

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

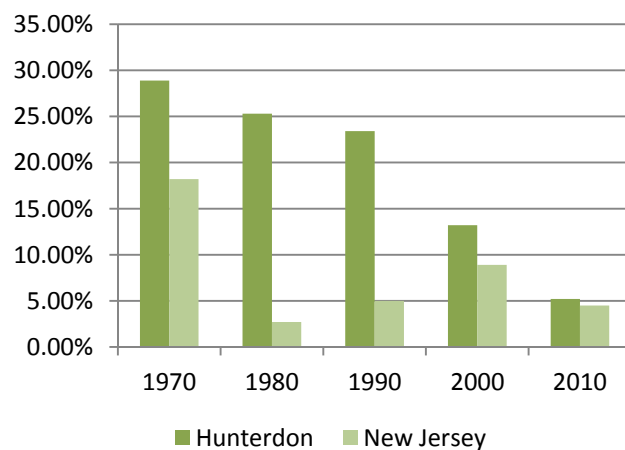
With a 2010 population of 128,349, Hunterdon ranks 12th among the 13 NJTPA counties in population. Hunterdon County has historically outpaced the state in population growth and household income, two key drivers of demand for consumer goods. The county's average household income is the highest in the NJTPA region, and the state overall. Between 2005 and 2009 Hunterdon County's median household income has grown by more than \$15,000, while the state's median household income has declined by more than \$1,700. This indicates growing affluence in Hunterdon County relative to other areas of the state.

Hunterdon County is home to...

- 128,349 people
- 8,679 businesses that employ 54,900 people; 28% of these jobs are in businesses that are highly dependent on freight movement
- 32 warehousing/ distribution buildings and 8 manufacturing buildings
- About 7.3 million tons of domestic freight shipped or received annually
- Interstate, state, and county highways used by tens of thousands of trucks every day
- The Norfolk Southern Lehigh Line and several secondary freight rail lines

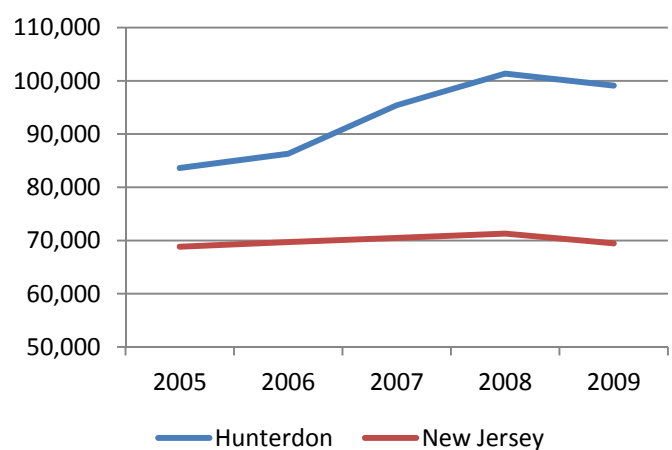
Population Growth by Decade

Source: U.S. Census Bureau



Household Income, Constant 2010 Dollars

Source: U.S. Census Bureau



Employment

The County's economy employs 54,900 people in 8,679 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

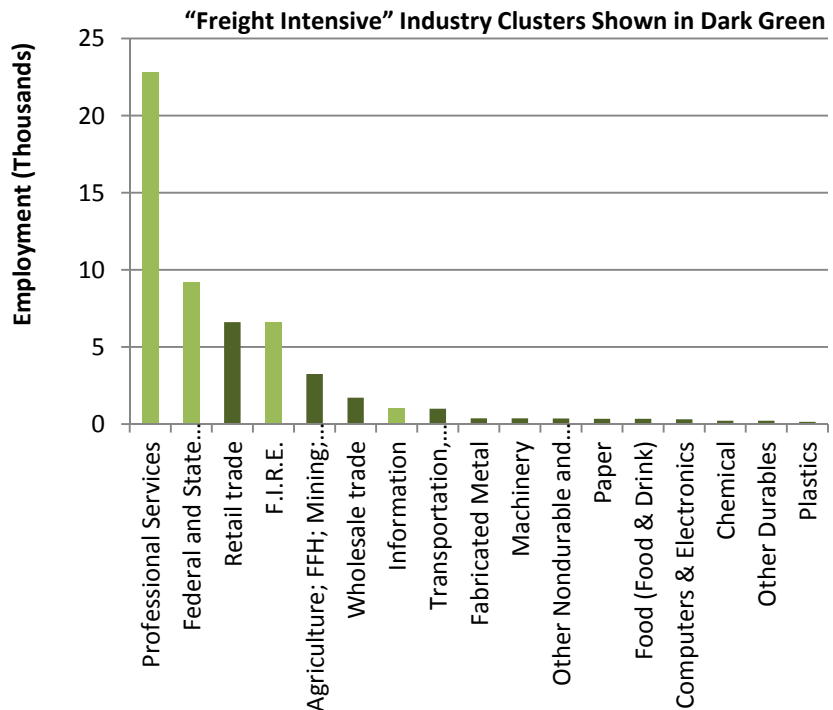
In 2007, approximately 7.3 million tons of domestic freight moved into, out of, or within Hunterdon County, by all modes of transportation (truck, rail, water, and air). This figure includes commodities moving into or out of Hunterdon County, but excludes pass-through tonnage. (The movement of international cargo to and from seaports, airports, and border crossings is captured and counted as domestic tonnage).

Commodities

For Domestic O-D tonnage, around one-eighth consisted of non-metallic minerals. Warehouse and distribution center traffic is the second-largest commodity in sum, and the largest inbound commodity. Other leading inbound commodities include clay, concrete, glass or stone; food; farm products; and petroleum or coal products. Among the leading outbound commodities are clay, concrete, glass and stone; food; chemicals; and municipal solid waste (MSW).

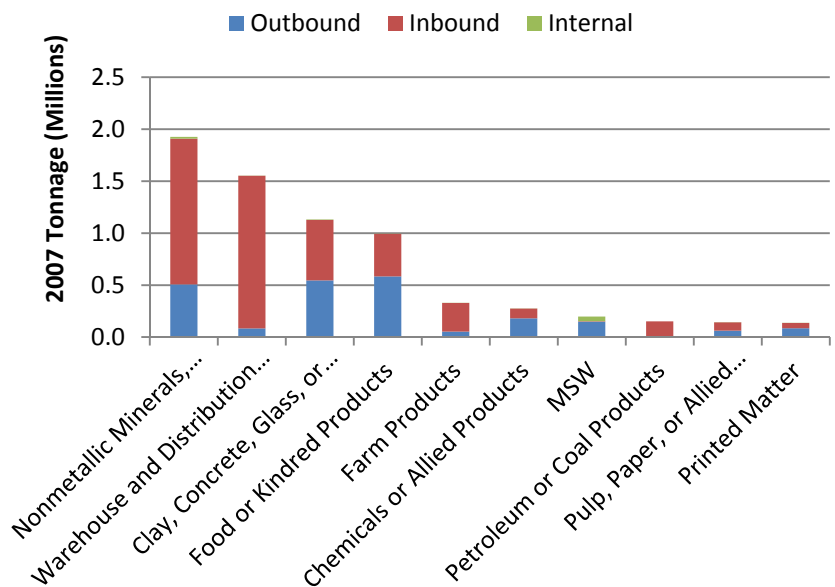
Employment by Industry, 2010

Source: R/ECON



Domestic O-D Commodities by Tonnage, 2007

Source: IHS Global Insight



Trading Partners

Hunterdon County’s major trading partners are, not surprisingly, its neighbors. As illustrated to the right, locations in New Jersey are the greatest origins of inbound freight and destinations of outbound freight. Beyond New Jersey, Pennsylvania is the largest origin of inbound freight, while New York is the largest destination of outbound freight. Other key partners include Canada and inbound trade with the Midwest, Vermont, Maryland, and Louisiana.

FREIGHT TRANSPORTATION NETWORKS

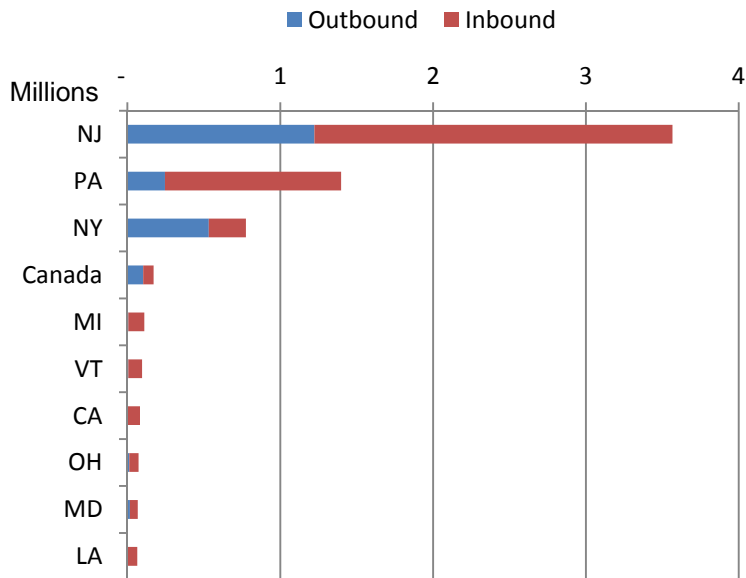
Freight can be handled by truck, rail, air or water. The choice of mode depends on a variety of factors, including: length of trip (rail and air are more competitive at longer distances), commodity type (rail and water are more competitive for heavy materials), time sensitivity (truck and air are most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

Mode Split

For domestic freight traveling to, from or within Hunterdon County, 99 % travels by truck, primarily to and from warehouses, distribution centers, manufacturing facilities and retail centers. About 1 % arrives or departs by rail.

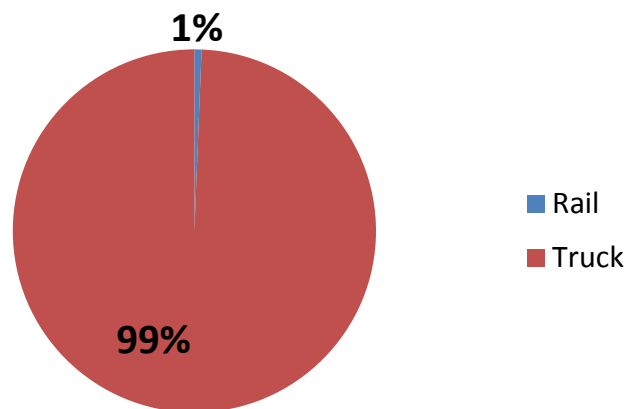
Top Origins and Destinations of Domestic O-D Freight Tonnage, 2007

Source: IHS Global Insight



Mode Split, Domestic O-D Tonnage, 2007

Source: IHS Global Insight



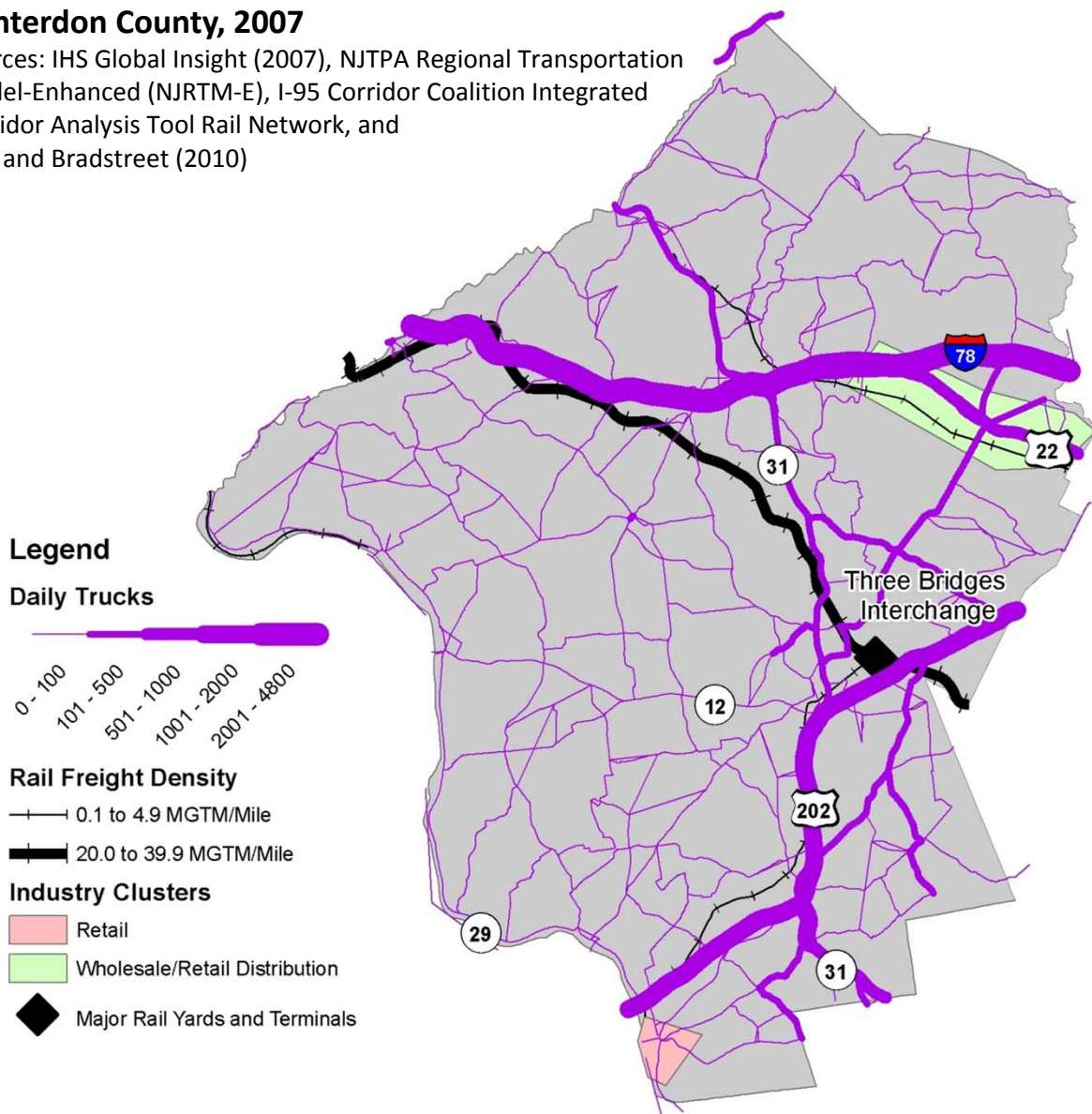
Highway and Rail Network Utilization

Hunterdon 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. Interstate 78, which runs the length of the county, accommodates more than 8,600 trucks per day, while portions of Route 22, Route 202 and Route 31 carry more than 2,000 trucks per day. 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.).

On the rail network, the Norfolk Southern Lehigh Line, which runs across the County, is one of the most heavily-traveled freight rail lines in the State. The Black River and Western Railroad and the Belvidere and Delaware River Railway are two short line railroads serving customers in the County. The map below illustrates how the highway and rail networks and terminals align with industrial activity clusters.

Commodity Truck and Rail Flows in Hunterdon 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)

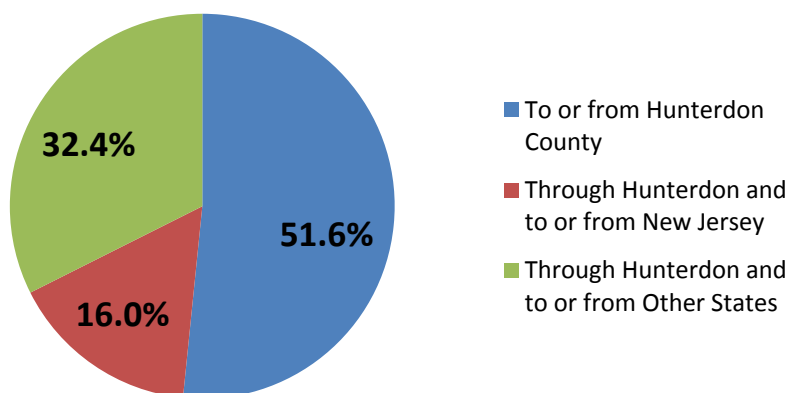


Highway Link Analysis

Different highways can be used by freight carrying trucks in different ways. Some highways have a high % of local traffic; others a high % of pass-through traffic. And many highways show significant differences at different locations. Among major highways in Hunterdon County, including Interstate 78 and U.S. Route 202, the average values of internal and through traffic are shown in the graph to the right.

Truck Trips on Hunterdon County Highway Links, 2007

Source: IHS Global Insight and USDOT Freight Analysis Framework-3



More than half of the truck trips on the selected highways in Hunterdon County were traveling either from an origin point in Hunterdon County or to a destination in Hunterdon County (or both). About 48 % of truck trips on the major highways were passing through Hunterdon County between origins and destinations outside the County. Most of the through trips (32 % of all trips) were traveling to or from points outside the State of New Jersey, while 16 % were traveling between origins and destinations in other New Jersey counties.

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.

Eight manufacturing buildings are located in the County. Manufacturing buildings tend to be clustered in Readington, Flemington, and Milford. More than 30 warehousing/distribution buildings are located within the county, one of which is between 500,000 and 1 million square feet. These buildings are mostly clustered in Flemington or along the Route 22/Interstate 78 corridor. The distribution of industrial buildings throughout the county is shown on the following two pages.

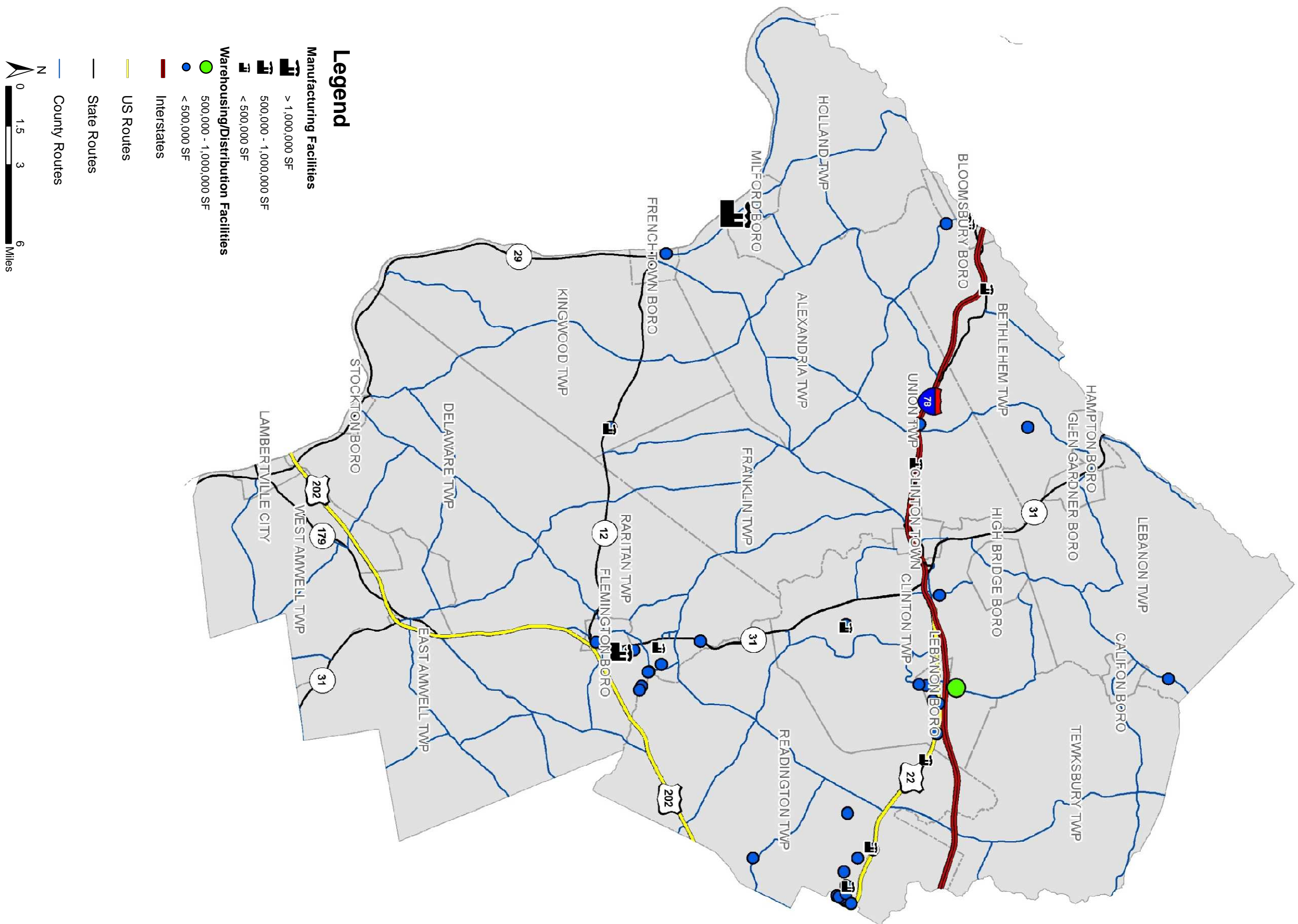
As summarized in the two tables to the right, many of the industrial buildings generate large volumes of freight. According to the Freight Locator database, 80 facilities in Hunterdon County receive nearly 1.5 million tons of freight annually, and ship more than 1.1 million tons outbound. It is important 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
MEENAN OIL CO	CLINTON	454,225
STEM BROTHERS PROPANE	MILFORD	403,589
INSTRUMENT SCIENCES & TECH	FRENCHTOWN	101,621
HARVARD INDUSTRIES INC	LEBANON	65,310
BREEN COLOR CONCENTRATES	LAMBERTVILLE	44,236
COMPANY NAME	CITY	OUTBOUND TONS
PINNACLE MATERIALS INC	HAMPTON	204,624
FLEMINGTON BLOCK & SUPPLY	FLEMINGTON	152,692
H K BUZBY & SONS INC	LEBANON	137,634
JOHANNA FOODS INC	FLEMINGTON	92,455
READINGTON FARMS INC	WHITEHOUSE	91,782

Industrial Buildings by Type and Square Footage, 2010
 Source: CB Richard Ellis

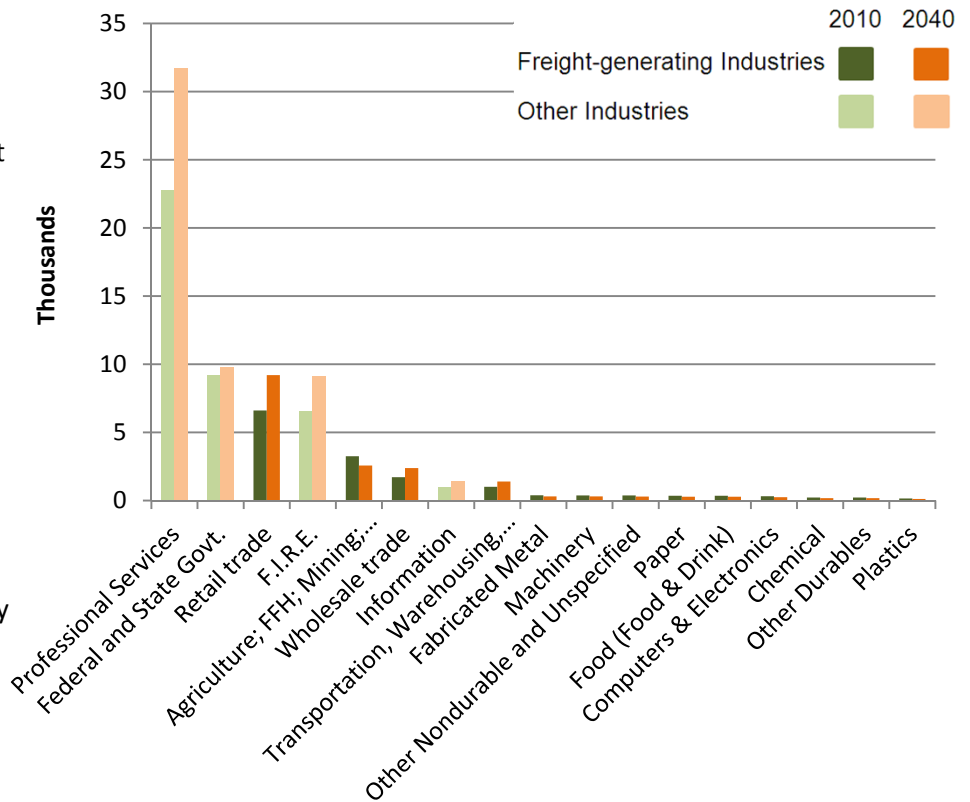


EMPLOYMENT FORECAST

Between 2010 and 2040, non-farm employment in Hunterdon County is expected to grow by 27%, from about 55,000 to about 70,000. Employment in freight-intensive industries is expected to grow by 16 % during the forecast period, compared to 32 % for other industries. The faster-growing services, finance, insurance, and real estate, and other less freight-intensive industries, will make up a larger share of the County’s employment in the future (75 % in 2040, compared to 72 % in 2010). Among individual industry groups, professional services is expected to experience the greatest employment growth (9,000 jobs), while there may be 700 fewer people employed in agriculture in 2010 than in 2040.

Industry Employment Forecast, 2010 - 2040

Source: R/ECON



2040 COMMODITY FLOWS

By 2040, overall commodity flows into, out of, and within Hunterdon County are expected to have increased by about 28 %, from 7.3 million tons to 9.3 million tons (a difference of 2 million tons). The forecast anticipates that the top ten commodities in 2007 will continue to account for 90 % of overall freight movement in 2040. Warehouse and Distribution Center traffic is expected to overtake nonmetallic minerals as the number one commodity transported in Hunterdon County by tonnage. Growth rates among top commodities are expected to range from 0 % for nonmetallic minerals to 54 % for municipal solid waste.

Top 10 Commodities by Tonnage, 2040

Sources: Cambridge Systematics, with data from IHS Global Insight

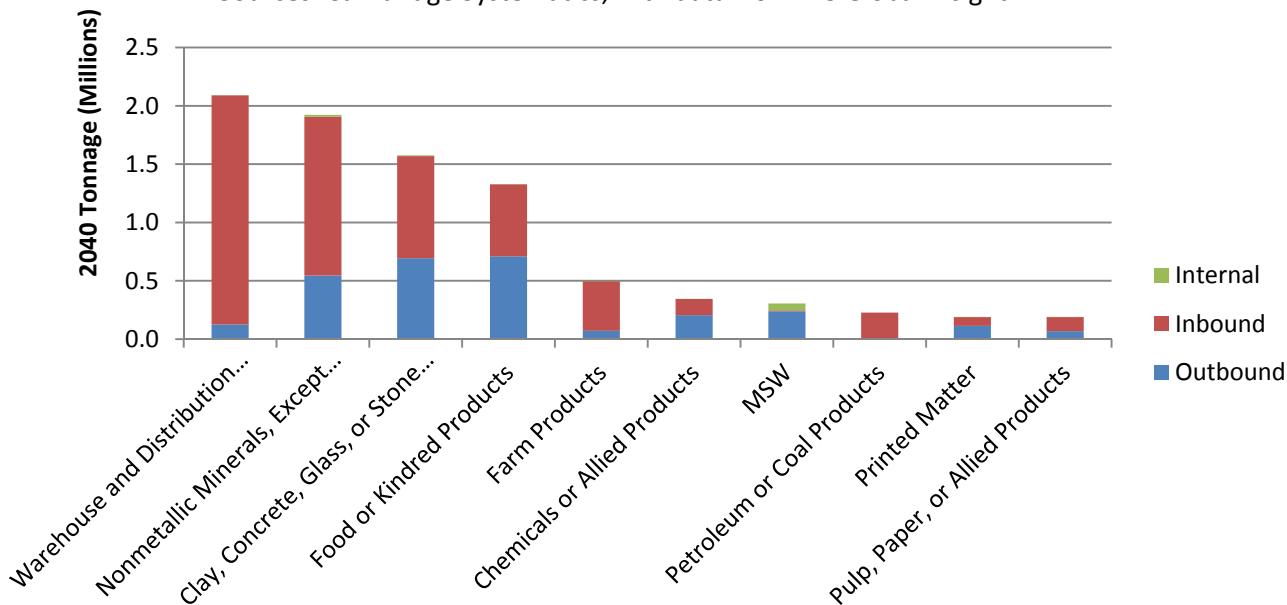
Commodity	2007 Tons	2040 Tons	Difference	Growth Rate
Warehouse and Distribution Center	1,553,196	2,089,518	536,321	35%
Nonmetallic Minerals, Except Fuels	1,926,947	1,922,977	(3,970)	-0%
Clay, Concrete, Glass, or Stone Products	1,131,411	1,575,547	444,136	39%
Food or Kindred Products	995,876	1,330,521	334,645	34%
Farm Products	329,641	498,266	168,624	51%
Chemicals or Allied Products	274,291	344,377	70,086	26%
MSW	197,829	305,624	107,795	54%
Petroleum or Coal Products	150,882	226,768	75,886	50%
Printed Matter	135,714	189,652	53,937	40%
Pulp, Paper, or Allied Products	142,835	189,542	46,706	33%

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 94 % of warehouse and distribution center tonnage will be moving into Hunterdon County, and 4 % will be moving outbound. Nonmetallic minerals, farm products, and petroleum will be moving primarily inbound as well. Most MSW tonnage will be moving outbound. Clay, concrete, glass, or stone; food; chemicals; and printed matter will be moved into and out of Hunterdon County in relatively balanced proportions.

Top 10 Commodities by Tonnage by Direction, 2040

Sources: Cambridge Systematics, with data from IHS Global Insight



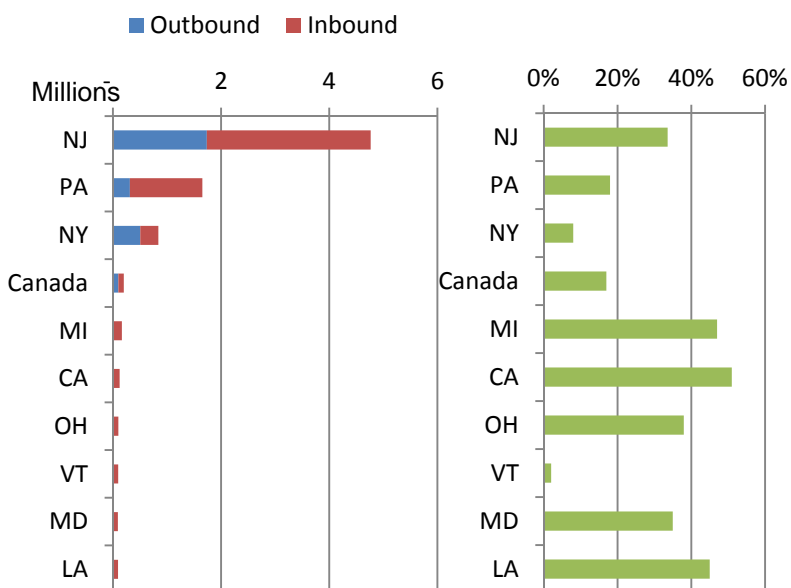
Future Trading Partners

Hunterdon County's largest out-of-state trading partners will continue to be Pennsylvania, followed by New York and Canada. Most of the trade with Pennsylvania will continue to be inbound moves, primarily consisting of nonmetallic minerals. With the exception of New York, trade with other states is moving in the inbound direction, and trade with Canada is split evenly.

Hunterdon County's trade with partners in the West, Midwest, and South is expected to grow faster (35-51%) than trade with Pennsylvania, New York, Canada, and New England (2-18%). Intrastate trade is expected to grow by about 34%.

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

Source: Cambridge Systematics, with data from IHS Global Insight

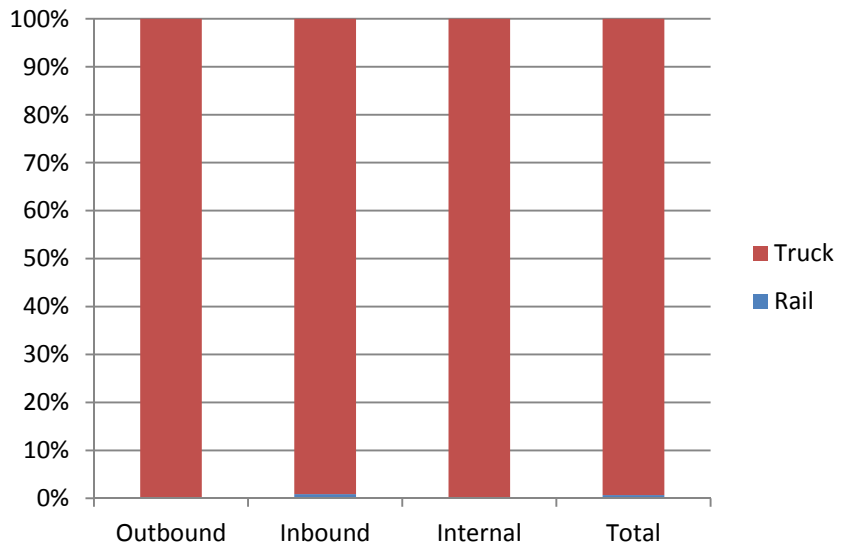


Future Mode Utilization

The forecast anticipates that freight mode splits in 2040 will be similar to 2007 mode splits. Trucks are expected to carry 99 % of all freight tons, while rail is expected to carry about 1 %. Trucks will have the largest share of movement in all directions, while nearly all of the rail tonnage will be moving in the inbound direction.

Freight Tonnage by Mode and Direction, 2040

Source: Cambridge Systematics, with data from IHS Global Insight

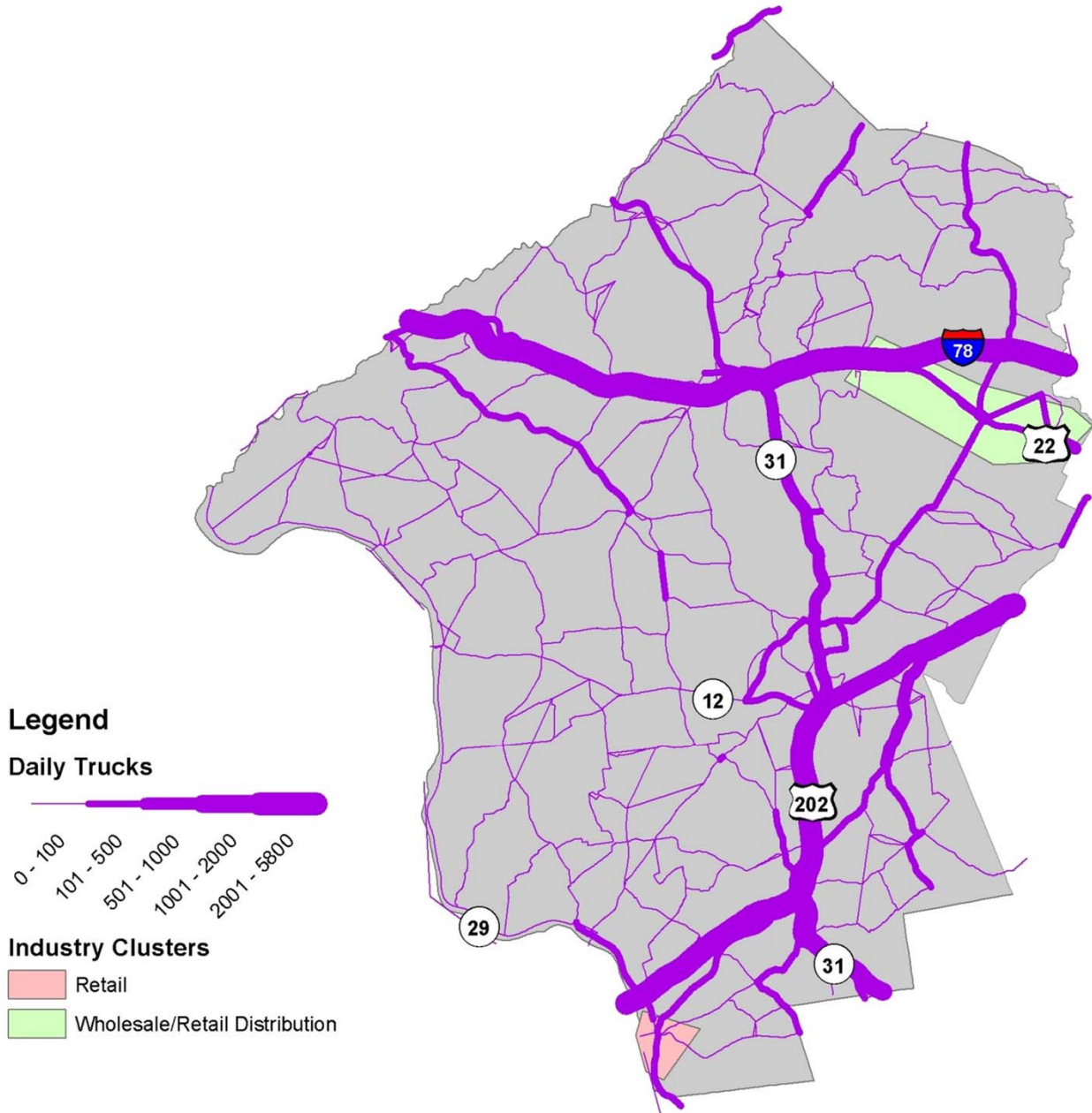

Future Highway Network Utilization

In 2040, Hunterdon 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 Interstate 78 is expected to increase by more than 23 % between 2007 and 2040, from just over 8,600 to more than 10,600 per day. Portions of US Route 202 and NJ Route 31 are expected to see numeric increases in truck traffic between 2007 and 2040 of 100 to 500 trucks per day. Parts of US Route 22 in Readington Township, County Route 613 (Old York Road) in East Amwell Township, and County Route 614 (Bloomsbury Road) in Alexandria Township, could see truck volumes increase by 50 to 100 per day.

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

Commodity Truck Flows in Hunterdon 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, Middlesex, 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.

Hunterdon County’s representative on the NJTPA Board of Trustees is Freeholder Matthew Holt, who also serves as Second Vice-Chairman of the Board and Chairman of the Planning and Economic Development Committee.

ABOUT THIS STUDY

This Profile is one component of a major NJTPA freight planning initiative – the development of Year 2040 Freight Industry Level Forecasts.

Freight issues are extremely important 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 the region’s residents and 20 million in the larger 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, covering the 13 counties of the NJTPA region, 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.