

2040 Freight Industry Level Forecasts

ABOUT THIS PROFILE

The NJTPA has developed a set of alternative freight forecasts to support transportation, land use, and economic development decisions. The first step in the study process was to document current baseline conditions. This Freight Profile offers a snapshot of key metrics – Economy and Land Uses, Freight Flows, and Freight Transportation Networks in 2010 and in the forecast year, 2040.

ECONOMY AND LAND USES

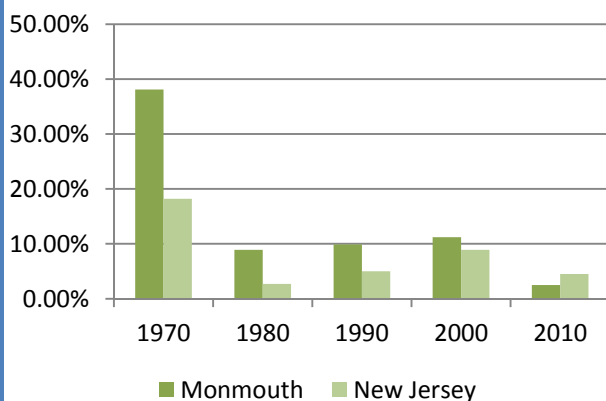
With a 2010 population of 630,380, Monmouth ranks fifth in the State of New Jersey and in the NJTPA region. Until last decade, Monmouth County outpaced the State in population growth. The County's average household income is higher than that of the State overall. Between 2002 and 2009, fluctuations in household income were more pronounced in Monmouth County than the rest of the State, though the decline in household income (as represented in 2010 constant dollars) matches the decline in household income Statewide since 2008.

Monmouth County is home to...

- 630,380 people
- 37,906 businesses that employ 262,400 people; 34% of these jobs are in businesses that are highly dependent on freight movement
- More than 280 warehousing/distribution buildings and 122 manufacturing buildings
- About 21.6 million tons of domestic freight shipped or received annually
- Interstate, State, and County highways used by tens of thousands of trucks every day

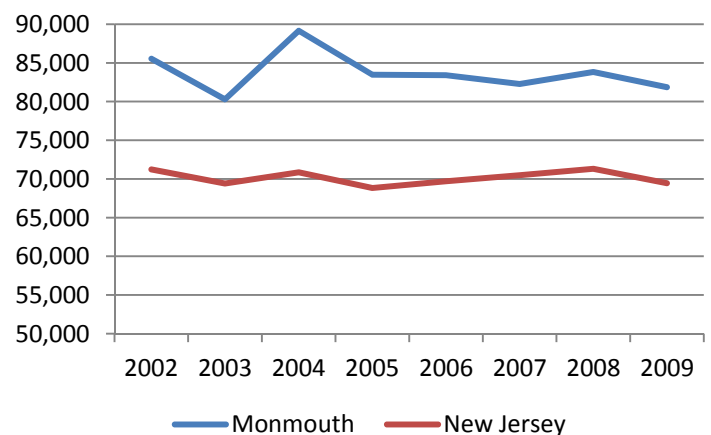
Population Growth by Decade

Source: U.S. Census Bureau



Household Income, Constant 2010 Dollars

Source: U.S. Census Bureau



Employment

The County's economy employs 262,400 people in nearly 38,000 establishments. About 28% are employed in "freight-intensive" industries, such as construction, manufacturing, mining and extraction, retail trade, wholesale trade, and logistics. About 72% are employed in industries that may generate freight, but are less dependent on freight movement.

FREIGHT FLOWS

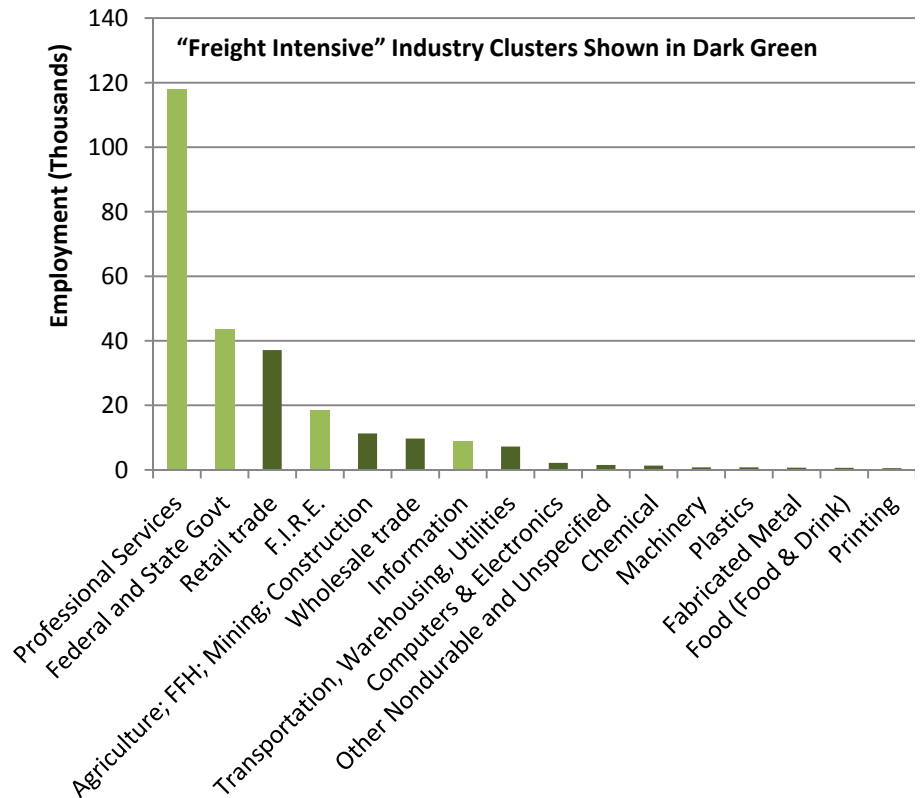
In 2007, approximately 21.6 million tons of domestic freight moved into, out of, or within Monmouth County, by all modes of transportation (truck, rail, water, and air). This figure includes commodities moving into or out of Monmouth County, but excludes pass-through tonnage. (The movement of international cargo to and from seaports, airports, and border crossings is captured and counted as domestic tonnage.)

Commodities

For domestic O-D tonnage, around 39% consisted of nonmetallic minerals, more than 90% of which traveled inbound to Monmouth County. Clay, concrete, glass, or stone products and food also moved primarily in the inbound direction. Outbound flows of consumer goods traveling to or from warehouses or distribution centers and petroleum outweighed inbound flows of those commodities. Municipal solid waste (MSW) traveled mostly within the County.

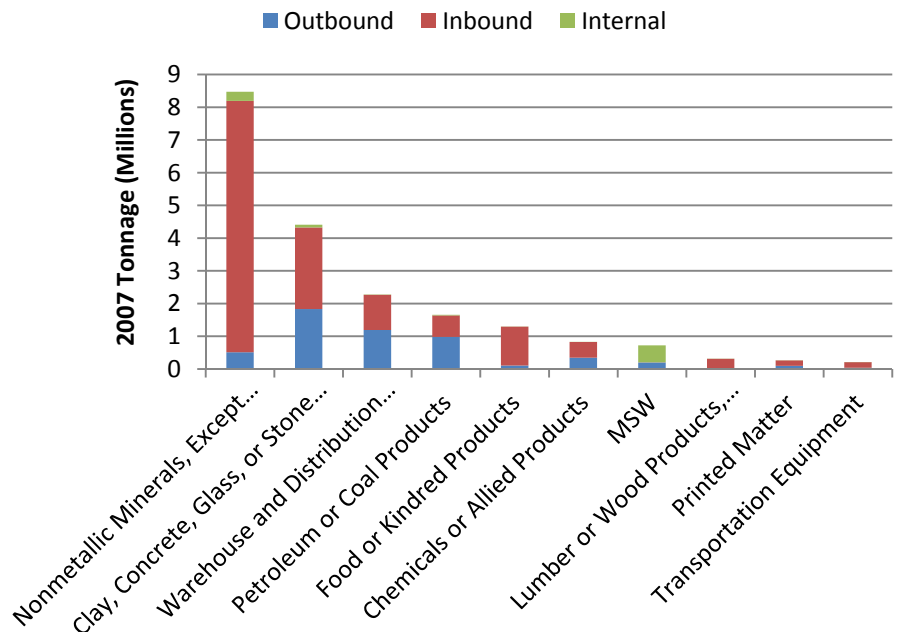
Employment by Industry, 2010

Source: R/ECON



Domestic O-D Commodities by Tonnage, 2007

Source: IHS Global Insight



Trading Partners

Monmouth County’s major trading partners are, not surprisingly, its neighbors. As illustrated to the right, more than 60% of all freight tonnage traveled between Monmouth and other counties in New Jersey. Inbound trade with other New Jersey counties alone accounted for 43% of all trade. Outside the State, Pennsylvania, New York, and Vermont are the next three largest trading partners. Inbound moves of nonmetallic minerals compose most of the Vermont and Pennsylvania trade.

FREIGHT TRANSPORTATION NETWORKS

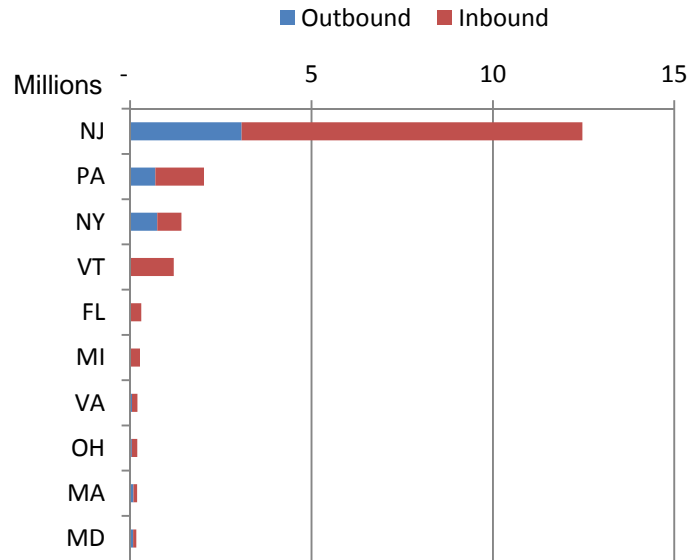
Freight can be handled by truck, rail, air or water. The choice of mode depends on a variety of factors, including: length of trip (rail and air are more competitive at longer distances), commodity type (rail and water are more competitive for heavy materials), time sensitivity (truck and air are most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

Mode Split

For domestic freight traveling to, from or within Monmouth County, 99.5% travels by truck, primarily to and from warehouses, distribution centers, manufacturing facilities and retail centers. About half of 1% travels by rail.

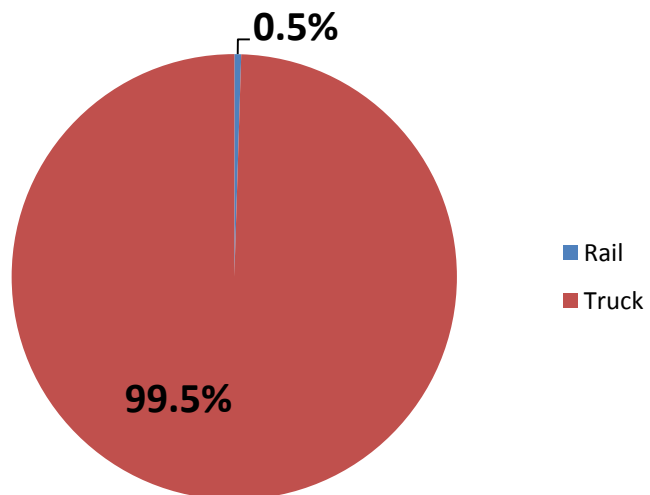
Top Origins and Destinations of Domestic O-D Freight Tonnage, 2007

Source: IHS Global Insight



Mode Split, Domestic O-D Tonnage, 2007

Source: IHS Global Insight



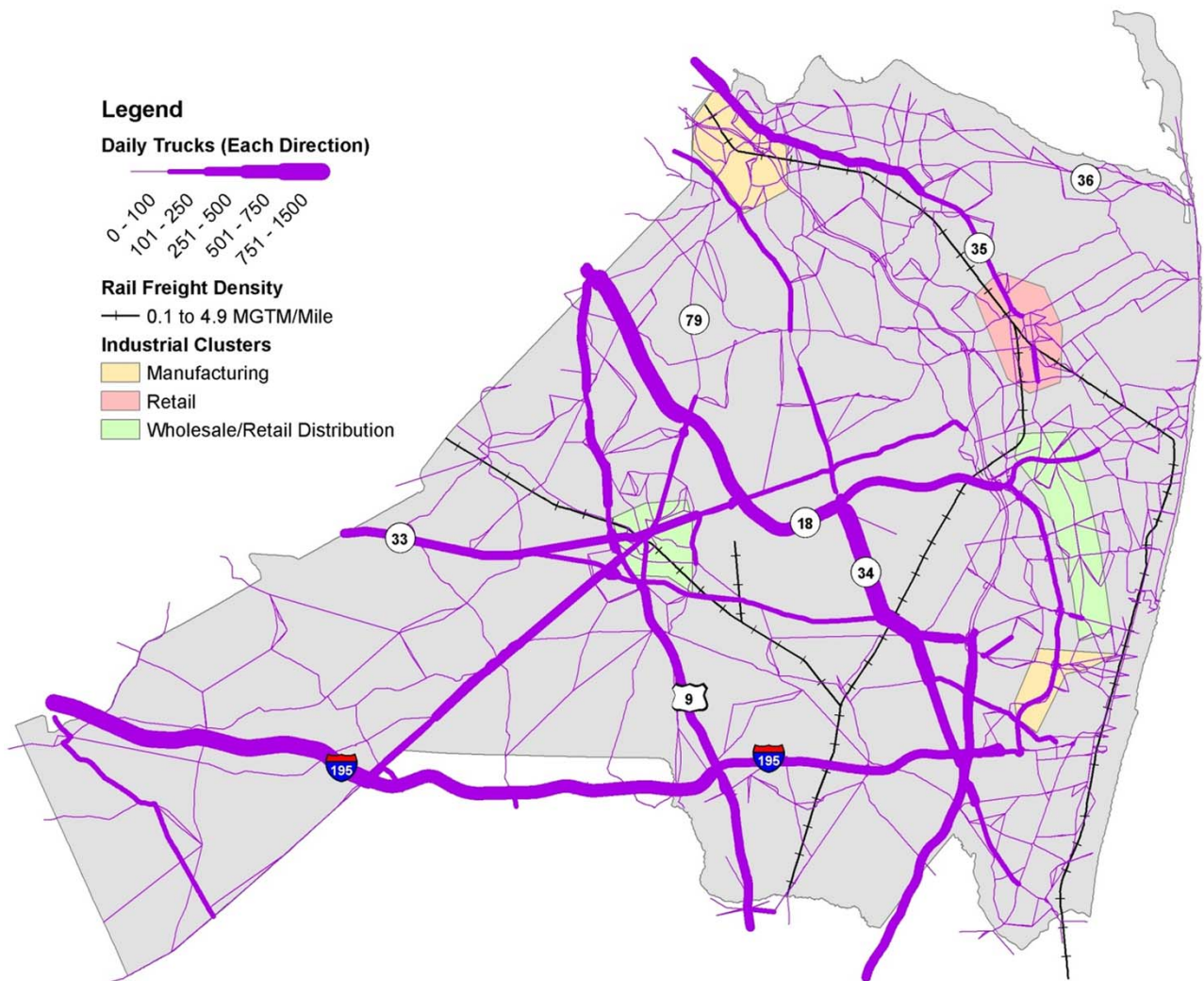
Highway and Rail Network Utilization

Monmouth County’s highway network serves to connect its major freight activity centers with key trading partners elsewhere in the County, in the State of New Jersey, in other parts of North America, and – via international seaports and airports – the world. Western sections of Interstate 195 and parts of NJ Routes 18 and 34 carry the highest volumes of trucks – between 2,000 and 3,000 trucks per day in some sections. 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 freight rail lines in Monmouth County are owned by Conrail and New Jersey Transit. Conrail has trackage rights on all of the active NJ Transit rail lines in the County. The map below illustrates highway and rail network utilization in Monmouth County.

Commodity Truck and Rail Flows in Monmouth County, 2007

Sources: IHS Global Insight (2007), NJTPA Regional Transportation Model-Enhanced (NJRTM-E), I-95 Corridor Coalition Integrated Corridor Analysis Tool Rail Network, and Dun and Bradstreet (2010)

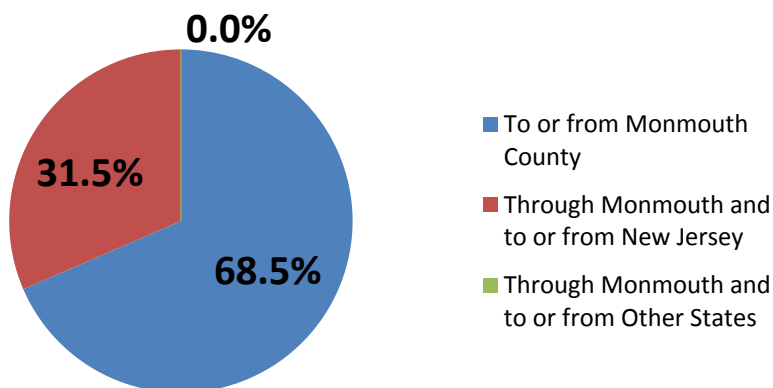


Highway Link Analysis

Different highways can be used by trucks carrying freight in different ways. Some highways have a high % of local traffic; others a high % of pass-through traffic. Many highways show significant differences at different locations. Among major highways in Monmouth County, including Interstate 195 and US Route 9, the average values of internal and through traffic are shown in the graph to the right.

Truck Trips on Monmouth County Highway Links, 2007

Source: Cambridge Systematics, Inc.



About 69% of trucks traveling on the selected highways in Monmouth County are traveling to or from a location within the County. Trucks using these highways to pass through Monmouth County on their way to or from locations in other parts of New Jersey compose 31.5% of truck traffic. It is estimated that 0% of trucks on these highways in Monmouth County are passing through between origin or destination points outside the State.

Industrial Buildings Inventory

Freight-generating industries are supported by industrial buildings. The location of these buildings often depends on transportation access, and their uses may be significant generators of freight traffic. As illustrated on Pages 6 and 7, there are 122 manufacturing buildings located in the County. Manufacturing buildings tend to be clustered in the Aberdeen/Matawan/Keyport area and along the Route 33 and Route 35 corridors in the eastern and central portions of the County. There are 286 warehousing/distribution buildings located within the County, one of which is more than 1 million square feet. These buildings are clustered in the vicinity of Neptune City, Neptune Township and Asbury Park; in Freehold Borough and Township, and along the Route 34 and Route 35 corridors in eastern and southeastern Monmouth County.

As summarized in the two tables to the right, many of the industrial buildings generate large volumes of freight. According to the Freight Locator database, 323 facilities in Monmouth County receive more than 1.3 million tons and ship 4.1 million tons of freight annually. It is important to note that some facilities' inbound and outbound tonnage values do not match. This is because some types of local delivery and pickup moves are not classified as "commodity moves" in the source data.

Top 5 Facilities by Inbound/Outbound Tonnage, 2007

Source: IHS Global Insight Freight Locator Database

COMPANY NAME	CITY	INBOUND TONS
BEL-RAY CO INC	FARMINGDALE	121,140
HAIR SYSTEMS INC	ENGLISHTOWN	111,534
COSMETIC ESSENCE INC	HOLMDEL	75,936
GLOBE PETROLEUM INC	RED BANK	67,041
COCA-COLA BOTTLING CO	NEPTUNE	65,184

COMPANY NAME	CITY	OUTBOUND TONS
EARL ASPHALT CO	FARMINGDALE	1,303,155
GLOBE PETROLEUM INC	RED BANK	596,041
STAVOLA CONTRACTING CO INC	RED BANK	228,052
HAIR SYSTEMS INC	ENGLISHTOWN	227,591
GOURMET KITCHENS INC	NEPTUNE	129,259

Industrial Buildings by Type and Square Footage, 2010

Source: CB Richard Ellis

Legend

Warehouses and Distribution Centers

- > 1 Million SF
- < 500,000 SF

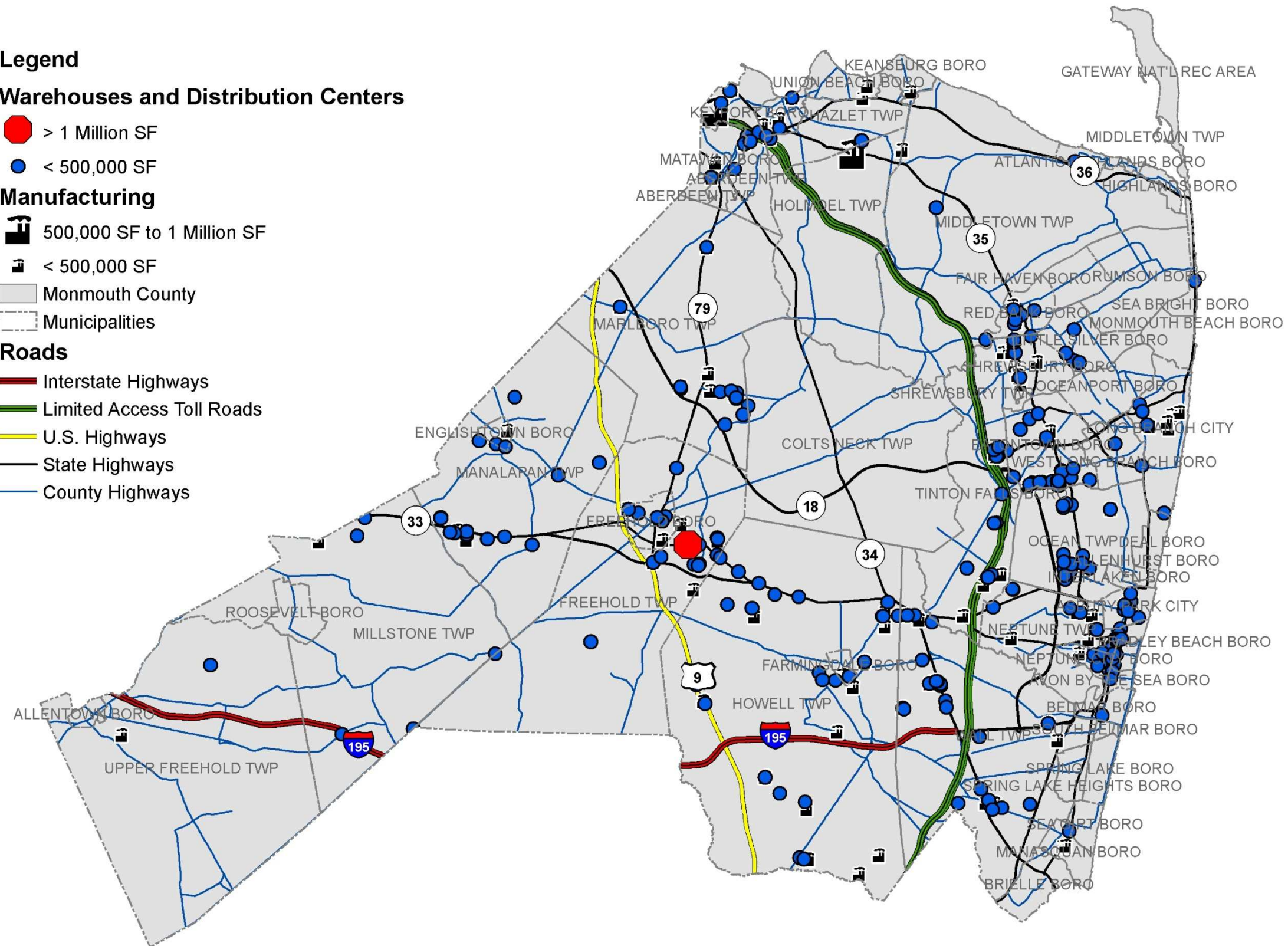
Manufacturing

- 500,000 SF to 1 Million SF
- < 500,000 SF

- Monmouth County
- Municipalities

Roads

- Interstate Highways
- Limited Access Toll Roads
- U.S. Highways
- State Highways
- County Highways

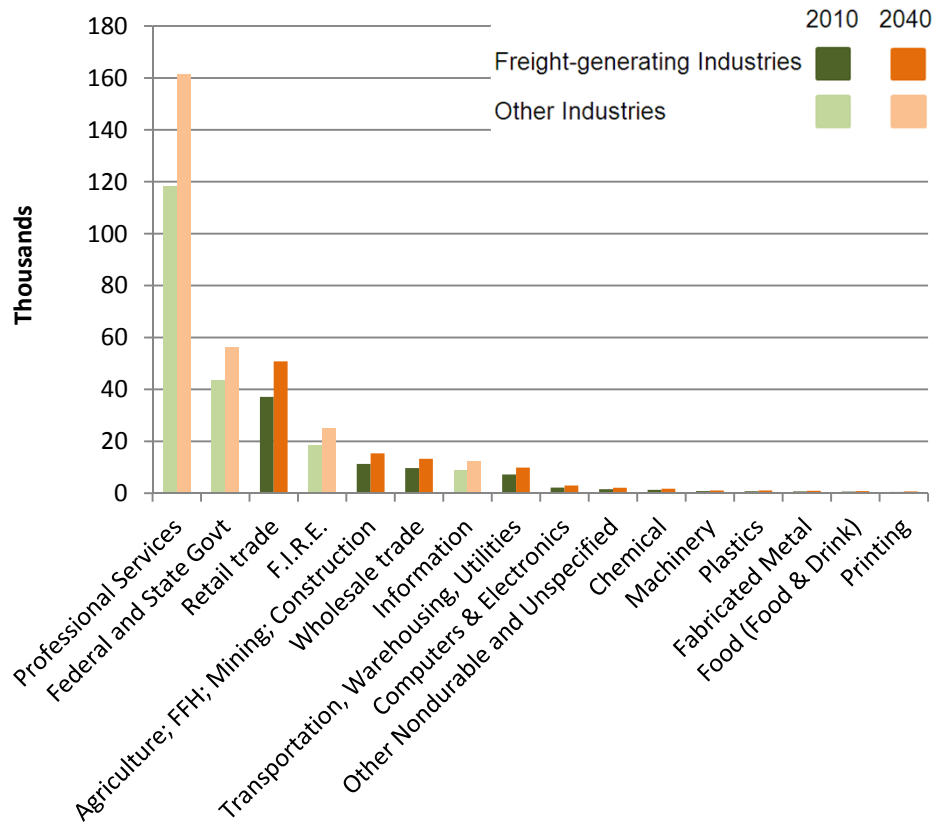


EMPLOYMENT FORECAST

Between 2010 and 2040, non-farm employment in Monmouth County is expected to grow by 36%, from 262,400 to 355,800. Employment in freight-intensive industries is expected to grow by 37% during the forecast period, compared to 35% for other industries. The faster-growing freight-intensive industries will make up a slightly larger share of the County's employment in the future (28.3% in 2040, compared to 28.1% in 2010). Among individual industry groups, professional services is expected to experience the greatest employment growth (43,400 jobs, or 37%), while Federal and State government employment is expected to grow at the slowest rate (30 or 12,900 jobs).

Industry Employment Forecast, 2010 - 2040

Source: R/ECON



2040 COMMODITY FLOWS

By 2040, overall commodity flows into, out of, and within Monmouth County are expected to have increased by about 63%, from 21.6 million tons to 35.2 million tons (a difference of 13.5 million tons). Nonmetallic minerals is expected to remain the number one commodity transported in Monmouth County by tonnage, followed by, clay/concrete/glass/stone, warehouse and distribution center traffic, petroleum or coal products, and food. Growth rates for most commodity groups are expected to range from 60% to 64%.

Top 10 Commodities by Tonnage, 2040

Sources: Cambridge Systematics, with data from IHS Global Insight

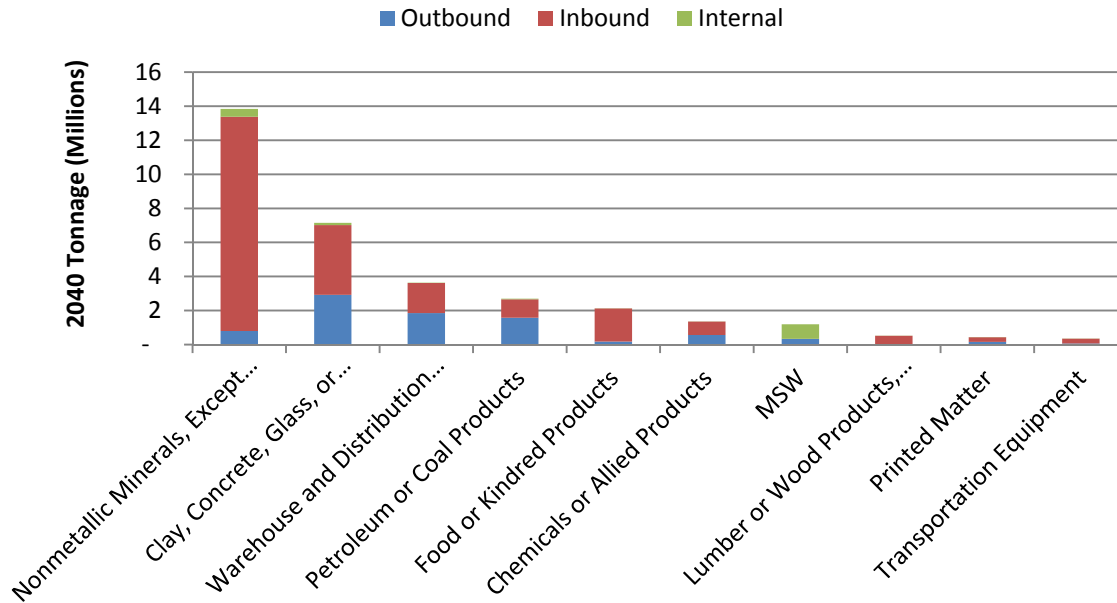
Commodity	2007 Tons	2040 Tons	Difference	Growth Rate
Nonmetallic Minerals, Except Fuels	8,474,721	13,842,329	5,367,608	63%
Clay, Concrete, Glass, or Stone Products	4,412,114	7,153,076	2,740,962	62%
Warehouse and Distribution Center	2,278,783	3,636,088	1,357,305	60%
Petroleum or Coal Products	1,658,484	2,690,319	1,031,835	62%
Food or Kindred Products	1,298,298	2,127,037	828,739	64%
Chemicals or Allied Products	825,537	1,352,431	526,894	64%
MSW	724,140	1,186,275	462,136	64%
Lumber or Wood Products, Excluding Furniture	312,351	512,171	199,820	64%
Printed Matter	267,584	434,930	167,346	63%
Transportation Equipment	209,340	342,980	133,640	64%

Commodity Volumes and Direction

The directional movement of shipments containing the top ten commodities is expected to remain fairly constant as well. In 2040, like 2007, about 91% of nonmetallic minerals will be moving inbound, while 6% will move outbound. About 57% of clay/concrete/glass/stone will move inbound and 41% will move outbound. Warehouse and distribution center traffic will be nearly evenly split (51% outbound and 49% inbound) .

Top 10 Commodities by Tonnage by Direction, 2040

Sources: Cambridge Systematics, with data from IHS Global Insight

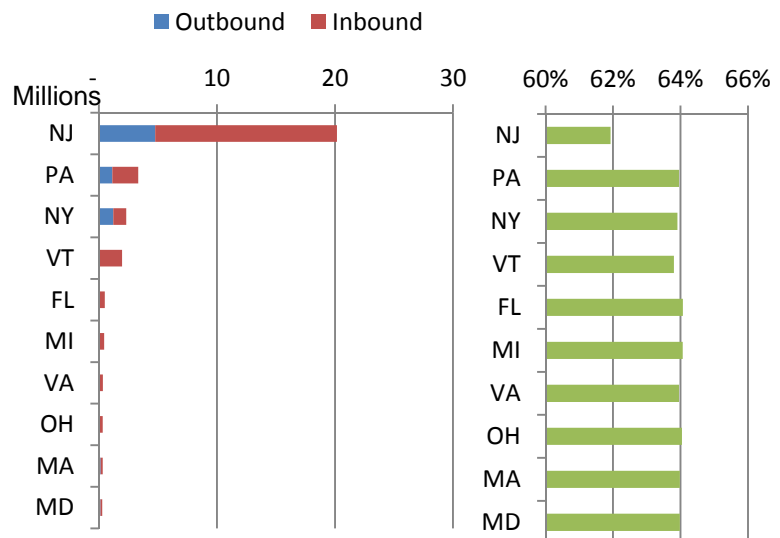


Trading Partners by 2040 Tonnage (Left) and 2007-2040 Growth (Right)

Source: Cambridge Systematics, with data from IHS Global Insight

Future Trading Partners

Monmouth County's largest trading partners will continue to be other New Jersey counties, followed by Pennsylvania and New York. Inbound shipments from other New Jersey counties are expected to grow at a faster rate than outbound shipments, and will account for 76% of intra-state trade in 2040, compared to 75% in 2007. Growth rates in trade among the top ten trading partners are expected to fall in a narrow range between 61.93% (New Jersey) and 64.07% (Florida).

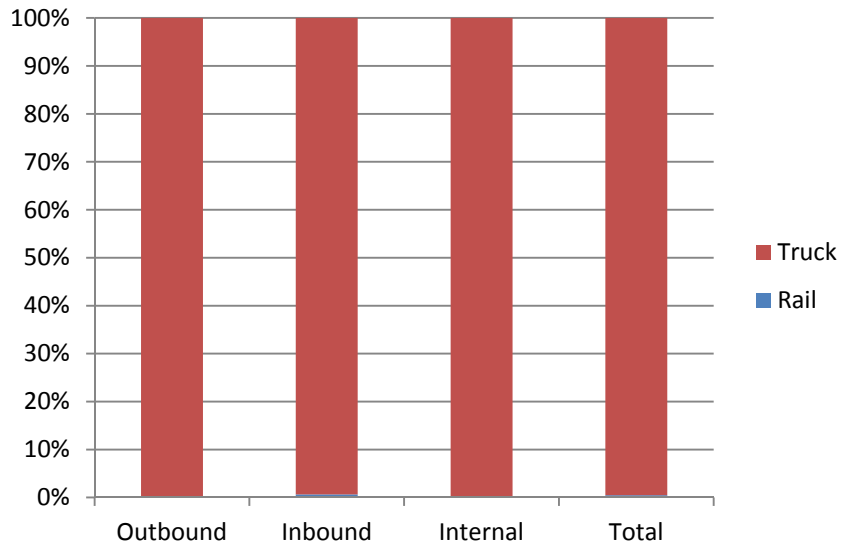


Future Mode Utilization

The forecast anticipates that freight mode splits in 2040 will be similar to 2007 mode splits. Trucks are expected to carry 99.5% of all freight tons, while rail is expected to carry about 0.5% of all freight tons. About 93% of rail tonnage will be moving in the inbound direction. Trucks will be used for nearly all outbound and internal freight moves.

Freight Tonnage by Mode and Direction, 2040

Source: Cambridge Systematics, with data from IHS Global Insight

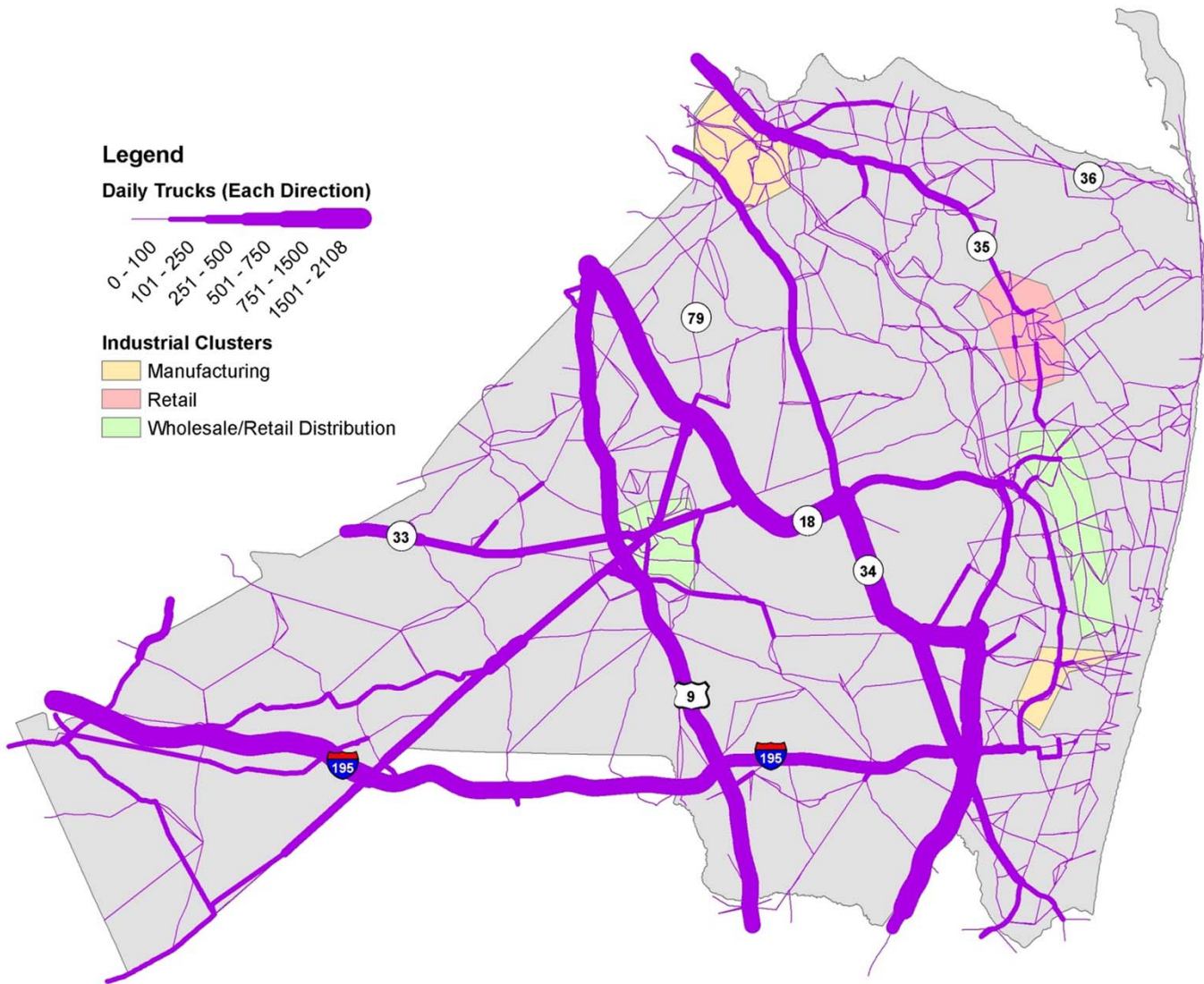

Future Highway Network Utilization

In 2040, Monmouth County’s highway network is expected to remain the primary conveyor of freight into, out of, within and through the County. The number of trucks traveling on parts of Interstate 195 and the Garden State Parkway south of Exit 105 could exceed 4,000 trucks per day. Parts of NJ Routes 18 and 34 and US Route 9 could see truck volumes exceed 2,000 trucks per day on some segments.

The map on Page 11 illustrates the projected truck volumes in 2040 on highways in Monmouth County.

Commodity Truck Flows in Monmouth County, 2040

Sources: IHS Global Insight, NJTPA Regional Transportation Model-Enhanced (NJRTM-E),
Dun & Bradstreet (2010)



ABOUT THE NJTPA

The North Jersey Transportation Planning Authority (NJTPA) is the federally authorized Metropolitan Planning Organization for 6.6 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 Directors of NJ Transit and the Port Authority of New York & New Jersey, a Governor’s Representative and a Citizens’ Representative appointed by the Governor.

Monmouth County’s representative on the NJTPA Board of Trustees is Freeholder Thomas A. Arnone.

ABOUT THIS STUDY

The North Jersey Transportation Planning Authority (NJTPA) is pleased to announce the completion of a major new freight planning initiative – the development of Year 2040 Freight Industry Level Forecasts.

Freight issues are extremely important in the NJTPA planning region, which includes thirteen counties in Northern New Jersey. The region hosts: the Port of New York and New Jersey, one of the nation’s top three ports on the basis of tonnage and containers; heavily-used local, regional, and interstate truck corridors and crossings; heavy concentrations of intermodal and non-intermodal rail activity; significant national and international air cargo facilities; and hundreds of millions of square feet of warehouse/distribution space. These networks and facilities are essential to the economic and transportation well-being of 6.6 million residents in the NJTPA region and 20 million in the NY/NJ metropolitan statistical area, along with more than 312,000 regional businesses. Understanding the effects and importance of freight is therefore critical – not only to ensure the accuracy of the regional transportation planning process, but also to effectively communicate the importance of freight to the region’s freight stakeholders, businesses, communities, residents, and funding decision-makers.

The primary goal of the 2040 Freight Industry Level Forecasts project was to develop a clear, accurate and comprehensive picture of regional freight activity, both current and future. The end product is an accurate picture of where concentrations of goods movement activity can be expected to occur in the region in the future, the types of commodities that will be moving, and where strategic investments should be made.

FOR FURTHER INFORMATION

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 North Jersey Transportation Planning Authority, Inc. with funding from the Federal Transit Administration and the Federal Highway Administration. The NJTPA is solely responsible for its contents.