

FREIGHT IN DELAWARE COUNTY



for:

*Delaware County Planning Department
Delaware County Commerce Center
City of Chester Division of Planning*

Delaware County Transportation Management Association

by:



BIG picture

In unrelenting fashion, freight activity in Delaware County, Pennsylvania, pulses with vigor and precision. Air, highway, marine, and rail freight facilities operate in a state of perpetual motion throughout the county. Buoyed by a fully integrated transportation network, the harmonious comingling of freight and passenger traffic of all kinds is a daily spectacle.

When considering freight movement within and through Delaware County, it is useful to think about freight in the same terms as trips made by people. Like person trips, freight shipments are influenced by factors such as the total trip distance, the pricing of different travel alternatives, the "size" of the shipment, and the degree to which precise arrival times are needed. These factors, in turn, help shippers, carriers, and logisticians make decisions about how (i.e., which mode or combination of modes) to ship the freight.

Industrial centers are a driving force in creating freight transportation demand, and Delaware County has a storied manufacturing history. Currently, the largest contiguous industrial center is made up of the Sunoco and Tosco refineries in Marcus Hook and Trainer boroughs, respectively. Other significant centers are located in Chester/Eddystone, in Darby/ Prospect Park, and near the I-95/US 322 interchange.

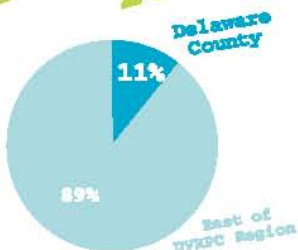
Delaware County has a full complement of freight transportation facilities. Two Interstate highways, I-95 and I-476, headline the county's highway assets and afford freeway driving conditions in virtually all directions. Twelve interstate highway interchanges, a supporting set of arterial highways such as US 1, US 202, US 322, and PA 3, and three National Highway System connectors form the remainder of the core system and local access network.

The county's busiest rail freight line is the CSX Philadelphia Subdivision line, which closely parallels I-95. The Conrail Chester Secondary line provides local rail freight service to sites along the Delaware River. Three additional lines, the Amtrak Northeast Corridor, the Keystone Corridor, and the SEPTA Media-Elwyn line, are primarily passenger rail lines, but there is also some instance of freight traffic.

Rounding out Delaware County's full offering of freight facilities are world-class air cargo and marine terminals. Much of Philadelphia International Airport's Cargo City, including major UPS, FedEx, US Airways, and U.S. Postal air cargo handling facilities, are located in Tinicum Township, Delaware County. To handle marine cargoes, four terminals are devoted to petroleum-related activities, while a fifth, Penn Terminals in Eddystone, excels as a highly flexible general cargo facility.

This brochure provides an introductory overview about freight activity in Delaware County, including a map, two case study references, data, and helpful contacts. Freight shipments will continue to grow in the coming years, and it is therefore vital for the general public, elected officials, and planners to grasp the factors and dynamics that govern freight shipments and to more fully integrate freight into the planning process. ♦

Manufacturing output (\$) in Delaware County: 2008



Source: Global Insight's U.S. Business Demographics Service

Delaware County: Demographic Data

	1970	2000	% Change
Employment			-54%
Manufacturing	52,612	24,041	
Transportation	8,008	14,920	86%

Source: Bureau of Economic Analysis, 2002 REIS data

DELAWARE COUNTY

FREIGHT RELATED TRANSPORTATION

Mode	OUTPUT (\$M)
WATER	50,181,350
ROADWAY	190,306,761
RAIL	22,571,661
CARRIER (PARTIALLY INCLUDED AIR)	564,825,202
PIPELINE	48,120,925
WAREHOUSING	122,044,698

TOTAL \$ 997,600,599

Source: Global Insight's U.S. Business Demographics Service



just
in
time

FACTS

Just-In-Time—a logistics term connoting cargo shipment reliability, speed, and transparency.

Of the four primary freight modes (trucking, rail, water based, and aviation), trucking is the most prominent in Delaware County. The DVRPC simulation model estimates that trucks log 1,029,800 miles on Delaware County roadways on an average day. Light trucks account for more vehicle miles than heavy trucks (i.e., single-unit trucks with three axles and larger), and 56 percent of all truck trips occur on arterial highways, 37 percent occur on freeways, and the remainder occur on local roads.

Utilizing 1.5 miles of linear ship berthing, 516 ships called on the various port facilities in the county in 2010. Also, close to half a million tons of high-value, time-sensitive air freight were handled at Philadelphia International Airport facilities in Delaware County and Philadelphia in 2009. The county has 51 miles of useable freight rail lines, of which 59 percent are privately owned by freight railroads. ♦

<i>Interstate Highway Route Miles</i>	28.54
<i>Other National Highway System Route Miles</i>	79.22
<i>NHS Freight Connector Route Miles</i>	2.62

<i>Interstate Highway Interchanges</i>	12
<i>Total Truck Rest Stop Parking Spaces</i>	10

<i>Light-Truck Miles Traveled Daily</i>	539,200
<i>Heavy-Truck Miles Traveled Daily</i>	490,600

<i>Freight Rail Route Miles (total):</i>	51.05
Private lines	29.98
Freight trackage rights on public lines	21.07

<i>Rail Yards and Intermodal Terminals</i>	4
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<i>Ports</i>	6
<i>2010 Ship Calls</i>	516
<i>Linear Berthing (feet)</i>	7,760
<i>Ship Cranes</i>	5

<i>Air cargo and air mail (tons)</i>	477,881
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It's All About Jobs

The movement of freight is integrally related to the retention and creation of employment in the transportation and manufacturing sectors. From 1970 to 2000, transportation jobs (many of which entail managing, hauling, or storing freight) increased in Delaware County by 86 percent. From 1970 to 2000, Delaware County experienced a loss of 54 percent of its manufacturing jobs. Despite the trend of a shrinking manufacturing workforce, it is still an important sector that provides higher than average annual salaries. *All together, the transportation and manufacturing sectors accounted for 14 percent of total nonfarm employment in Delaware County in 2000.*

In 2008, Delaware County businesses produced just under \$11 billion in economic output, and accounted for a total of 11 percent of the region's manufacturing output. Petroleum refineries created over half of the county's economic output in 2008, with a total of \$6.7 billion. Three other sectors were responsible for over \$500 million in output. Transportation equipment manufacturing produced \$921 million in output, led primarily by the manufacturing of aircrafts. Chemical manufacturing created \$692 million in output, with over \$200 million due to plastics material and resin manufacturing. Paper manufacturing produced \$505 million economic output in 2008, over half of which came from paper (except newsprint) mills.

In terms of economic output from freight-related transportation, Delaware County is highly oriented toward courier movements which accounts for 57 percent of the freight transportation output. Roadway and warehousing activities both account for over \$100 million of output. ♦

how it

GOES

from here to there

The 21st century supply chain is an amazing spectacle of interwoven modes, schedules, and partnerships. Each manufactured product results from its own unique logistics and decision-making process as it goes from raw material to production and then to consumers for final consumption.

If you could peer inside factories, warehouses, trucks, rail cars, and ships, you would find a diverse and fascinating number of supply chain case studies criss-crossing Delaware County at any moment in time. What is particularly interesting about different products is how varied their trip lengths are: they may range from wholly local to regional, national, and even international.

The diagram below details the intricate supply chain journey for Scott Bath Tissue, manufactured by Kimberly-Clark at the Chester plant in Delaware County. The step-by-step graphic vividly illustrates Delaware County's industrial muscle, technological prowess, and critical role in the global and green economies. ♦

- #1** Retail stores and suppliers from all over the world forecast demand for Scott Bath Tissue products and place orders with Kimberly-Clark Corporation.
- #2** Kimberly-Clark logisticians orchestrate the purchase of raw materials and establish production targets for Kimberly-Clark's Chester plant.
- #3** Dried, bleached pulp (largely made from wood chips) is shipped in bulk form to the Chester plant for the production of bath tissue, paper towels, and facial tissue.
- #4** Skilled employees working 24 hours a day/7 days a week transform the pulp into paper stock which is wound into jumbo base rolls.
- #5** Base rolls are loaded onto converting machines and the paper stock is unwound, slit, and rewound onto long, thin cardboard tubing, cut into personal size rolls, and packaged.
- #6** At intermittent stages, other production steps are followed to modify the technical qualities of the paper and rolls, such as the length, number of plies, color, embossing, and scents.
- #7** Packaged rolls are conveyed to the adjacent Distribution Center and light-weight cases are loaded onto trucks and then delivered to customers throughout the East Coast.
- #8** Among many available choices, consumers purposefully purchase rolls of Scott Bath Tissue off the store shelf as a recognized, trusted brand.



DELAWARE COUNTY

Freight Facilities & Industrial Centers



Good Neighbors Right in Our Backyard

Local communities are where the *rubber hits the road* when it comes to freight shipments. Freight facilities and operations sometimes generate unwanted impacts, so it is important to cultivate partnerships and promote programs that allow for freight movement, but that also protect the quality of life in our neighborhoods.

Sunoco, Inc., which owns several oil refineries in the Delaware Valley and is a major shipper of refined petroleum products, has a long track record of working collaboratively with host communities and demonstrating concern for local residents. In Marcus Hook Borough, Delaware County, Sunoco truck scale personnel recently informed company drivers about changes to nearby truck routes implemented by the borough and PennDOT. The newly delineated truck routes restrict some turns, help maintain traffic flows, preserve the integrity of street-side infrastructure, promote pedestrian safety, and guide trucks to connector routes with better geometry and turning radii.

For more information, see DVRPC's special treatment of freight in local communities in a Municipal Implementation Tool brochure released in 2010 (publication # MIT019). ♦



Delaware County Freight Planning Contacts:

Delaware County Planning Department

201 West Front Street
Media, PA 19063
(610) 891.4000
www.co.delaware.pa.us/planning

Delaware County Commerce Center

200 E. State Street
Media, Pennsylvania 19063
(610) 566.2225
www.delcoca.org/

City of Chester Division of Planning

1 Fourth Street
Chester, PA 19013
(610) 447.7707
www.chestercity.com

Delaware County Transportation Management Association

102 West Front Street
Media, PA 19063
(610) 892.9440
www.dctma.org

Delaware Valley Regional Planning Commission

190 N Independence Mall West
Philadelphia, PA 19106
Contact: Ted Dahlburg
(215) 238.2844
www.dvrpc.org

Delaware Valley Goods Movement Task Force

DVRPC's freight advisory committee, the Delaware Valley Goods Movement Task Force, allows the local freight community to participate in formulating regional policies, plans, and programs. This diverse committee has been meeting since 1992. Members include shippers, Class I and short line railroads, trucking companies, ports, air freight, 3PL firms, federal, state, and local agencies, toll authorities, and consultants.

County Freight Scans

This brochure has been prepared in conjunction with DVRPC's County Freight Scans Program. During Fiscal Year 2011, brochures were completed for each of the nine counties in the Delaware Valley region: Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania, and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. DVRPC gratefully acknowledges the stalwart support of many members of its freight advisory committee in the conduct of the County Freight Scans and the preparation of the series of county freight brochures.

