.14%)	Other Commodities (20.99%)	Other Commodities (9.51%)	Other Commodities (25.22%)

Table 8 | Top 10 Inter-State Import and Export Commodities by Tons and Value (2018)

Table 9 illustrates the top 10 intra-state and intra-county commodities by tonnage and value.

Florida Rank	Intra-State (Tons)	Intra-State (Value)	Intra-County (Tons)	Intra-County (Value)
1	Nonmetallic Minerals (39.89%)	Warehouse, Distribution Center and Drayage Movements (38.09%)	Nonmetallic Minerals (31.65%)	Warehouse, Distribution Center and Drayage Movements (50.48%)
2	Clay, Concrete, Glass, Stone (14.37%)	Transportation Equipment (10.18%)	Clay, Concrete, Glass, Stone (17.32%)	Petroleum or Coal Products (8.32%)
3	Warehouse, Distribution Center and Drayage Movements (13.13%)	Petroleum or Coal Products (8.59%)	Petroleum or Coal Products (14.06%)	Transportation Equipment (7.22%)
4	Petroleum or Coal Products (11.62%)	Misc. Mixed Shipments (8.43%)	Farm Products (11.88%)	Misc. Mixed Shipments (5.85%)
5	Waste or Scrap Materials (5.58%)	Food or Kindred Products (5.66%)	Warehouse, Distribution Center and Drayage Movements (11.60%)	Food or Kindred Products (3.90%)
6	Farm Products (3.69%)	Chemicals or Allied Products (4.32%)	Waste or Scrap Materials (3.47%)	Chemicals or Allied Products (3.36%)
7	Food or Kindred Products (3.50%)	Clay, Concrete, Glass, Stone (2.95%)	Food or Kindred Products (3.04%)	Clay, Concrete, Glass, Stone (2.45%)
8	Chemicals or Allied Products (2.32%)	Farm Products (2.64%)	Chemicals or Allied Products (2.33%)	Electrical Equipment (2.44%)

9	Lumber or Wood Products (2.21%)	Electrical Equipment (2.05%)	Misc. Mixed Shipments (1.11%)	Machinery (2.30%)
10	Misc. Mixed Shipments (1.13%)	Waste or Scrap Materials (1.97%)	Lumber or Wood Products (0.68%)	Tobacco Products (1.54%)
-	Other Commodities (2.56%)	Other Commodities (15.12%)	Other Commodities (2.86%)	Other Commodities (12.14%)

Table 9 | Top 10 Intra-State and Intra-County Commodities by Tons and Value (2018)

Table 10 illustrates the percent change in commodity movements by tons and value from 2018 to 2045.

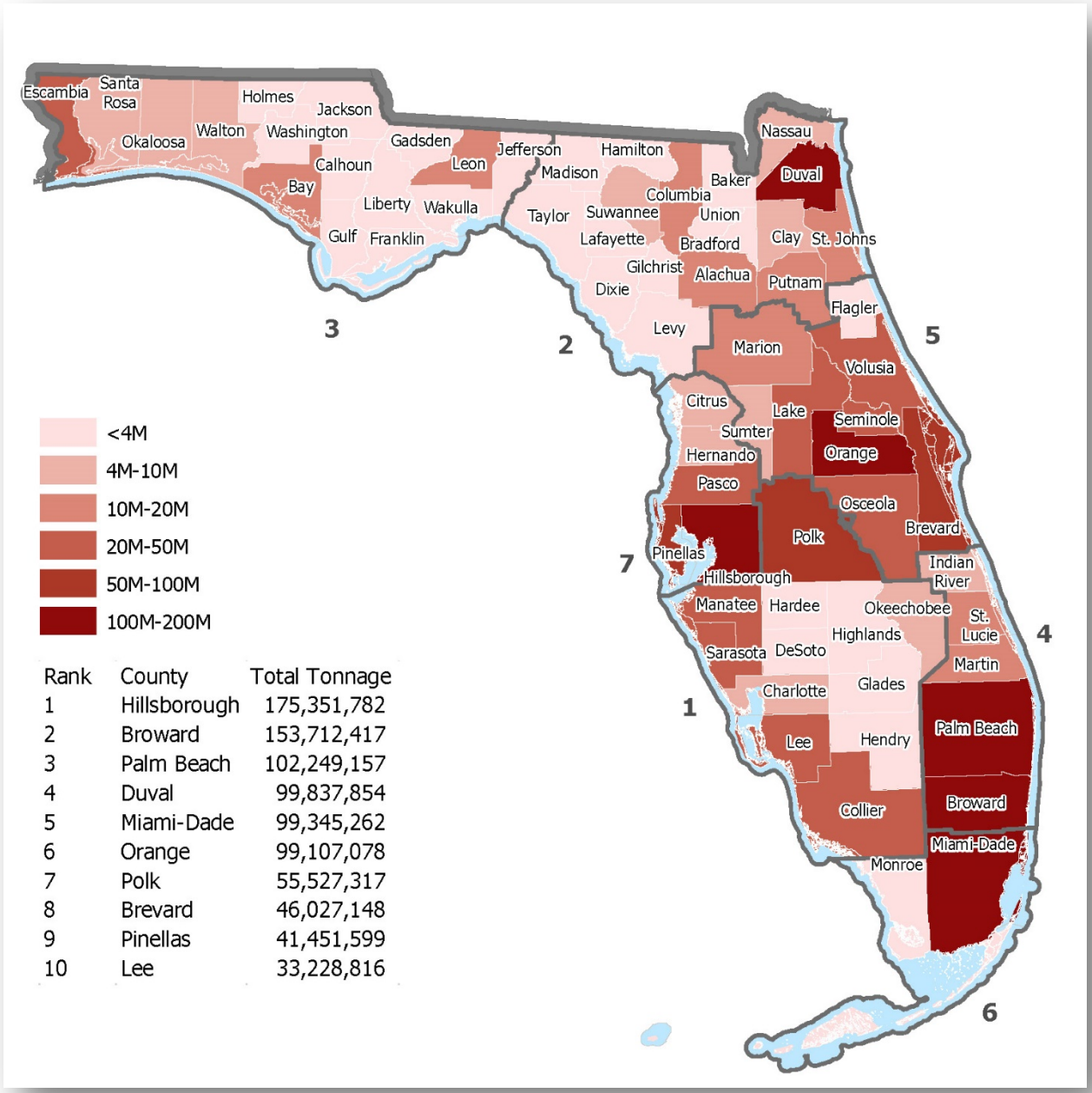
Commodity Type (STCC 2)	Inter-State Imports		Inter-State Exports		Intra-State		Intra-County	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
Apparel or Related Products	29.18%	23.19%	39.67%	35.60%	23.82%	18.29%	-20.51%	-25.53%
Chemicals or Allied Products	46.24%	106.43%	46.72%	91.82%	70.80%	109.52%	48.59%	114.27%
Clay, Concrete, Glass or Stone	41.64%	55.91%	30.53%	33.09%	49.45%	51.81%	51.36%	50.97%
Coal	-68.36%	-68.01%	682.22%	656.41%	98.76%	108.43%	452.54%	451.85%
Electrical Equipment	64.86%	90.97%	83.31%	92.46%	78.45%	86.43%	76.12%	107.68%
Fabricated Metal Products	45.78%	49.51%	38.43%	46.05%	34.70%	34.30%	21.70%	23.37%
Farm Products	24.71%	48.89%	64.61%	67.59%	19.46%	40.68%	-29.60%	16.20%
Food or Kindred Products	58.50%	61.17%	63.12%	70.45%	65.30%	67.73%	63.21%	64.75%
Forest Products	123.94%	121.41%	19.88%	21.05%	8.63%	14.33%	80.42%	183.70%

Fresh Fish or Marine Products	-12.07%	-26.96%	92.13%	69.41%	67.22%	42.81%	21.24%	3.91%
Furniture or Fixtures	43.63%	39.48%	71.40%	73.17%	59.36%	62.21%	36.07%	40.22%
Instruments, Photo and Optical Equipment	131.11%	61.40%	126.76%	50.98%	155.77%	141.13%	94.88%	105.58%
Leather or Leather Products	-29.86%	-38.49%	54.26%	67.21%	-23.46%	-13.68%	-28.86%	-24.45%
Lumber or Wood Products	-1.09%	5.39%	7.10%	5.24%	18.67%	19.42%	27.36%	28.96%
Machinery	90.76%	86.64%	68.19%	72.31%	63.78%	77.11%	64.78%	90.50%
Mail or Contract Traffic	128.08%	128.08%	104.11%	104.11%	65.92%	65.91%	-	-
Metallic Ores	-34.90%	34.52%	-18.24%	-18.41%	135.27%	-13.31%	-7.73%	-15.10%
Misc. Freight Shipments	-48.62%	-81.50%	-15.15%	-74.60%	-15.16%	74.16%	-	-
Misc. Manufacturing Products	70.38%	81.51%	63.51%	102.74%	60.77%	93.51%	44.76%	40.45%
Misc. Mixed Shipments	44.19%	43.72%	60.19%	62.61%	39.07%	39.08%	38.07%	38.07%
Nonmetallic Minerals	62.19%	66.65%	19.63%	34.14%	26.53%	23.23%	34.11%	13.08%
Ordnance or Accessories	26.53%	27.20%	7.69%	22.80%	-5.15%	4.15%	11.30%	21.51%
Petroleum or Coal Products	-19.47%	-19.30%	15.16%	66.06%	32.94%	51.94%	60.08%	81.18%
Primary Metal Products	36.40%	33.55%	46.98%	44.93%	48.65%	49.99%	40.84%	69.09%
Printed Matter	141.29%	133.88%	32.79%	56.86%	117.99%	142.10%	86.65%	104.65%
Pulp, Paper Or Allied Products	12.59%	16.98%	-2.75%	-12.30%	-7.19%	-8.32%	-25.47%	-18.78%
Rubber or Misc. Plastics	53.44%	55.73%	31.88%	52.19%	23.35%	27.24%	27.19%	29.72%
Shipping Containers	43.63%	-	45.40%	-	45.40%	-	45.40%	-
Small Packaged Freight Shipments	48.27%	-	44.72%	-	29.14%	-	-	-

Textile Mill Products	24.49%	16.51%	44.89%	42.33%	82.79%	60.84%	72.16%	54.78%
Tobacco Products	-74.69%	-74.36%	56.82%	35.95%	62.12%	41.15%	-53.97%	-60.73%
Transportation Equipment	14.39%	27.91%	66.42%	76.91%	16.96%	20.28%	28.93%	25.50%
Warehouse, Distribution Center & Drayage Movements	48.80%	41.73%	73.58%	116.84%	46.26%	46.14%	56.91%	57.99%
Waste or Scrap Materials	15.87%	18.72%	67.34%	67.75%	68.70%	72.49%	57.16%	53.81%

Table 10 | Statewide Percent Change in Commodity Movements by Tons and Value (2018 and 2045)

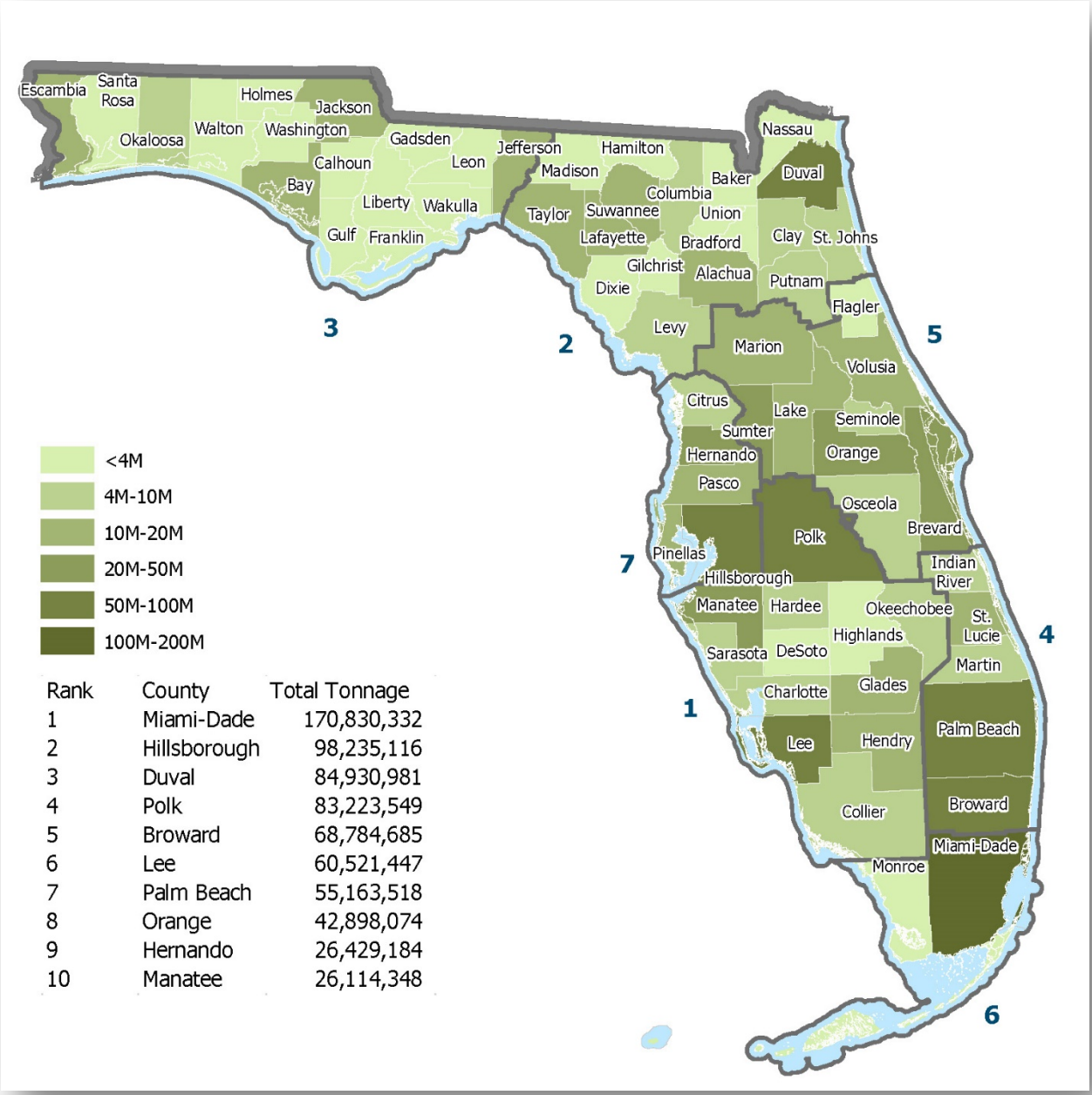
Figure 7 illustrates the total tonnage imports for different counties. Hillsborough, Broward, Palm Beach, Duval, Miami-Dade, Orange, Polk, Brevard, Pinellas and Lee are the top 10 counties.



Rank	County	Total Tonnage
1	Hillsborough	175,351,782
2	Broward	153,712,417
3	Palm Beach	102,249,157
4	Duval	99,837,854
5	Miami-Dade	99,345,262
6	Orange	99,107,078
7	Polk	55,527,317
8	Brevard	46,027,148
9	Pinellas	41,451,599
10	Lee	33,228,816

Figure 7 | County Imports – Domestic and Intra-State (2018 Tonnage)

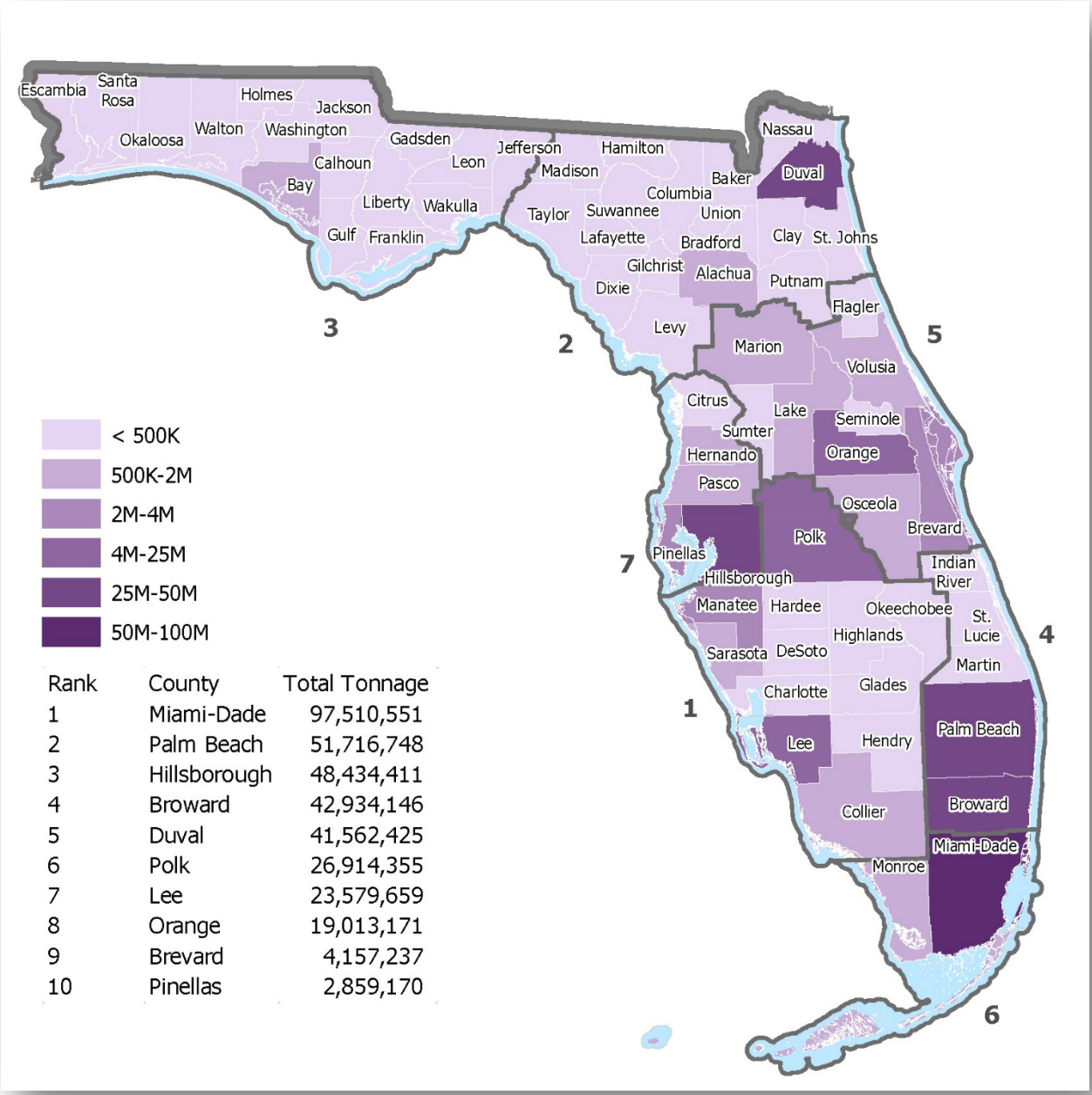
Figure 8 illustrates the total tonnage exports for different counties. Miami-Dade, Hillsborough, Duval, Polk, Broward, Lee, Palm Beach, Orange, Hernando and Manatee are the top 10 counties.



Rank	County	Total Tonnage
1	Miami-Dade	170,830,332
2	Hillsborough	98,235,116
3	Duval	84,930,981
4	Polk	83,223,549
5	Broward	68,784,685
6	Lee	60,521,447
7	Palm Beach	55,163,518
8	Orange	42,898,074
9	Hernando	26,429,184
10	Manatee	26,114,348

Figure 8 | County Exports – Domestic and Intra-State (2018 Tonnage)

Figure 9 illustrates the total intra-county tonnage movements for different counties. Miami-Dade, Palm Beach, Hillsborough, Broward, Duval, Polk, Lee, Orange, Brevard and Pinellas are the top 10 counties.



Rank	County	Total Tonnage
1	Miami-Dade	97,510,551
2	Palm Beach	51,716,748
3	Hillsborough	48,434,411
4	Broward	42,934,146
5	Duval	41,562,425
6	Polk	26,914,355
7	Lee	23,579,659
8	Orange	19,013,171
9	Brevard	4,157,237
10	Pinellas	2,859,170

Figure 9 | Intra-County Movements (2018 Tonnage)

5.3. Truck Empty Haul Analysis

High truck empty backhaul has been widely acknowledged as a major issue in Florida. It has also been widely believed that there is a negative trade imbalance with heavier truck head haul into Florida when compared to truck backhaul out of Florida. **Figure 10** illustrate the empty back haul trip in a freight supply chain.

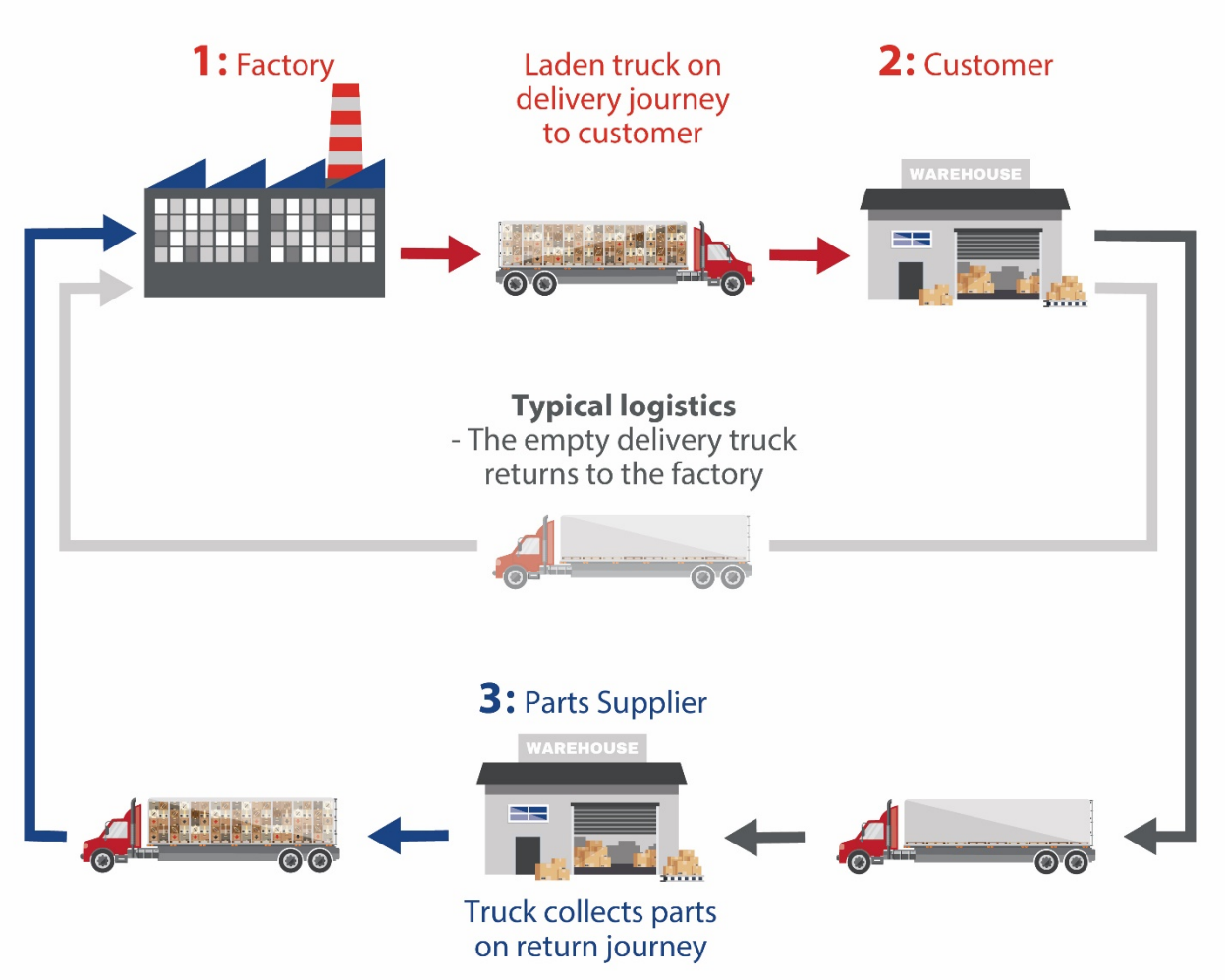


Figure 10 | Empty Backhaul Trip in a Freight Supply Chain

One of the commodity codes included in the Transearch database provides empty trips (STCC code = 42 21) information. **Figure 11** illustrates the percentage of empty truck trips moving through Florida.

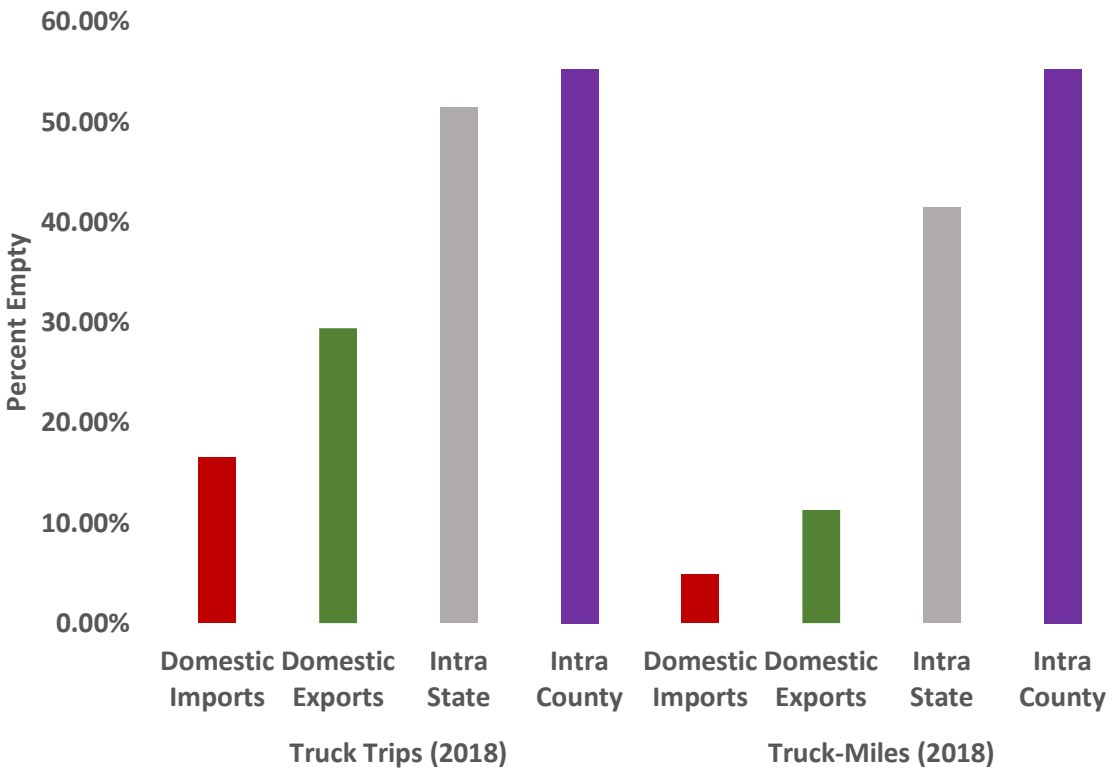


Figure 11 | Statewide Empty Truck Trips and Empty Truck-Miles (2018)

The outcomes indicate that the truck trips moving out-of-state include 29.4% empty trucks. On the other hand, 16.49% of truck trips moving in-state are empty truck trips. Similarly, the 11.26% of truck miles traveling out-of-state are empty miles and 4.88% of truck miles traveling in-state are empty miles. As expected approximately ½ of the intra-state trips and 40% of the intra-state truck-miles are empty. The percent of intra-county empty movements is the highest (55.3%) as it includes short-haul and day trip movements. **Figure 12** and **Figure 13** demonstrate the percentage of truck trips and truck miles moving out of different counties being empty. It is important to note that the percentage of empty trucks moving out-of-state are considerably higher in counties from FDOT Districts 2, 3 and 5. **Figure 14** and **Figure 15** demonstrate the percentage of truck trips and truck miles terminating in different counties being empty.

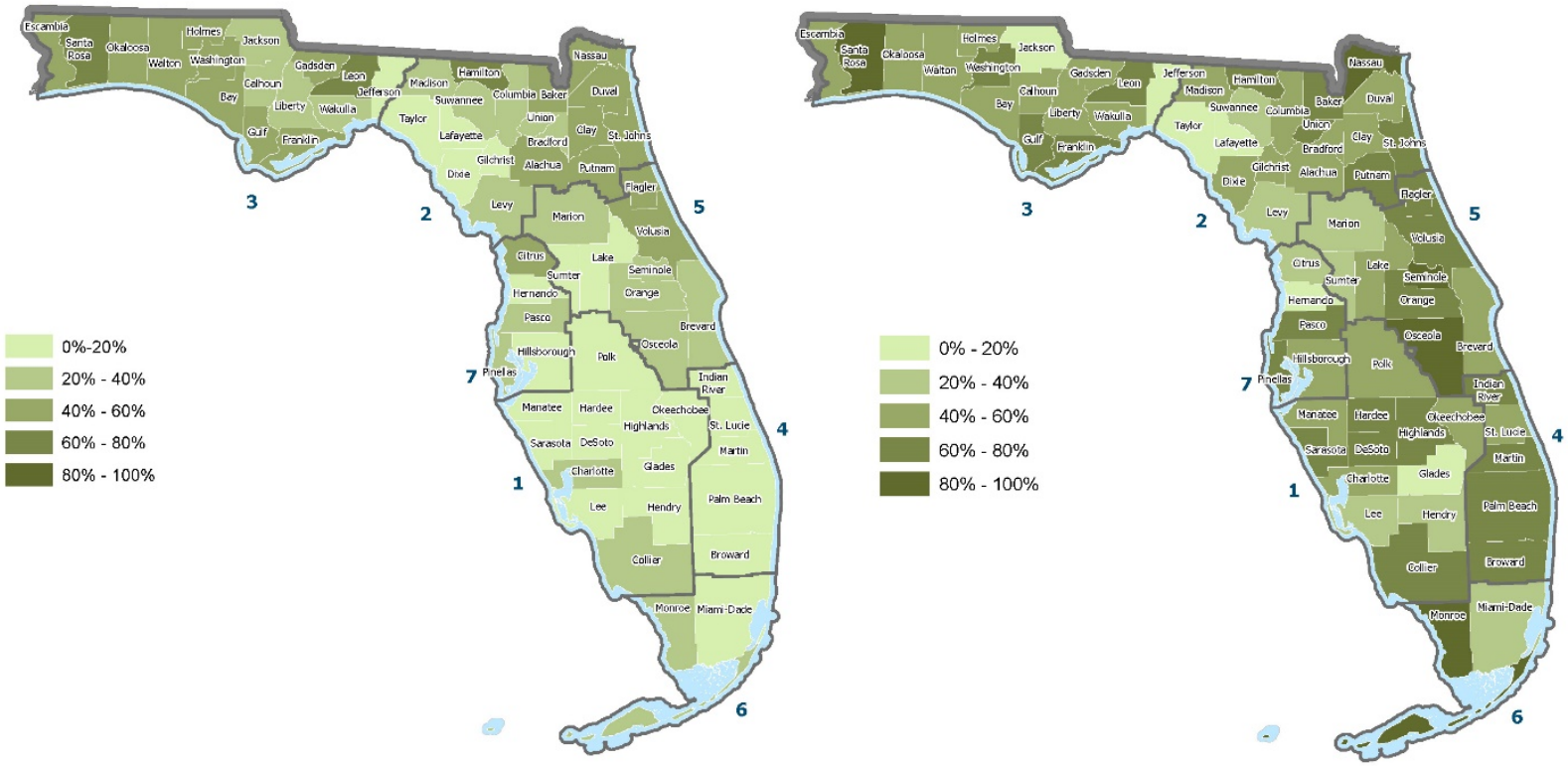


Figure 12 | Percent of Originating Truck Trips Being Empty – Inter-state (Left) and Intra-state (Right)

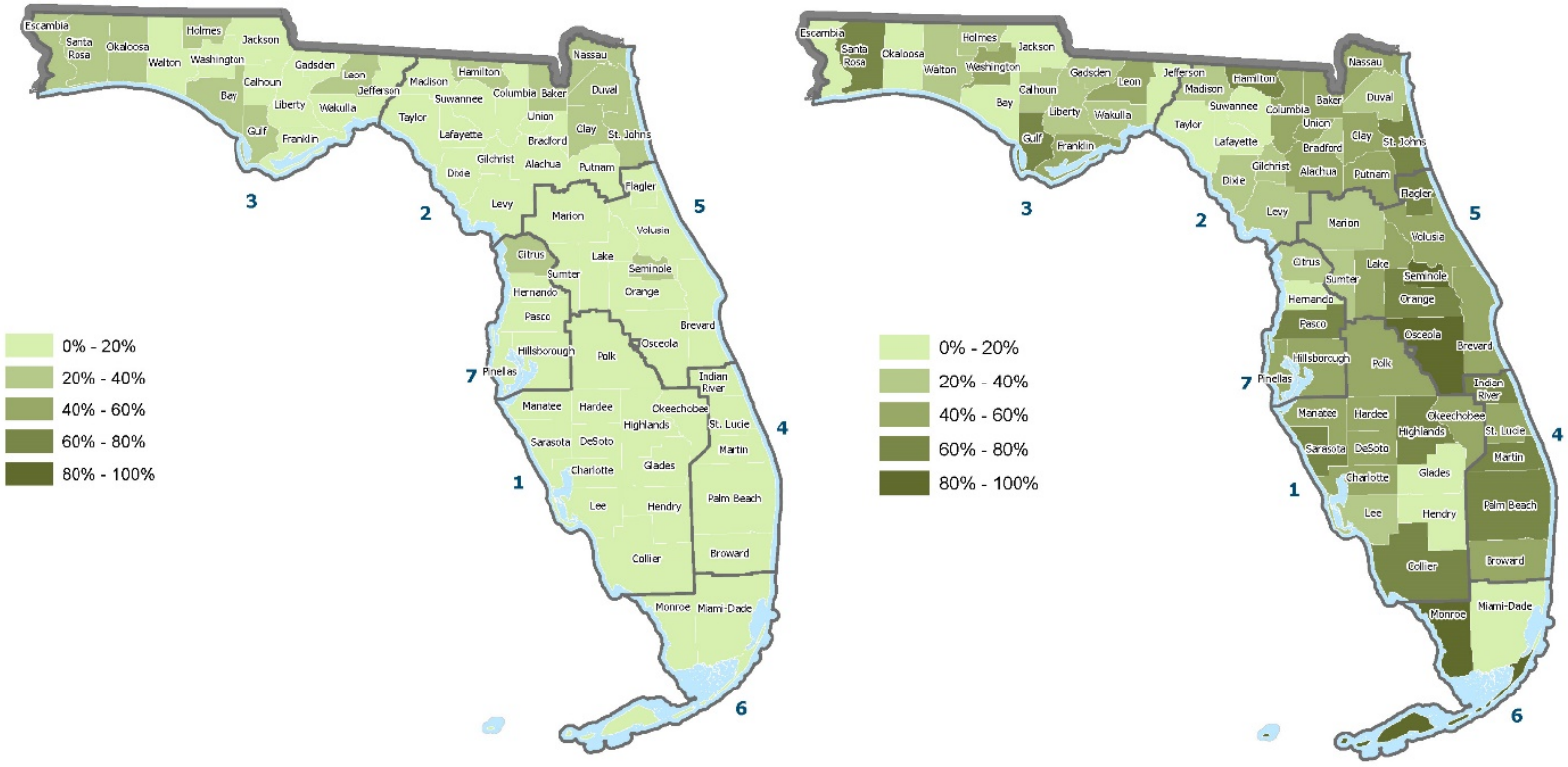


Figure 13 | Percent of Originating Truck Miles Being Empty – Inter-state (Left) and Intra-state (Right)

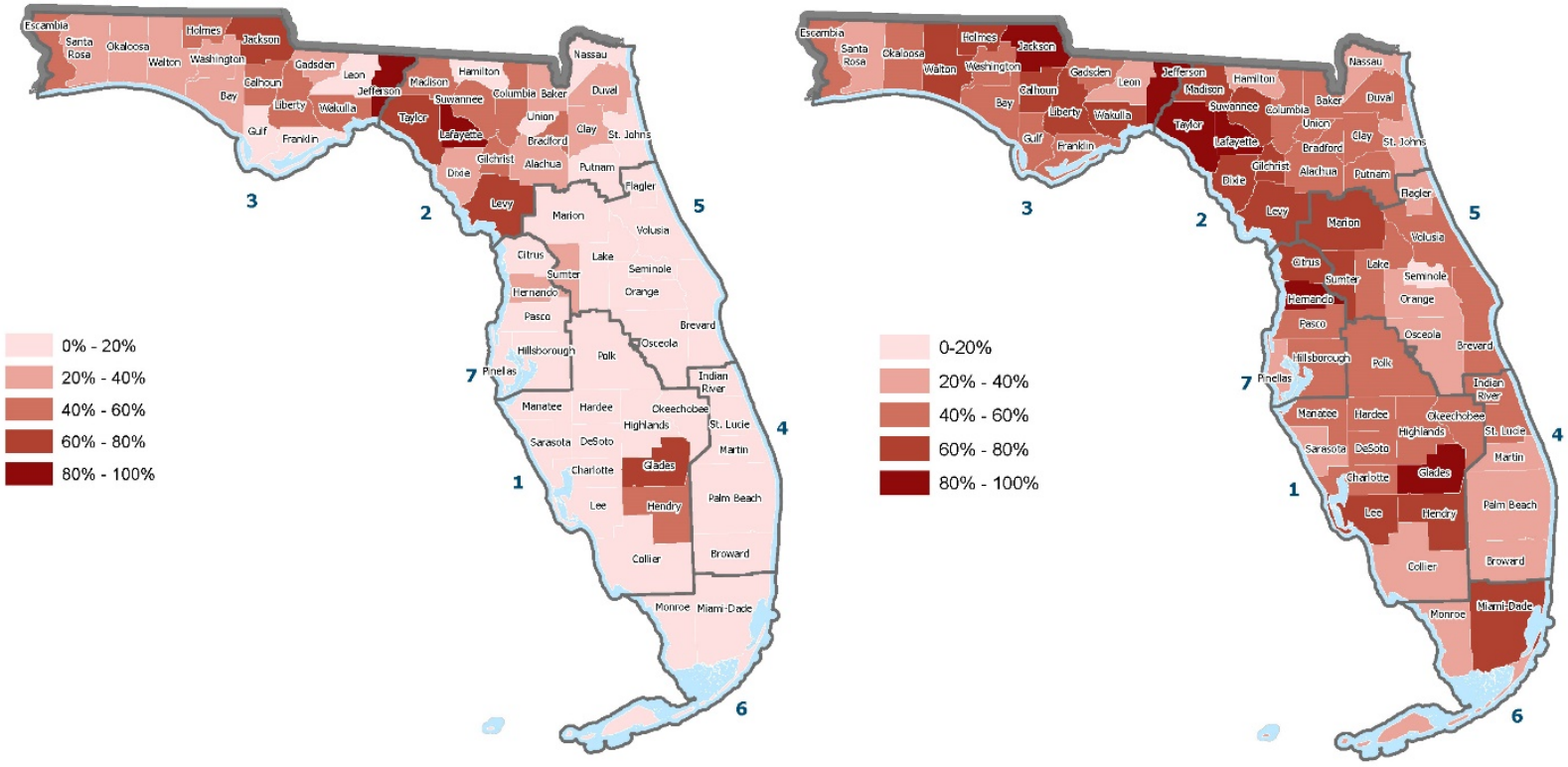


Figure 14 | Percent of Terminating Truck Trips Being Empty – Inter-state (Left) and Intra-state (Right)

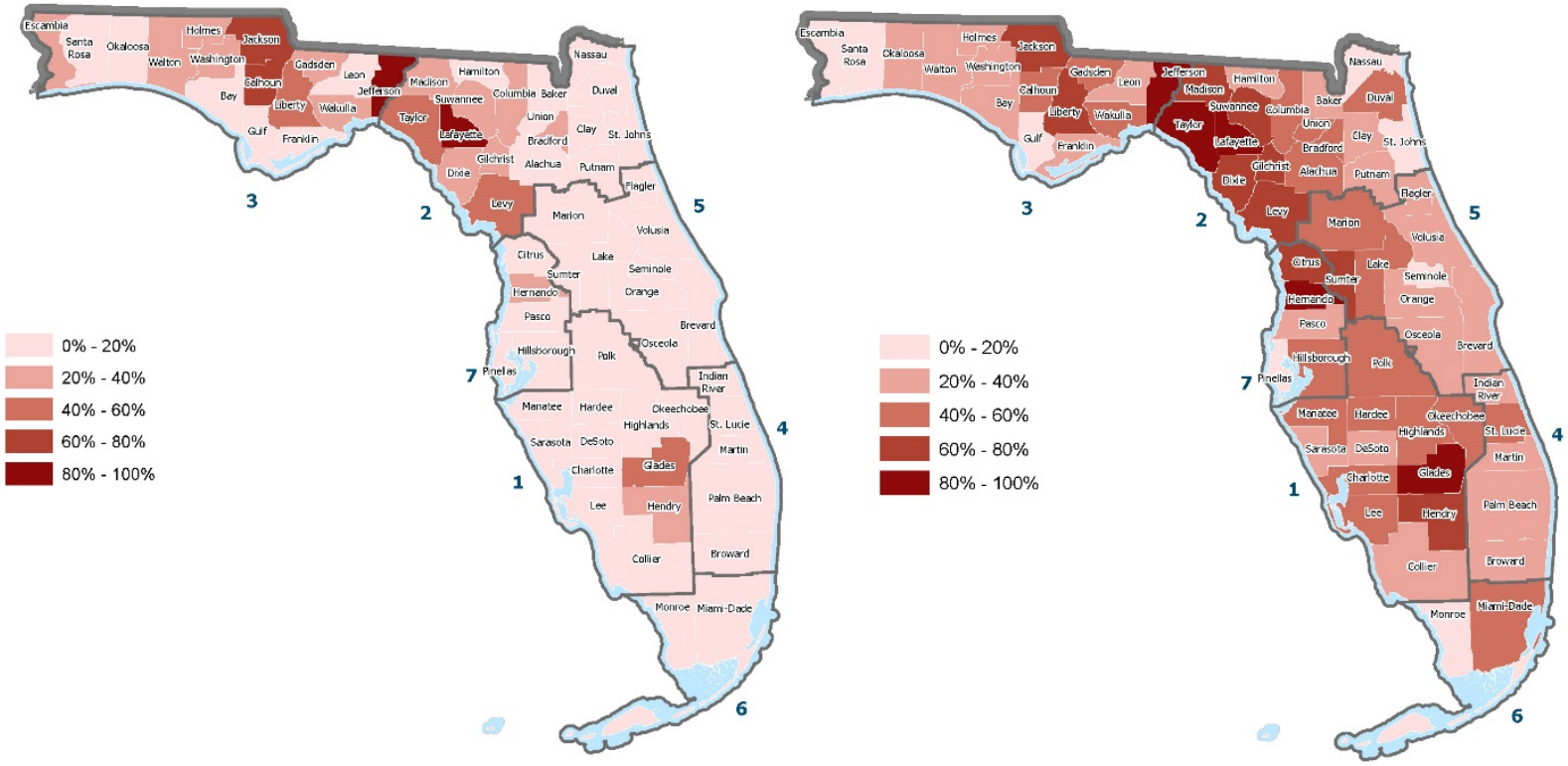


Figure 15 | Percent of Terminating Truck Miles Being Empty – Inter-state (Left) and Intra-state (Right)

5.4. Commodity Analysis

Transearch data is analyzed to understand the commodity flow patterns for five selected commodities. **Table 11** illustrates the STCC commodity classification for selected commodities at 2-digit, 3-digit and 4-digit level.

- Citrus Fruits (STCC – 01 21);
- Waste or Scrap Materials (STCC – 40);
- Lumber or Wood Products (STCC – 24);
- Coal (STCC – 11); and
- Drugs (STCC – 28 3).

STCC – 2 digit	STCC – 3 digit	STCC – 4 digit
01 - Farm Products	01 1 - Field Crops 01 2 - Fresh Fruits or Tree Nuts 01 3 - Fresh Vegetables 01 4 - Livestock 01 5 - Poultry of Poultry Products 01 9 - Misc. Farm Products	**01 21 – Citrus Fruits*** Cotton, field seeds, dairy farm products, horticultural specialties and more….
40 - Waste or Scrap Materials*	40 1- Ashes 40 2 - Waste or Scrap	Ashes, Metal Scrap, Textile Scrap, Wood Scrap, Paper Scrap, Chemical Scrap and more…….
24 - Lumber or Wood Products*	24 1 - Primary Forest Materials, 24 2 - Sawmill or Planning Mill Products 24 3 - Millwork or Prefab Wood Products 24 4 - Wooden Containers 24 9 - Miscellaneous Wood Products	Primary Forest Materials, Lumber or Dimension Stock, Plywood or Veneer, Treated Wood Products and more…
11 - Coal*	11 1 - Anthracite, 11 2 - Bituminous Coal or Lignite	Anthracite, Bituminous Coal and Lignite
28 - Chemical or Allied Products	28 1 - Industrial Chemicals 28 2 - Plastic Mater or Synth Fibers **28 3 - Drugs*** 28 4 - Soap or Other Detergents 28 5 - Paints, Lacquers, etc. 28 6 - Gum or wood chemicals 28 7 - Agricultural Chemicals 28 9 - Misc. Agricultural Chemicals	Ind, Inorg, or Org chemicals, industrial gases Inorganic pigments, drugs, paints, fertilizers, adhesives and more….

***Selected Commodities**

Table 11 | STCC Commodity Classification for Selected Commodities

5.4.1. Citrus Fruits

Florida is the largest citrus producing area in the United States (70% of U.S. citrus supply) and is also second only to Brazil in global orange juice production and the state remains the world's leading producer of grapefruit. In most seasons, more than 90 percent of America's orange juice

is made from Florida-grown oranges. Florida citrus industry has a tremendous economic impact, as it is a $9 billion industry and employs nearly 76,000 Floridians.

In Florida, there are about 569,000 acres of citrus groves and more than 74 million citrus trees. Polk County in the central part of the state remains the top citrus producing county. As per the commodity flow analysis:

- In 2018, Florida counties exported 2.14 million tons of citrus fruits valued at more than $ 0.86 billion.
- **Figure 16** illustrates the percent share of Florida citrus exports from different counties. Polk County is the highest exporter in the state with more than 15% of total exports. Hendry (12.85%), Highlands (12.26%) and DeSoto (11.44%) are the other major exporters.
- Texas, New York, Pennsylvania, California and Illinois are the top 5 consumer states of Florida citrus in 2018.
- Citrus Fruits exports from Florida exports are forecasted to grow from 2.14 million tons in 2018 to 3.71 million tons in 2045.
- The commodity flow analysis forecasts that Highlands (15.24%), Hendry (14.23%) and Polk County (13.65%) will continue to be the top citrus exporters in 2045.
- 100% of citrus fruits exported from Florida was hauled by reefer trucks.
- It is important to note that a significant percent of citrus fruits exported from six counties – Brevard (1.69%), Broward (73.7%), Hillsborough (13.43%), Manatee (21.12%), Miami-Dade (62.88%), Palm Beach (78.59%) was first imported from a seaport in that county.

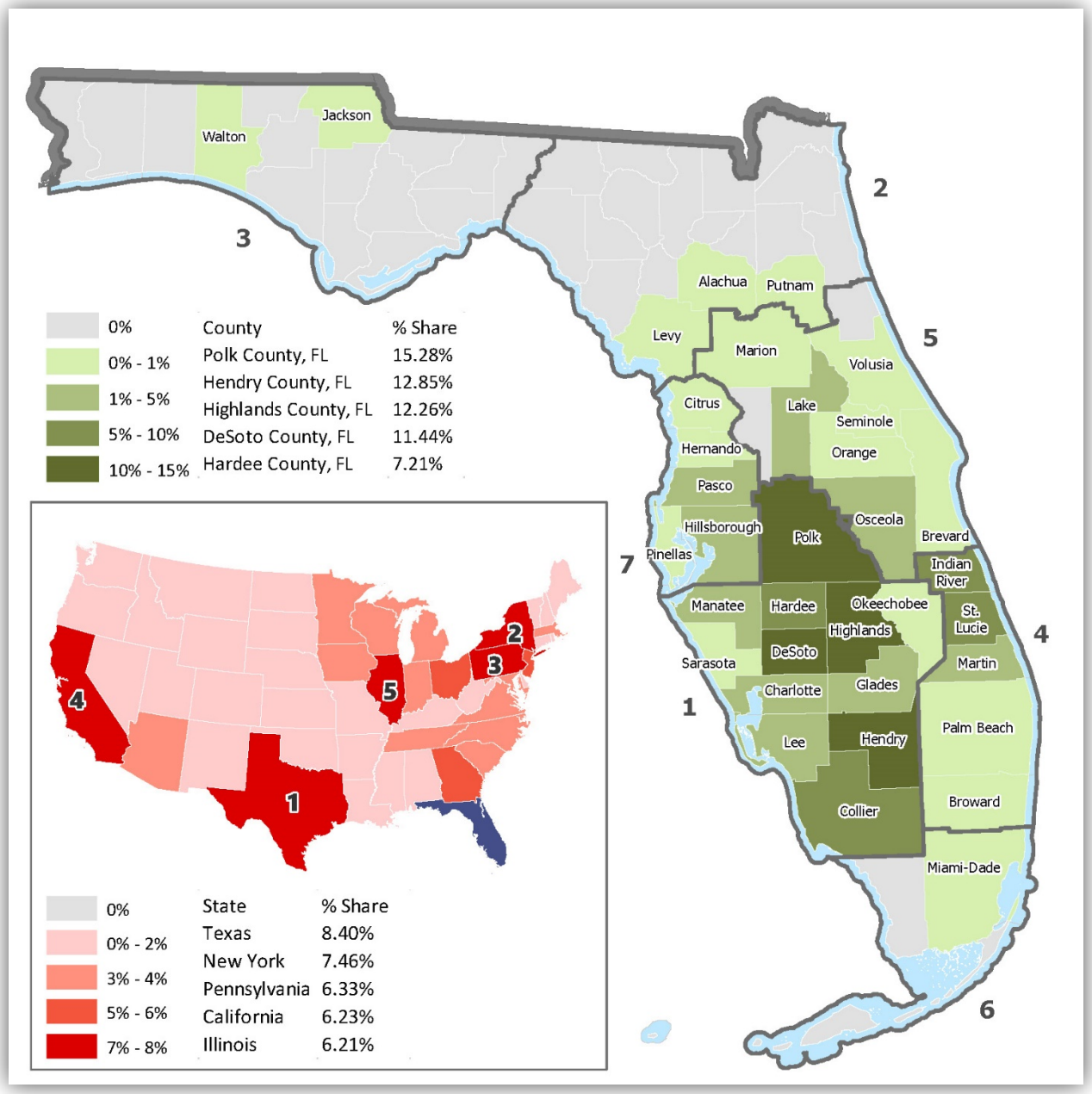


Figure 16 | Florida Counties Exporting Citrus Fruits and Consumer States of Florida Citrus Exports

5.4.2. Waste & Scrap Materials

The total generation of municipal solid waste (MSW) in 2018 was 292.4 million tons (U.S. short tons, unless specified) or 4.9 pounds per person per day. Of the MSW generated, approximately 69 million tons were recycled, and 25 million tons were composted. As per the commodity flow analysis:

- In 2018, Florida counties exported 26.62 million tons of waste/scrap materials. 52.33% of this tonnage exported from Florida counties are intra-state movements. On the other hand, 3.8 million tons of waste/scrap materials originate and terminate inside the same county.
- **Figure 17** illustrates the percent share of Florida waste/scrap materials exports from different counties. Palm Beach County is the highest exporter in the state with more than 10.02% of total exports. Miami-Dade (9.87%), Hillsborough (8.74%), Broward (7.85%) and Orange (7.66%) are the other major exporters. These counties are also the top five most populous counties and the top five counties with the highest number of employees.
- Ten counties which export the highest tonnage per capita of waste/scrap materials are Hamilton (2.35), Monroe (2.22), Manatee (2.15), Collier (2.09), Palm Beach (1.86), Gadsden (1.84), Suwannee (1.82), Bay (1.8), Martin (1.69) and St. Lucie (1.67). It is important to note that the waste/scrap materials considered for this analysis include all types of waste/scrap materials.
- Texas, Georgia, Alabama, South Carolina and Pennsylvania are the top 5 destination states of waste/scrap materials from Florida counties.
- 95.23% of waste/scrap materials are hauled by trucks. Rail (4.26%) and water (0.51%) are the other major modes.
- Out of all waste/scrap materials generated by Florida counties, miscellaneous waste includes 71.4% of all waste. Other major waste types are paper waste (11.2%), metal scrap (10.1%), ashes (4.7%), and rubber/plastic scrap (1.2%).
- Waste/scrap materials exports from Florida are forecasted to grow from 26.62 million tons in 2018 to 44.73 million tons in 2045.
- The commodity flow analysis forecasts that Palm Beach (13.61%), Broward (10.21%) and Orange (9.23%) and Miami-Dade (4.66%) will continue to be the top waste producers in 2045.

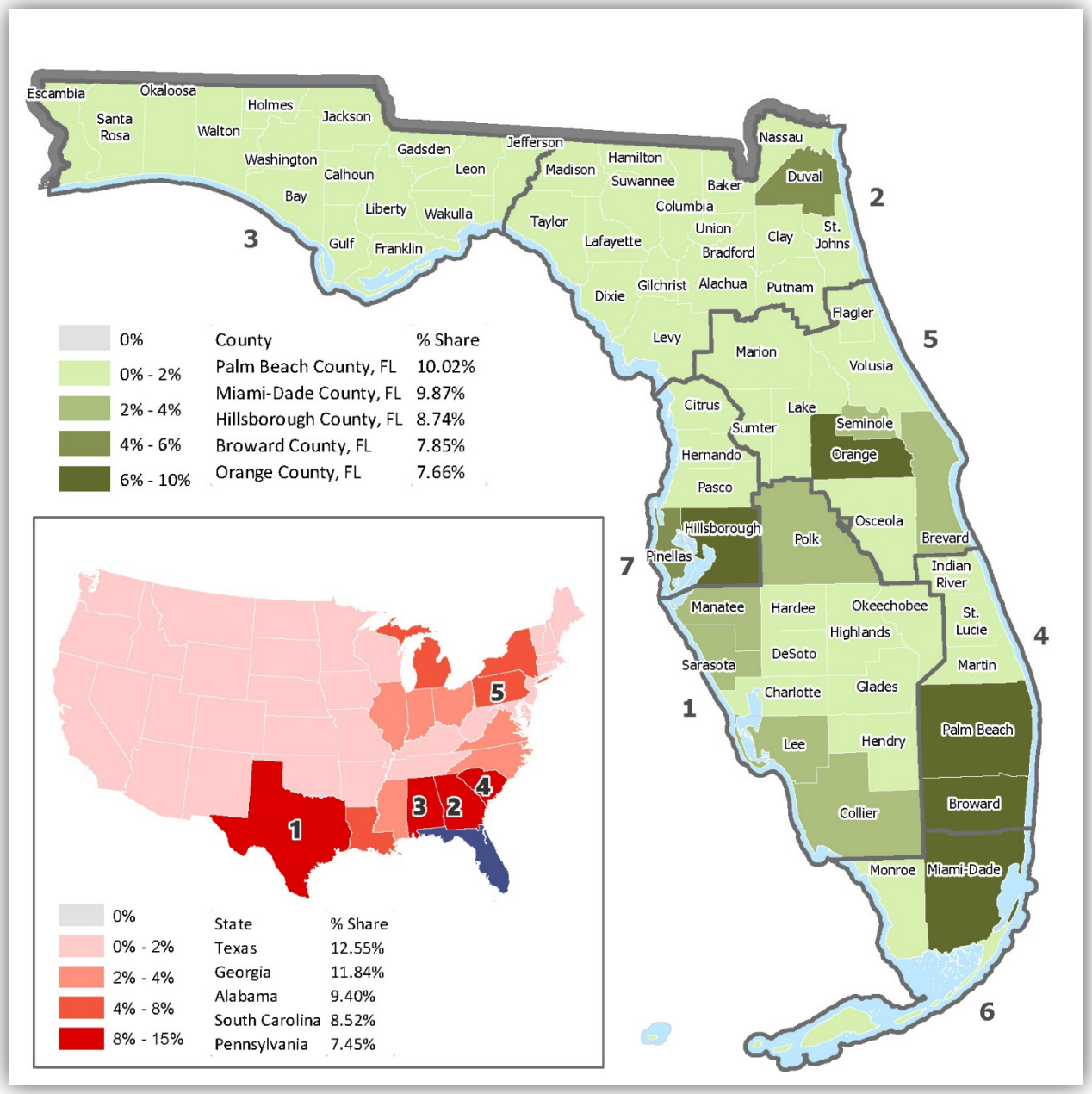


Figure 17 | Florida Counties Exporting Waste & Scrap Materials and Destination States of Florida Waste/Scrap Materials Exports

5.4.3. Lumber or Wood Products

The state of Florida has 17.16 million acres (26,807 square miles) of forestland, representing 50 percent of the state's total land area. Most of those timberlands are working forests. As per the commodity flow analysis:

- In 2018, Florida counties exported 9.3 million tons of lumber/wood products valued at more than $5 billion. 47.5% of exported lumber/wood products tons are forest materials. Other major categories of lumber/wood products by tonnage are miscellaneous sawmill or planning mills (15.18%), lumber or dimension stock (6.3%), wood cont. or box shooks (5.53%) and plywood or veneer (5.23%).
- 59.3% of lumber/wood products exported tonnage is exported from one Florida county to another Florida county (intra-state movements). On the other hand, 0.74 million tons of lumber/wood products originate and terminate inside the same county.
- **Figure 18** illustrates the percent share of Florida lumber/wood products exports from different counties. Jackson County is the highest exporter in the state with more than 10.3% of total exports. Taylor (8.52%), Polk (6.37%), Nassau (5.68%) and Dixie (5.22%) are the other major exporters.
- Georgia, Alabama, North Carolina, Texas and South Carolina are the top 5 destination states of Florida's lumber and wood products in 2018.
- 92.92% of lumber/wood products are hauled by trucks, while Rail (6.38%) and water (0.7%) are the other major modes.
- Lumber/wood products exports from Florida are forecasted to grow from 9.3 million tons in 2018 to 10.61 million tons in 2045.
- The commodity flow analysis forecasts that Jackson (8.72%), Suwannee (8.55%), Taylor (6.58%), Polk (4.57%) and Gadsden (4.2%) will be the top lumber/wood products exporters in 2045.

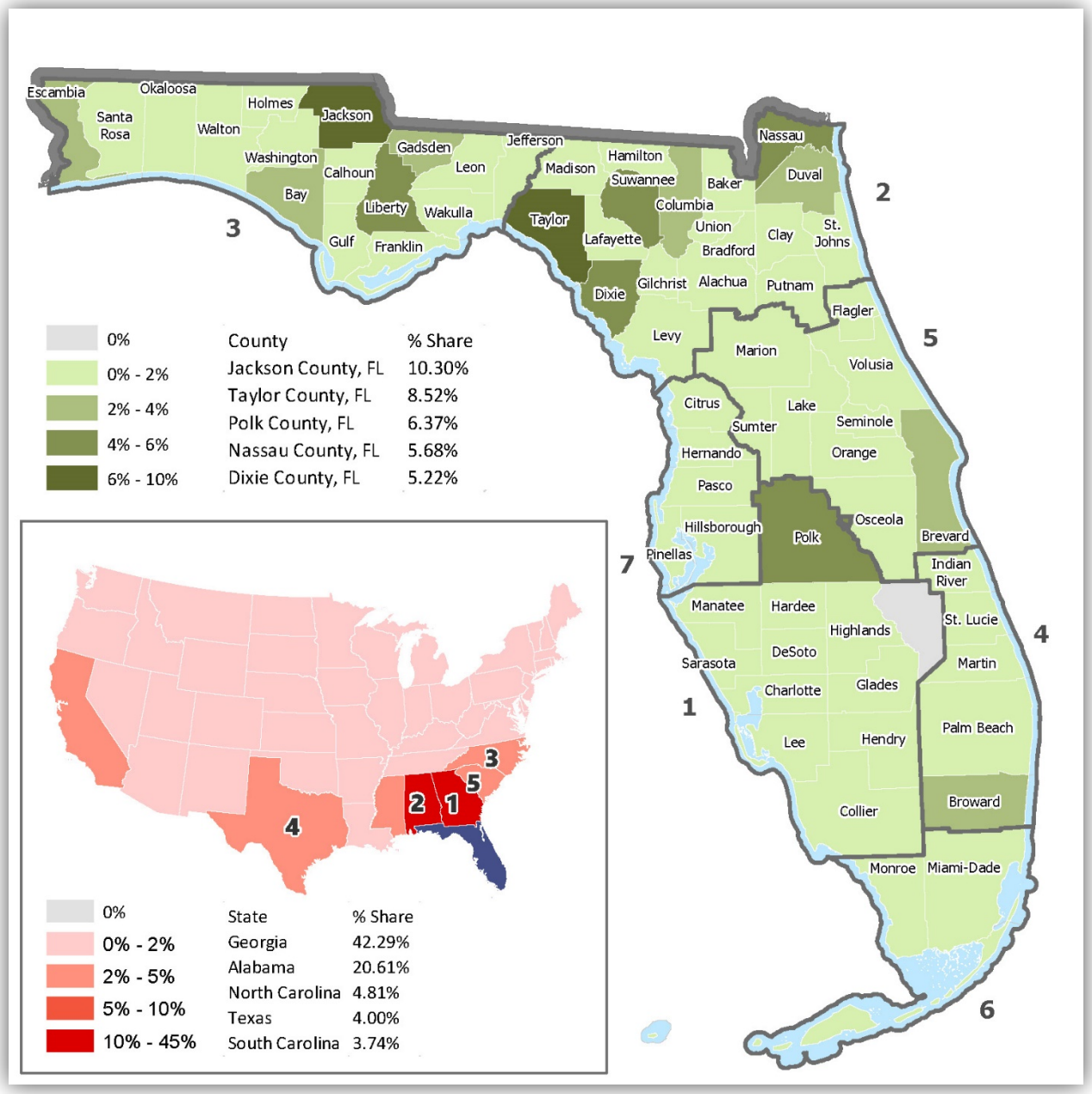


Figure 18 | Florida Counties Exporting Lumber & Wood Products and Destination States of Florida Lumber/Wood Products Exports

5.4.4. Coal

Florida is the third-most populated state and is the fourth-largest energy-consuming state. Florida does not have any coal reserves or production and relies on several other states to meet its limited coal demand. Almost all coal consumed in Florida is used for electricity generation. However, coal-fired electricity generation in the state has decreased as older coal units have

been replaced with natural gas-fired power plants. Coal consumption in the electric power sector has fallen from 29 million tons in 2008 to approximately 10 million tons in 2018. As per the commodity flow analysis:

- In 2018, Florida counties imported 10.1 million tons of coal valued at more than $ 0.3 billion. The majority of coal imports to Florida are from regions outside Florida (99.99%).
- **Figure 19** illustrates the percent share of Florida coal imports to different counties. Putnam County is the highest importer of coal in the state with more than 27.6% of total imports. Orange (17.16%), Hillsborough (14.4%), Escambia (13.53%) and Citrus (12.35%) are the other major importers.
- Kentucky, Indiana, Louisiana, Alabama and Illinois are the top 5 provider states of coal to Florida in 2018.
- 67.5% of coal is carried by rail and 32.46% is carried over water.
- Coal imports to Florida are forecasted to decline from 10.1 million tons in 2018 to 3.2 million tons in 2045.
- The commodity flow analysis forecasts that Putnam (24.31%), Hillsborough (21.15%), Orange (15.12%), Citrus (14.27%) and Escambia (11.62%) will continue to be the top coal importers in 2045.

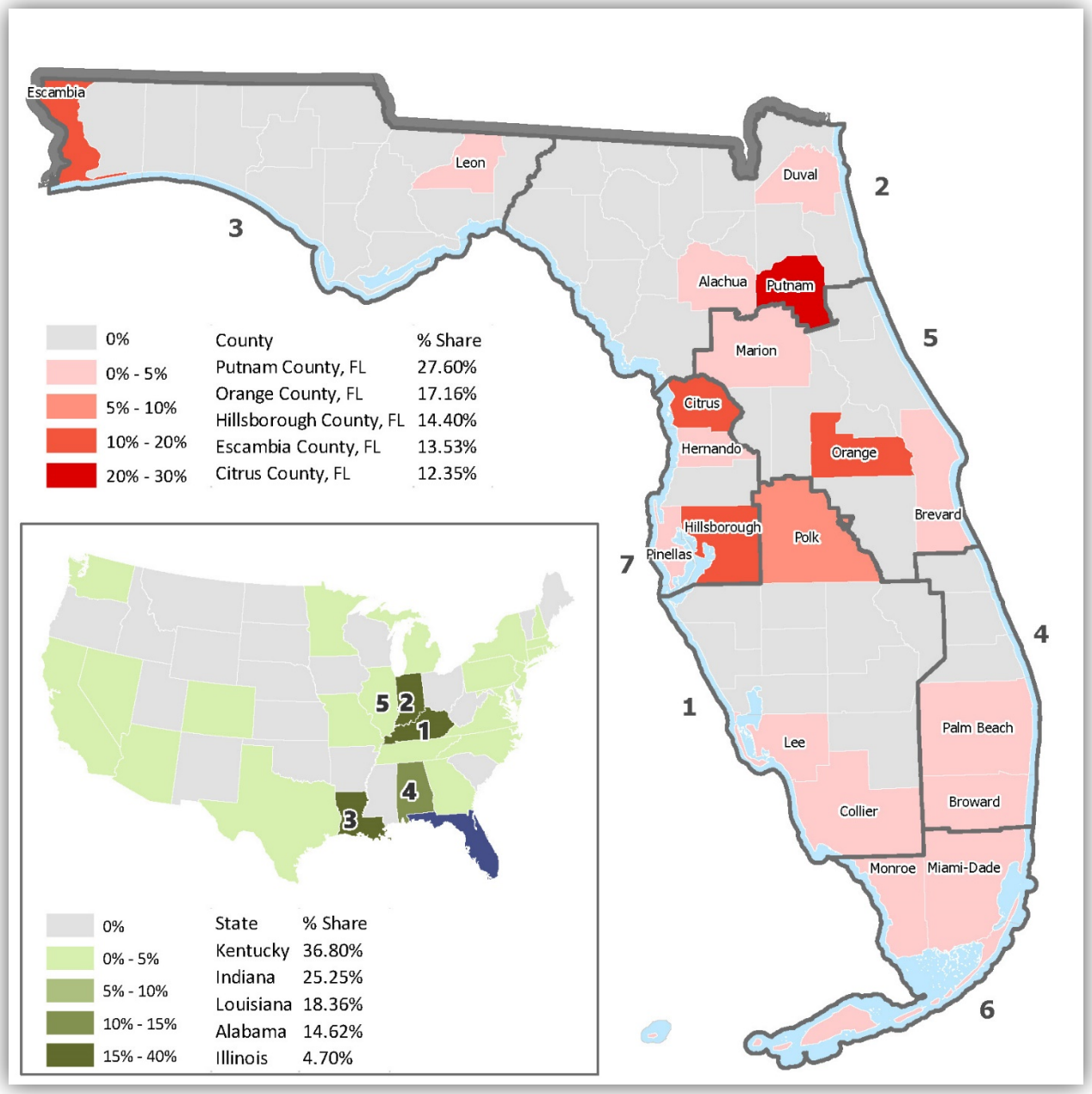


Figure 19 | Florida Counties Importing Coal and States Providing Coal to Florida

5.4.5. Drugs

As per the commodity flow analysis:

- In 2018, Florida counties imported 308.8 thousand tons of drugs valued at more than $ 12.1 billion.

- 34.89% of drugs imported (tonnage) is imported from one Florida county to another Florida county (intra-state movements). On the other hand, 65 thousand tons of drugs originate and terminate inside the same county.
- **Figure 20** illustrates the percent share of Florida drug imports to different counties. Miami-Dade County is the highest importer in the state with more than 18.02% of total imports. Orange (15.14%), Hillsborough (10.33%), Palm Beach (9.94%) and Broward (8.91%) are the other major importers.
- North Carolina, California, New York, New Jersey and Tennessee are the top 5 provider states of drugs to Florida in 2018.
- Mode splits of drug imports by tonnage are Air (5.2%), Rail (5.98%) and Truck (88.8%). But it is important to note that modal splits of drug imports by value are Air (27.72%), Rail (4.4%) and Truck (67.85%).
- Drug imports to Florida are forecasted to grow from 308.8 thousand tons in 2018 to 779.3 thousand tons in 2045.
- The commodity flow analysis forecasts that Miami-Dade (17.8%), Orange (17.45%), Palm Beach (9.49%), Hillsborough (9.29%) and Broward (8.38%) will be the top drug importers in 2045.

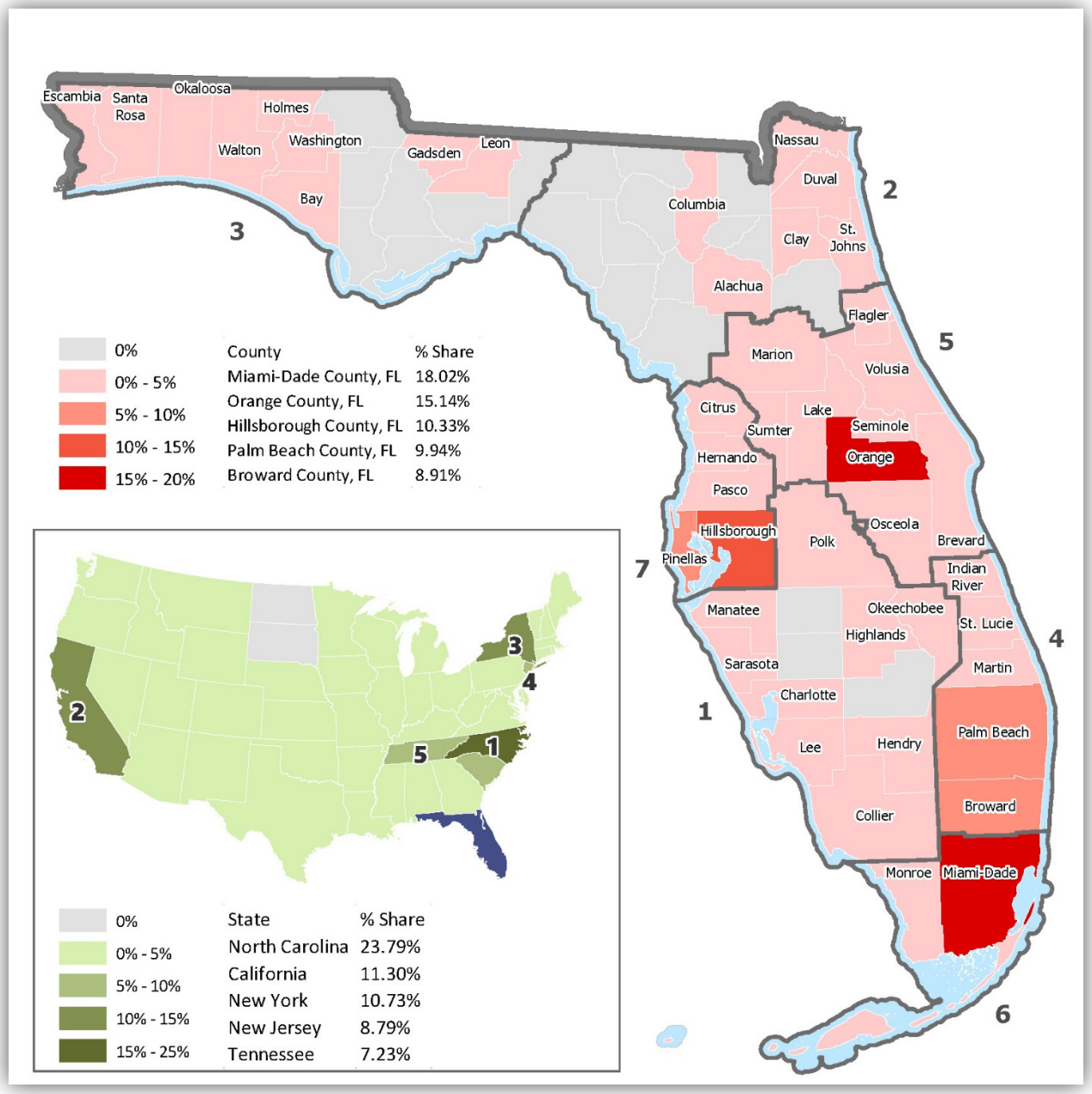


Figure 20 | Florida Counties Importing Drugs and States Providing Drugs to Florida

5.5. County Freight Profile Analysis

The FDOT Systems Implementation Office in coordination with the FDOT Freight, Logistics, and Passenger Operations Office partnered with the Florida Chamber of Commerce, Enterprise Florida, and Workforce Florida to produce a series of brochures for public administrators, private corporations, and the general public on Florida's freight infrastructure and commodity movements. These brochures were developed in 2013 and are now outdated.

FDOT Freight Multimodal and Operations Office in coordination with the FDOT Systems Implementation Office and Transportation Data and Analytics Office teamed up in 2020 to update these brochures with the latest available information. Each county brochure includes:

- Interesting facts;
- Fastest growing industries;
- Largest employment sectors;
- Major private employers;
- Key transportation facilities;
- Top import and exports by tonnage and value;
- Top domestic and intra-state trading partners;
- Major modes of transportation for freight movement
- An illustrative map of freight infrastructure; and
- A general discussion on Florida's freight, trade and economic highlights.

Additionally, Transearch data developed as part of this project was used to identify the following information for every county:

- Top imports and exports by tonnage and value;
- Top domestic and intra-state trading partners;
- Major modes of transportation for freight movement.

Figures 21-22 illustrate examples of analyses conducted for the Orange County brochure.

	IMPORTS		WITHIN COUNTY		EXPORTS	
	2018	2045	2018	2045	2018	2045
Tonnage:	26.89 M	41.61 M	4.41 M	8.81 M	11.44 M	18.18 M
Value:	$ 41.96 B	$ 77.91 B	$ 5.19 B	$ 9.49 B	$ 27.55 B	$ 38.3 B

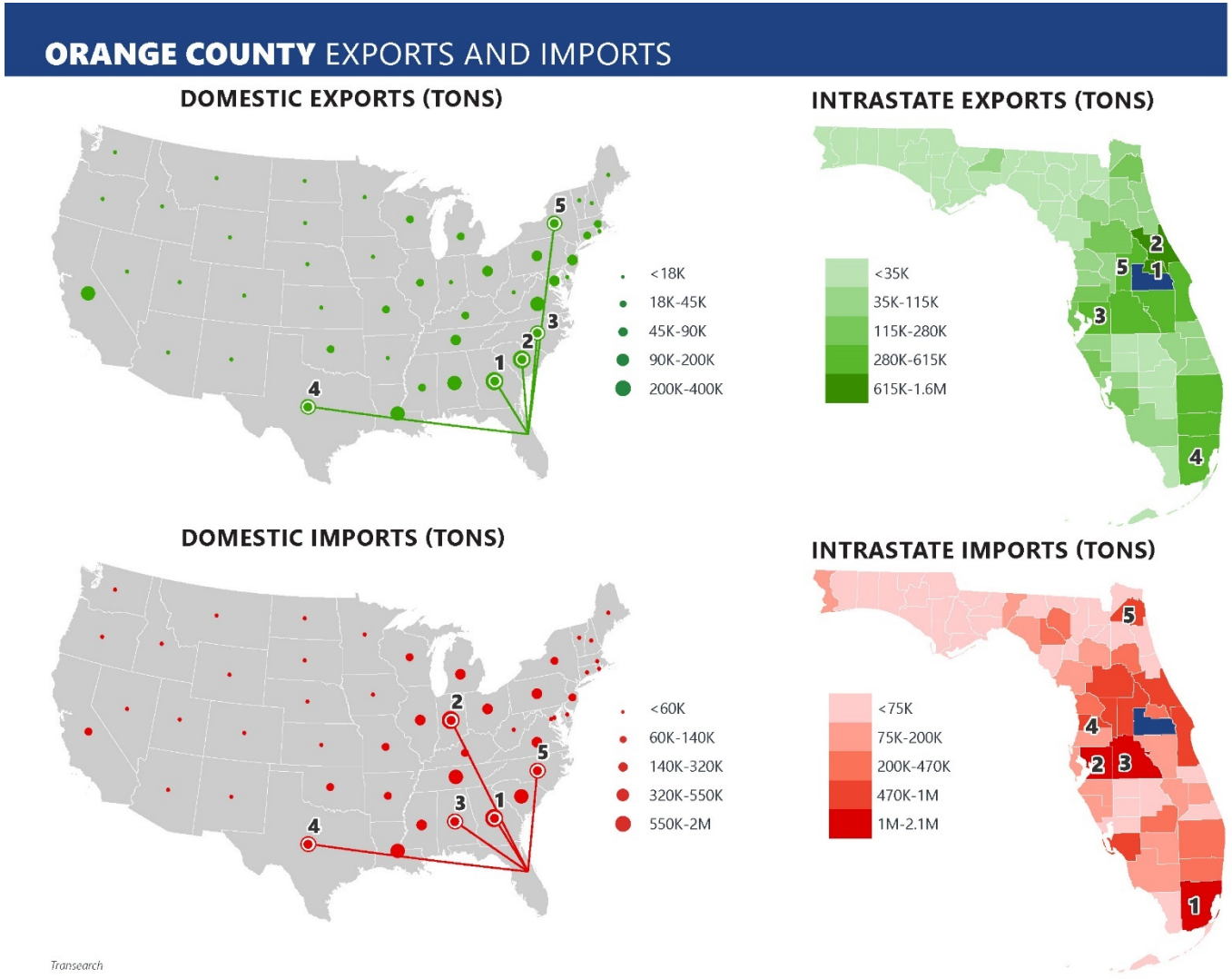
TOP COMMODITY *by Tonnage, 2018*

Nonmetallic Minerals	8,232,324	Clay, Concrete, Glass, Stone	2,795,664
Clay, Concrete, Glass, Stone	3,493,776	Warehouse, Distribution Center and Drayage Movements	2,043,100
Warehouse, Distribution Center and Drayage Movements	3,305,080	Waste or Scrap Materials	2,039,544
Petroleum or Coal Products	2,286,073	Petroleum or Coal Products	1,630,960
Food or Kindred Products	1,915,832	Food or Kindred Products	1,128,671

TOP COMMODITY *by Value, 2018*

Transportation Equipment	8,339,766,868	Misc. Freight Shipments	4,365,438,893
Warehouse, Distribution Center and Drayage Movements	6,666,751,138	Warehouse, Distribution Center and Drayage Movements	4,068,602,475
Electrical Equipment	3,533,582,122	Transportation Equipment	3,698,497,638
Misc. Manufacturing Products	3,454,014,323	Instruments, Photo and Optical Equipment	3,170,710,645
Chemicals or Allied Products	3,062,978,787	Misc. Manufacturing Products	2,229,974,432

Figure 21 | Orange County Commodity Flow Highlights (County Freight Brochures)



DOMESTIC EXPORTS (TONNAGE)		
1	Georgia	392,021
2	South Carolina	335,054
3	North Carolina	196,851
4	Texas	169,097
5	New York	155,204

INTRASTATE EXPORTS (TONNAGE)		
1	Seminole	1,559,444
2	Volusia	923,778
3	Hillsborough	616,078
4	Miami-Dade	473,795
5	Lake	457,517

DOMESTIC IMPORTS (TONNAGE)		
1	Georgia	1,920,362
2	Indiana	1,874,118
3	Alabama	548,294
4	Texas	521,329
5	North Carolina	484,406

INTRASTATE IMPORTS (TONNAGE)		
1	Miami-Dade	2,064,362
2	Hillsborough	1,683,147
3	Polk	1,612,640
4	Hernando	994,244
5	Duval	932,746

Figure 22 | Orange County Exports and Imports (County Freight Brochures)

Chapter 6. Conclusions

Transearch data provided by IHS Markit is a comprehensive database which can be used for conducting commodity flow analysis for different modes and commodity types for base year 2018, 2030 and 2045. This database provided the information needed to conduct a thorough analysis of current and projected multi modal commodity movements across the state of Florida.

Key takeaways from the analysis conducted here are as follows:

- Most commodity movements are intra-state (250 million tons) and intra-county movements (109 million tons). The inter-state imports (154 million tons) highly out number inter-state exports (74 million tons). The 2018 and 2045 statistics clearly indicate that Florida is and will predominantly remain a consumer state.
- Inter-state imports are expected to grow by 20% in tonnage and 47% in value from 2018 to 2045. Similarly, the inter-state exports are expected to grow by 42% in tonnage and 66% in value.
- In 2018, trucks hauled 77.8% of total commodity tonnage originating or terminating in Florida. Rail (13.1%), Water (8.9%) and Air (0.16%) accounted for the remaining tonnage movement. Similarly, trucks hauled 62.66% of total commodity value. Rail (15.29%), Water (4.64%) and Air (17.39%) are the other modes.
- The majority of commodities are hauled predominantly by trucks with few exceptions which are coal, metallic ores, miscellaneous freight, miscellaneous mixed shipments, small package freight shipments and shipping containers.
- Hillsborough, Broward, Palm Beach, Duval, Miami-Dade, Orange, Polk, Brevard, Pinellas and Lee are the top 10 import counties. Miami-Dade, Hillsborough, Duval, Polk, Broward, Lee, Palm Beach, Orange, Hernando and Manatee are the top 10 export counties.
- Truck trips moving out of state include 29.4% empties. On the other hand, 16.49% of truck trips moving in state are empty truck trips. Similarly, the 11.26% of truck miles traveling out of state are empty miles and 4.88% of truck miles traveling in state are empty miles.

The analysis conducted in this study focused primarily on statewide commodity flow analysis from a transportation perspective. The data has also been used to provide commodity flow highlights for the development of County Freight Brochures and FDOT District Freight Brochures. The analysis results will support the implementation of Florida's Freight Mobility and Trade Plan (FMTP) and can be utilized for other freight transportation planning needs.

Appendix A Kick-Off and Stakeholder Meeting Deliverables

Kick-Off Meeting Notes

Project:	Statewide Freight and Commodity Analysis	
Subject:	Kick-Off Meeting	
Date:	Friday, December 20, 2019	
Location:	CO-Burns, SPO Conference Room 226 and GoToMeeting	
Attendees:	Joel Worrell (FDOT) Jerry Scott (FDOT)	Makarand Gawade (HDR) Santanu Roy (HDR)

- FDOT (Joel Worrell and Jerry Scott) opened the meeting.
- HDR (Mak) started the presentation and provided an agenda outline for the meeting.
- FDOT (Joel) – List of Stakeholders
    a. Stakeholders should include Systems Implementation Office, Freight and Multimodal Operations office, Seaport office, Aviation office, Forecasting and Trends Office, and others.
    b. A project stakeholder meeting will be scheduled in early 2020.
    c. Jerry proposed a contact mailer list to let the stakeholders know the project status.
- HDR (Mak) – Years of data
    a. Years considered in the scope are as follows: 2017, 2025 and 2045.
    b. FDOT and HDR discussed that the years should be revised to 2017(or 2018), 2030 and 2050 (M-CORES horizon year).
    c. FDOT (Joel) indicated that the existing scope should be amended to change the years.
- HDR (Mak) – Datasets from FDOT
    a. FDOT should provide 2017 Surface Transportation Board (STB) – Carload Waybill Sample data and Truck counts data for this project.
- FDOT (Jerry) – Additional tasks
    a. Jerry indicated that correlating commodity flow statistics to truck crashes and truck bottlenecks will help understand freight story better.
    b. Santanu indicated that this can be done as part of an on-call support task.

Action Items

- HDR to send the meeting notes and slide deck to FDOT.
- HDR/FDOT will schedule the meeting with stakeholders in February.
- Mak and Jerry will follow-up with Holly Cohen and Joey Gordon to acquire the datasets.

Task work order to be amended to reflect the revised years of data analysis.

Agenda

- Welcome and Introductions
- Motivation
- Objectives
- Scope of Services
- Deliverables
- Task Descriptions
- Schedule
- Discussions

Welcome and Introductions

Joel Worrell

Jerry Scott

Santanu Roy

Makarand Gawade

Mike Rose

Levi Hannon

Kaisha Rose

Motivation

- Freight industry has changed considerably in last five years (E-commerce, distribution centers and other trends).
- Latest available commodity flow data is FAF* with base year – 2012.
- Commodity flow information is not available at county geography level.

*FAF – Freight Analysis Framework

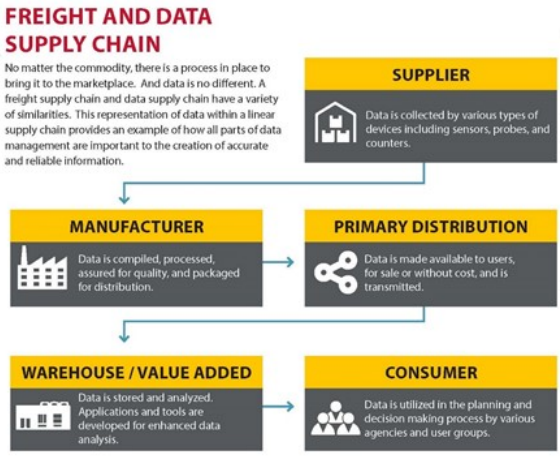
Objectives

- Develop a report on Florida's freight and commodities as it relates to the transportation system.
- Analyze IHS Global Commodity Flow data* to develop a statewide commodity flow profile.

*No data is purchased for this project

Scope of Services

- Task 1 – Project Coordination Meetings
- Task 2 – Freight Data Analysis
- Task 3 – Report Development
- Task 4 – Final Report



Deliverables

- Task 1 - Project schedule, FDOT freight data analysis requirements, Meeting presentations and notes, and Stakeholder list.
- Task 2 - Freight data analysis results technical memorandum.
- Task 3 - Draft freight data analysis report and data spatial analysis graphics.
- Task 4 - Final freight data analysis report, data spatial analysis graphics and webinar presentation.

Task 1-Project Meetings

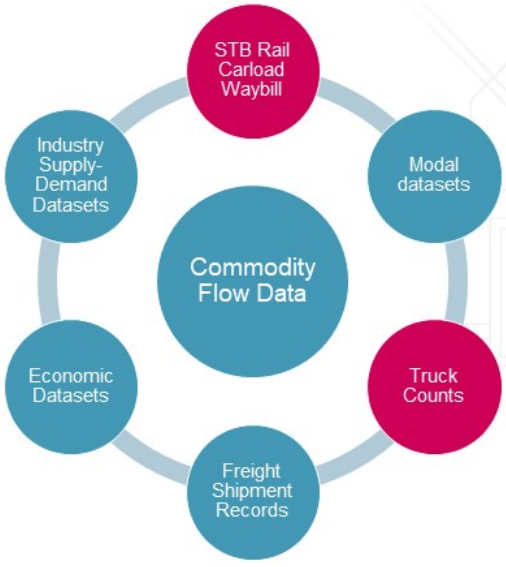
- Project Kick-off Meeting
- Key Stakeholders
  - Transportation Data and Analytics (TDA)
  - Freight Logistics and Passenger Operations (FLP) Division
  - District Freight Coordinators
  - Systems Implementation Office
  - Others?
- Interim Update Meetings
- FDOT freight data analysis requirements

Task 2-Freight Data Analysis

- Modal movements that originate, terminate, or transit-in or through the state.
- Commodity flows within each county of Florida that covers all modal movements that originate, terminate, or transit-in or through each county.
- Commodity flow movement and perform statistical analysis of commodities at the 4-digit Standard Transportation Commodity Code (STCC) level and transportation modes.
- Methodology of statistical analysis.
- Data validations using highway truck counts.

Task 2-Freight Data Analysis

- The analysis will also account for import and export activities.
- The Surface Transportation Board (STB) Waybill data and truck counts will be provided by FDOT to develop the rail component of commodity flow information.



Raw Datasets for Data Fusion*

*This is a preliminary list of raw datasets. Will be updated.

Proposed Attributes of Commodity Flow Analysis

List of Attributes	Proposed Values
Origin	County (FL) or BEA* (Outside FL) or Country Name (Outside U.S.)
Destination	County (FL) or BEA* (Outside FL) or Country Name (Outside U.S.)
Commodity Type	STCC4** or NAICS***
Mode	Rail Carload, Rail Intermodal, For-hire Truckload , For-hire Less than Truckload, Private truck, Air , Water, Pipeline, Space (??)
Trade Type	Domestic, Import, Export, North American Free Trade Agreement (NAFTA), Alaska, Bridge (Transiting the U.S. with ultimate origin and destination outside country)
Quantity	Annual Short Tons (2,000 lbs.) and Ton-Miles
Units	Number of truckloads or/and carloads or/and intermodal containers
Value	Million $
Year	2017, 2025 and 2045
Equipment	Auto, Bulk, Dry Van, Flat, Livestock, Reefer, Specialty, Tank

*BEA – Bureau of Economic Analysis Regions
**STCC4 – Standard Transportation Commodity Code – 4 digit
***NAICS – North American Industry Classification System

Task 3-Report Development

- Develop a report design in coordination with FDOT.
- Develop and provide state and county spatial representations of commodity flow analyses
- Perform iterations of report designs based on feedback from FDOT.

Task 4-Final Report

- Coordinate a final project closeout meeting with the FDOT task manager.
- Present the final report in a summarized presentation that will be shared publicly.
- Perform a webinar to present the final reports and its results
- Develop Statewide commodity flow profile (infographic brochure).

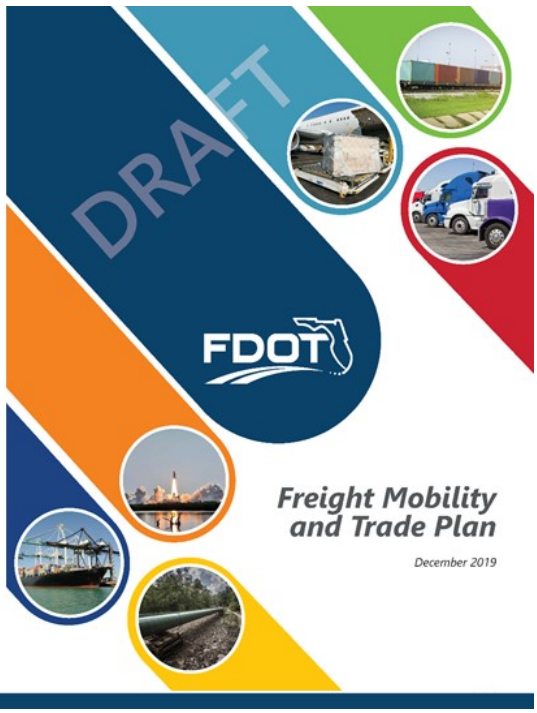
Project Schedule

PROJECT ELEMENT	2019 Oct	2019 Nov	2019 Dec	2020 Jan	2020 Feb	2020 Mar	2020 Apr	2020 May	2020 June	2020 July	2020 Aug	2020 Sep
Task #1: Project Meetings and Coordination			■	■								
a. Kick-off meeting (12/20/19) *b. Deliverable: Meeting notes and presentation slides (12/30/19)*			★ ★									
Task #2: Freight Data Analysis				■	■	■	■	■				
*a. Interim Update Meetings** *b. Deliverable: Technical Memorandum (04/13/20)*					★		★	★ ★				
Task #3: Report Development						■	■	■	■	■		
*a. Interim Update Meeting** *b. Deliverable: Draft Report and Infographics (06/15/20)*									★ ★			
Task #4: Graphical Production of Analysis									■	■	■	■
*a. Interim Update Meeting** *b. Deliverable: Final Report and Infographics (08/31/20)*											★	★ ★

*Exact dates will be decided later

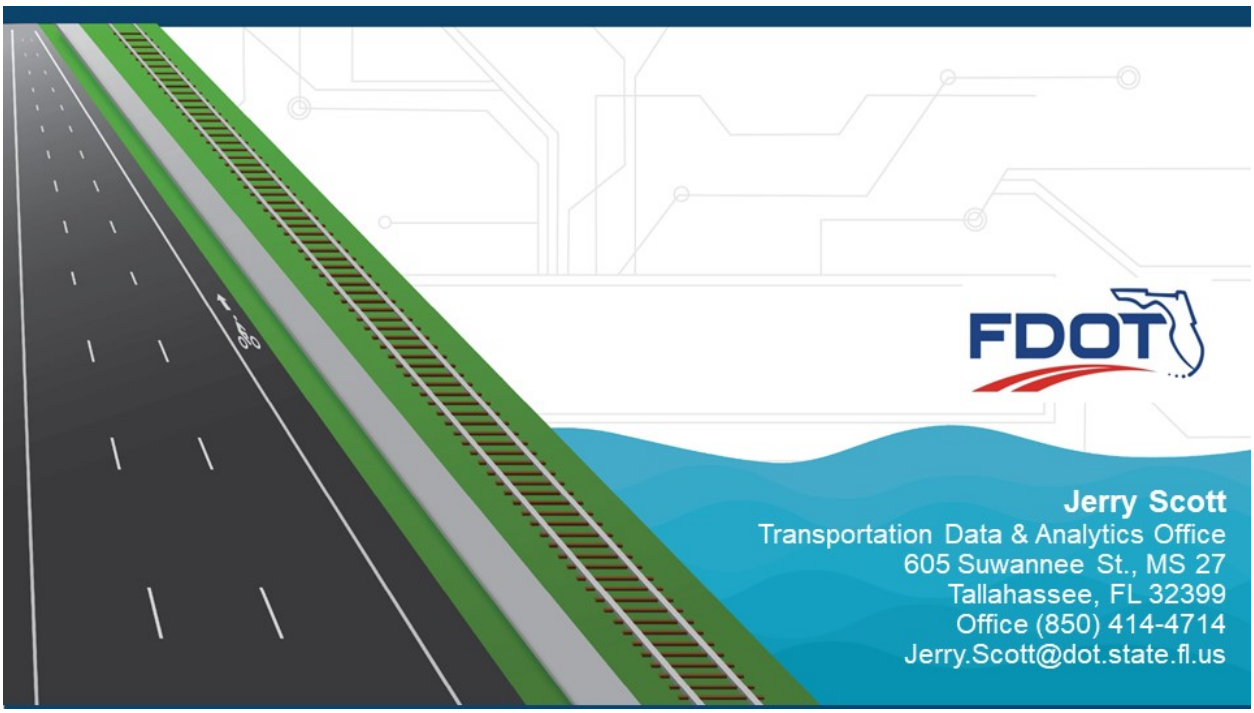
Proposed Applications

- Freight and Mobility Trade Plan Updates
- County and Regional Freight Profiles
- District Freight Coordinator Initiatives
- Travel Demand Models
- Other Plans



Discussion

- Business requirements for data analysis of Florida's commodity flow movements.
- Opportunities and limitations of freight data analyses.
- List of Stakeholders
- Data availability and objectivity
- Repeatable methodology
- Reasonable checks
- Tools to be used
- Internal v/s External deliverables



Stakeholder Meeting Notes

Project:	Statewide Freight and Commodity Analysis
Subject:	Stakeholder Meeting
Date:	Monday, October 12, 2020
Location:	Microsoft Teams
Attendees:	Joel Worrell (FDOT-CO) Jerry Scott (FDOT-CO) Ed Hutchinson (FDOT-CO) Rickey Fitzgerald (FDOT-CO) Chris Edmonston (FDOT-CO) Keith Robbins (FDOT-D1) Justin Ryan (FDOT-D2) Autumn Young (FDOT-D4) Sarah Van Gundy (FDOT-D5) Allison McCuddy (FDOT-D5) Carlos Castro (FDOT-D6) Brian Hunter (FDOT-D7) Carol Scott (FDOT-TP) Santanu Roy (HDR) Makarand Gawade (HDR)

- FDOT (Jerry Scott) opened the meeting and provided a brief outline of the project.
- HDR (Mak) presented the project scope and deliverables. HDR (Mak) presented the preliminary data analysis results and the county freight profile template (Duval).
- FDOT (Rickey) indicated that they would like to provide direct access to information on parcels which are ‘shovel’ ready.
- HDR (Santanu) responded that the Department of Revenue (DOR) parcel data can be shared, but the employment information from Department of Economic Opportunity (DEO) cannot be shared.

- FDOT (Joel) indicated that local appraisal/tax collectors' data might be needed as well. HDR (Santanu) indicated that the DOR parcel information will be useful for locational information, but they will need to go to various other sources as per their other needs.
- FDOT (Ed) asked if these 'shovel' ready projects are driven by Chamber of Commerce and Regional Planning Councils. He indicated that it will be useful to have more information on these parcels and it will be a product useful for commercial and real-estate needs.
- FDOT (Rickey) agreed that it will be useful for economic development which connect dots for the counties. Local participation is the key, but he doesn't want a massive undertaking.
- FDOT (Justin Ryan) indicated that one approach can be to highlight major/mega industrial areas and develop interactive maps with economic development layers below it. FDOT (Ed) and FDOT (Keith) mentioned that it will be a major undertaking to maintain this information. HDR (Santanu) indicated commercially data sources are available for real-time updates, but DOR parcels will be useful for planning purposes.
- FDOT (Autumn) asked if the underlying layers used as part of this project will be accessible. HDR (Santanu) indicated that many datasets are proprietary and may not be accessible. FDOT (Joel) and HDR (Santanu) indicated that ArcGIS Online (AGOL)/Azure services can be used for hosting some of these layers and developing interactive visualizations.
- HDR (Santanu) indicated that commodity flow information will supplement the county and district freight profiles and support different Freight Mobility and Trade Plan (FMTP) implementation tasks.

Action Items

- Jerry/Mak to send the meeting notes and slide deck to stakeholders.
- Jerry/Mak will schedule the follow-up meeting with stakeholders in November.

Mak and Jerry will follow-up with Data Support team in CIM to use AGOL portal for publishing Department of Revenue parcel data and other supporting datasets.

STATEWIDE FREIGHT AND COMMODITY ANALYSIS

Stakeholder Meeting

Thursday, January 7, 2021

Agenda

- Motivation
- Objectives
- Scope of Services
- Deliverables
- Task Descriptions
- Project Timeline
- Preliminary Analysis
- Discussion

Agenda

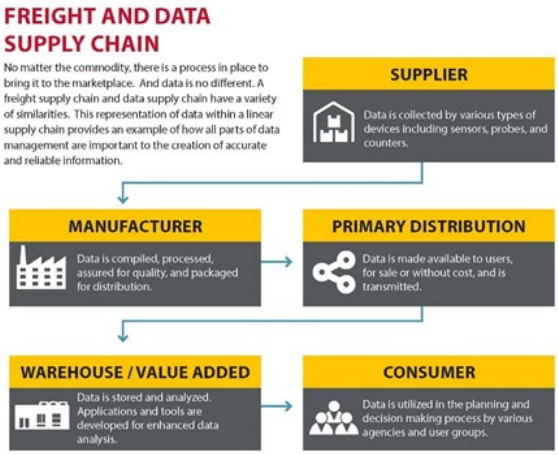
- Motivation
- Objectives
- Scope of Services
- Deliverables
- Task Descriptions
- Project Timeline
- Preliminary Analysis
- Discussion

Objectives

- Analyze IHS Global Commodity Flow data* to develop a statewide commodity flow profile.
- Develop a report summarizing the movement of freight and commodities across Florida's transportation system.

*No data is purchased for this project

Scope of Services



- Task 1 – Project Coordination Meetings
- Task 2 – Freight Data Analysis
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- Task 4 – Final Report

Deliverables

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  - Freight Logistics and Passenger Operations (FLP) Division
  - District Freight Coordinators (DFCs)
  - Systems Implementation Office
  - Others
- Interim Update Meetings
- FDOT freight data analysis requirements

Freight Data Analysis

- Modal movements that originate, terminate, or transit-in or through the state.
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- Methodology of statistical analysis.
- Data validations using highway truck counts.

Report Development

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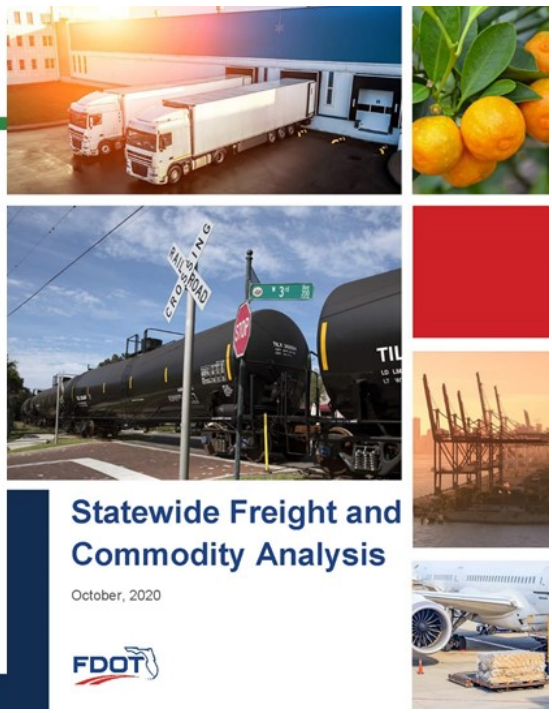
- Develop and provide state and county spatial representations of commodity flow analyses.
- Perform iterations of report designs based on feedback from FDOT.



Final Report

- Coordinate a final project closeout meeting with the FDOT task manager.
- Present the final report in a summarized presentation that will be shared publicly.
- Perform a webinar to present the final reports and its results.
- Develop Statewide commodity flow profile (infographic brochure).

Project Timeline

PROJECT ELEMENT	2020 Aug	Sep	Oct	Nov	Dec	2021 Jan
Task #1: Project Meetings and Coordination	COMPLETED IN 2019					
a. Kick-off meeting (12/20/19) *b. Deliverable: Meeting notes and presentation slides (12/30/19)*						
Task #2: Freight Data Analysis						
a. Interim Update Meetings *b. Deliverable: Technical Memorandum (10/23/20)*	★		★	★		
Task #3: Report Development						
a. Interim Update Meeting *b. Deliverable: Draft Report and Infographics (11/27/20)*				★ ★		
Task #4: Graphical Production of Analysis						
*a. Final Update Meeting** *b. Deliverable: Final Report and Infographics (12/11/20)*					★ ★	

PRELIMINARY DATA ANALYSIS

Data Overview and Description

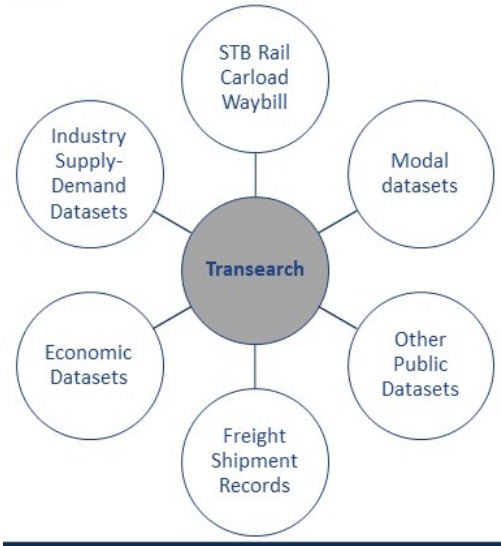
Preliminary Findings

Overview of TRANSEARCH Data

County-level freight-movement data:

- Produced by IHS Markit for base year 2018.
- Developed by combining information from public sources and data on primary shipments obtained from major freight carriers.
- Classified by:
  - Inbound, outbound, intrastate and through traffic.
  - Modes including truck, rail, water and air.
  - Tonnage, value and units (trucks and rail).
  - Commodity type – 35+ broad categories (400+ sub groups).
- Forecasted based on expected growth in output, employment and consumption factors within each county (2030 and 2045).

Base Year Dataset Preparation (2018)



- Establish market specific output volumes.
- Estimate value of production and consumption for each commodity at county level.
- Develop domestic production and consumption data.
- Identify modal volumes distribution.
- Add activity from NAFTA and Waybill data.
- Incorporate modal datasets and motor carrier exchange shipment records data.

Forecast Year Dataset Preparation (2030/2045)

Domestic Forecast:

- Domestic shipment volumes
- Purchased goods associated with commodity volumes
- Aggregate-level benchmark freight volumes for each commodity

International Forecast:

- Export and import data
- Export-import growth by county and commodity

Florida Summary – Tonnage/Value for 2018 and 2045

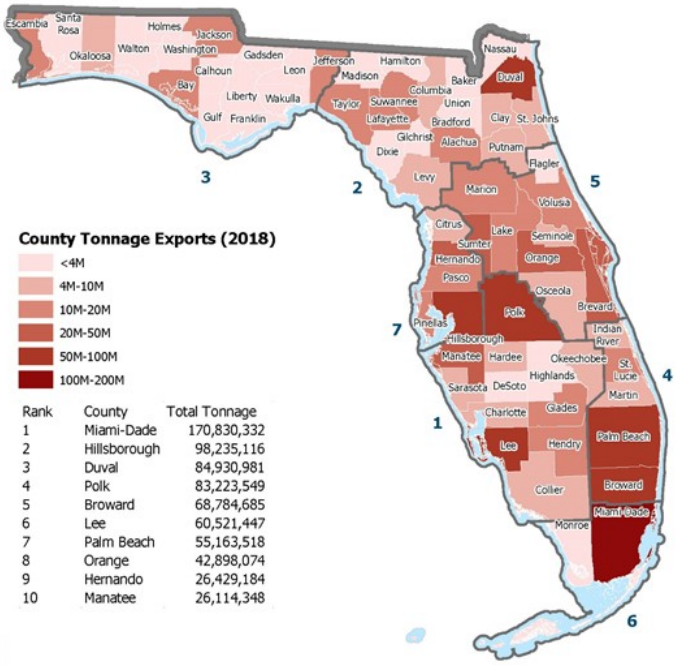
Mode	2018 Tonnage (Millions)	2045 Tonnage (Millions)	Percent Forecasted Growth	2018 Value** ($ Billions)	2045 Value** ($ Billions)	Percent Forecasted Growth
Truck	507.43	715.10	40.93%	535.72	853.92	59.40%
Rail	80.05	95.62	19.44%	115.97	146.68	26.48%
Water	52.42	53.45	1.96%	33.46	35.01	4.63%
Air	0.97	1.67	72.31%	125.25	227.06	81.29%
Other*	0.03	0.05	85.12%	0.11	0.19	76.51%
All Modes	**640.89**	**865.88**	**35.10%**	**810.50**	**1262.85**	**55.81%**

*Other includes Foreign Trade Zones and other modes.
** Value indexed to the same year as the data

County Exports

Top 10 Export Commodities (Lee County)

STCC 2 Commodity Description	Tonnage (2018)	Percent Total
Nonmetallic Minerals	45,246,909	74.76%
Clay, concrete, glass Or Stone	4,498,040	7.43%
Waste or Scrap Materials	4,273,668	7.06%
Petroleum or Coal Products	2,340,484	3.87%
Warehouse, Distribution Center and Drayage movements	2,315,944	3.83%
Lumber or Wood Products	610,387	1.01%
Food or Kindred Products	548,059	0.91%
Farm Products	279,798	0.46%
Chemicals or Allied Products	124,266	0.21%
Fabricated Metal Products	84,144	0.14%
Top 10 Commodities	60,321,700	99.67%
All Commodities	60,521,447	100%

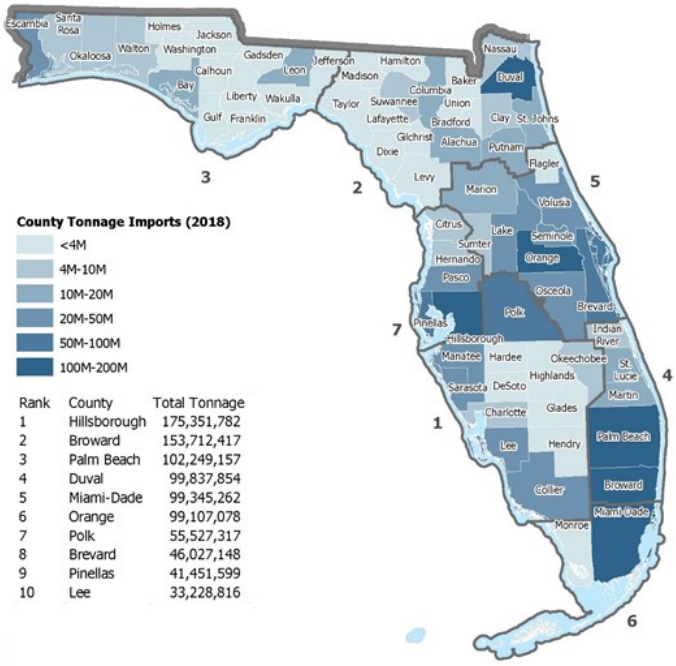


Rank	County	Total Tonnage
1	Miami-Dade	170,830,332
2	Hillsborough	98,235,116
3	Duval	84,930,981
4	Polk	83,223,549
5	Broward	68,784,685
6	Lee	60,521,447
7	Palm Beach	55,163,518
8	Orange	42,898,074
9	Hernando	26,429,184
10	Manatee	26,114,348

County Imports

Top 10 Import Commodities (Lee County)

STCC 2 Commodity Description	Tonnage (2018)	Percent Total
Nonmetallic Minerals	8,359,699	25.16%
Petroleum or Coal Products	5,326,590	16.03%
Clay, concrete, glass Or Stone	5,246,048	15.79%
Warehouse, Distribution Center and Drayage movements	5,073,546	15.27%
Food or Kindred Products	3,192,526	9.61%
Lumber or Wood Products	1,492,096	4.49%
Farm Products	950,697	2.86%
Chemicals or Allied Products	714,546	2.15%
Transportation Equipment	475,556	1.43%
Fabricated Metal Products	460,975	1.39%
Top 10 Commodities	31,292,277	94.17%
All Commodities	33,228,816	100.00%

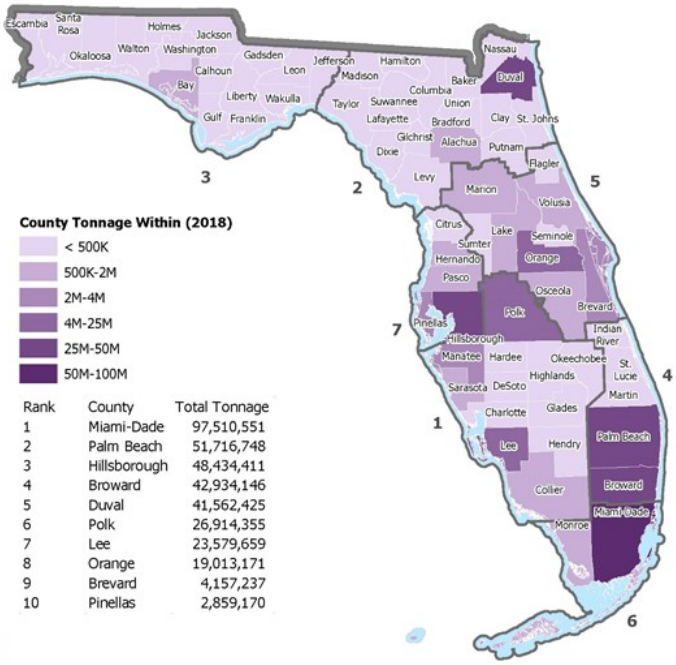


Rank	County	Total Tonnage
1	Hillsborough	175,351,782
2	Broward	153,712,417
3	Palm Beach	102,249,157
4	Duval	99,837,854
5	Miami-Dade	99,345,262
6	Orange	99,107,078
7	Polk	55,527,317
8	Brevard	46,027,148
9	Pinellas	41,451,599
10	Lee	33,228,816

Within County

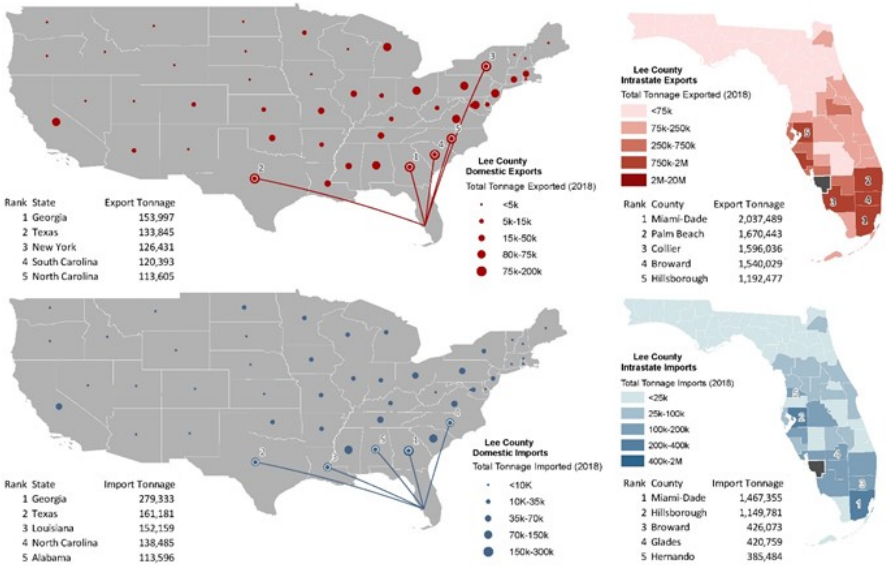
Top 10 Commodities within Lee County

STCC 2 Commodity Description	Tonnage (2018)	Percent Total
Nonmetallic Minerals	15,744,975	66.77%
Clay, concrete, glass Or Stone	6,263,330	26.56%
Petroleum or Coal Products	637,153	2.70%
Food or Kindred Products	268,772	1.14%
Waste or Scrap Materials	191,340	0.81%
Lumber or Wood Products	188,744	0.80%
Warehouse, Distribution Center and Drayage movements	177,152	0.75%
Fabricated Metal Products	28,666	0.12%
Chemicals or Allied Products	15,856	0.07%
Farm Products	15,454	0.07%
Top 10 Commodities	23,531,441	99.80%
All Commodities	23,579,659	100.00%



Rank	County	Total Tonnage
1	Miami-Dade	97,510,551
2	Palm Beach	51,716,748
3	Hillsborough	48,434,411
4	Broward	42,934,146
5	Duval	41,562,425
6	Polk	26,914,355
7	Lee	23,579,659
8	Orange	19,013,171
9	Brevard	4,157,237
10	Pinellas	2,859,170

Lee County Trading Partners (Example)



Rank	State	Export Tonnage
1	Georgia	153,997
2	Texas	133,845
3	New York	126,431
4	South Carolina	120,393
5	North Carolina	113,605

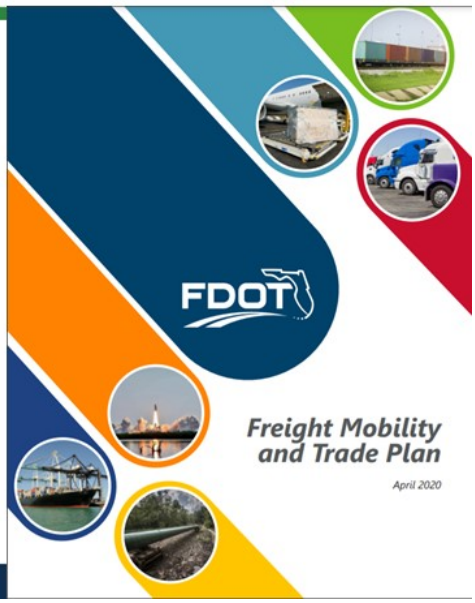
Rank	County	Export Tonnage
1	Miami-Dade	2,037,489
2	Palm Beach	1,670,443
3	Collier	1,596,036
4	Broward	1,540,029
5	Hillsborough	1,192,477

Rank	State	Import Tonnage
1	Georgia	279,333
2	Texas	161,181
3	Louisiana	152,159
4	North Carolina	138,485
5	Alabama	113,596

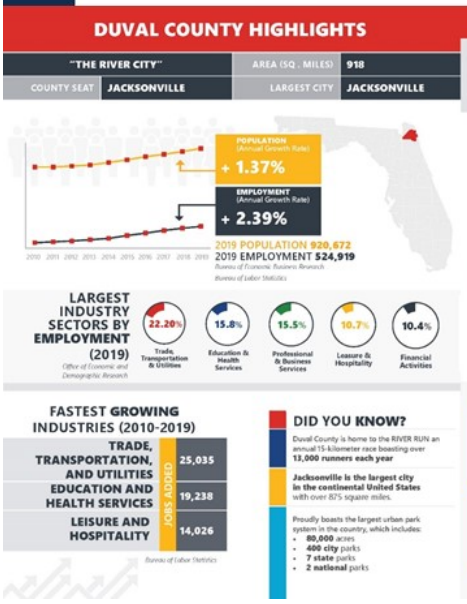
Rank	County	Import Tonnage
1	Miami-Dade	1,467,355
2	Hillsborough	1,149,781
3	Broward	426,073
4	Glades	420,759
5	Hernando	385,484

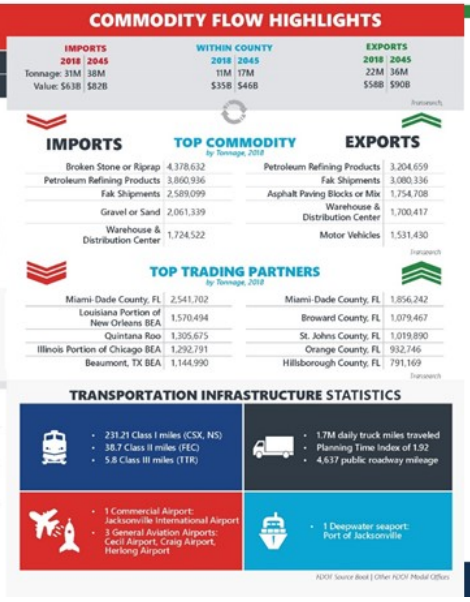
Potential Applications

- FMTP Updates
  - Implementation tasks
- County Freight Profiles
  - 67 counties and 7 districts
- DFC Initiatives
  - Support analysis
- Vital Few
  - Mobility metrics



County Freight Profiles





- Draft Template: Oct, 2020.
- Draft Brochures: Nov, 2020.
- Final Brochures: Dec, 2020.

Discussion

Contact Information

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Appendix B Standard Transportation Commodity Codes (STCC)

STCC	STCC Description	STCC	STCC Description
01	**Farm Products**	32 13	Laminated Safety Glass
01 1	Field Crops	32 2	Glassware, Pressed or Blown
01 12	Cotton, raw	32 21	Glass Containers
01 13	Grain	32 29	Misc. Glassware, blown or Pressed
01 14	Oil Kernels, Nuts or Seeds	32 4	Portland Cement
01 15	Field Seeds	32 41	Portland Cement
01 19	Misc. Field Crops	32 5	Structural Clay Products
01 2	Fresh Fruits or Tree Nuts	32 51	Clay Brick or Tile
01 21	Citrus Fruits	32 53	Ceramic Floor or Wall Tile
01 22	Deciduous Fruits	32 55	Refractories
01 23	Tropical Fruits	32 59	Misc. Structural Clay Products
01 29	Misc. Fresh Fruits or Tree Nuts	32 6	Pottery or Related Products
01 3	Fresh Vegetables	32 61	Vitreous China Plumbing Fixtures
01 31	Bulbs, roots or Tubers	32 62	Vitreous China Kitchen Articles
01 33	Leafy Fresh Vegetables	32 64	Porcelain Electric Supplies
01 34	Dry Ripe Vegetable Seeds	32 69	Misc. Pottery Products
01 39	Misc. Fresh Vegetables	32 7	Concrete, Gypsum, or Plaster
01 4	Livestock or Livestock Prod	32 71	Concrete Products
01 41	Livestock	32 73	Ready-mix Concrete, Wet
01 42	Dairy Farm Products	32 74	Lime or Lime Plaster
01 43	Animal Fibers	32 75	Gypsum Products
01 5	Poultry or Poultry Products	32 8	Cut Stone or Stone Products
01 51	Live Poultry	32 81	Cut Stone or Stone Products
01 52	Poultry Eggs	32 9	Abrasives, asbestos products, Etc.
01 9	Misc. Farm Products	32 91	Abrasive Products
01 91	Horticultural Specialties	32 92	Asbestos Products
01 92	Animal Specialties	32 93	Gaskets or Packing
01 99	Farm Prod, NEC	32 95	Nonmetal Minerals, Processed
08	**Forest Products**	32 96	Mineral Wool
08 4	Barks or Gums, crude	32 99	Misc. Nonmetallic Minerals
08 42	Barks or Gums, crude	**33**	**Primary Metal Products**
08 6	Misc. Forest Products	33 1	Steel Mill Products
08 61	Misc. Forest Products	33 11	Blast Furnace or Coke Oven Products
09	**Fresh Fish or Marine Products**	33 12	Primary Iron or Steel Products
09 1	Fresh Fish or Marine Products	33 13	Electrometallurgical Products
09 12	Fresh Fish or Whale Products	33 15	Steel Wire, Nails or Spikes
09 13	Marine Products	33 16	Cold Finishing Of Steel Shapes

09 8	Fish Hatcheries	33 2	Iron or Steel Forgings
09 89	Fish Hatcheries	33 21	Iron or Steel Castings
10	**Metallic Ores**	33 3	Nonferrous Primary Smelter Products
10 1	Iron Ores	33 31	Primary Copper Smelter Products
10 11	Iron Ores	33 32	Primary Lead Smelter Products
10 2	Copper Ores	33 33	Primary Zinc Smelter Products
10 21	Copper Ores	33 34	Primary Aluminum Smelter Products
10 3	Lead or Zinc Ores	33 39	Misc. Prim Nonferrous Smelter Products
10 31	Lead Ores	33 5	Nonferrous Metal Basic Shapes
10 32	Zinc Ores	33 51	Copper or Alloy Basic Shapes
10 33	Lead and Zinc Ores Combined	33 52	Aluminum or Alloy Basic Shapes
10 4	Gold or Silver Ores	33 56	Misc. Nonferrous Basic Shapes
10 41	Gold Ore	33 57	Nonferrous Wire
10 42	Silver Ore	33 6	Nonferrous Metal Castings
10 5	Bauxite or Other Alum Ores	33 61	Aluminum or Alloy Castings
10 51	Bauxite or Other Alum Ores	33 62	Copper or Alloy Castings
10 6	Manganese Ores	33 69	Misc. Nonferrous Castings
10 61	Manganese Ores	33 9	Misc. Primary Metal Products
10 7	Tungsten Ores	33 91	Iron or Steel Forgings
10 71	Tungsten Ores	33 92	Nonferrous Metal Forgings
10 8	Chromium Ores	33 99	Primary Metal Products, NEC
10 81	Chromium Ores	**34**	**Fabricated Metal Products**
10 9	Misc. Metal Ores	34 1	Metal Cans
10 92	Misc. Metal Ores	34 11	Metal Cans
11	**Coal**	34 2	Cutlery, Hand Tools or Hardware
11 1	Anthracite	34 21	Cutlery, not Electrical
11 11	Anthracite	34 23	Edge or Hand Tools
11 2	Bituminous Coal or Lignite	34 25	Hand Saws or Saw Blades
11 21	Bituminous Coal	34 28	Builders or Cabinet Hardware
11 22	Lignite	34 29	Misc. Hardware
13	**Crude Petrol. or Natural Gas**	34 3	Plumbing or Heating Fixtures
13 1	Crude Petrol. or Natural Gas	34 31	Metal Sanitary Ware
13 11	Crude Petroleum	34 32	Plumbing Fixtures
13 12	Natural Gas	34 33	Heating Equip, not Electrical
13 2	Natural Gasoline	34 4	Fabricated Structural Metal Products
13 21	Natural Gasoline	34 41	Fabricated Structural Metal Products
14	**Nonmetallic Minerals**	34 42	Metal Doors, Sash, Etc.
14 1	Dimension Stone, Quarry	34 43	Fabricated Plate Products
14 11	Dimension Stone, Quarry	34 44	Sheet Metal Products
14 2	Broken Stone or Riprap	34 46	Architectural Metal Work
14 21	Broken Stone or Riprap	34 49	Misc. Metal Work

14 4	Gravel or Sand	34 5	Bolts, Nuts, Screws, Etc.
14 41	Gravel or Sand	34 52	Bolts, Nuts, Screws, Etc.
14 5	Clay Ceramic or Refrac Minerals	34 6	Metal Stampings
14 51	Clay Ceramic or Refrac Minerals	34 61	Metal Stampings
14 7	Chemical or Fertilizer Minerals	34 8	Misc. Fabricated Wire Prod
14 71	Chemical or Fertilizer Minerals Crude	34 81	Misc. Fabricated Wire Products
14 9	Misc. Nonmetallic Minerals	34 9	Misc. Fabricated Metal Products
14 91	Misc. Nonmetallic Minerals, NEC	34 91	Metal Shipping Containers
14 92	Water	34 92	Metal Safes or Vaults
19	**Ordnance or Accessories**	34 93	Steel Springs
19 1	Guns, howitzers, mortars, Etc.	34 94	Valves or Pipe Fittings
19 11	Guns, howitzers, mortars, Etc.	34 99	Fabricated Metal Products, NEC
19 2	Ammo, Over 30mm	**35**	**Machinery**
19 25	Guided Missiles or Space Vehicle	35 1	Engines or Turbines
19 29	Ammo or Related Parts, NEC	35 11	Steam Engines, Turbines, Etc.
19 3	Tracked Combat Vehicle or Parts	35 19	Misc. Internal Combustion Engines
19 31	Tracked Combat Vehicle or Parts	35 2	Farm Machinery or Equipment
19 4	Military Fire Control Equipment	35 22	Farm Machinery or Equipment
19 41	Military Fire Control Equipment	35 23	Farm Machinery or Equipment
19 5	Small Arms,30mm or Less	35 24	Lawn or Garden Equipment
19 51	Small Arms,30mm or Less	35 3	Construction Machinery or Equipment
19 6	Small Arms Ammo,30mm or Less	35 31	Construction Machinery or Equipment
19 61	Small Arms Ammo,30mm or Less	35 32	Mining Machinery or Parts
19 9	Misc. Ordnance or Accessories	35 33	Oil Field Machinery or Equipment
19 91	Misc. Ordnance or Accessories	35 34	Elevators or Escalators
20	**Food or Kindred Products**	35 35	Conveyors or Parts
20 1	Meat or Poultry, Fresh or Chilled	35 36	Hoists, Industrial Cranes, Etc.
20 11	Meat, Fresh or Chilled	35 37	Industrial Trucks, Etc.
20 12	Meat, Fresh Frozen	35 4	Metalworking Machinery
20 13	Meat Products	35 41	Machine Tools, Metal Cutting
20 14	Animal By-prod, inedible	35 42	Machine Tools, Metal Forming
20 15	Dressed Poultry, Fresh	35 44	Special Dies, tools, jigs, etc.
20 16	Dressed Poultry, Frozen	35 45	Machine Tool Accessories
20 17	Processed Poultry or Eggs	35 48	Metalworking Machinery
20 2	Dairy Products	35 5	Special Industry Machinery
20 21	Creamery Butter	35 51	Food Prod Machinery
20 23	Condensed, Evap or Dry Milk	35 52	Textile Machinery or Parts
20 24	Ice Cream or Rel Frozen Desserts	35 53	Woodworking Machinery
20 25	Cheese or Special Dairy Products	35 54	Paper Industries Machinery
20 26	Processed Milk	35 55	Printing Trades Machinery

20 3	Canned or Preserved Food	35 59	Misc. Special Industry Mach
20 31	Canned or Cured Sea Foods	35 6	General Industrial Machinery
20 32	Canned Specialties	35 61	Industrial Pumps
20 33	Canned Fruits, vegetables, Etc.	35 62	Ball or Roller Bearings
20 34	Dehydrated or Dried Fruit or Veg	35 64	Ventilating Equipment
20 35	Pickled Fruits or Vegetables	35 66	Mechanical Power Transmission Equipment
20 36	Processed Fish Products	35 67	Industrial Process Furnaces
20 37	Frozen Fruit, Veg or Juice	35 69	Misc. General Industrial
20 38	Frozen Specialties	35 7	Office or Computing Machinery
20 39	Canned or Pres Food, Mixed	35 72	Typewriters or Parts
20 4	Grain Mill Products	35 73	Electronic Data Proc Equipment
20 41	Flour or Other Grain Mill Products	35 74	Accounting or Calculating Equipment
20 42	Prepared or Canned Feed	35 76	Scales or Balances
20 43	Cereal Preparations	35 79	Misc. Office Machines
20 44	Milled Rice, Flour or Meal	35 8	Service Industry Machines
20 45	Blended or Prepared Flour	35 81	Automatic Merchandising Machines
20 46	Wet Corn Milling or Milo	35 82	Commercial Laundry Equipment
20 47	Dog, cat or Other Pet Food, NEC	35 85	Refrigeration Machinery
20 5	Bakery Products	35 89	Misc. Service Industry Machinery
20 51	Bread or Other Bakery Prod	35 9	Misc. Machinery or Parts
20 52	Biscuits, Crackers or Pretzels	35 92	Carburetors, Pistons, Etc.
20 6	Sugar, Beet or Cane	35 99	Misc. Machinery or Parts
20 61	Sugar Mill Prod or By-prod	**36**	**Electrical Equipment**
20 62	Sugar, Refined, Cane or Beet	36 1	Electric Trans or Distributors
20 7	Confectionery or Rel Prod	36 11	Electric Measuring Instruments
20 71	Candy or Other Confectionery	36 12	Electrical Transformers
20 8	Beverages or Flavor Extracts	36 13	Switchgear or Switchboards
20 82	Malt Liquors	36 2	Industrial Electrical Equipment
20 83	Malt	36 21	Motors or Generators
20 84	Wine, brandy or Brandy Spirit	36 22	Industrial Controls or Parts
20 85	Distilled or Blended Liquors	36 23	Welding Apparatus
20 86	Soft Drinks or Mineral Water	36 24	Carbon Prod For Electric Uses
20 87	Misc. Flavoring Extracts	36 29	Misc. Electrical Industrial Equipment
20 9	Misc. Food Preparations	36 3	Household Appliances
20 91	Cottonseed Oil or By-prod	36 31	Household Cooking Equipment
20 92	Soybean Oil or By-products	36 32	Household Refrigerators
20 93	Nut or Veg Oils or By-products	36 33	Household Laundry Equipment
20 94	Marine Fats or Oils	36 34	Electric Housewares or Fans
20 95	Roasted or Instant Coffee	36 35	Household Vacuum Cleaners
20 96	Margarine, shortening, Etc.	36 36	Sewing Machines or Parts
20 97	Ice, Natural or Manufactured	36 39	Misc. Household Appliances

20 98	Macaroni, spaghetti, Etc.	36 4	Electric Lighting or Wire Equipment
20 99	Misc. Food Preparations, NEC	36 41	Electric Lamps
21	**Tobacco Products**	36 42	Lighting Fixtures
21 1	Cigarettes	36 43	Current Carrying Wiring Equipment
21 11	Cigarettes	36 44	Noncurrent Wiring Devices
21 2	Cigars	36 5	Radio or TV Receiving Sets
21 21	Cigars	36 51	Radio or TV Receiving Sets
21 3	Chewing or Smoking Tobacco	36 52	Phonograph Records
21 31	Chewing or Smoking Tobacco	36 6	Communication Equipment
21 4	Stemmed or Re-dried Tobacco	36 61	Telephone or Telegraph Equipment
21 41	Stemmed or Re-dried Tobacco	36 62	Radio or TV Transmitting Equipment
22	**Textile Mill Products**	36 7	Electronic Components
22 1	Cotton Broad-woven Fabrics	36 71	Electronic Tubes
22 11	Cotton Broad-woven Fabrics	36 74	Solid State Semiconductors
22 17	Cotton Broad-woven Fabrics	36 79	Misc. Electronic Components
22 2	Man-made or Silk Woven Fiber	36 9	Misc. Electrical Machinery
22 21	Man-made or Glass Woven Fiber	36 91	Storage Batteries or Plates
22 22	Silk-woven Fabrics	36 92	Primary Batteries
22 3	Wool Broad-woven Fabrics	36 93	X-ray Equipment
22 31	Wool Broad-woven Fabrics	36 94	Elec Equipment For Internal Combustion Engine
22 4	Narrow Fabrics	36 99	Electrical Equipment, NEC
22 41	Narrow Fabrics	**37**	**Transportation Equipment**
22 5	Knit Fabrics	37 1	Motor Vehicle or Equipment
22 51	Knit Fabrics	37 11	Motor Vehicles
22 7	Floor Coverings	37 12	Passenger Motor Car Bodies
22 71	Woven Carpets, mats or rugs	37 13	Motor Bus or Truck Bodies
22 72	Tufted Carpets, rugs or mats	37 14	Motor Vehicle Parts or Accessories
22 79	Carpets, mats or Rugs, NEC	37 15	Truck Trailers
22 8	Thread or Yarn	37 2	Aircraft or Parts
22 81	Yarn	37 21	Aircraft
22 84	Thread	37 22	Aircraft or Missile Engines
22 9	Misc. Textile Goods	37 23	Aircraft Propellers or Parts
22 91	Felt Goods	37 29	Misc. Aircraft Parts
22 92	Lace Goods	37 3	Ships or Boats
22 93	Paddings, upholstery Fill, etc.	37 32	Ships or Boats
22 94	Textile Waste, Processed	37 4	Railroad Equipment
22 95	Coated or Imprinted Fabric	37 41	Locomotives or Parts
22 96	Cord or Fabrics, industrial	37 42	Railroad Cars
22 97	Wool or Mohair	37 5	Motorcycles, Bicycles or Parts
22 98	Cordage or Twine	37 51	Motorcycles, Bicycles or Parts
22 99	Textile Goods, NEC	37 6	Missile or Space Vehicle Parts

23	**Apparel or Related Products**	37 69	Missile or Space Vehicle Parts
23 1	Men's or Boys Clothing	37 9	Misc. Transportation Equipment
23 11	Men's or Boys Clothing	37 91	Trailer Coaches
23 3	Women's or Children's Clothing	37 99	Transportation Equipment, NEC
23 31	Women's or Children's Clothing	**38**	**Instruments, Photo Equipment, Optical Equipment**
23 5	Caps, hats or Millinery	38 1	Engineering, Lab or Scientific Equipment
23 51	Millinery	38 11	Engineering, Lab or Scientific Equipment
23 52	Caps or Hats or Hat Bodies	38 2	Measuring or Controlling Equipment
23 7	Fur Goods	38 21	Mechanical Measuring or Control Equipment
23 71	Fur Goods	38 22	Automatic Temperature Controls
23 8	Misc. Apparel or Accessories	38 3	Optical Instruments or Lenses
23 81	Gloves, mittens or Linings	38 31	Optical Instruments or Lenses
23 84	Robes or Dressing Gowns	38 4	Medical or Dental Instruments
23 85	Raincoats or Other Rain Wear	38 41	Surgical or Medical Instruments
23 86	Leather Clothing	38 42	Orthopedic or Prosthetic Supplies
23 87	Apparel Belts	38 43	Dental Equipment or Supplies
23 89	Apparel, NEC	38 5	Ophthalmic or Opticians Goods
23 9	Misc. Finished Textile Goods	38 51	Ophthalmic or Opticians Goods
23 91	Curtains or Draperies	38 6	Photographic Equipment or Supplies
23 92	Textile House furnishings	38 61	Photographic Equipment or Supplies
23 93	Textile Bags	38 7	Watches, Clocks, Etc.
23 94	Canvas Products	38 71	Watches, Clocks, Etc.
23 95	Textile Products, pleated, Etc.	**39**	**Misc. Manufacturing Products**
23 96	Apparel Findings	39 1	Jewelry, Silverware, Etc.
23 99	Misc. Fabricated Textile Products	39 11	Jewelry, Precious Metal, Etc.
24	**Lumber or Wood Products**	39 14	Silverware or Plated Ware
24 1	Primary Forest Materials	39 3	Musical Instruments or Parts
24 11	Primary Forest Materials	39 31	Musical Instruments or Parts
24 2	Sawmill or Planing Mill Products	39 4	Toys, Amusement, Athletic Equipment
24 21	Lumber or Dimension Stock	39 41	Games or Toys
24 29	Misc. Sawmill or Planing Mill	39 42	Dolls or Stuffed Toys
24 3	Millwork or Prefab Wood Products	39 43	Children's Vehicle or Parts, NEC
24 31	Millwork or Cabinetwork	39 49	Sporting or Athletic Goods
24 32	Plywood or Veneer	39 5	Office or Art Materials
24 33	Prefab Wood Buildings	39 51	Pens or Parts
24 34	Kitchen Cabinets, wood	39 52	Pencils, crayons, or Artists Materials
24 39	Structural Wood Prod, NEC	39 53	Marking Devices
24 4	Wooden Containers	39 55	Carbon Paper or Inked Ribbons

24 41	Wood Cont. or Box Shooks	39 6	Costume Jewelry or Novelties
24 9	Miscellaneous Wood Products	39 61	Costume Jewelry or Novelties
24 91	Treated Wood Products	39 62	Feathers, Plumes, Etc.
24 92	Rattan or Bamboo Ware	39 63	Buttons
24 93	Lasts or Related Products	39 64	Apparel Fasteners
24 94	Cork Products	39 9	Misc. Manufactured Products
24 95	Hand Tool Handles	39 91	Brooms, Brushes, Etc.
24 96	Scaffolding Equip or Ladders	39 92	Linoleum or Other Coverings
24 97	Wooden Ware or Flatware	39 93	Signs or Advertising Displays
24 98	Wood Prod, NEC	39 94	Morticians Goods
24 99	Misc. Wood Products	39 96	Matches
25	**Furniture or Fixtures**	39 97	Furs, dressed or Dyed
25 1	Household or Office Furniture	39 99	Manufactured Prod, NEC
25 11	Benches, chairs, Stools	**40**	**Waste or Scrap Materials**
25 12	Tables or Desks	40 1	Ashes
25 13	Sofas, Couches, Etc.	40 11	Ashes
25 14	Buffets, China Closets, Etc.	40 2	Waste or Scrap
25 15	Bedsprings or Mattresses	40 21	Metal Scrap or Tailings
25 16	Beds, dressers, chests, Etc.	40 22	Textile Scrap or Sweepings
25 17	Cabinets or Cases	40 23	Wood Scrap or Waste
25 18	Children's Furniture	40 24	Paper Waste or Scrap
25 19	Household or Office Furniture, NEC	40 25	Chemical or Petroleum Waste
25 3	Public Building or Related Furniture	40 26	Rubber or Plastic Scrap
25 31	Public Building or Related Furniture	40 27	Stone, Clay or Glass Scrap
25 4	Lockers, partitions or Shelves	40 28	Leather Waste or Scrap
25 41	Wood Lockers, partitions, Etc.	40 29	Misc. Waste or Scrap
25 42	Metal Lockers, partitions, Etc.	**41**	**Misc. Freight Shipments**
25 5	Pallets	41 1	Misc. Freight Shipments
25 51	Pallets	41 11	Misc. Freight Shipments
25 9	Misc. Furniture or Fixtures	41 2	Special Commodities
25 91	Venetian Blinds, shades, Etc.	41 21	Special Commodities
25 99	Furniture or Fixtures, NEC	41 92	Special Commodities
26	**Pulp, paper or Allied Products**	**42**	**Shipping Containers**
26 1	Pulp or Pulp Mill Products	42 1	Shipping Containers
26 11	Pulp or Pulp Mill Products	42 11	Shipping Containers
26 2	Paper	42 2	Semi-trailers Returned Empty
26 21	Paper	42 21	Semi-trailers Returned Empty
26 3	Fiber, Paper or Pulpboard	42 3	Empty Equipment, Reverse Route
26 31	Fiber, Paper or Pulpboard	42 31	Empty Equipment, Reverse Route
26 4	Converted Paper or Ppbd Products	**43**	**Mail or Contract Traffic**
26 42	Envelopes	43 1	Mail and Express Traffic
26 43	Paper Bags	43 11	Mail and Express Traffic

26 44	Wallpaper	43 2	Other Contract Traffic
26 45	Die-cut Paper or Ppbd Products	43 21	Other Contract Traffic
26 46	Pressed or Molded Pulp Goods	**44**	**Freight Forwarder Traffic**
26 47	Sanitary Paper Products	44 1	Freight Forwarder Traffic
26 49	Misc. Converted Paper Products	44 11	Freight Forwarder Traffic
26 5	Containers or Boxes, paper	**45**	**Shipper Association Traffic**
26 51	Containers or Boxes, paper	45 1	Shipper Association Traffic
26 54	Sanitary Food Containers	45 11	Shipper Association Traffic
26 55	Fiber Cans, Drums or Tubes	**46**	**Misc. Mixed Shipments**
26 6	Paper or Building Board	46 1	FAK Shipments
26 61	Paper or Building Board	46 11	FAK Shipments
27	**Printed Matter**	46 2	Mixed Shipments, Multi-STCC
27 1	Newspapers	46 21	Mixed Shipments, Multi-STCC
27 11	Newspapers	**47**	**Small Packaged Freight Shipments**
27 2	Periodicals	47 1	Small Packaged Freight Shipments
27 21	Periodicals	47 11	Small Packaged Freight Shipments
27 3	Books	48 04	Waste Nonflammable Compressed Gases
27 31	Books	48 05	Waste Flammable Compressed Gases
27 4	Misc. Printed Matter	48 07	Waste Flammable Liquids
27 41	Misc. Printed Matter	48 08	Waste Flammable Liquids
27 6	Manifold Business Forms	48 09	Waste Flammable Liquids
27 61	Manifold Business Forms	48 10	Waste Flammable Liquids, Misc.
27 7	Greeting Cards, Seals, Etc.	48 12	Flammable Liquids
27 71	Greeting Cards, Seals, Etc.	48 13	Waste Combustible Liquids
27 8	Blankbook, Loose Leaf Binder	48 14	Combustible Liquids
27 81	Blankbook, Loose Leaf Binder	48 15	Waste Combustible Liquids
27 9	Svc Indus For Print Trades	48 16	Waste Flammable Solids
27 91	Svc Indus For Print Trades	48 17	Waste Flammable Solids
28	**Chemicals or Allied Products**	48 18	Waste Oxidizing Materials
28 1	Industrial Chemicals	48 20	Waste Poisonous Liquids
28 11	Ind, Inorg, or Org Chemicals	48 21	Waste Poison B, Organic
28 12	Potassium or Sodium Compound	48 23	Waste Poisonous Materials
28 13	Industrial Gases	48 25	Waste Etiologic Agents
28 14	Crude Prod Of Coal, gas, petroleum	48 29	Waste Radioactive Materials
28 15	Cyclic Intermediates or Dyes	48 30	Waste Corrosive Materials
28 16	Inorganic Pigments	48 31	Waste Corrosive Materials
28 18	Misc. Industrial Organic Chemicals	48 32	Waste Corrosive Materials
28 19	Misc. Indus Inorganic Chemicals	48 35	Waste Corrosive Materials
28 2	Plastic Mater or Synth Fibers	48 36	Waste Corrosive Materials

28 21	Plastic Mater or Synth Fibers	48 45	Waste Other Regulated Materials, Group C
28 3	Drugs	48 50	Freight All Kinds, Hazardous Wastes
28 31	Drugs	48 60	Waste Other Regulated Materials Group E
28 4	Soap or Other Detergents	48 61	Waste Miscellaneous Hazardous Materials
28 41	Soap or Other Detergents	48 62	Waste Misc. Hazardous Materials
28 42	Specialty Cleaning Preparations	48 63	Waste Miscellaneous Hazardous Materials
28 43	Surface Active Agents	48 66	Waste Miscellaneous Hazardous Materials
28 44	Cosmetics, perfumes, Etc.	48 70	Hazardous Waste, N.O.S.
28 5	Paints, Lacquers, Etc.	48 75	Waste Stream Other Regulated
28 51	Paints, Lacquers, Etc.	**49**	**Hazardous Materials**
28 6	Gum or Wood Chemicals	49 01	Ammunition & Class A Explosives
28 61	Gum or Wood Chemicals	49 02	Class B Explosives
28 7	Agricultural Chemicals	49 03	Class C Explosives
28 71	Fertilizers	49 04	Non Flammable Compressed Gases
28 79	Misc. Agricultural Chemicals	49 05	Flammable Compressed Gases
28 9	Misc. Chemical Products	49 06	Flammable Liquids
28 91	Adhesives	49 07	Flammable Liquids
28 92	Explosives	49 08	Flammable Liquids
28 93	Printing Ink	49 09	Flammable Liquids
28 99	Chemical Preparations, NEC	49 10	Flammable Liquids
29	**Petroleum or Coal Products**	49 12	Combustible Liquids
29 1	Prod Of Petroleum Refining	49 13	Combustible Liquids
29 11	Petroleum Refining Products	49 14	Combustible Liquids
29 12	Liquefied Gases, Coal or Petroleum	49 15	Combustible Liquids
29 5	Paving or Roofing Materials	49 16	Combustible Solids
29 51	Asphalt Paving Blocks or Mix	49 17	Flammable Solids
29 52	Asphalt Coatings or Felt	49 18	Oxidizing Materials
29 9	Misc. Coal or Petroleum Products	49 19	Organic Peroxides
29 91	Misc. Coal or Petroleum Products	49 20	Poisons A
30	**Rubber or Misc. Plastics**	49 21	Poisons B, organic
30 1	Tires or Inner Tubes	49 23	Poisons B, inorganic
30 11	Tires or Inner Tubes	49 25	Irritating Materials - Etiologic Agents
30 2	Rubber or Plastic Footwear	49 26	Radioactive Materials
30 21	Rubber or Plastic Footwear	49 27	Radioactive Materials, Fissile Cl Iii
30 3	Reclaimed Rubber	49 28	Radioactive Materials, Fissile Cl Ii
30 31	Reclaimed Rubber	49 29	Radioactive Materials, Fissile Cl I
30 4	Rubber or Plastic Hose or Belting	49 30	Corrosive Materials
30 41	Rubber or Plastic Hose or Belting	49 31	Corrosive Materials

30 6	Misc. Fabricated Products	49 32	Corrosive Materials
30 61	Misc. Fabricated Products	49 33	Corrosive Materials
30 7	Misc. Plastic Products	49 34	Corrosive Materials
30 71	Misc. Plastic Products	49 35	Corrosive Materials
30 72	Misc. Plastic Products	49 36	Corrosive Materials
31	**Leather or Leather Products**	49 40	Other Regulated Materials Group A
31 1	Leather	49 41	Other Regulated Materials Group A
31 11	Leather, finished or Tanned	49 44	Other Regulated Materials Group B
31 2	Industrial Leather Belting	49 45	Other Regulated Material
31 21	Industrial Leather Belting	49 50	Mixed Loads
31 3	Boot or Shoe Cut Stock	49 60	Division 9 Environmentally Hazardous
31 31	Boot or Shoe Cut Stock	49 61	Other Regulated Materials Group E
31 4	Leather Footwear	49 62	Other Regulated Materials Group E
31 41	Leather Footwear	49 63	Other Regulated Materials Group E
31 42	Leather House Slippers	49 66	Other Regulated Materials Group E
31 5	Leather Gloves or Mittens	**50**	**Secondary Traffic**
31 51	Leather Gloves or Mittens	50 1	Warehouse & Distribution Center
31 6	Leather Luggage or Handbags	50 2	Rail Intermodal Drayage
31 61	Leather Luggage or Handbags	50 21	Rail Intermodal Drayage to Ramp
31 9	Leather Goods, NEC	50 22	Rail Intermodal Drayage from Ramp
31 99	Leather Goods, NEC	50 3	Air Freight Drayage
32	**Clay, concrete, glass or stone**	50 31	Air Freight Drayage to Airport
32 1	Flat Glass	50 32	Air Freight Drayage from Airport
32 11	Flat Glass	**60**	**Unclassified**

Appendix C Modal Shares by County

County	Mode	Tonnage		Value	
		2018	2045	2018	2045
Alachua	Truck	89.73%	91.42%	96.68%	96.48%
	Rail	10.26%	8.57%	3.20%	3.37%
	Water	-	-	-	-
	Air	0.00%	0.00%	0.08%	0.10%
	Other	0.00%	0.01%	0.04%	0.06%
Baker	Truck	77.20%	77.12%	59.90%	59.58%
	Rail	22.80%	22.87%	40.09%	40.40%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.01%	0.02%	0.03%
Bay	Truck	70.14%	76.57%	74.88%	76.92%
	Rail	22.27%	16.84%	14.28%	13.97%
	Water	7.59%	6.59%	10.73%	9.01%
	Air	0.00%	0.00%	0.11%	0.09%
	Other	0.00%	0.00%	0.01%	0.01%
Bradford	Truck	74.76%	77.65%	39.73%	51.33%
	Rail	25.23%	22.35%	60.27%	48.66%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.02%
Brevard	Truck	67.53%	73.48%	90.39%	93.56%
	Rail	20.60%	17.70%	2.82%	2.36%
	Water	11.86%	8.82%	6.22%	3.59%
	Air	0.00%	0.00%	0.56%	0.49%
	Other	0.00%	0.00%	0.01%	0.01%
Broward	Truck	76.92%	81.55%	75.53%	77.10%
	Rail	4.61%	4.74%	6.35%	7.06%
	Water	18.35%	13.57%	8.53%	6.79%
	Air	0.13%	0.14%	9.57%	9.03%
	Other	0.00%	0.00%	0.01%	0.01%
Calhoun	Truck	100.00%	100.00%	100.00%	100.00%
	Rail	-	-	-	-
	Water	-	-	-	-
	Air	-	-	-	-
	Other	-	-	-	-
Charlotte	Truck	99.97%	99.94%	99.74%	99.55%
	Rail	0.03%	0.06%	0.26%	0.44%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.00%	0.00%

County	Mode	Tonnage		Value	
		2018	2045	2018	2045
Citrus	Truck	72.82%	88.35%	95.58%	98.41%
	Rail	0.04%	0.05%	0.39%	0.68%
	Water	27.15%	11.60%	4.03%	0.91%
	Air	-	-	-	-
	Other	0.00%	0.00%	0.00%	0.00%
Clay	Truck	91.63%	94.36%	99.57%	99.63%
	Rail	8.35%	5.62%	0.40%	0.33%
	Water	0.01%	0.01%	0.01%	0.01%
	Air	-	-	-	-
	Other	0.00%	0.01%	0.02%	0.04%
Collier	Truck	99.97%	99.96%	99.80%	99.76%
	Rail	0.03%	0.04%	0.19%	0.24%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.00%	0.00%
Columbia	Truck	76.49%	78.92%	74.18%	77.03%
	Rail	23.49%	21.06%	25.76%	22.90%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.02%	0.02%	0.06%	0.07%
DeSoto	Truck	100.00%	100.00%	99.98%	99.96%
	Rail	0.00%	0.00%	0.02%	0.04%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	-	-	-	-
Dixie	Truck	99.96%	100.00%	99.96%	99.98%
	Rail	0.04%	0.00%	0.03%	0.00%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.02%
Duval	Truck	66.66%	71.09%	55.53%	59.52%
	Rail	23.12%	20.33%	33.69%	29.97%
	Water	10.10%	8.47%	4.17%	3.84%
	Air	0.12%	0.11%	6.60%	6.66%
	Other	0.00%	0.00%	0.00%	0.01%
Escambia	Truck	62.86%	69.29%	69.13%	70.90%
	Rail	16.14%	17.33%	16.75%	16.61%
	Water	20.91%	13.27%	6.40%	5.22%
	Air	0.08%	0.10%	7.70%	7.25%
	Other	0.01%	0.01%	0.01%	0.02%
Flagler	Truck	92.48%	93.89%	97.46%	97.25%
	Rail	7.52%	6.11%	2.50%	2.73%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.03%	0.02%

County	Mode	Tonnage		Value	
		2018	2045	2018	2045
Franklin	Truck	99.99%	99.99%	99.98%	99.99%
	Rail	-	-	-	-
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.01%	0.01%	0.02%	0.01%
Gadsden	Truck	83.09%	85.58%	97.44%	97.54%
	Rail	16.91%	14.42%	2.55%	2.44%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.02%
Gilchrist	Truck	99.88%	99.80%	99.95%	99.90%
	Rail	0.12%	0.20%	0.04%	0.08%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.02%
Glades	Truck	99.98%	99.97%	99.79%	99.75%
	Rail	0.02%	0.03%	0.20%	0.23%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.02%
Gulf	Truck	99.99%	99.99%	99.97%	99.95%
	Rail	-	-	-	-
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.01%	0.01%	0.03%	0.05%
Hamilton	Truck	49.76%	43.53%	64.05%	61.73%
	Rail	50.23%	56.46%	35.94%	38.27%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.00%	0.00%
Hardee	Truck	46.27%	36.63%	81.82%	78.36%
	Rail	53.73%	63.37%	18.18%	21.64%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	-	-	-	-
Hendry	Truck	92.55%	89.71%	78.56%	76.41%
	Rail	7.45%	10.28%	21.44%	23.59%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.00%	0.00%
Hernando	Truck	97.22%	96.13%	98.04%	98.53%
	Rail	2.78%	3.87%	1.96%	1.47%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	-	-	-	-

County	Mode	Tonnage		Value	
		2018	2045	2018	2045
Highlands	Truck	96.42%	95.94%	97.15%	97.04%
	Rail	3.58%	4.06%	2.85%	2.96%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.00%	0.00%
Hillsborough	Truck	64.39%	72.48%	45.84%	43.95%
	Rail	12.47%	11.43%	8.13%	6.75%
	Water	22.91%	15.77%	12.12%	5.00%
	Air	0.22%	0.32%	33.91%	44.29%
	Other	0.01%	0.01%	0.01%	0.01%
Holmes	Truck	99.90%	99.84%	99.98%	99.98%
	Rail	0.10%	0.16%	0.02%	0.02%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	-	-	-	-
Indian River	Truck	95.27%	96.31%	94.08%	91.74%
	Rail	4.73%	3.69%	5.91%	8.25%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.01%
Jackson	Truck	81.61%	83.68%	89.73%	89.21%
	Rail	18.39%	16.32%	10.26%	10.78%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.01%
Jefferson	Truck	100.00%	100.00%	99.98%	99.95%
	Rail	-	-	-	-
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.02%	0.05%
Lafayette	Truck	99.98%	99.97%	99.94%	99.84%
	Rail	0.02%	0.03%	0.06%	0.16%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	-	-	-	-
Lake	Truck	99.29%	99.01%	99.17%	98.84%
	Rail	0.70%	0.98%	0.82%	1.15%
	Water	0.00%	0.00%	0.00%	0.00%
	Air	-	-	-	-
	Other	0.00%	0.00%	0.00%	0.00%
Lee	Truck	99.67%	99.73%	84.39%	83.24%
	Rail	0.28%	0.21%	0.50%	0.56%
	Water	0.00%	0.00%	0.00%	0.00%
	Air	0.05%	0.06%	15.10%	16.18%
	Other	0.00%	0.00%	0.01%	0.01%

County	Mode	Tonnage		Value	
		2018	2045	2018	2045
Leon	Truck	99.53%	99.59%	47.47%	73.55%
	Rail	0.23%	0.12%	40.54%	0.21%
	Water	-	-	-	-
	Air	0.24%	0.27%	11.98%	26.22%
	Other	0.00%	0.01%	0.01%	0.02%
Levy	Truck	99.97%	99.94%	99.68%	99.22%
	Rail	0.03%	0.06%	0.21%	0.58%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.11%	0.20%
Liberty	Truck	98.40%	97.13%	97.58%	96.56%
	Rail	1.60%	2.87%	2.42%	3.44%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	-	-	-	-
Madison	Truck	99.27%	99.34%	99.62%	99.70%
	Rail	0.72%	0.65%	0.36%	0.28%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.01%	0.01%	0.01%	0.02%
Manatee	Truck	81.57%	83.27%	82.08%	84.92%
	Rail	5.69%	5.69%	6.74%	7.34%
	Water	12.73%	11.03%	10.37%	6.85%
	Air	0.00%	0.00%	0.80%	0.87%
	Other	0.00%	0.00%	0.02%	0.02%
Marion	Truck	99.09%	98.93%	98.17%	97.87%
	Rail	0.91%	1.06%	1.01%	1.40%
	Water	-	-	-	-
	Air	0.00%	0.00%	0.76%	0.64%
	Other	0.00%	0.01%	0.06%	0.09%
Martin	Truck	91.35%	91.40%	97.90%	97.95%
	Rail	8.64%	8.59%	2.09%	2.04%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.01%
Miami-Dade	Truck	86.26%	86.71%	59.82%	56.83%
	Rail	13.22%	12.68%	13.26%	12.35%
	Water	0.18%	0.20%	0.13%	0.16%
	Air	0.33%	0.41%	26.78%	30.65%
	Other	0.00%	0.00%	0.01%	0.01%
Monroe	Truck	98.96%	98.97%	94.19%	92.45%
	Rail	0.23%	0.12%	0.33%	0.44%
	Water	0.77%	0.87%	1.02%	2.89%
	Air	0.04%	0.04%	4.47%	4.22%
	Other	0.00%	0.00%	0.00%	0.00%

County	Mode	Tonnage		Value	
		2018	2045	2018	2045
Nassau	Truck	84.55%	88.26%	80.95%	85.89%
	Rail	13.00%	10.03%	17.61%	13.14%
	Water	2.44%	1.71%	1.43%	0.95%
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.02%
Okaloosa	Truck	87.36%	91.46%	91.40%	93.66%
	Rail	1.43%	1.27%	0.21%	0.38%
	Water	11.21%	7.26%	8.28%	5.80%
	Air	0.00%	0.00%	0.09%	0.12%
	Other	0.00%	0.01%	0.02%	0.03%
Okeechobee	Truck	94.65%	95.63%	94.41%	95.29%
	Rail	5.32%	4.34%	5.53%	4.63%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.03%	0.03%	0.07%	0.07%
Orange	Truck	88.56%	93.07%	61.50%	63.39%
	Rail	11.01%	6.37%	11.18%	4.02%
	Water	-	-	-	-
	Air	0.43%	0.56%	27.31%	32.58%
	Other	0.00%	0.00%	0.01%	0.01%
Osceola	Truck	98.18%	99.36%	96.58%	98.69%
	Rail	1.81%	0.64%	3.41%	1.30%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.01%	0.00%	0.01%	0.01%
Palm Beach	Truck	97.02%	96.85%	83.04%	84.06%
	Rail	1.95%	1.71%	10.20%	7.62%
	Water	0.99%	1.38%	0.68%	1.12%
	Air	0.04%	0.05%	6.06%	7.19%
	Other	0.00%	0.00%	0.01%	0.01%
Pasco	Truck	98.36%	98.49%	99.22%	99.08%
	Rail	1.64%	1.51%	0.77%	0.91%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.00%
Pinellas	Truck	98.35%	98.33%	99.52%	99.40%
	Rail	1.60%	1.64%	0.30%	0.38%
	Water	0.05%	0.03%	0.04%	0.05%
	Air	0.00%	0.00%	0.13%	0.15%
	Other	0.00%	0.00%	0.02%	0.02%
Polk	Truck	56.73%	60.91%	63.93%	66.50%
	Rail	43.27%	39.08%	36.05%	33.48%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.01%	0.02%	0.02%

County	Mode	Tonnage		Value	
		2018	2045	2018	2045
Putnam	Truck	50.20%	72.42%	55.11%	58.43%
	Rail	37.78%	15.72%	14.04%	18.26%
	Water	12.02%	11.86%	30.85%	23.30%
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.01%
Santa Rosa	Truck	84.13%	84.84%	88.71%	88.60%
	Rail	15.44%	14.74%	11.01%	11.11%
	Water	0.43%	0.42%	0.25%	0.24%
	Air	-	-	-	-
	Other	0.00%	0.01%	0.03%	0.05%
Sarasota	Truck	99.81%	99.73%	99.33%	99.15%
	Rail	0.19%	0.27%	0.67%	0.85%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.00%	0.00%
Seminole	Truck	95.16%	94.32%	97.36%	96.50%
	Rail	4.83%	5.67%	2.58%	3.44%
	Water	0.01%	0.00%	0.00%	0.00%
	Air	0.00%	0.00%	0.00%	0.00%
	Other	0.00%	0.00%	0.05%	0.05%
St. Johns	Truck	94.23%	94.98%	99.12%	99.17%
	Rail	5.77%	5.01%	0.86%	0.79%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.01%	0.01%	0.03%	0.03%
St. Lucie	Truck	77.75%	81.96%	72.76%	70.32%
	Rail	22.24%	18.03%	27.21%	29.65%
	Water	0.00%	0.00%	0.01%	0.01%
	Air	0.00%	0.00%	0.01%	0.01%
	Other	0.01%	0.01%	0.02%	0.02%
Sumter	Truck	86.11%	92.50%	93.09%	91.67%
	Rail	13.89%	7.49%	6.90%	8.32%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.01%	0.01%
Suwannee	Truck	96.13%	96.63%	98.41%	98.39%
	Rail	3.86%	3.36%	1.56%	1.58%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.01%	0.01%	0.03%	0.04%
Taylor	Truck	95.46%	96.45%	92.78%	93.93%
	Rail	4.54%	3.55%	7.22%	6.06%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.00%	0.00%	0.00%	0.01%

County	Mode	Tonnage		Value	
		2018	2045	2018	2045
Union	Truck	99.63%	99.44%	99.49%	99.19%
	Rail	0.32%	0.49%	0.43%	0.67%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	0.04%	0.07%	0.08%	0.13%
Volusia	Truck	90.83%	91.56%	98.97%	98.84%
	Rail	9.17%	8.44%	0.78%	0.92%
	Water	0.00%	0.00%	0.00%	0.00%
	Air	0.00%	0.00%	0.20%	0.19%
	Other	0.00%	0.00%	0.05%	0.05%
Wakulla	Truck	87.35%	94.25%	95.10%	97.80%
	Rail	0.07%	0.14%	0.02%	0.04%
	Water	12.58%	5.61%	4.86%	2.13%
	Air	-	-	-	-
	Other	0.00%	0.01%	0.02%	0.03%
Walton	Truck	76.32%	81.12%	80.14%	88.52%
	Rail	11.93%	10.70%	0.47%	0.45%
	Water	11.74%	8.17%	19.36%	10.99%
	Air	-	-	-	-
	Other	0.00%	0.01%	0.02%	0.04%
Washington	Truck	99.92%	99.86%	99.94%	99.87%
	Rail	0.08%	0.14%	0.06%	0.13%
	Water	-	-	-	-
	Air	-	-	-	-
	Other	-	-	-	-

Appendix D Top 5 County Import and Top 5 County Export Commodities

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
Alachua	Nonmetallic Minerals	1,480,755	Petroleum or Coal Products	756,140
	Clay, Concrete, Glass, Stone	802,226	Nonmetallic Minerals	598,092
	Warehouse, Distribution Center and Drayage movements	509,035	Warehouse, Distribution Center and Drayage movements	515,082
	Waste or Scrap Materials	223,533	Clay, Concrete, Glass, Stone	511,885
	Farm Products	128,180	Waste or Scrap Materials	502,363
	Lumber or Wood Products	28,680	Petroleum or Coal Products	51,623
Baker	Farm Products	17,964	Primary Metal Products	48,360
	Waste or Scrap Materials	12,389	Warehouse, Distribution Center and Drayage movements	29,632
	Warehouse, Distribution Center and Drayage movements	3,757	Clay, Concrete, Glass, Stone	23,002
	Primary Metal Products	2,503	Nonmetallic Minerals	18,823
	Pulp, Paper or Allied Products	803,162	Lumber or Wood Products	1,633,630
	Warehouse, Distribution Center and Drayage movements	717,864	Petroleum or Coal Products	652,947
Bay	Primary Metal Products	468,701	Nonmetallic Minerals	614,410
	Waste or Scrap Materials	327,061	Pulp, Paper or Allied Products	339,442
	Lumber or Wood Products	221,917	Warehouse, Distribution Center and Drayage movements	315,886
	Lumber or Wood Products	135,573	Petroleum or Coal Products	58,533
	Metallic Ores	103,397	Clay, Concrete, Glass, Stone	45,732
	Food or Kindred Products	99,905	Warehouse, Distribution Center and Drayage movements	39,744
Bradford	Warehouse, Distribution Center and Drayage movements	47,254	Nonmetallic Minerals	29,257
	Nonmetallic Minerals	25,760	Lumber or Wood Products	9,991
	Clay, Concrete, Glass, Stone	1,088,929	Nonmetallic Minerals	5,154,310
	Petroleum or Coal Products	1,061,343	Petroleum or Coal Products	2,113,174

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Nonmetallic Minerals	944,800	Warehouse, Distribution Center and Drayage movements	1,644,359
	Waste or Scrap Materials	905,663	Clay, Concrete, Glass, Stone	1,189,986
Brevard	Warehouse, Distribution Center and Drayage movements	776,413	Food or Kindred Products	662,823
	Clay, Concrete, Glass, Stone	3,760,774	Petroleum or Coal Products	14,840,473
	Petroleum or Coal Products	3,736,950	Nonmetallic Minerals	10,134,093
	Warehouse, Distribution Center and Drayage movements	3,699,185	Warehouse, Distribution Center and Drayage movements	4,674,617
	Waste or Scrap Materials	2,088,853	Clay, Concrete, Glass, Stone	4,093,881
	Farm Products	774,967	Food or Kindred Products	2,367,240
Broward	Lumber or Wood Products	127,548	Petroleum or Coal Products	25,542
	Farm Products	20,949	Clay, Concrete, Glass, Stone	18,607
	Waste or Scrap Materials	3,832	Lumber or Wood Products	15,385
	Warehouse, Distribution Center and Drayage movements	3,516	Warehouse, Distribution Center and Drayage movements	13,559
	Chemicals or Allied Products	2,003	Nonmetallic Minerals	9,665
	Nonmetallic Minerals	1,302,087	Nonmetallic Minerals	656,331
Calhoun	Clay, Concrete, Glass, Stone	291,177	Clay, Concrete, Glass, Stone	352,142
	Waste or Scrap Materials	174,958	Petroleum or Coal Products	333,031
	Farm Products	68,882	Warehouse, Distribution Center and Drayage movements	261,842
	Petroleum or Coal Products	18,787	Food or Kindred Products	126,270
	Nonmetallic Minerals	3,184,425	Coal	1,252,167
	Clay, Concrete, Glass, Stone	516,317	Nonmetallic Minerals	665,794
Charlotte	Petroleum or Coal Products	112,349	Clay, Concrete, Glass, Stone	253,878
	Waste or Scrap Materials	111,305	Petroleum or Coal Products	236,500
	Lumber or Wood Products	39,838	Warehouse, Distribution Center and Drayage movements	183,363
	Clay, Concrete, Glass, Stone	538,214	Nonmetallic Minerals	605,492
	Nonmetallic Minerals	348,817	Warehouse, Distribution Center and Drayage movements	356,731
	Waste or Scrap Materials	177,526	Petroleum or Coal Products	346,699
	Lumber or Wood Products	126,273	Clay, Concrete, Glass, Stone	326,102

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
Charlotte	Petroleum or Coal Products	52,481	Food or Kindred Products	142,263
	Waste or Scrap Materials	766,312	Nonmetallic Minerals	2,167,750
	Warehouse, Distribution Center and Drayage movements	458,441	Petroleum or Coal Products	1,196,055
	Clay, Concrete, Glass, Stone	348,201	Warehouse, Distribution Center and Drayage movements	1,113,519
	Petroleum or Coal Products	346,824	Food or Kindred Products	603,382
Citrus	Nonmetallic Minerals	185,040	Clay, Concrete, Glass, Stone	529,252
	Clay, Concrete, Glass, Stone	1,414,289	Nonmetallic Minerals	1,932,131
	Lumber or Wood Products	293,625	Clay, Concrete, Glass, Stone	299,635
	Chemicals or Allied Products	277,344	Farm Products	206,246
	Food or Kindred Products	211,252	Food or Kindred Products	185,571
	Warehouse, Distribution Center and Drayage movements	149,034	Petroleum or Coal Products	171,382
Clay	Farm Products	350,079	Nonmetallic Minerals	401,213
	Clay, Concrete, Glass, Stone	102,566	Waste or Scrap Materials	258,462
	Lumber or Wood Products	70,020	Clay, Concrete, Glass, Stone	113,995
	Food or Kindred Products	65,056	Petroleum or Coal Products	82,754
	Waste or Scrap Materials	25,798	Warehouse, Distribution Center and Drayage movements	53,074
	Lumber or Wood Products	486,031	Lumber or Wood Products	189,649
Collier	Farm Products	12,335	Petroleum or Coal Products	24,032
	Waste or Scrap Materials	10,685	Warehouse, Distribution Center and Drayage movements	16,273
	Warehouse, Distribution Center and Drayage movements	3,230	Nonmetallic Minerals	10,687
	Forest Products	703	Clay, Concrete, Glass, Stone	8,657
	Petroleum or Coal Products	5,321,309	Nonmetallic Minerals	6,640,299
	Misc. Mixed Shipments	3,080,735	Petroleum or Coal Products	4,932,301
Columbia	Warehouse, Distribution Center and Drayage movements	2,525,177	Clay, Concrete, Glass, Stone	2,734,424
	Nonmetallic Minerals	1,889,851	Warehouse, Distribution Center and Drayage movements	2,690,243
	Food or Kindred Products	1,735,532	Misc. Mixed Shipments	2,594,978

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Clay, Concrete, Glass, Stone	834,110	Nonmetallic Minerals	1,866,365
	Chemicals or Allied Products	797,282	Coal	1,371,495
	Warehouse, Distribution Center and Drayage movements	793,652	Petroleum or Coal Products	1,073,858
DeSoto	Pulp, Paper or Allied Products	748,667	Chemicals or Allied Products	810,857
	Waste or Scrap Materials	374,413	Clay, Concrete, Glass, Stone	544,180
	Farm Products	131,634	Petroleum or Coal Products	184,880
	Waste or Scrap Materials	96,284	Warehouse, Distribution Center and Drayage movements	157,891
	Clay, Concrete, Glass, Stone	34,493	Clay, Concrete, Glass, Stone	147,096
	Lumber or Wood Products	29,203	Nonmetallic Minerals	138,785
Dixie	Warehouse, Distribution Center and Drayage movements	19,481	Food or Kindred Products	49,217
	Lumber or Wood Products	15,770	Petroleum or Coal Products	18,824
	Food or Kindred Products	14,450	Warehouse, Distribution Center and Drayage movements	16,159
	Waste or Scrap Materials	5,155	Nonmetallic Minerals	8,921
	Marine Products	989	Clay, Concrete, Glass, Stone	4,097
	Farm Products	295	Food or Kindred Products	2,745
Duval	Clay, Concrete, Glass, Stone	382,318	Nonmetallic Minerals	506,072
	Lumber or Wood Products	226,131	Clay, Concrete, Glass, Stone	156,639
	Waste or Scrap Materials	87,793	Lumber or Wood Products	124,190
	Farm Products	46,454	Petroleum or Coal Products	103,951
	Warehouse, Distribution Center and Drayage movements	4,890	Warehouse, Distribution Center and Drayage movements	69,681
	Clay, Concrete, Glass, Stone	293,781	Nonmetallic Minerals	233,590
Escambia	Farm Products	238,366	Clay, Concrete, Glass, Stone	56,987
	Forest Products	47,014	Lumber or Wood Products	47,936
	Lumber or Wood Products	31,289	Petroleum or Coal Products	38,989
	Waste or Scrap Materials	15,006	Warehouse, Distribution Center and Drayage movements	24,713
	Nonmetallic Minerals	4,930,685	Nonmetallic Minerals	190,876
	Farm Products	1,075,677	Clay, Concrete, Glass, Stone	36,060
	Chemicals or Allied Products	85,243	Petroleum or Coal Products	24,455

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
Flagler	Lumber or Wood Products	56,583	Warehouse, Distribution Center and Drayage movements	12,828
	Clay, Concrete, Glass, Stone	28,168	Lumber or Wood Products	3,945
	Lumber or Wood Products	25,489	Petroleum or Coal Products	22,233
	Waste or Scrap Materials	9,449	Warehouse, Distribution Center and Drayage movements	18,446
	Clay, Concrete, Glass, Stone	6,609	Clay, Concrete, Glass, Stone	17,598
Franklin	Forest Products	2,905	Nonmetallic Minerals	11,687
	Farm Products	1,573	Lumber or Wood Products	8,313
	Chemicals or Allied Products	564,881	Nonmetallic Minerals	395,933
	Lumber or Wood Products	70,779	Chemicals or Allied Products	153,631
	Waste or Scrap Materials	34,301	Clay, Concrete, Glass, Stone	117,533
	Farm Products	33,253	Warehouse, Distribution Center and Drayage movements	38,991
Gadsden	Warehouse, Distribution Center and Drayage movements	17,009	Petroleum or Coal Products	23,725
	Nonmetallic Minerals	1,386,661	Nonmetallic Minerals	415,637
	Farm Products	403,083	Clay, Concrete, Glass, Stone	70,920
	Lumber or Wood Products	91,621	Petroleum or Coal Products	58,839
	Waste or Scrap Materials	27,612	Warehouse, Distribution Center and Drayage movements	32,182
	Food or Kindred Products	23,713	Chemicals or Allied Products	25,898
Gilchrist	Farm Products	2,970,402	Nonmetallic Minerals	763,328
	Nonmetallic Minerals	1,957,919	Clay, Concrete, Glass, Stone	283,309
	Food or Kindred Products	892,344	Petroleum or Coal Products	145,296
	Waste or Scrap Materials	42,379	Warehouse, Distribution Center and Drayage movements	69,178
	Clay, Concrete, Glass, Stone	24,264	Waste or Scrap Materials	34,597
	Nonmetallic Minerals	12,237,308	Nonmetallic Minerals	508,591
Glades	Clay, Concrete, Glass, Stone	1,095,693	Clay, Concrete, Glass, Stone	323,677
	Waste or Scrap Materials	138,479	Petroleum or Coal Products	283,534
	Farm Products	25,195	Warehouse, Distribution Center and Drayage movements	267,783

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Warehouse, Distribution Center and Drayage movements	13,990	Coal	236,172
	Farm Products	385,384	Nonmetallic Minerals	322,699
	Clay, Concrete, Glass, Stone	328,828	Clay, Concrete, Glass, Stone	186,944
Gulf	Waste or Scrap Materials	74,951	Petroleum or Coal Products	165,048
	Chemicals or Allied Products	12,537	Warehouse, Distribution Center and Drayage movements	119,771
	Warehouse, Distribution Center and Drayage movements	4,750	Food or Kindred Products	49,503
	Petroleum or Coal Products	10,055,702	Nonmetallic Minerals	20,757,988
	Clay, Concrete, Glass, Stone	4,786,529	Petroleum or Coal Products	15,620,885
	Chemicals or Allied Products	3,954,067	Chemicals or Allied Products	4,889,934
Hamilton	Waste or Scrap Materials	2,325,494	Clay, Concrete, Glass, Stone	3,052,420
	Nonmetallic Minerals	1,851,377	Warehouse, Distribution Center and Drayage movements	2,782,051
	Farm Products	66,533	Nonmetallic Minerals	40,316
	Clay, Concrete, Glass, Stone	23,520	Petroleum or Coal Products	28,106
	Lumber or Wood Products	22,828	Warehouse, Distribution Center and Drayage movements	20,999
	Waste or Scrap Materials	16,009	Clay, Concrete, Glass, Stone	20,919
Hardee	Fabricated Metal Products	2,300	Waste or Scrap Materials	11,749
	Petroleum or Coal Products	702,921	Nonmetallic Minerals	1,048,224
	Clay, Concrete, Glass, Stone	501,063	Clay, Concrete, Glass, Stone	417,901
	Waste or Scrap Materials	246,982	Petroleum or Coal Products	400,178
	Farm Products	160,243	Warehouse, Distribution Center and Drayage movements	368,093
	Chemicals or Allied Products	77,404	Food or Kindred Products	161,899
Hendry	Nonmetallic Minerals	1,747,269	Nonmetallic Minerals	262,338
	Lumber or Wood Products	959,398	Lumber or Wood Products	253,622
	Farm Products	195,195	Petroleum or Coal Products	91,192
	Clay, Concrete, Glass, Stone	90,860	Clay, Concrete, Glass, Stone	87,274
	Waste or Scrap Materials	28,935	Waste or Scrap Materials	64,655
	Nonmetallic Minerals	2,406,367	Nonmetallic Minerals	38,031
	Lumber or Wood Products	44,169	Petroleum or Coal Products	21,201

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
Hernando	Farm Products	31,915	Warehouse, Distribution Center and Drayage movements	18,425
	Waste or Scrap Materials	7,804	Clay, Concrete, Glass, Stone	14,452
	Forest Products	2,307	Lumber or Wood Products	6,915
	Nonmetallic Minerals	2,704,920	Lumber or Wood Products	27,159
	Farm Products	236,537	Food or Kindred Products	18,354
Highlands	Forest Products	30,485	Petroleum or Coal Products	16,452
	Waste or Scrap Materials	7,576	Nonmetallic Minerals	12,977
	Lumber or Wood Products	6,465	Clay, Concrete, Glass, Stone	8,601
	Nonmetallic Minerals	2,402,452	Nonmetallic Minerals	2,192,834
	Clay, Concrete, Glass, Stone	1,845,705	Clay, Concrete, Glass, Stone	925,936
	Waste or Scrap Materials	320,754	Petroleum or Coal Products	704,619
Hillsborough	Food or Kindred Products	204,628	Warehouse, Distribution Center and Drayage movements	521,901
	Warehouse, Distribution Center and Drayage movements	201,475	Food or Kindred Products	267,747
	Nonmetallic Minerals	11,134,752	Nonmetallic Minerals	2,840,527
	Clay, Concrete, Glass, Stone	1,420,849	Petroleum or Coal Products	1,643,942
	Petroleum or Coal Products	1,280,357	Warehouse, Distribution Center and Drayage movements	1,405,256
	Waste or Scrap Materials	1,045,293	Clay, Concrete, Glass, Stone	1,296,787
Holmes	Warehouse, Distribution Center and Drayage movements	643,498	Food or Kindred Products	780,267
	Warehouse, Distribution Center and Drayage movements	509,348	Petroleum or Coal Products	787,362
	Waste or Scrap Materials	377,045	Nonmetallic Minerals	727,883
	Clay, Concrete, Glass, Stone	88,137	Warehouse, Distribution Center and Drayage movements	535,493
	Lumber or Wood Products	57,417	Food or Kindred Products	400,858
	Farm Products	13,330	Clay, Concrete, Glass, Stone	346,252
Indian River	Nonmetallic Minerals	2,194,290	Nonmetallic Minerals	799,840
	Lumber or Wood Products	143,533	Clay, Concrete, Glass, Stone	216,856
	Farm Products	113,324	Petroleum or Coal Products	104,111

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Waste or Scrap Materials	38,285	Warehouse, Distribution Center and Drayage movements	60,230
	Transportation Equipment	9,685	Lumber or Wood Products	25,079
	Lumber or Wood Products	377,201	Lumber or Wood Products	176,448
Jackson	Forest Products	11,756	Petroleum or Coal Products	11,194
	Farm Products	4,352	Warehouse, Distribution Center and Drayage movements	6,054
	Waste or Scrap Materials	1,342	Clay, Concrete, Glass, Stone	3,564
	Warehouse, Distribution Center and Drayage movements	424	Forest Products	1,549
	Farm Products	177,660	Food or Kindred Products	40,610
	Lumber or Wood Products	126,739	Farm Products	39,578
Jefferson	Food or Kindred Products	14,174	Lumber or Wood Products	36,024
	Clay, Concrete, Glass, Stone	7,791	Petroleum or Coal Products	33,132
	Waste or Scrap Materials	6,238	Warehouse, Distribution Center and Drayage movements	23,670
	Nonmetallic Minerals	2,222,405	Nonmetallic Minerals	2,511,067
	Food or Kindred Products	925,710	Petroleum or Coal Products	1,887,474
	Farm Products	843,527	Clay, Concrete, Glass, Stone	970,023
Lafayette	Waste or Scrap Materials	811,609	Warehouse, Distribution Center and Drayage movements	702,176
	Clay, Concrete, Glass, Stone	636,987	Food or Kindred Products	578,216
	Nonmetallic Minerals	3,203,711	Nonmetallic Minerals	1,198,797
	Clay, Concrete, Glass, Stone	1,438,546	Petroleum or Coal Products	640,794
	Warehouse, Distribution Center and Drayage movements	380,087	Clay, Concrete, Glass, Stone	639,160
	Waste or Scrap Materials	322,124	Warehouse, Distribution Center and Drayage movements	493,216
Lake	Food or Kindred Products	182,378	Food or Kindred Products	227,760
	Clay, Concrete, Glass, Stone	646,312	Nonmetallic Minerals	1,061,533
	Farm Products	574,614	Clay, Concrete, Glass, Stone	593,378
	Waste or Scrap Materials	263,010	Petroleum or Coal Products	488,738
	Food or Kindred Products	100,172	Warehouse, Distribution Center and Drayage movements	427,720

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Chemicals or Allied Products	26,684	Farm Products	343,576
Lee	Nonmetallic Minerals	20,529,475	Nonmetallic Minerals	5,252,624
	Warehouse, Distribution Center and Drayage movements	13,119,424	Warehouse, Distribution Center and Drayage movements	4,712,717
	Clay, Concrete, Glass, Stone	7,089,769	Food or Kindred Products	3,268,730
	Petroleum or Coal Products	3,653,413	Petroleum or Coal Products	2,268,928
	Waste or Scrap Materials	2,626,293	Clay, Concrete, Glass, Stone	2,237,247
	Waste or Scrap Materials	164,101	Petroleum or Coal Products	259,454
Leon	Nonmetallic Minerals	80,273	Nonmetallic Minerals	250,295
	Food or Kindred Products	10,948	Warehouse, Distribution Center and Drayage movements	238,035
	Chemicals or Allied Products	3,048	Clay, Concrete, Glass, Stone	93,641
	Clay, Concrete, Glass, Stone	2,879	Food or Kindred Products	73,237
	Pulp, Paper or Allied Products	645,405	Waste or Scrap Materials	1,027,616
	Lumber or Wood Products	529,208	Lumber or Wood Products	261,578
Levy	Waste or Scrap Materials	88,634	Petroleum or Coal Products	174,886
	Farm Products	16,864	Warehouse, Distribution Center and Drayage movements	164,438
	Warehouse, Distribution Center and Drayage movements	14,503	Clay, Concrete, Glass, Stone	128,265
	Warehouse, Distribution Center and Drayage movements	609,743	Petroleum or Coal Products	617,564
	Petroleum or Coal Products	458,674	Warehouse, Distribution Center and Drayage movements	369,791
	Clay, Concrete, Glass, Stone	276,475	Nonmetallic Minerals	310,208
Liberty	Waste or Scrap Materials	197,509	Clay, Concrete, Glass, Stone	213,861
	Farm Products	15,889	Food or Kindred Products	171,417
	Clay, Concrete, Glass, Stone	797,480	Waste or Scrap Materials	1,604,138
	Farm Products	519,754	Nonmetallic Minerals	485,185
	Chemicals or Allied Products	182,995	Clay, Concrete, Glass, Stone	192,985
	Food or Kindred Products	159,787	Food or Kindred Products	116,732
Madison	Petroleum or Coal Products	60,317	Petroleum or Coal Products	106,816
	Clay, Concrete, Glass, Stone	2,795,664	Nonmetallic Minerals	8,232,324

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Warehouse, Distribution Center and Drayage movements	2,043,100	Clay, Concrete, Glass, Stone	3,493,776
	Waste or Scrap Materials	2,039,544	Warehouse, Distribution Center and Drayage movements	3,305,080
	Petroleum or Coal Products	1,630,960	Petroleum or Coal Products	2,286,073
	Food or Kindred Products	1,128,671	Food or Kindred Products	1,915,832
Manatee	Clay, Concrete, Glass, Stone	616,037	Nonmetallic Minerals	1,122,364
	Waste or Scrap Materials	256,017	Waste or Scrap Materials	977,835
	Food or Kindred Products	189,369	Clay, Concrete, Glass, Stone	690,436
	Lumber or Wood Products	99,014	Petroleum or Coal Products	558,810
	Farm Products	67,211	Warehouse, Distribution Center and Drayage movements	492,761
	Petroleum or Coal Products	3,496,921	Nonmetallic Minerals	10,618,457
Marion	Clay, Concrete, Glass, Stone	3,111,887	Farm Products	4,708,867
	Waste or Scrap Materials	2,667,359	Warehouse, Distribution Center and Drayage movements	4,082,772
	Nonmetallic Minerals	2,276,610	Petroleum or Coal Products	3,042,760
	Food or Kindred Products	1,915,251	Clay, Concrete, Glass, Stone	2,866,998
	Clay, Concrete, Glass, Stone	1,330,574	Nonmetallic Minerals	2,389,128
	Nonmetallic Minerals	1,207,030	Petroleum or Coal Products	866,464
Martin	Waste or Scrap Materials	502,757	Clay, Concrete, Glass, Stone	757,594
	Farm Products	90,664	Warehouse, Distribution Center and Drayage movements	696,152
	Food or Kindred Products	77,899	Food or Kindred Products	412,593
	Warehouse, Distribution Center and Drayage movements	1,141,306	Nonmetallic Minerals	2,726,304
	Waste or Scrap Materials	1,125,154	Petroleum or Coal Products	2,096,144
	Clay, Concrete, Glass, Stone	588,255	Clay, Concrete, Glass, Stone	2,039,146
Miami-Dade	Petroleum or Coal Products	443,985	Warehouse, Distribution Center and Drayage movements	1,792,732
	Chemicals or Allied Products	307,959	Food or Kindred Products	1,190,711
	Nonmetallic Minerals	7,509,536	Nonmetallic Minerals	6,751,157
	Chemicals or Allied Products	4,285,172	Clay, Concrete, Glass, Stone	1,507,667
	Food or Kindred Products	2,299,983	Food or Kindred Products	1,250,910

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Petroleum or Coal Products	2,290,771	Petroleum or Coal Products	1,206,836
Monroe	Clay, Concrete, Glass, Stone	2,283,197	Chemicals or Allied Products	1,170,681
	Nonmetallic Minerals	1,047,122	Coal	2,798,088
	Pulp, Paper or Allied Products	206,100	Nonmetallic Minerals	1,630,670
	Clay, Concrete, Glass, Stone	172,618	Petroleum or Coal Products	1,095,806
	Lumber or Wood Products	99,771	Lumber or Wood Products	192,814
	Waste or Scrap Materials	94,207	Clay, Concrete, Glass, Stone	168,968
Nassau	Nonmetallic Minerals	1,480,755	Nonmetallic Minerals	667,081
	Clay, Concrete, Glass, Stone	802,226	Warehouse, Distribution Center and Drayage movements	253,691
	Warehouse, Distribution Center and Drayage movements	509,035	Petroleum or Coal Products	241,636
	Waste or Scrap Materials	223,533	Clay, Concrete, Glass, Stone	236,513
	Farm Products	128,180	Food or Kindred Products	108,111
	Lumber or Wood Products	28,680	Nonmetallic Minerals	2,925,018
Okaloosa	Farm Products	17,964	Clay, Concrete, Glass, Stone	1,131,651
	Waste or Scrap Materials	12,389	Petroleum or Coal Products	1,084,019
	Warehouse, Distribution Center and Drayage movements	3,757	Warehouse, Distribution Center and Drayage movements	929,372
	Primary Metal Products	2,503	Food or Kindred Products	589,360
	Pulp, Paper or Allied Products	803,162	Nonmetallic Minerals	1,807,096
	Warehouse, Distribution Center and Drayage movements	717,864	Clay, Concrete, Glass, Stone	1,624,053
Okeechobee	Primary Metal Products	468,701	Petroleum or Coal Products	1,106,643
	Waste or Scrap Materials	327,061	Warehouse, Distribution Center and Drayage movements	879,556
	Lumber or Wood Products	221,917	Waste or Scrap Materials	613,229
	Lumber or Wood Products	135,573	Nonmetallic Minerals	614,996
	Metallic Ores	103,397	Petroleum or Coal Products	581,005
	Food or Kindred Products	99,905	Warehouse, Distribution Center and Drayage movements	542,561
Orange	Warehouse, Distribution Center and Drayage movements	47,254	Clay, Concrete, Glass, Stone	515,880
	Nonmetallic Minerals	25,760	Food or Kindred Products	320,461

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Clay, Concrete, Glass, Stone	1,088,929	Nonmetallic Minerals	1,631,127
	Petroleum or Coal Products	1,061,343	Petroleum or Coal Products	531,188
	Nonmetallic Minerals	944,800	Clay, Concrete, Glass, Stone	529,477
	Waste or Scrap Materials	905,663	Warehouse, Distribution Center and Drayage movements	426,374
Osceola	Warehouse, Distribution Center and Drayage movements	776,413	Food or Kindred Products	208,568
	Clay, Concrete, Glass, Stone	3,760,774	Nonmetallic Minerals	1,206,364
	Petroleum or Coal Products	3,736,950	Clay, Concrete, Glass, Stone	320,428
	Warehouse, Distribution Center and Drayage movements	3,699,185	Petroleum or Coal Products	231,418
	Waste or Scrap Materials	2,088,853	Waste or Scrap Materials	228,147
	Farm Products	774,967	Warehouse, Distribution Center and Drayage movements	194,959
Palm Beach	Lumber or Wood Products	127,548	Nonmetallic Minerals	347,836
	Farm Products	20,949	Lumber or Wood Products	308,658
	Waste or Scrap Materials	3,832	Farm Products	305,362
	Warehouse, Distribution Center and Drayage movements	3,516	Food or Kindred Products	161,800
	Chemicals or Allied Products	2,003	Clay, Concrete, Glass, Stone	113,318
	Nonmetallic Minerals	1,302,087	Lumber or Wood Products	471,559
Pasco	Clay, Concrete, Glass, Stone	291,177	Waste or Scrap Materials	68,799
	Waste or Scrap Materials	174,958	Pulp, Paper or Allied Products	51,014
	Farm Products	68,882	Warehouse, Distribution Center and Drayage movements	37,240
	Petroleum or Coal Products	18,787	Petroleum or Coal Products	33,307
	Nonmetallic Minerals	3,184,425	Lumber or Wood Products	80,959
	Clay, Concrete, Glass, Stone	516,317	Nonmetallic Minerals	47,671
Pinellas	Petroleum or Coal Products	112,349	Petroleum or Coal Products	35,254
	Waste or Scrap Materials	111,305	Clay, Concrete, Glass, Stone	21,603
	Lumber or Wood Products	39,838	Warehouse, Distribution Center and Drayage movements	12,379
	Clay, Concrete, Glass, Stone	538,214	Nonmetallic Minerals	1,987,132
	Nonmetallic Minerals	348,817	Waste or Scrap Materials	1,615,619

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Waste or Scrap Materials	177,526	Clay, Concrete, Glass, Stone	1,174,734
Polk	Lumber or Wood Products	126,273	Petroleum or Coal Products	976,889
	Petroleum or Coal Products	52,481	Warehouse, Distribution Center and Drayage movements	825,941
	Waste or Scrap Materials	766,312	Chemicals or Allied Products	51,024
	Warehouse, Distribution Center and Drayage movements	458,441	Petroleum or Coal Products	41,223
	Clay, Concrete, Glass, Stone	348,201	Warehouse, Distribution Center and Drayage movements	36,941
	Petroleum or Coal Products	346,824	Nonmetallic Minerals	17,371
Putnam	Nonmetallic Minerals	185,040	Clay, Concrete, Glass, Stone	10,768
	Clay, Concrete, Glass, Stone	1,414,289	Nonmetallic Minerals	508,031
	Lumber or Wood Products	293,625	Petroleum or Coal Products	402,145
	Chemicals or Allied Products	277,344	Warehouse, Distribution Center and Drayage movements	149,806
	Food or Kindred Products	211,252	Clay, Concrete, Glass, Stone	145,091
	Warehouse, Distribution Center and Drayage movements	149,034	Food or Kindred Products	58,313
Santa Rosa	Waste or Scrap Materials	208,706	Nonmetallic Minerals	95,462
	Chemicals or Allied Products	171,530	Petroleum or Coal Products	34,997
	Petroleum or Coal Products	110,234	Lumber or Wood Products	27,977
	Clay, Concrete, Glass, Stone	97,905	Clay, Concrete, Glass, Stone	26,890
	Lumber or Wood Products	80,173	Warehouse, Distribution Center and Drayage movements	26,586
	Clay, Concrete, Glass, Stone	911,168	Petroleum or Coal Products	756,140
Sarasota	Waste or Scrap Materials	620,559	Nonmetallic Minerals	598,092
	Warehouse, Distribution Center and Drayage movements	589,647	Warehouse, Distribution Center and Drayage movements	515,082
	Rubber or Misc. Plastics	129,594	Clay, Concrete, Glass, Stone	511,885
	Fabricated Metal Products	111,599	Waste or Scrap Materials	502,363
	Waste or Scrap Materials	630,816	Petroleum or Coal Products	51,623
	Clay, Concrete, Glass, Stone	525,814	Primary Metal Products	48,360
Seminole	Food or Kindred Products	114,902	Warehouse, Distribution Center and Drayage movements	29,632

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Lumber or Wood Products	71,373	Clay, Concrete, Glass, Stone	23,002
	Fabricated Metal Products	40,029	Nonmetallic Minerals	18,823
	Clay, Concrete, Glass, Stone	324,135	Lumber or Wood Products	1,633,630
	Waste or Scrap Materials	312,585	Petroleum or Coal Products	652,947
	Farm Products	226,395	Nonmetallic Minerals	614,410
St. Johns	Food or Kindred Products	80,121	Pulp, Paper or Allied Products	339,442
	Lumber or Wood Products	36,192	Warehouse, Distribution Center and Drayage movements	315,886
	Clay, Concrete, Glass, Stone	904,395	Petroleum or Coal Products	58,533
	Nonmetallic Minerals	663,935	Clay, Concrete, Glass, Stone	45,732
	Waste or Scrap Materials	505,630	Warehouse, Distribution Center and Drayage movements	39,744
	Food or Kindred Products	340,645	Nonmetallic Minerals	29,257
St. Lucie	Chemicals or Allied Products	272,122	Lumber or Wood Products	9,991
	Nonmetallic Minerals	3,837,603	Nonmetallic Minerals	5,154,310
	Clay, Concrete, Glass, Stone	847,979	Petroleum or Coal Products	2,113,174
	Waste or Scrap Materials	180,864	Warehouse, Distribution Center and Drayage movements	1,644,359
	Lumber or Wood Products	96,068	Clay, Concrete, Glass, Stone	1,189,986
	Food or Kindred Products	56,905	Food or Kindred Products	662,823
Sumter	Nonmetallic Minerals	2,203,080	Petroleum or Coal Products	14,840,473
	Lumber or Wood Products	439,440	Nonmetallic Minerals	10,134,093
	Farm Products	377,950	Warehouse, Distribution Center and Drayage movements	4,674,617
	Clay, Concrete, Glass, Stone	238,221	Clay, Concrete, Glass, Stone	4,093,881
	Food or Kindred Products	192,170	Food or Kindred Products	2,367,240
	Nonmetallic Minerals	1,806,461	Petroleum or Coal Products	25,542
Suwannee	Pulp, Paper or Allied Products	1,149,767	Clay, Concrete, Glass, Stone	18,607
	Lumber or Wood Products	792,988	Lumber or Wood Products	15,385
	Fabricated Metal Products	24,670	Warehouse, Distribution Center and Drayage movements	13,559
	Waste or Scrap Materials	19,265	Nonmetallic Minerals	9,665
	Lumber or Wood Products	130,449	Nonmetallic Minerals	656,331
	Food or Kindred Products	23,075	Clay, Concrete, Glass, Stone	352,142

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
Taylor	Farm Products	16,503	Petroleum or Coal Products	333,031
	Waste or Scrap Materials	4,499	Warehouse, Distribution Center and Drayage movements	261,842
	Warehouse, Distribution Center and Drayage movements	935	Food or Kindred Products	126,270
	Nonmetallic Minerals	1,281,468	Coal	1,252,167
	Clay, Concrete, Glass, Stone	1,246,919	Nonmetallic Minerals	665,794
	Warehouse, Distribution Center and Drayage movements	651,681	Clay, Concrete, Glass, Stone	253,878
Union	Waste or Scrap Materials	313,383	Petroleum or Coal Products	236,500
	Chemicals or Allied Products	233,413	Warehouse, Distribution Center and Drayage movements	183,363
	Chemicals or Allied Products	101,547	Nonmetallic Minerals	605,492
	Petroleum or Coal Products	45,715	Warehouse, Distribution Center and Drayage movements	356,731
	Lumber or Wood Products	32,952	Petroleum or Coal Products	346,699
	Waste or Scrap Materials	15,854	Clay, Concrete, Glass, Stone	326,102
Volusia	Farm Products	6,922	Food or Kindred Products	142,263
	Petroleum or Coal Products	490,482	Nonmetallic Minerals	2,167,750
	Clay, Concrete, Glass, Stone	182,068	Petroleum or Coal Products	1,196,055
	Waste or Scrap Materials	110,526	Warehouse, Distribution Center and Drayage movements	1,113,519
	Lumber or Wood Products	100,942	Food or Kindred Products	603,382
	Nonmetallic Minerals	61,524	Clay, Concrete, Glass, Stone	529,252
Wakulla	Lumber or Wood Products	110,300	Nonmetallic Minerals	1,932,131
	Farm Products	27,270	Clay, Concrete, Glass, Stone	299,635
	Food or Kindred Products	20,482	Farm Products	206,246
	Waste or Scrap Materials	13,074	Food or Kindred Products	185,571
	Forest Products	5,076	Petroleum or Coal Products	171,382
	Waste or Scrap Materials	208,706	Nonmetallic Minerals	401,213
Walton	Chemicals or Allied Products	171,530	Waste or Scrap Materials	258,462
	Petroleum or Coal Products	110,234	Clay, Concrete, Glass, Stone	113,995
	Clay, Concrete, Glass, Stone	97,905	Petroleum or Coal Products	82,754

County Name	Exports		Imports	
	STCC 2	Tonnage (2018)	STCC 2	Tonnage (2018)
	Lumber or Wood Products	80,173	Warehouse, Distribution Center and Drayage movements	53,074
	Clay, Concrete, Glass, Stone	911,168	Lumber or Wood Products	189,649
	Waste or Scrap Materials	620,559	Petroleum or Coal Products	24,032
Washington	Warehouse, Distribution Center and Drayage movements	589,647	Warehouse, Distribution Center and Drayage movements	16,273
	Rubber or Misc. Plastics	129,594	Nonmetallic Minerals	10,687
	Fabricated Metal Products	111,599	Clay, Concrete, Glass, Stone	8,657
	Waste or Scrap Materials	630,816	Nonmetallic Minerals	6,640,299
	Clay, Concrete, Glass, Stone	525,814	Petroleum or Coal Products	4,932,301
	Food or Kindred Products	114,902	Clay, Concrete, Glass, Stone	2,734,424

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