

## REGIONAL FREIGHT COMMODITY PROFILE

### *Durable Goods*

#### COMMODITY BUNDLE OVERVIEW

This bundle consists of three specific commodity groups of durable goods not classified in other commodity bundles. These include furniture, precision instruments, and wood products. Furniture is one of the top import commodities at the Port of New York and New Jersey.

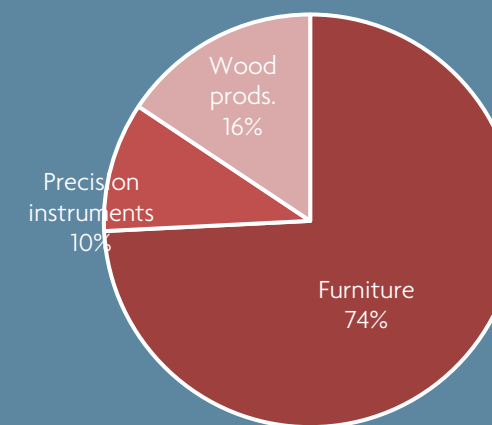
The primary data source for commodity flows reported in this profile is North Jersey Transportation Planning Authority's (NJTPA) Freight Forecasting Tool, which generates commodity freight data and forecasts for a 2020 base year and forecast years through 2050. This profile describes freight flows between domestic origins and destinations.

- 4.7 million tons in 2020, increasing 10 percent to 5.1 million tons in 2050
- Represents 1.3 percent of the goods moved in the region by weight and 5.5 percent by value.
- More than 28 million square feet of warehousing/distribution center space dedicated to this commodity bundle.
- 95 percent moves by truck, less than 1 percent by rail, and less than 5 percent moves by other modes

**Highlights**

**Composition**

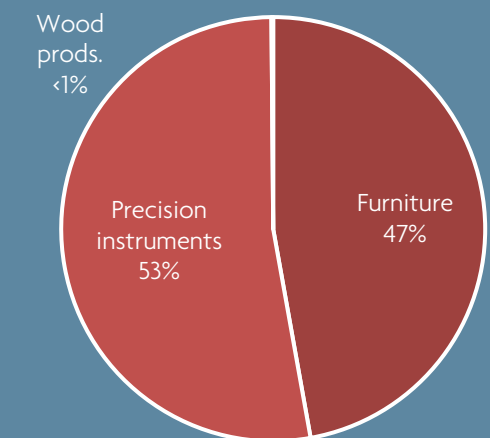
#### Domestic Tons in 2020



Total Tons: 4.7 million

Source: NJTPA Freight Forecasting Tool, 2020

#### Domestic Value in 2020



Total Value: \$40 billion

Source: NJTPA Freight Forecasting Tool, 2020

Furniture composes 74 percent of all goods in the durable goods commodity bundle by weight, and 47 percent by value. Wood products represent 16 percent by weight and less than 1 percent by value, and precision instruments are 10 percent of durable goods by weight and 53 percent by value.

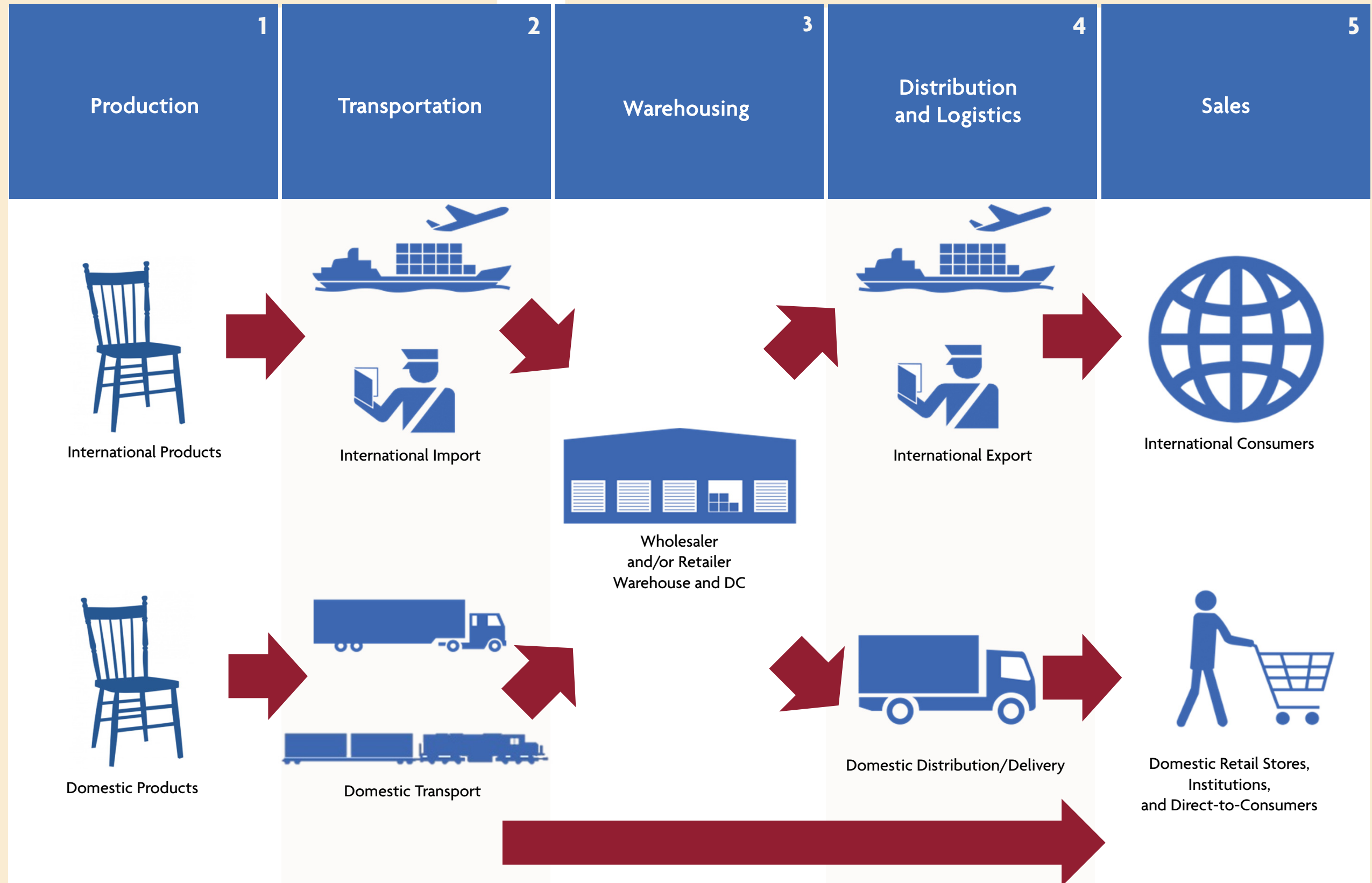
**LOGISTICS SUMMARY**

The graphic to the right represents the supply chain for the durable goods commodity bundle from initial production of finished goods to delivery of goods to consumers.

This supply chain consists of five steps:

1. Internationally and domestically sourced goods are produced by manufacturers.
2. International products are transported by ocean vessel to U.S. Ports-of-Entry where they are inspected by U.S. Customs and transloaded to truck or rail intermodal modes. Domestically produced products are transported by truck and rail intermodal.
3. Finished products are sorted and stored at wholesaler or retailer warehouses and distribution centers.
4. Products are distributed to customers via one of two routes:
  - A. By truck to an export distributor or freight forwarder for export by ocean vessel or air.
  - B. By truck from the warehouse or distribution center to retail stores, institutions, or to fulfill direct-to-customer orders.
5. Shipments are delivered to international and domestic consumers, according to customers' specification.

Note that some products bypass retailer or customer warehouses and distribution centers and move directly from a wholesaler's warehouse to the final user. The e-commerce deliveries are described in the e-commerce commodity bundle profile.



# Business Locations by Industry Type

## Business Square Footage by Industry Type

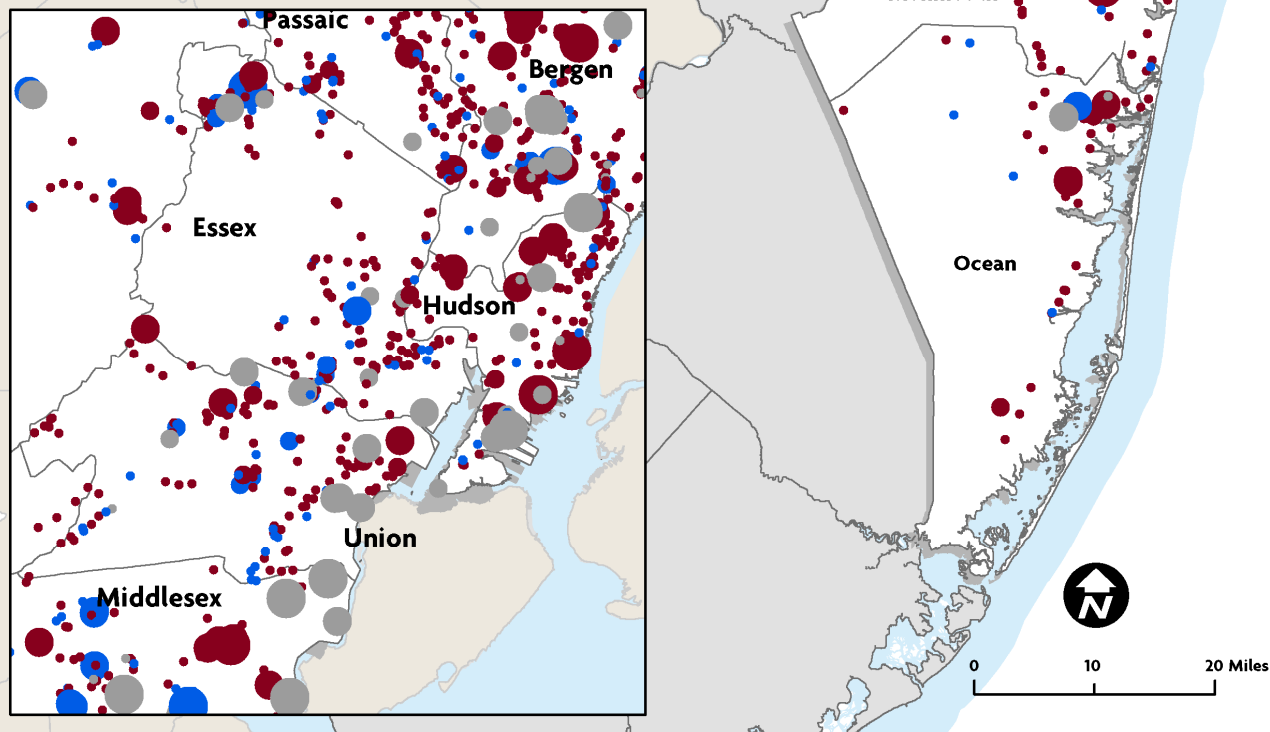
### Durable Goods

#### Legend Square Feet Occupied

- Production**
- 0 - 24,999
  - 25,000 - 49,999
  - 50,000 - 249,999
  - 250,000 +
- Logistics**
- 0 - 24,999
  - 25,000 - 49,999
  - 50,000 - 249,999
  - 250,000 +
- Sales**
- 0 - 24,999
  - 25,000 - 49,999
  - 50,000 - 249,999
  - 250,000 +

Source: Source: CoStar, 2015; InfoGroup, 2019; Cambridge Systematics, 2020; NJOIT, 2008; Esri, 2014

Note:  
 "Production" includes Manufacturing, Utilities, Mining, & Agriculture  
 "Logistics" includes Transportation and Distribution  
 "Sales" includes all other categories



## BUSINESS LOCATIONS SUMMARY

The map on the previous page illustrates the locations of facilities that ship, handle, or receive commodities in this bundle, including:

- Production facilities such as manufacturing businesses where goods are produced, and correspond to Step 1 in the logistics summary chart on pages 2 and 3.
- Logistics facilities, including warehousing and transportation facilities through which goods are distributed, and correspond to steps 2 through 4 on the logistics summary chart.
- Sales, represented in Step 5 on the logistics summary chart, including retail, services, and institutional establishments where goods are sold.

The largest clusters of businesses handling durable goods are located in southern Bergen and Passaic counties, Hudson, eastern Essex, and northern and eastern Union County, and Middlesex County. Smaller clusters cover portions of Morris, Somerset, Monmouth, and Ocean counties.

## KEY INDUSTRY TRENDS

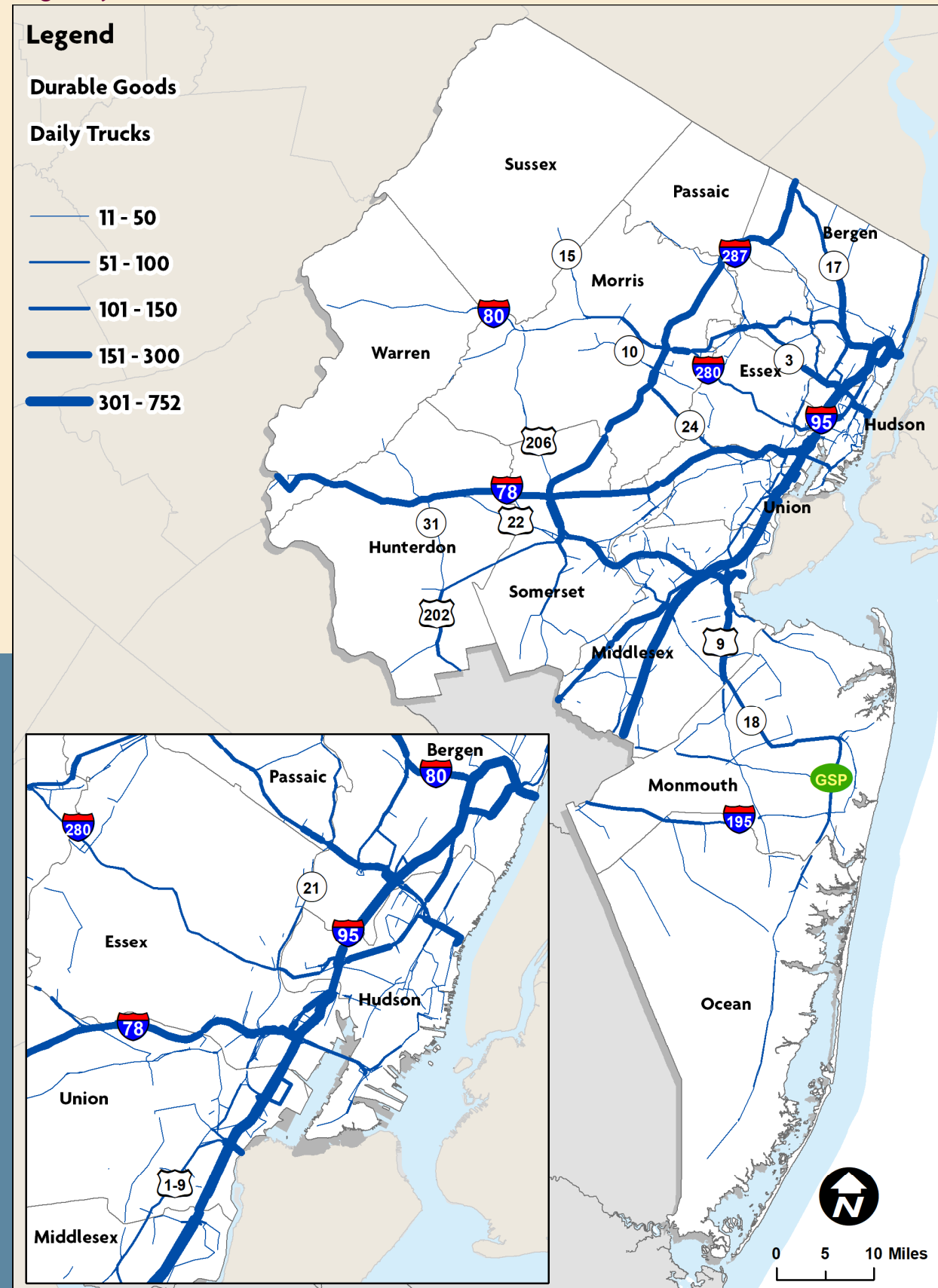
The following trends are shaping demand for durable goods commodities today, and projected demand in the future:

- Consumer purchases of goods made online or using mobile devices, with requests for home delivery, are making up a growing share of sales of these goods.
- More manufacturers are shifting to sustainable material sourcing as consumers are increasingly willing to pay a modest premium for sustainable and eco-friendly furniture.
- COVID-19 is causing widespread supply and demand disruption in the durable goods market, which could facilitate more near-shoring of production, especially for furniture and appliances.
- Post-COVID-19 increases in remote work may lead to decreased demand for commercial furniture and fixtures.

## Major Furniture Retailer in Union County



## Highway Network Utilization, 2020



Source: NJTPA Freight Forecasting Tool, 2020; NJRTM-E, 2019; NJOIT, 2008; Esri, 2014.

## HIGHWAY NETWORK FLOWS OF DURABLE GOODS

The map on the previous page shows the volume of truckloads of goods in this bundle traveling on highway segments in the NJTPA region every day.

The New Jersey Turnpike, along its entire length within the NJTPA region, and a short segment of Routes 202/206 in Somerset County carry more than 300 trucks carrying durable goods per day in each direction. Portions of Interstate 287, Interstate 78, Route 17, Route 3, Route 1, and Route 9 carry between 150 and 300 daily truckloads of goods in this bundle in each direction.

## COMMODITY FLOW SUMMARY

Collectively, about 4.7 million tons of goods in this bundle, worth \$40 billion, moved in the NJTPA region in 2020. By 2050, more than 5.1 million tons worth more than \$44 billion will move in the region. These projections represent 10 percent growth by tons and 11 percent growth by value.

This bundle represented 1.3 percent of the goods moved in the region by weight and 5.7 percent by value in 2020. By 2050, these shares are expected to remain nearly the same, at 1.2 percent by tons and 5.5 percent by value.

As the table below shows, furniture composes nearly three-quarters of this bundle by weight, and precision instruments represents more than half of this bundle by value.

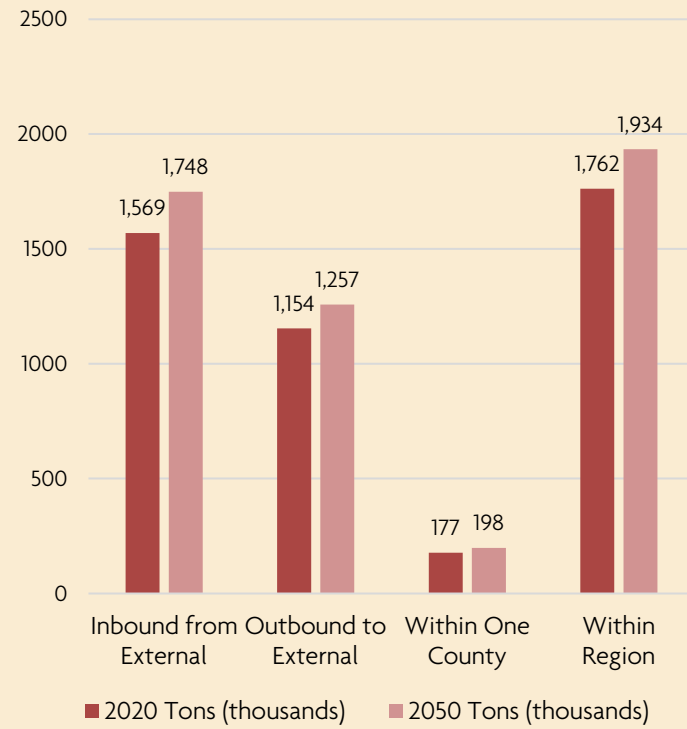
## Forecasted Change in Commodity Flows in the Durable Goods Bundle by Weight and Value, 2020 and 2050

Commodity	2020 Tons (thousands)	2050 Tons (thousands)	2020 Value (millions \$)	2050 Value (millions \$)	Change in Tons, 2020-2050	Change in Value, 2020-2050
Furniture	3,459	3,849	18,881	20,934	11%	11%
Precision Instruments	473	513	21,087	23,259	9%	10%
Wood Products	729	775	54	57	6%	7%
<b>Grand Total</b>	<b>4,661</b>	<b>5,137</b>	<b>40,022</b>	<b>44,250</b>	<b>10%</b>	<b>11%</b>

Source: NJTPA Freight Forecasting Tool, 2020

Note: Commodities assigned a value of \$0 indicate the absence of sales or commercial value

### Domestic Tons by Direction, 2020 and 2050



About 1.8 million tons of durable goods (38 percent of all tons in this bundle) moved between origin and destination points within the region. About 1.6 million tons (34 percent) moved into the region from origin points outside the region. About 1.1 million tons (25 percent) moved outbound from an origin point within the region to a destination outside the region, and 177,000 tons (4 percent) moved within just one of the region's counties.

About 86 percent of the goods in this bundle imported to the NJTPA region originate in one of the locations shown in the graph on the next page. About 440,000 tons originated in New York. Among the top origins, flows are projected to grow by 11 percent by 2050.

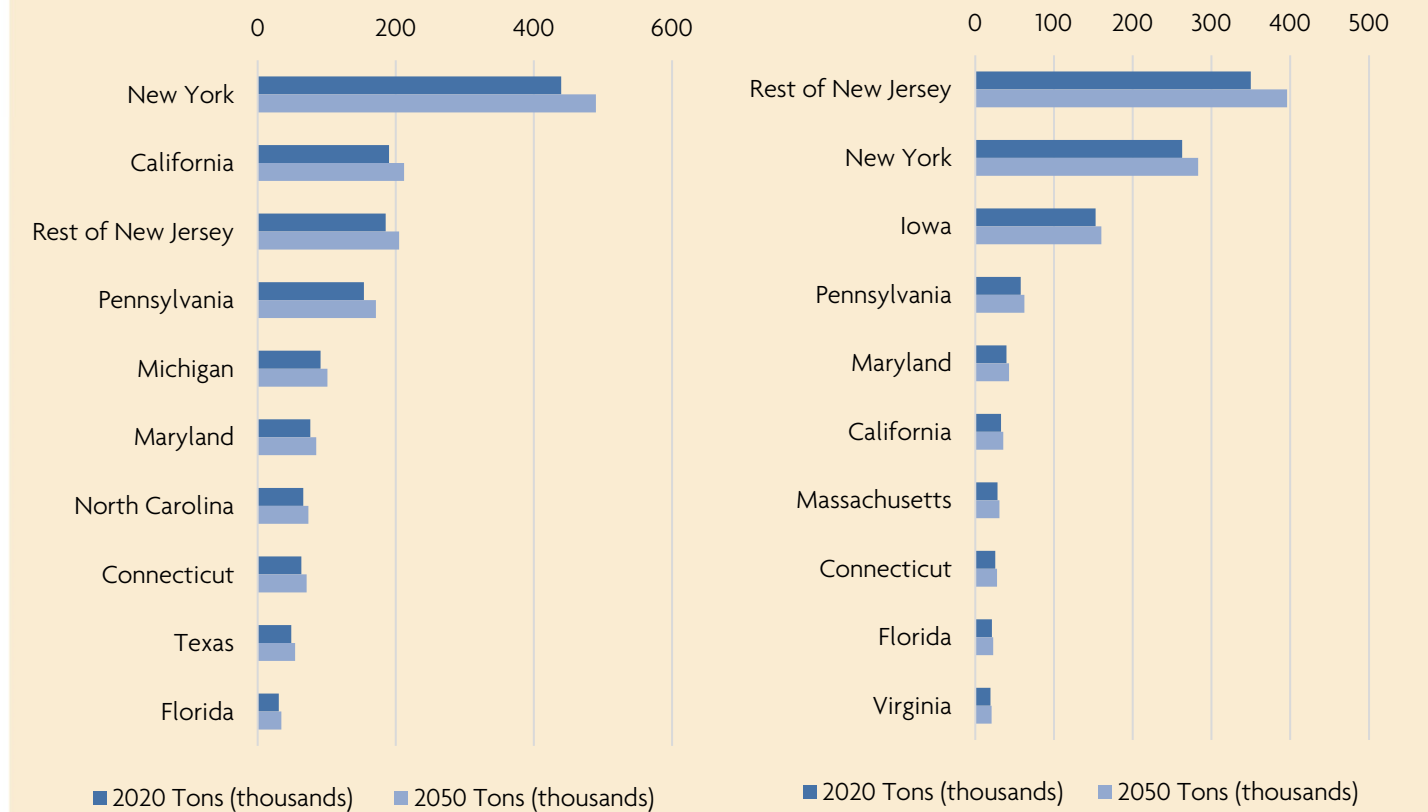
The graph on the next page also shows the destinations of 85 percent of the goods in this commodity bundle that leave the NJTPA region. For the rest of New Jersey outside the NJTPA Region, New York, Iowa, and Pennsylvania are among the top destinations. The weight of durable goods traveling to the top destinations is expected to grow 9 percent through 2050.

Source: NJTPA Freight Forecasting Tool, 2020

### Nearly All of the Durable Goods Commodities Move by Truck (Left) . Less than One Percent Move by Rail (Right), and Five Percent Moved by Other Modes



### Top Origins of Inbound Commodities (Left) and Top Destinations of Outbound Commodities (Right), 2020 and 2050

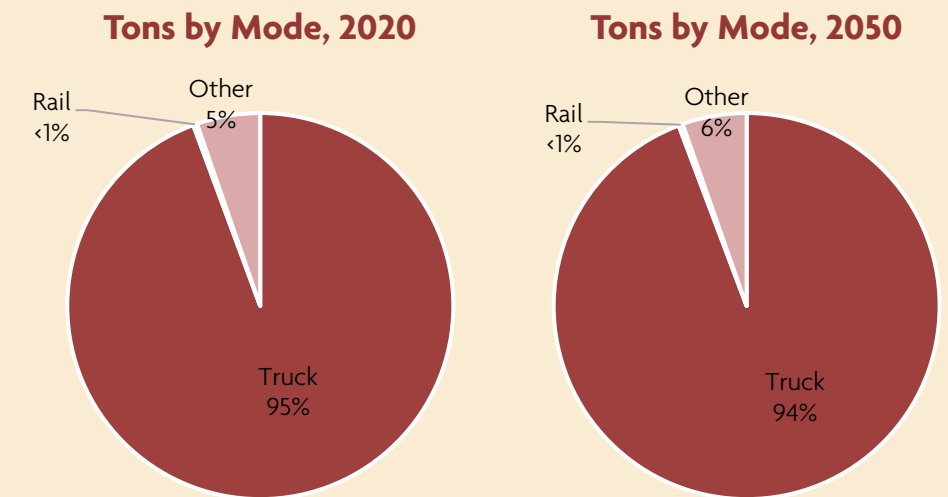


Source: NJTPA Freight Forecasting Tool, 2020

Source: NJTPA Freight Forecasting Tool, 2020

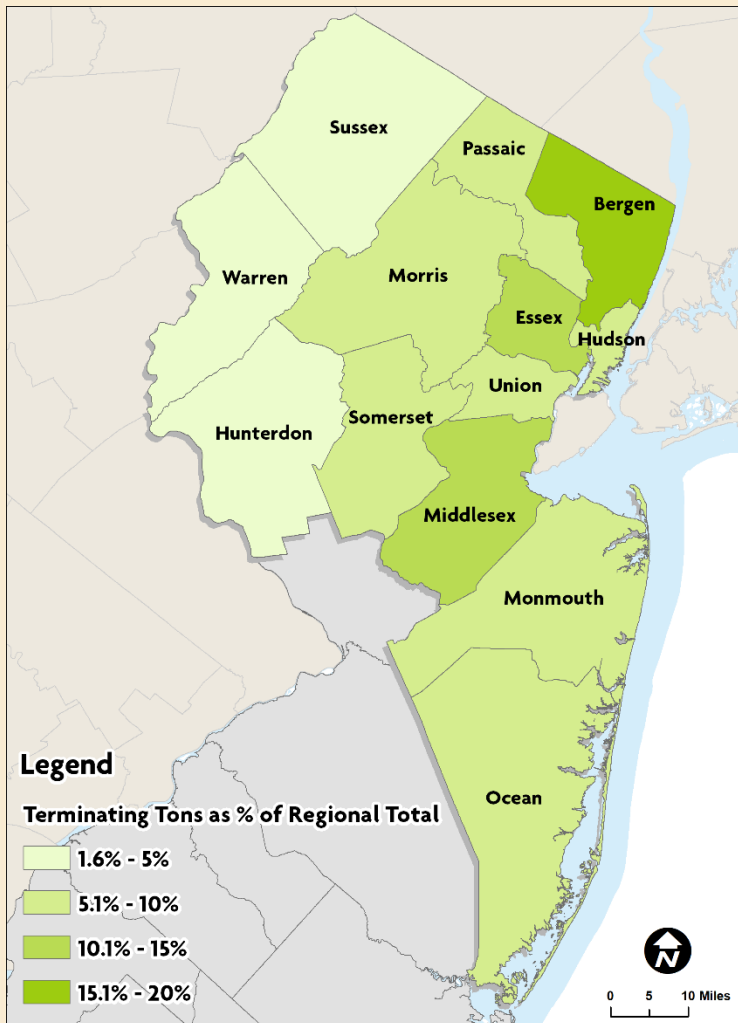
### Mode Splits, 2020 and 2050

In 2020, about 95 percent of the durable goods commodities moving in the NJTPA region traveled by truck. Rail carried less than 1 percent, and 5 percent moved by other modes. By 2050, the share of tons moving by each mode is expected to remain similar.



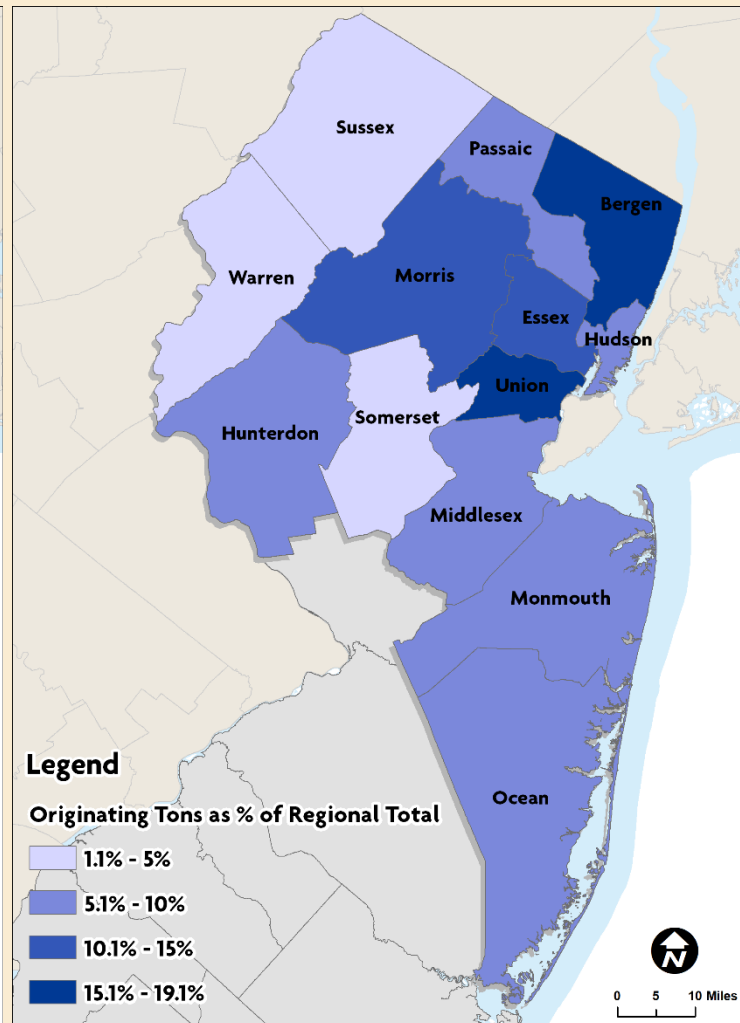
Source: NJTPA Freight Forecasting Tool, 2020

### Inbound Domestic Tons by County, 2020



Source: NJTPA Freight Forecasting Tool, 2020; NJRTM-E, 2019; NJOIT, 2008; Esri, 2014.

### Outbound Domestic Tons by County, 2020

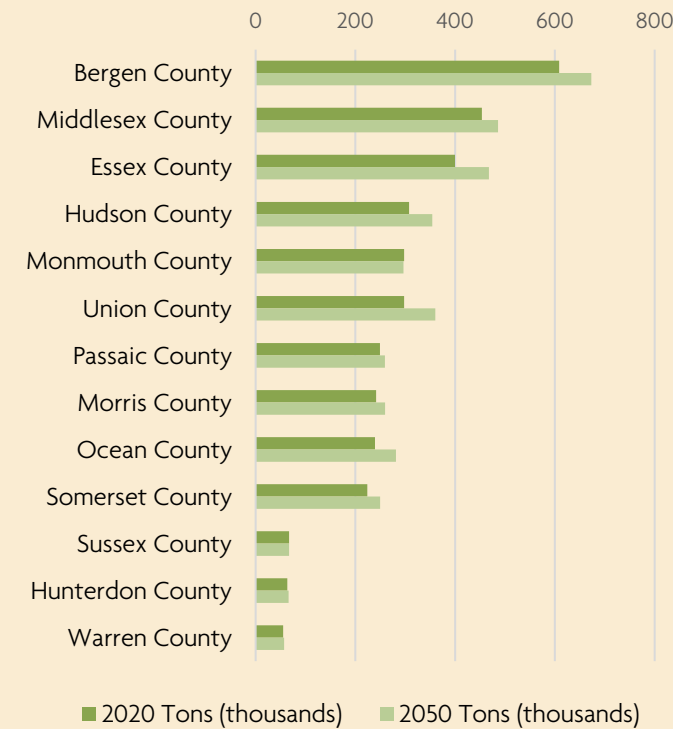


Source: NJTPA Freight Forecasting Tool, 2020; NJRTM-E, 2019; NJOIT, 2008; Esri, 2014.

The graphs on the next page show the top counties of origin and top counties of destination for goods in this commodity bundle traveling to or from the NJTPA region. About 17 percent of inbound durable goods in this commodity bundle are destined for Bergen County. Projected growth rates in inbound durable goods tonnage between 2020 and 2050 range from -1 percent (Monmouth County) to 21 percent (Union County).

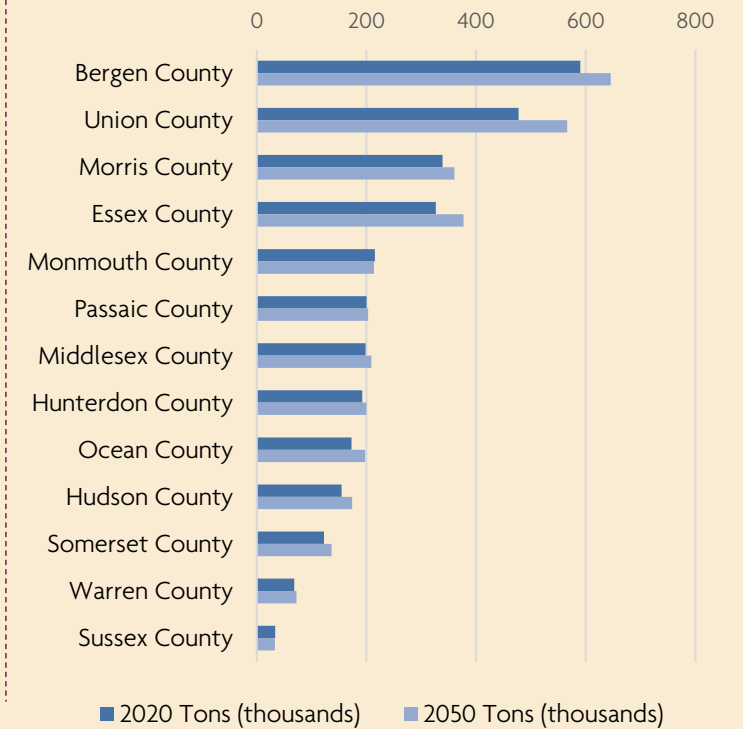
About 17 percent of all goods in the durable goods commodity bundle traveling outbound from the NJTPA region originate in Union County. Bergen County is the origin for about 16 percent of outbound shipments of goods in this bundle. Projected growth rates in outbound tonnage between 2020 and 2050 range from 1 percent (Monmouth County) to 17 percent (Union County).

### Inbound Domestic Tons by County, 2020 and 2050



Source: NJTPA Freight Forecasting Tool, 2020

### Outbound Domestic Tons by County, 2020 and 2050



Source: NJTPA Freight Forecasting Tool, 2020

## References

For more information on durable goods commodity flows and logistics in the North Jersey region and elsewhere, consult the following sources:

- National Association of Wholesaler-Distributors, [www.naw.org](http://www.naw.org)
- National Retail Federation, [www.nrf.com](http://www.nrf.com)
- Greater Metropolitan Furnishings Association, [www.gnyhfa.org](http://www.gnyhfa.org)
- National Furniture Association, [www.nationalfurnitureassociation.com](http://www.nationalfurnitureassociation.com)
- Bureau of Labor Statistics, U.S. Department of Labor, [www.bls.gov](http://www.bls.gov)

## ABOUT THE NJTPA

The North Jersey Transportation Planning Authority (NJTPA) is the federally authorized Metropolitan Planning Organization for 6.7 million people in the 13-county northern New Jersey region. Each year, the NJTPA oversees the investment of more than \$1 billion in federal funding for transportation projects and provides a forum for interagency cooperation and public input into funding decisions. It also sponsors and conducts studies, assists county planning agencies and monitors compliance with national air quality goals.

The NJTPA Board of Trustees includes 15 local elected officials, including one representative from each of the 13 northern New Jersey counties – Bergen, Essex, Hudson, Hunterdon, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren – as well as from the cities of Newark and Jersey City. The Board also includes the Commissioner of the New Jersey Department of Transportation (NJDOT), the Executive Director of NJ TRANSIT, the Chairman of the Port Authority of New York and New Jersey, a Governor's Representative and a Citizens' Representative appointed by the Governor.

## ABOUT THE STUDY

Conditions in the goods movement industry have changed over the last several years. The 2050 Freight Industry Level Forecasts Study developed updated information on current and projected freight demand through 2050 for the NJTPA to use in its freight planning activities. This effort built on two previous NJTPA freight planning studies: the 2040 Freight Industry Level Forecasts Study (completed in 2012) and the Regional Freight Commodity Profiles Study (completed in 2015).

This study helps identify locations with concentrations of goods movement activity and where they will occur in the future; the types of commodities that are and will be moving through the region; and where strategic investments should be considered to support economic growth and enhance regional resiliency. The results of this work will serve as background for the NJTPA's next Long Range Transportation Plan as well as freight planning and subregional planning studies.

**For further information,** please contact Jakub Rowinski, NJTPA Project Manager, at [jrowinski@njtpa.org](mailto:jrowinski@njtpa.org).

This Freight Profile is one of a series of profiles, representing 12 freight commodity bundles in the 13-county NJTPA region.

This document was prepared by the NJTPA with funding from the Federal Transit Administration and the Federal Highway Administration. The NJTPA is solely responsible for its contents.