

REGIONAL FREIGHT PROFILE

City of Jersey City

ABOUT THIS PROFILE

The North Jersey Transportation Planning Authority (NJTPA) has developed a set of alternative freight forecasts to support transportation, land use, and economic development decisions. This Freight Profile is an update to a previous version published in 2012, and offers a snapshot of key metrics – Economy and Land Uses, Freight Flows, and Freight Transportation Networks in 2020 and in the forecast year, 2050. Much of the economic and freight data reported in this profile is only available at the county level. Jersey City is in Hudson County.

ECONOMY AND LAND USES

With a population of 271,099, Jersey City is the 2nd most populated city in New Jersey and is home to about 40 percent of the population of Hudson County. Its population growth has exceeded the state average since 2000. Jersey City's median household income is close to the Hudson County median, and about 11 percent lower than the statewide median household income.

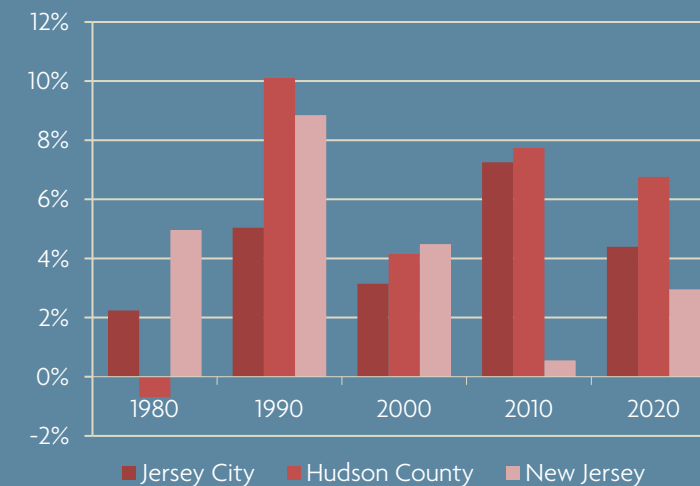
Jersey City is home to:

- 271,099 people
- About 41 million tons of domestic freight shipped or received in Hudson County annually, of which Jersey City sends and receives a substantial share
- Nearly 5.7 million e-commerce packages delivered annually
- Interstate, State, and County highways used by tens of thousands of trucks every day
- GCT Bayonne marine terminal
- Major freight rail yards at Croxton, Port Jersey ExpressRail, and Greenville

Highlights

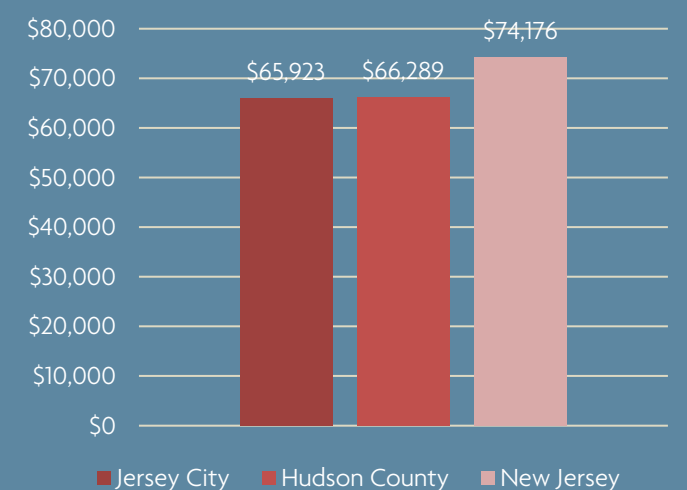
Population Growth by Decade

Source: U.S. Census Bureau



Median Household Income, 2018

Source: U.S. Census Bureau



EMPLOYMENT

Hudson County's economy employs 270,000 people in more than 15,000 establishments. About 29 percent are employed in "freight-intensive" industries, such as construction, manufacturing, mining and extraction, retail trade, wholesale trade, and logistics. About 71 percent are employed in industries that may generate freight but are less dependent on freight movement.

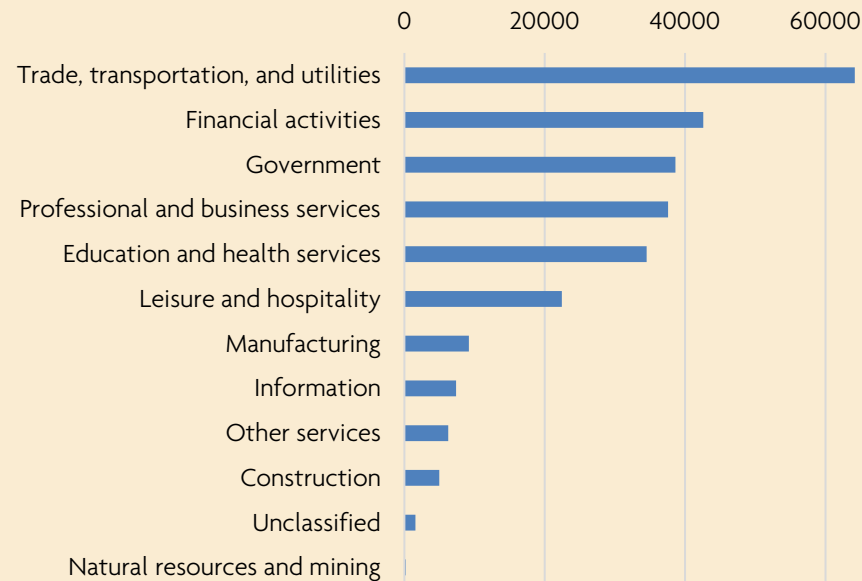
FREIGHT FLOWS

Commodity flow data and forecasts are available at the county level.

In 2020, an estimated 41 million tons of domestic freight will move into, out of, or within Hudson County, by all modes of transportation (truck, rail, pipeline, water, and air). This figure includes commodities moving into or out of Hudson County, but excludes pass-through tonnage. (The movement of international cargo to and from seaports, airports, and border crossings is captured and counted as domestic tonnage.)

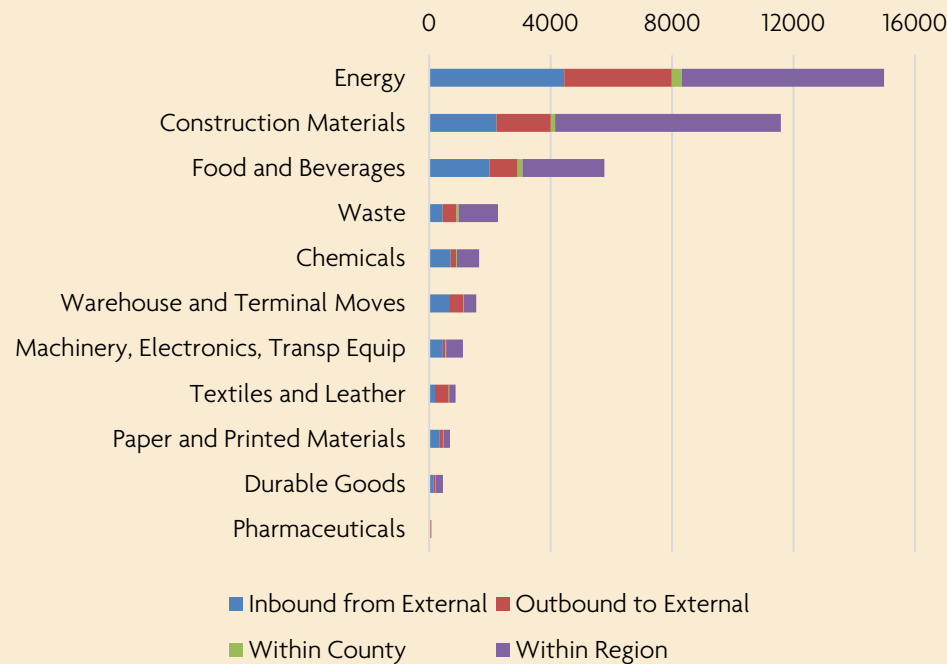
For domestic tonnage with an origin and/or destination in the County, around 28 percent consists of energy products, 44 percent of which move between points within the NJTPA region. Other leading commodities include moves of construction materials and food and beverages. Waste, chemicals, and movements of mixed freight from warehouses and terminals are among the top six commodity groups transported in the County.

Employment by Industry, 2019



Source: U.S. Bureau of Labor Statistics

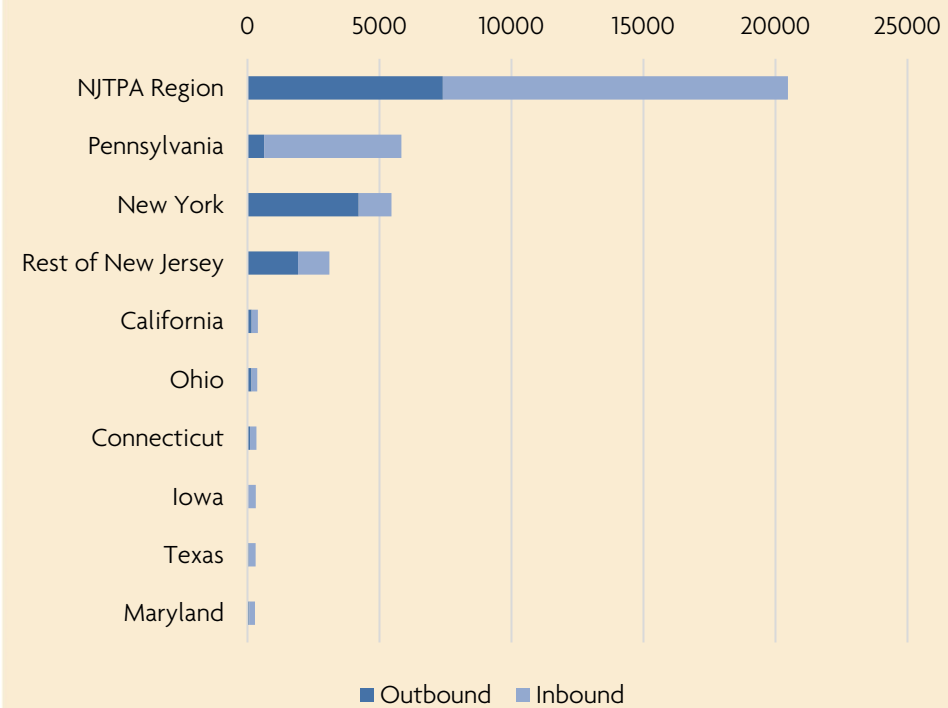
Thousands of Tons by Commodity by Direction, 2020



Source: NJTPA Freight Forecasting Tool, 2020

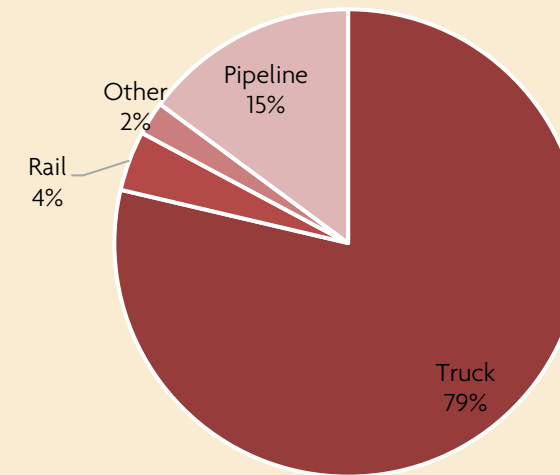
E-commerce has a growing presence in the retail landscape. Some of the freight shipments described in this profile include goods that are ultimately delivered to consumers who shop online. In 2019, about 14.7 million e-commerce shipments containing 22.5 million items were delivered to consumers in Hudson County.

Thousands of Tons by Domestic Trading Partner, 2020



Source: NJTPA Freight Forecasting Tool, 2020

Tons by Mode, 2020



Source: NJTPA Freight Forecasting Tool, 2020

TRADING PARTNERS

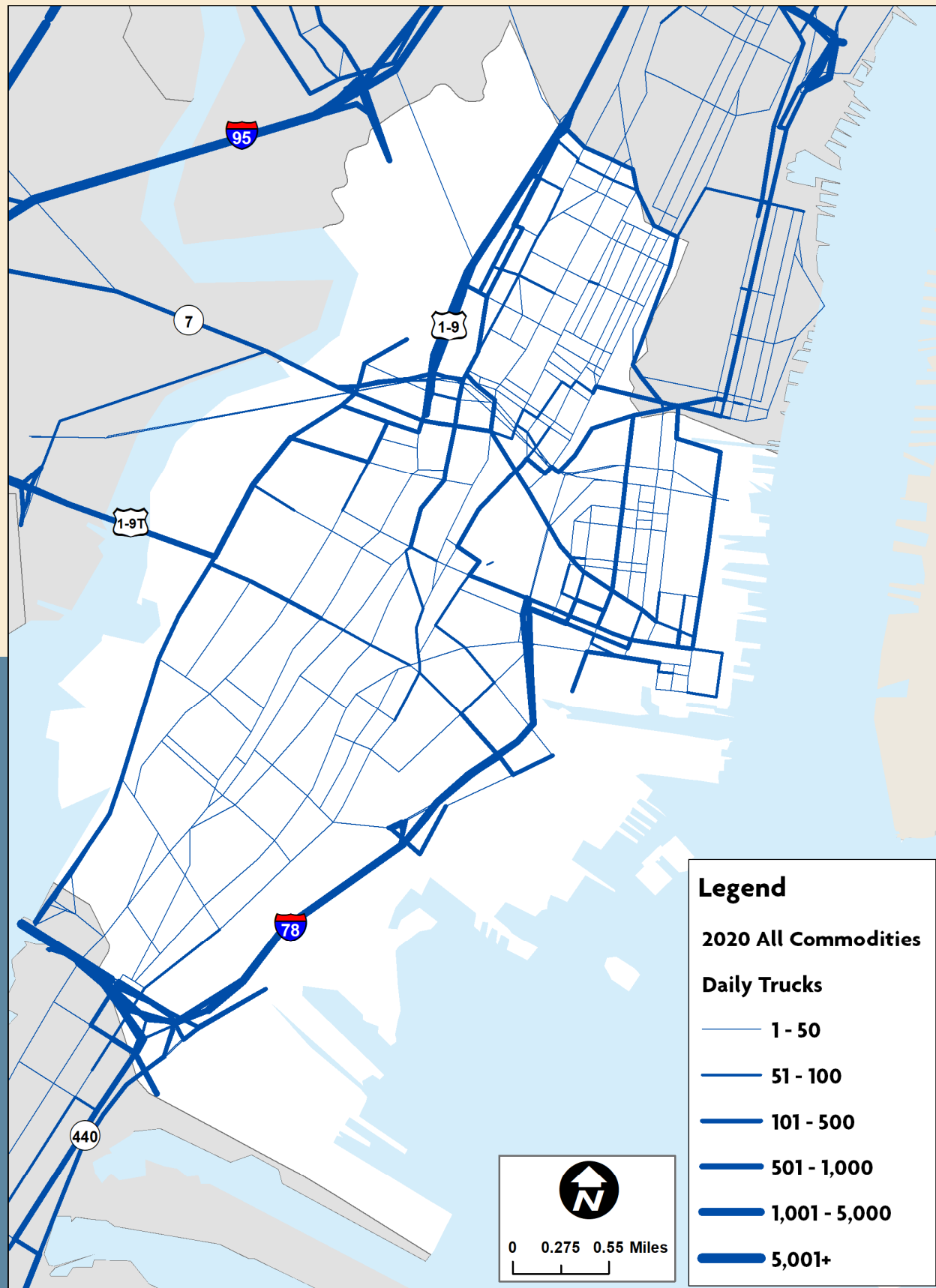
Hudson County's major trading partners are, not surprisingly, its neighbors. As illustrated to the left, locations in the NJTPA region are the greatest origins of inbound freight and destinations for outbound freight. The rest of New Jersey outside the NJTPA region, New York, and Pennsylvania, are also among the top origins and destinations for freight traded with Hudson County.

FREIGHT TRANSPORTATION NETWORKS

Freight can be handled by truck, rail, pipelines, air, or water. The choice of mode depends on a variety of factors, including: length of trip (rail and air are more competitive at longer distances), commodity type (rail and water are more competitive for heavy materials, and pipelines are suited for moving energy products), time sensitivity (truck and air are most competitive), need for door-to-door service (trucking is needed unless the customer has a dock or rail connection).

For domestic freight traveling to, from or within Hudson County, 79 percent travels by truck, 15 percent by pipeline, 4 percent by rail, and 2 percent by other modes. These modes also connect with the marine terminals located in Hudson County to move international freight to and from locations outside the United States.

Highway Network Utilization, 2020



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

HIGHWAY NETWORK UTILIZATION

Jersey City's highway network serves to connect its major freight activity centers with key trading partners elsewhere in the City, Hudson County, in the State of New Jersey, in other parts of North America, and – via international seaports and airports – the world.

Not all trucks on the road are carrying freight. Some are moving empty. Others are providing municipal services (waste transfer, utility services, etc.) or commercial services (contractors, lumber, landscapers, etc.).

The map on the previous page illustrates the flows of commodity trucks, or trucks loaded with freight, on the highway network.

Interstate 78 in Jersey City carries more than 2,000 commodity trucks per day in each direction every day. Portions of Route 1/9 also carry 2,000 commodity trucks per day in each direction. Route 440 carries more than 1,000 commodity trucks per day in each direction.

BUSINESS ESTABLISHMENTS

The map on the next page illustrates the locations of facilities that ship, handle, or receive freight, including:

- Production facilities such as manufacturing businesses or mining and quarrying facilities where goods are produced or raw materials are extracted;
- Logistics facilities, including warehousing and transportation facilities through which goods are distributed; and
- Sales, including retail, services, and institutional establishments where goods are sold.

The largest clusters of logistics facilities are the Port Jersey area on the border of Jersey City and Bayonne, and along County Avenue in the Croxton area of the City. Large groups of sales facilities are located in the Newport and Route 440 corridor areas and along major retail corridors such as Newark Avenue, West Side Avenue, and in Journal Square.

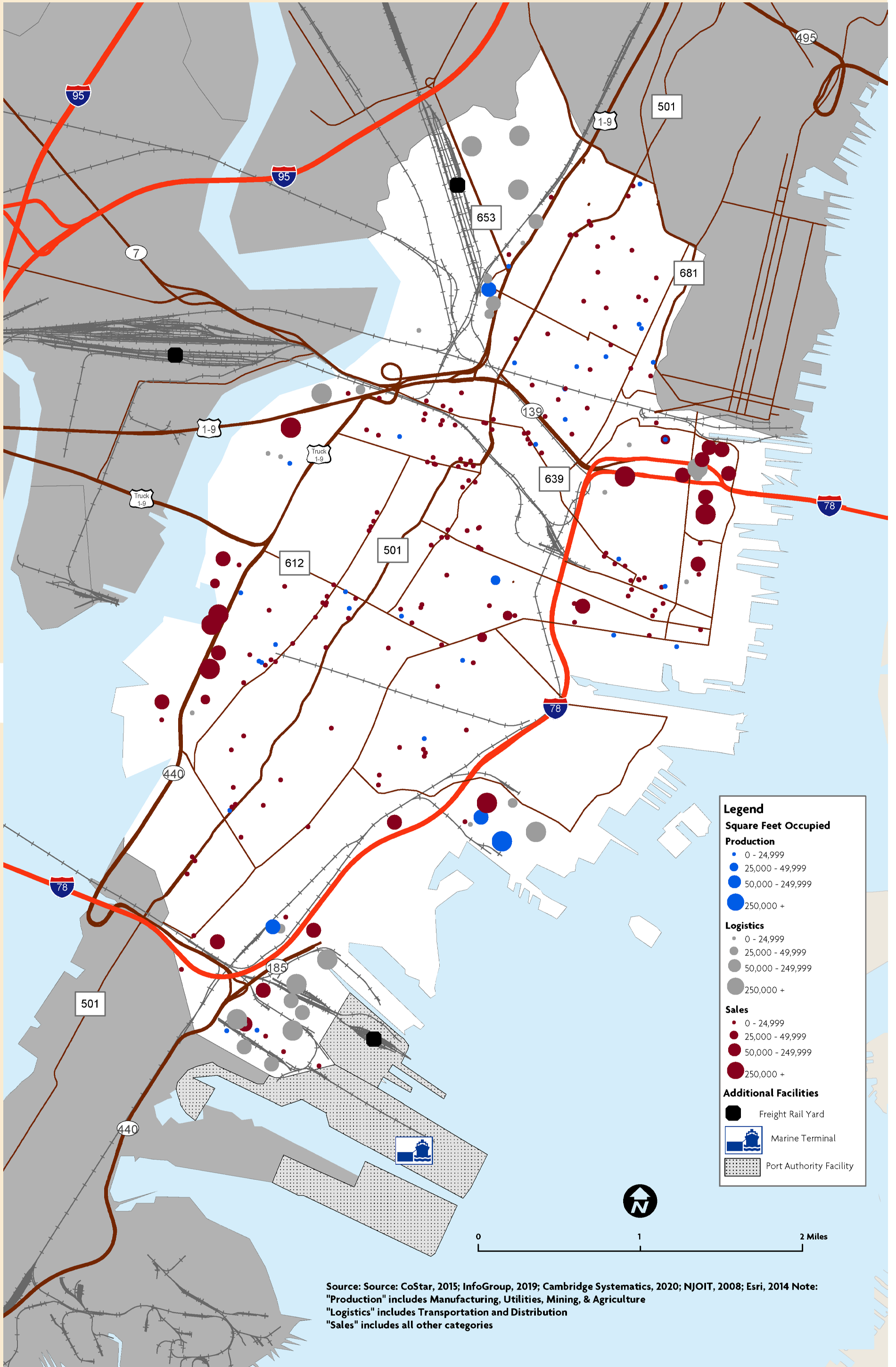
Top 5 Business Establishments in Freight-Generating Industry Sectors, by Size

| Company | Square Footage | Municipality | Business Type |
|-------------------------------------|----------------|--------------|---------------|
| USPS International Bulk Mail Center | 1,150,000 | Jersey City | Logistics |
| GRM Information Management Services | 900,000 | Jersey City | Sales |
| Goya | 660,000 | Jersey City | Logistics |
| Florence Warehouse | 500,000 | Jersey City | Logistics |
| National Retail Transportation | 400,000 | Jersey City | Logistics |

Source: Infogroup, 2019; CoStar, 2015

Note: Some companies may have multiple locations in the city and/or region.

Business Square Footage by Industry Type

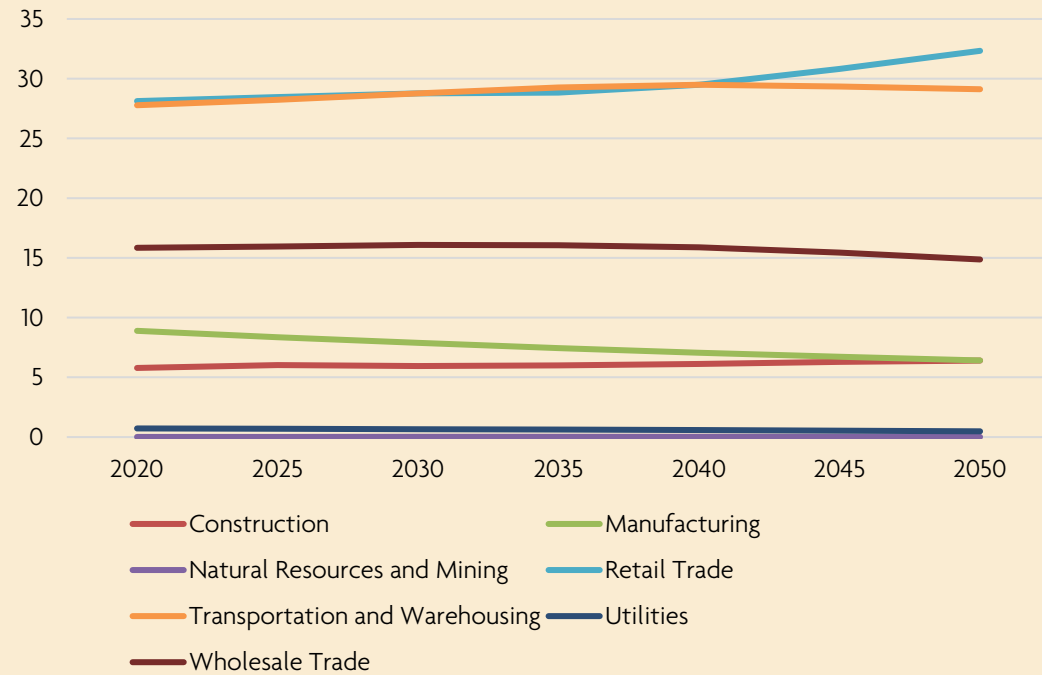


Source: Source: CoStar, 2015; InfoGroup, 2019; Cambridge Systematics, 2020; NJOIT, 2008; Esri, 2014 Note:
 "Production" includes Manufacturing, Utilities, Mining, & Agriculture
 "Logistics" includes Transportation and Distribution
 "Sales" includes all other categories

EMPLOYMENT FORECAST

Employment forecasts by sector are available at the county level. Employment in freight-intensive industries in Hudson County is expected to increase by about 3 percent during the forecast period. Retail trade, construction, and transportation and warehousing, employment are expected to increase by 15 percent, 11 percent, and 5 percent, respectively, between 2020 and 2050.

Forecasted Employment in Freight-Generating Industry Sectors, 2020-2050 (Thousands of Jobs)



Source: Moody's, 2020

Commodity Flow Forecast, 2020-2050

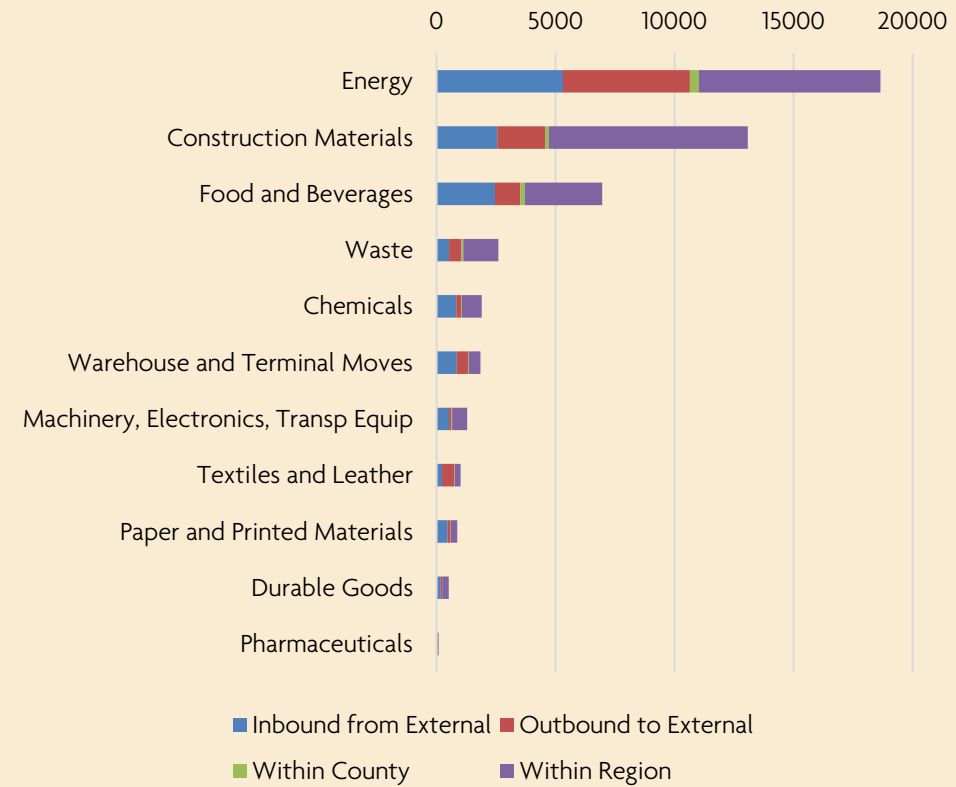
By 2050, commodity flows into, out of, and within Hudson County are expected to have increased by about 19 percent, from 41 million tons to 48.8 million tons (a difference of 7.8 million tons). Energy products is expected to remain the number one commodity transported by tonnage, followed construction materials, food and beverages, and waste. Machinery, electronics, and transportation equipment and food and beverages are the top commodity bundles by value of goods and are expected to remain the top two bundles by value through 2050.

| Commodity Bundle | 2020 Tons (thousands) | 2050 Tons (thousands) | 2020 Value (millions \$) | 2050 Value (millions \$) | Change in Tons | Change in Value |
|--------------------------------------|-----------------------|-----------------------|--------------------------|--------------------------|----------------|-----------------|
| Chemicals | 1,645 | 1,900 | 6,392 | 7,383 | 16% | 16% |
| Construction Materials | 11,583 | 13,080 | 4,036 | 4,563 | 13% | 13% |
| Durable Goods | 453 | 517 | 3,402 | 3,934 | 14% | 16% |
| Energy | 14,985 | 18,651 | 9,756 | 11,740 | 24% | 20% |
| Food and Beverages | 5,771 | 6,960 | 10,724 | 12,760 | 21% | 19% |
| Machinery, Electronics, Transp Equip | 1,116 | 1,288 | 13,683 | 15,914 | 15% | 16% |
| Paper and Printed Materials | 686 | 871 | 1,698 | 2,342 | 27% | 38% |
| Pharmaceuticals | 78 | 88 | 3,406 | 3,851 | 13% | 13% |
| Warehouse and Terminal Moves | 1,553 | 1,846 | 9,331 | 11,498 | 19% | 23% |
| Waste | 2,271 | 2,601 | 745 | 860 | 15% | 15% |
| Textiles and Leather | 870 | 1,014 | 6,909 | 8,100 | 17% | 17% |
| Grand Total | 41,010 | 48,816 | 70,082 | 82,944 | 19% | 18% |

Source: NJTPA Freight Forecasting Tool, 2020

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

Thousands of Tons by Commodity by Direction, 2050



Source: NJTPA Freight Forecasting Tool, 2020

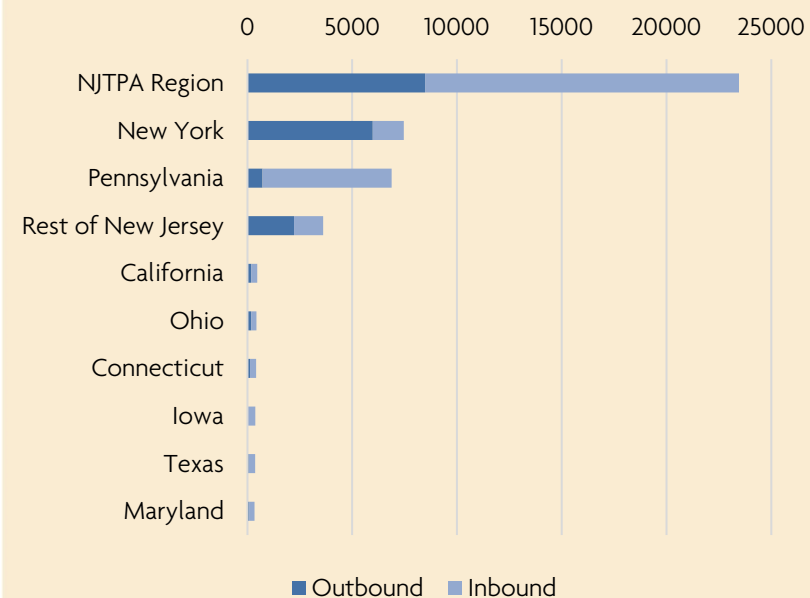
COMMODITY VOLUMES AND DIRECTION

The directional movement of shipments containing the top 10 commodities are expected to remain nearly constant as well. About 40 percent of the energy product moves will be intraregional moves. Inbound flows of food and beverages are expected to grow slightly more than intraregional moves between 2020 and 2050.

FUTURE TRADING PARTNERS

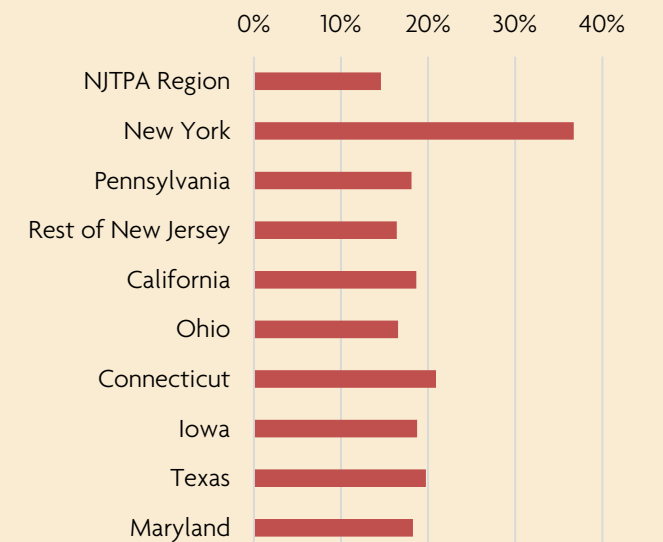
Hudson County's largest trading partners will continue to be other counties in the NJTPA region, followed by New York and Pennsylvania. The volume of trade with New York is expected to grow at a greater rate (37 percent) than trade with other top trading partners between 2020 and 2050.

Thousands of Tons by Domestic Trading Partner, 2050



Source: NJTPA Freight Forecasting Tool, 2020

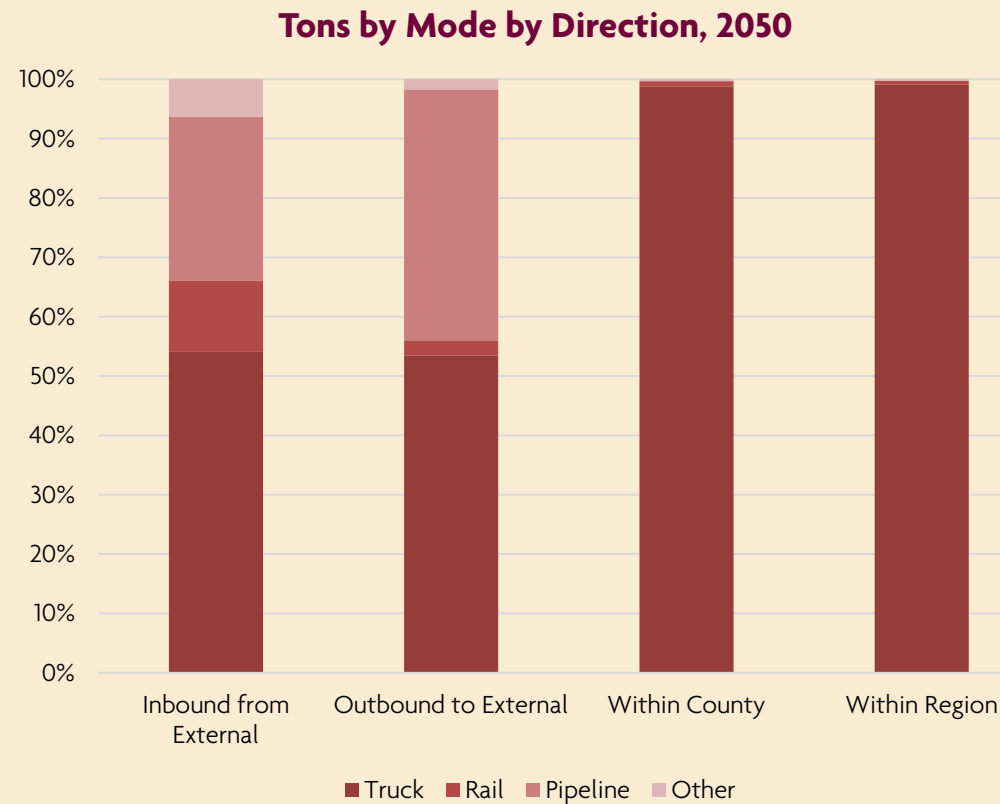
Growth, 2020-2050



Source: NJTPA Freight Forecasting Tool, 2020

FUTURE MODE UTILIZATION

The forecast anticipates that freight mode splits in 2050 will be similar to 2020 mode splits. Trucks are expected to carry 76 percent of all freight tons, and pipelines are expected to carry 17 percent of freight tons. Rail is expected to move 4 percent and other modes are expected to carry about 2 percent. Pipelines are expected to move 42 percent of outbound tonnage, and truck will carry about 99 percent of intracounty and intraregional freight moves.



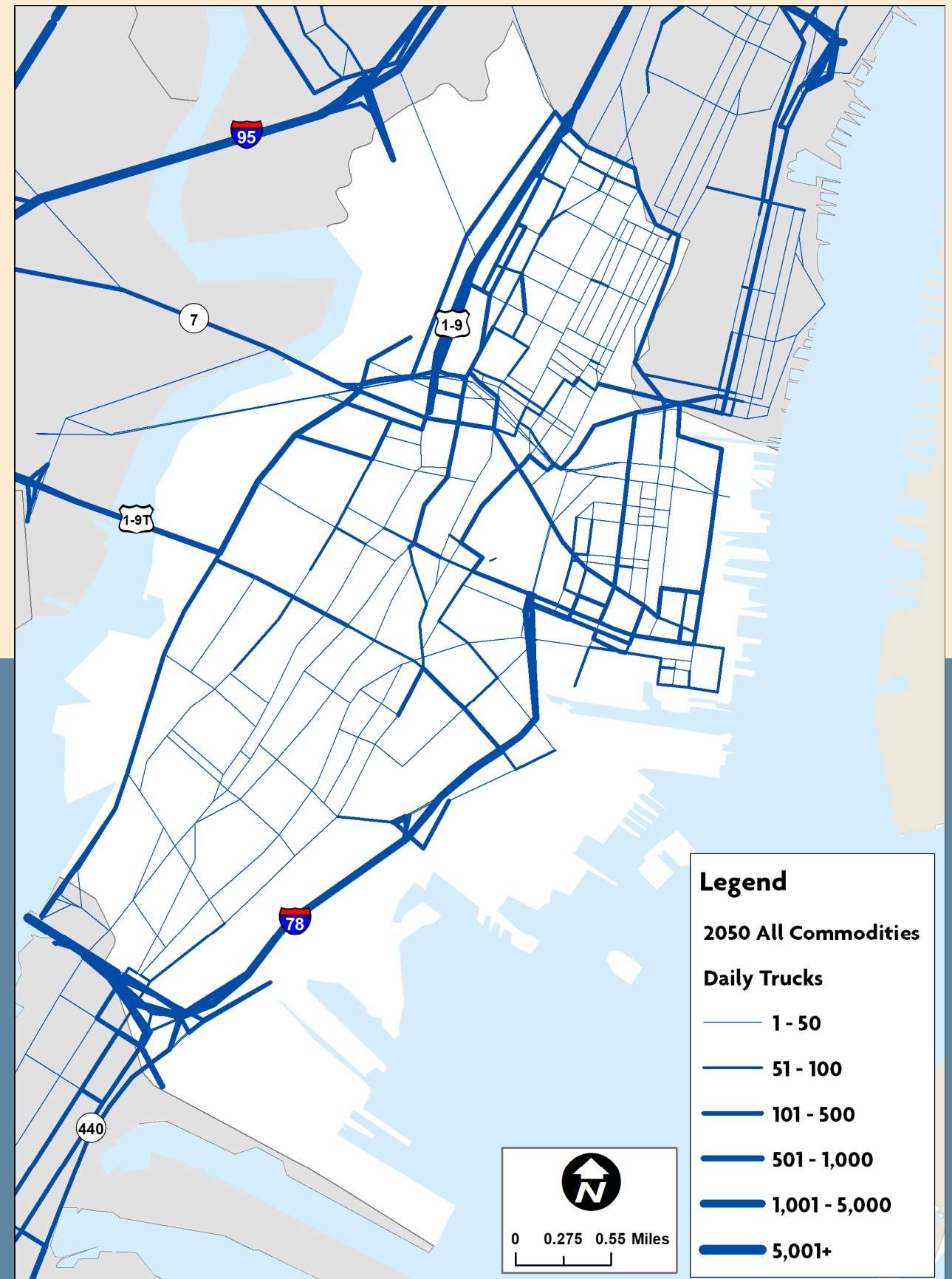
Source: NJTPA Freight Forecasting Tool, 2020

Future Highway Network Utilization

In 2050, Jersey City's highway network is expected to remain the primary conveyor of freight into, out of, within and through the City. The number of commodity trucks traveling on portions of Route 1/9 are expected to increase by more than 400 per day in each direction between 2020 and 2050. On Interstate 78 and Route 7, 200 more commodity truck trips in each direction are expected by 2050.

The map on Page 11 illustrates the projected commodity truck volumes in 2050 on highways in Jersey City.

Highway Network Utilization, 2050



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

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.

Jersey City's representative on the NJTPA Board of Trustees is Mayor Steven M. Fulop.

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.

This Freight Profile is one of a series of profiles, covering the 13 counties of the NJTPA region, the City of Newark, Jersey City, and the region as a whole.

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.