

Logistics: A Logical Segment upon which to Focus

A Susquehanna Region Industry Brief



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Executive Summary

- Background

Since the turn of the 21st century, Cecil and Harford counties have experienced remarkable expansion in their respective distribution and logistics segments. This is precisely what one might have anticipated given the availability of developable land to support the construction and operations of lengthy, low-slung facilities, ready workforces, relatively lower costs of living, the presence of I-95, the backdrop of the densely populated Northeastern megalopolis stretching from Washington, D.C. to Boston, and the explosive growth of e-commerce.

There's more. A 200-mile radius from the region encompasses virtually the entire New York metro area, extends almost as far west as Pittsburgh, and reaches as far south as Norfolk, VA.¹ Given these prevailing circumstances, logistics will continue to be a segment offering substantial promise for jobseekers going forward.

This industry brief supplies data and analysis regarding the Susquehanna region's logistics/distribution workforce. For purposes of this brief, logistics/distribution has been defined to include the "Wholesale Trade" and "Transportation and Warehousing" sectors as defined by the North American Industry Classification System (NAICS).

This industry brief addresses the following questions:

1. What are the realistic growth prospects for logistics/distribution employment in the Susquehanna region?
2. To what extent is there evidence of inadequate human capital supply now and into the future with respect to regional logistics/distribution?
3. What does an individual need to do to access logistics/distribution opportunities and are those opportunities available within the confines of the Susquehanna region?

¹ Colliers International. "Principio Business Park". <http://www.ccgov.org/home/showdocument?id=1606>.

Sage concludes that:

1. Regional growth prospects remain upbeat. While the dislocating impacts of COVID-19 have rattled the prospects of many industries, there have been a number of industries that have been catalyzed by the pandemic. Among these are manufacturing and e-commerce, which rely heavily upon the supply chain functions supported by logistics/distribution. Accordingly, the logistics/distribution sector will continue to offer plentiful opportunity to jobseekers going forward, including for those who lack significant formal educational attainment. Many of the occupational categories most closely tied to logistics/distribution are associated with middle-income wages.
2. The region's workforce has been able to keep up with demand thus far. Thanks in large measure to the stepped-up offerings of local two-year colleges, the Susquehanna region has been able to offer a workforce generally capable of meeting the growing demands of regional employers. These colleges appear well positioned to continue to support local industry growth.
3. A mastery of basic skills coupled with formal programmatic participation is a recipe for success. Many employers report seeking basic skills such as reliability and offer on-the-job training. The region has attracted many large-scale facilities in recent years, each embodying different technologies, processes, products, and protocols. Accordingly, many of the skills to be mastered must be learned on-the-job, though earlier stage preparation at a two-year college or other similarly situated setting can prove useful. Opportunities for those with commercial driver's licenses remain plentiful.

- Final Comments

Between 2009 and 2014, logistics/distribution industry employment expanded at an average annual rate of 4.1 percent in the Susquehanna region. Sectoral employment in Cecil County expanded at an average annual rate of 7.8 percent between 2014 and 2019. Given the spread of e-commerce and the prospectively greater presence of manufacturing in America, logistics/distribution, which support these and other segments, will continue to represent an area offering enormous opportunity during the decade of the 2020s.

As always, the future is not perfectly clear. Economic conditions are subject to change. The advent of new technologies/automation could undermine positions involving the movement of goods, including truck driving. But for now, this appears to be a sector of promise for jobseekers and those seeking to climb further up the economic ladder. Accordingly, SWN and similarly situated stakeholders should continue to consider logistics/distribution as an industry capable of offering abundant opportunity, including for those who ultimately seek to become managers/supervisors.

I. Industry Components & Functions

- Wholesale Trade

The wholesale trade sector includes establishments engaged in wholesaling merchandise and rendering services related to the sale of merchandise. To use less formal vocabulary, these are “middle men” and “middle women” – intermediaries that help link producers to those who supply final consumers.

Accordingly, wholesalers do not sell directly to consumers, but to other businesses. Wholesalers are organized to sell or arrange the purchase or sale of: (a) goods for resale to other wholesalers or retailers; (b) capital or durable nonconsumer goods, and (c) raw and intermediate materials and supplies used in production. Merchandise distributed by wholesalers encompasses the output of agriculture, mining, manufacturing, and certain information segments such as publishing.

Wholesalers normally operate from a warehouse or an office. In contrast to a retail establishment, these warehouses and offices are characterized by having little or no display of merchandise and neither the design nor the location of the wholesaler is intended to solicit walk-in traffic.

Wholesalers do not typically advertise directly to the general public, but contact businesses (customers) initially via telephone, in-person marketing, or by specialized advertising that may include Internet and other electronic means. Follow-up orders from clients of wholesalers are often based on previous sales, and wholesalers and clients often have long-standing business relationships.²

- Transportation and Warehousing

The transportation and warehousing sector encompasses industries that supply transportation services for both passengers and cargo, warehousing and storage for goods, scenic and sightseeing services, and support activities related to various modes of transportation. Establishments in transportation and warehousing use transportation equipment or transportation related facilities as a productive asset, with the type of equipment/facilities depending upon the mode of transportation. The modes of transportation are air, rail, water, road, and pipeline.³

² U.S. Bureau of Labor Statistics. *Industries at a Glance*: Wholesale Trade: NAICS 42. <https://www.bls.gov/iag/tgs/iag42.htm>.

³ U.S. Bureau of Labor Statistics. *Industries at a Glance*: Transportation and Warehousing: NAICS 48-49. <https://www.bls.gov/iag/tgs/iag48-49.htm>.

Key Subsectors/Industries.

The wholesale trade sector consists of the following subsectors:

- *Merchant Wholesalers, Durable Goods (NAICS 423)*
- *Merchant Wholesalers, Nondurable Goods (NAICS 424)*
- *Wholesale Electronic Markets and Agents and Brokers (NAICS 425).*⁴

The transportation and warehousing sector consists of the following subsectors:

- Air Transportation (NAICS 481)
- Rail Transportation (NAICS 482)
- Water Transportation (NAICS 483)
- Truck Transportation (NAICS 484)
- Transit and Ground Passenger Transportation (NAICS 485)
- Pipeline Transportation (NAICS 486)
- Scenic and Sightseeing Transportation (NAICS 487)
- Support Activities for Transportation (NAICS 488)
- Postal Service (NAICS 491)
- Couriers and Messengers (NAICS 492)
- Warehousing and Storage (NAICS 493).⁵

The two transportation and warehousing industries most relevant to logistics/distribution are warehousing and storage and truck transportation.

Wholesale trade and transportation/warehousing each account for roughly half of combined total logistics/distribution employment nationally. Within wholesale trade, merchant wholesalers of durable and nondurable goods collectively account for 90 percent of employment nationally. Wholesale electronic markets accounts for just under 10 percent of total wholesale trade employment.

Within transportation and warehousing, truck transportation represents the largest employment segment, accounting for more than 27 percent of national transportation and warehousing employment. That segment is followed by warehousing and storage, which accounts for 21 percent of sectoral employment. Exhibit 1 supplies more in-depth statistical detail.

⁴ U.S. Bureau of Labor Statistics. *Industries at a Glance: Wholesale Trade: NAICS 42.*
<https://www.bls.gov/iag/tgs/iag42.htm>.

⁵ U.S. Bureau of Labor Statistics. *Industries at a Glance: Transportation and Warehousing: NAICS 48-49.*
<https://www.bls.gov/iag/tgs/iag48-49.htm>.

Exhibit 1. U.S. Logistics/Distribution Employment by Industry/Subsector, 2018

Industry/Subsector	Employment (000s)	% of Total
Wholesale Trade		
Merchant wholesalers, durable goods	3,153.2	53.9%
Merchant wholesalers, nondurable goods	2,151.4	36.8%
Wholesale electronic markets and agents and brokers	547.9	9.4%
Total	5,852.5	100.0%
Transportation & Warehousing		
Truck transportation	1,491.9	27.5%
Warehousing and storage	1,139.6	21.0%
Scenic/sightseeing transportation and support activities for transportation	746.0	13.8%
Couriers and messengers	725.4	13.4%
Air transportation	501.3	9.3%
Transit and ground passenger transportation	487.5	9.0%
Rail transportation	214.1	4.0%
Water transportation	64.8	1.2%
Pipeline transportation	48.5	0.9%
Total	5,419.1	100.0%

Source: U.S. Bureau of Labor Statistics, *Employment Projections — 2018-2028*; Sage.

According to pre-Covid-19-generated projections, national logistics/distribution employment was set to expand 0.2 percent annually or by more than 223,000 positions in total from 2018 to 2028. This expected growth was attributable solely to transportation and warehousing, which has been projected to expand 0.6 percent annually over that time period (322,300 jobs in total). Wholesale trade was actually expected to contract 0.2 percent annually from 2018-2028 (-98,500 jobs), in part because of the growing direct-to-consumer movement.

Within transportation and warehousing, the warehousing and storage segment has been expected to grow much faster than the sector overall, expanding 1.4 percent annually between 2018 and 2028. Transportation and warehousing industries that are projected to decline over that period include rail transportation and water transportation.

In accordance with national projections, transportation and warehousing is expected to far outpace wholesale trade in terms of Susquehanna regional employment growth. This will be discussed in further detail later in this report.

Key Occupations. Exhibit 2 presents data regarding the top 5 major occupation groups representing the most employment in wholesale trade and transportation and warehousing in the U.S. as of 2019. Transportation and material moving occupations represent the largest portion of employment in both segments, accounting for more than a quarter of wholesale trade employment and more than 60 percent of transportation and warehousing employment. The office and administrative support occupation group is also among the top occupational groups in both sectors as are management occupations and installation, maintenance, and repair occupations.

Exhibit 2. U.S. Logistics/Distribution Employment by Top 5 Major Occupation Groups, May 2019

Occupation Group	% of Industry Employment
Wholesale Trade	
Transportation and Material Moving Occupations	25.1%
Sales and Related Occupations	23.0%
Office and Administrative Support Occupations	17.5%
Management Occupations	7.9%
Installation, Maintenance, and Repair Occupations	6.9%
Transportation & Warehousing	
Transportation and Material Moving Occupations	61.5%
Office and Administrative Support Occupations	21.8%
Installation, Maintenance, and Repair Occupations	5.4%
Management Occupations	3.0%
Business and Financial Operations Occupations	2.0%

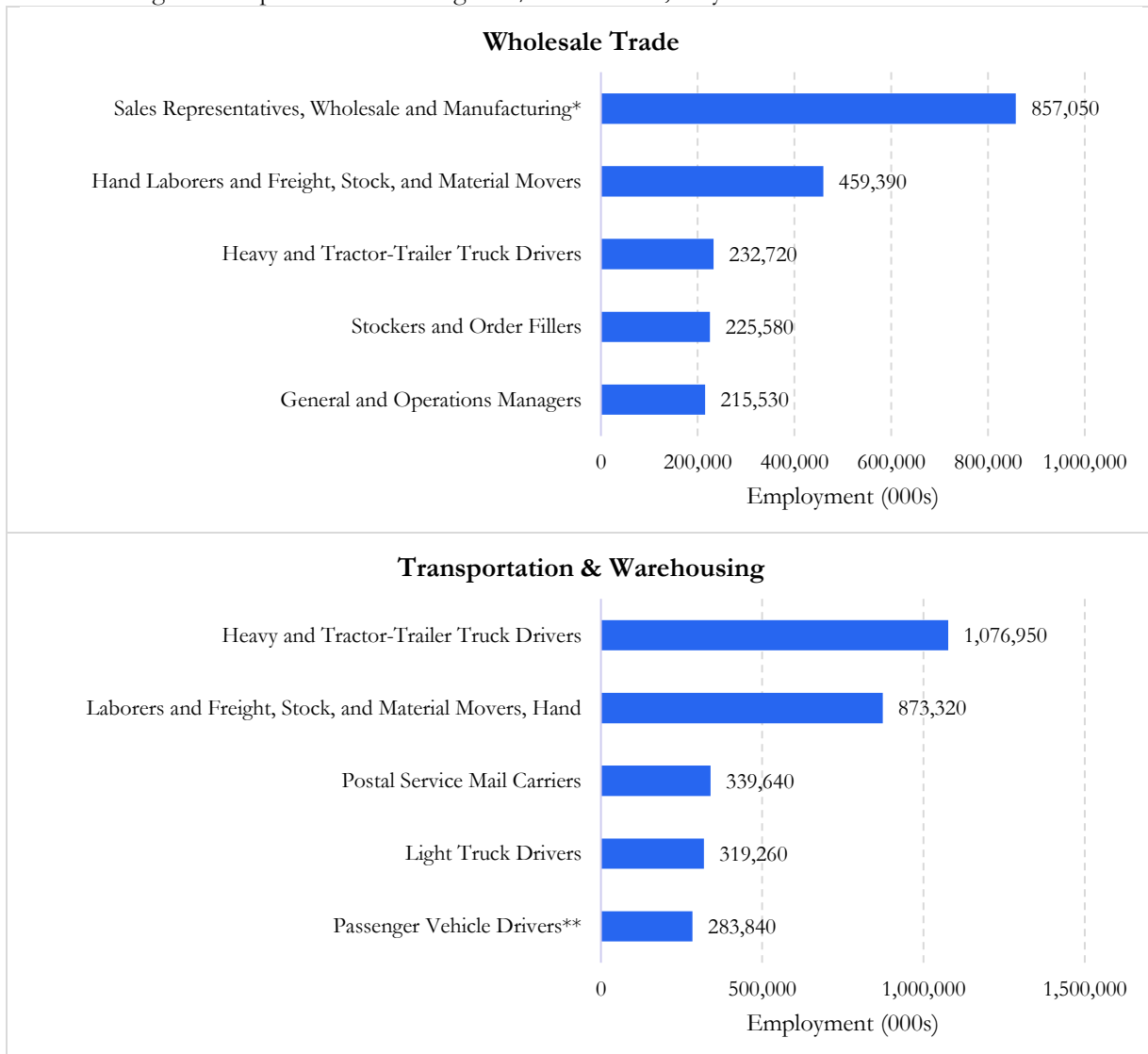
Source: U.S. Bureau of Labor Statistics, *Occupational Employment Statistics (OES)*; Sage.



Exhibit 3 supplies statistical detail regarding U.S. employment in the largest detailed occupations in the wholesale trade and transportation and warehousing sectors. Within wholesale trade, 4 of the 5 detailed occupations are considered transportation and material moving occupations (hand laborers/material movers, heavy and tractor-trailer truck drivers, and stock/order fillers). Sales representatives and general and operations managers are also among the top 5 occupations employed in wholesale trade.

Within transportation and warehousing, 4 of the 5 detailed occupations are considered transportation and material moving occupations (heavy and tractor-trailer truck drivers, hand laborers/material movers, light truck drivers, and passenger vehicle drivers). One need not look at data to know that drivers represent a substantial component of the nation’s logistics industry. The data render it clear just how important drivers are to logistics, and they are likely to become even more important going forward as e-commerce continues to represent a larger share of economic activity. Of course, driverless vehicles represent a future threat to this large and growing workforce.

Exhibit 3. Largest Occupations in U.S. Logistics/Distribution, May 2019



Source: U.S. Bureau of Labor Statistics, *Occupational Employment Statistics (OES)*; Sage.

Notes: *Except Technical and Scientific Products. **Except Bus Drivers, Transit and Intercity.

II. Logistics in the Susquehanna Region

Since IKEA's 2002 announcement of plans for an enormous warehouse facility in Perryville, Cecil County has become home to numerous additional distribution centers of 1 million or more square feet of space: GE in 2003, Restoration Hardware in 2012, and Amazon in 2017. In recent years, companies such as Amazon, Smithfield, Lidl and Medline have collectively developed 3.5 million square feet at Principio Business Park, located in Northeast, MD.

More than 17 million additional square feet of development is expected in the future as a new interchange at I-95 allows for direct access to Principio. This is expected to be completed within the next five years. This could render Principio Business Park the largest business park in the Mid-Atlantic.

Bainbridge, a former 1,200-acre Naval Training Center in Port Deposit, could also soon experience industrial activity, though discussions regarding the potential for development at this site have transpired for decades. A prospective developer is looking to develop 3-4 million square feet at Bainbridge that would employ more than 1,000 workers.^{6,7}

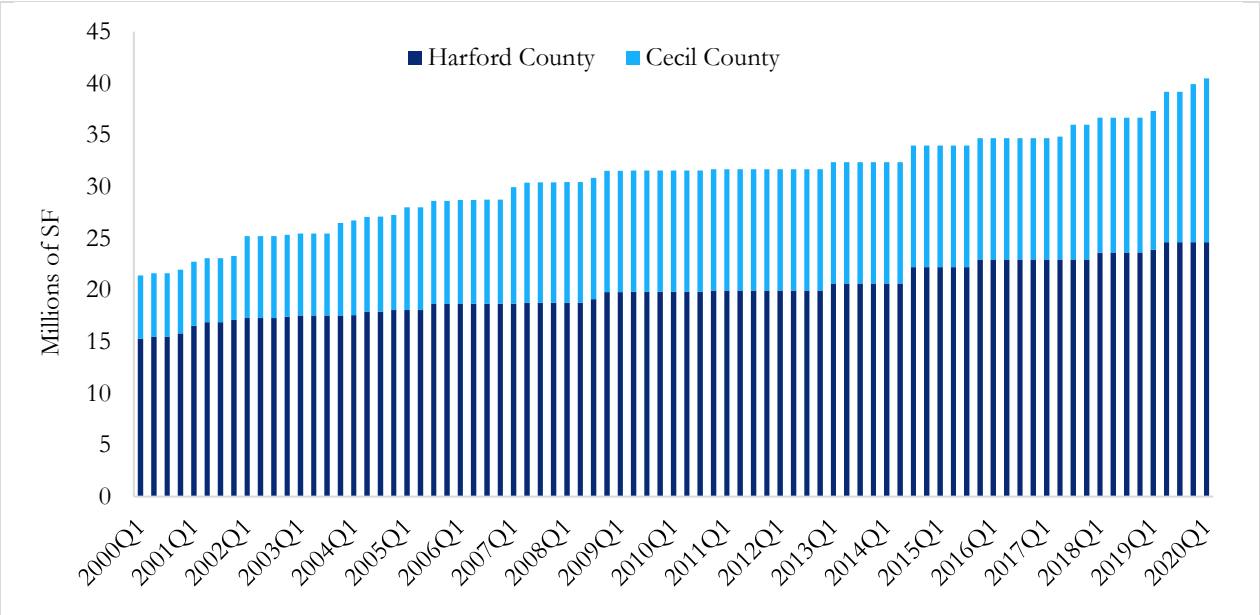
Harford County is also home to a number of large logistics/distribution businesses, including Rite Aid's Mid-Atlantic Customer Distribution Center, Sephora USA and Sephora Americas, and Kohl's E-Fulfillment Center. In 2019, Universal Supply Company, a leading distributor of specialty building products on the East Coast, opened a new location in Edgewood.⁸ Growth in Susquehanna region industrial space is plotted in Exhibit 4. Total square footage in Cecil County has nearly tripled since 2000.

⁶ Economic Alliance of Greater Baltimore (EAGB). "Get to Know Logistics in the Greater Baltimore Region". <https://www.greaterbaltimore.org/news/blog/get-know-logistics-greater-baltimore-region>.

⁷ Cecil County Economic Development, "2019 Growth & Development Symposium". October 24, 2019. <https://www.ccgov.org/home/showdocument?id=35268>.

⁸ Economic Alliance of Greater Baltimore (EAGB). "Get to Know Logistics in the Greater Baltimore Region". <https://www.greaterbaltimore.org/news/blog/get-know-logistics-greater-baltimore-region>.

Exhibit 4. Growth in Susquehanna Region Transportation and Warehousing Facilities (Industrial Inventory): 2000-2020



Source: Mackenzie Commercial; Sage.

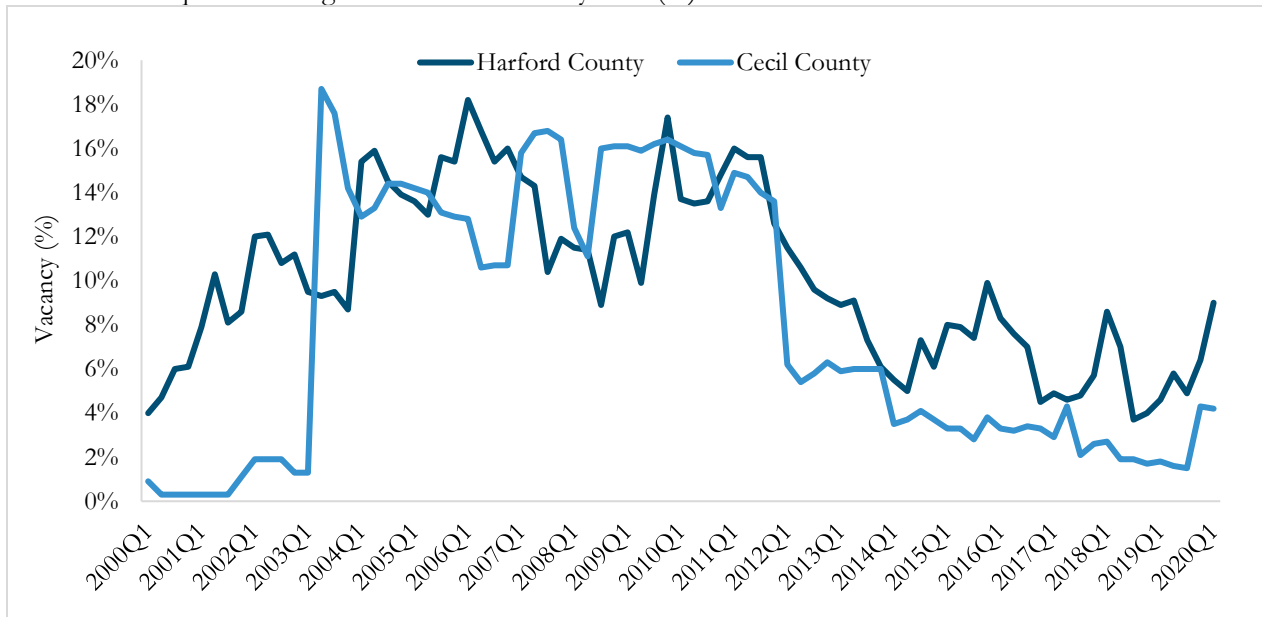


COVID-19 represents an obvious threat to the growth of logistics going forward. The pandemic produced a recession that began in February 2020, ending the lengthiest expansion in American history. Unemployment quickly rose from a 50-year low of 3.5 percent pre-crisis well into the double-digits nationally.

Exhibit 5 reflects industrial vacancy rates in Cecil and Harford counties, respectively, from 2000 to 2020. Industrial vacancy rates fell massively during the prior economic expansion cycle, creating conditions ripe for additional development and job creation. The recession may cause delays in development and subsequent job creation, especially as certain retailers go bankrupt.

The impact on overall development timelines is likely to be limited given the ongoing emergence of e-commerce, however. A forecast delivered by eMarketer indicates that U.S. e-commerce sales will surge 18 percent in 2020, due in large measure to the impact of the coronavirus pandemic, while brick-and-mortar retail sales will decline by an estimated 14 percent. It may take up to five years for offline sales to return to pre-pandemic levels. Amazon is expected to expand its e-commerce market share to 38 percent, extending its emerging dominance.⁹

Exhibit 5. Susquehanna Region Industrial Vacancy Rate (%): 2000-2020



Source: Mackenzie Commercial; Sage.

⁹ Tech Crunch, “U.S. E-commerce sales to jump 18% in 2020, but not enough to offset retail’s decline”. By Sarah Perez, 6/8/2020. <https://techcrunch.com/2020/06/08/u-s-e-commerce-sales-to-jump-18-in-2020-but-not-enough-to-offset-retails-decline/>.

The table below shows a ranking of the largest warehouses in terms of square footage in the Greater Baltimore region, which as defined encompasses both Harford and Cecil counties. Five of the top 10 largest warehouses in the greater Baltimore region are in Cecil County. Those five buildings total approximately 7.16 million square feet of rentable building area. Twelve of the top 25 largest warehouses are in the Susquehanna region. Those 12 buildings total nearly 14 million square feet of rentable building area.

Exhibit 6. Largest Warehouses in Greater Baltimore, Ranked by Rentable Building Area (SF)

Rank	Building Address	County	RBA	Year Built	Owner
1	2122 Broening Highway	Baltimore County	2.23M	2015	Duke Realty Corp.
2	100-401 Airport Road	Cecil	2.00M	1990	W. L. Gore & Associates Inc.
3	2800 Eastern Blvd.	Baltimore County	1.92M	1940	Blue Ocean Realty
4	100 Firestone Road	Cecil	1.72M	2002	IKEA U.S. Inc.
5	7015 Tradepoint Ave.	Baltimore County	1.50M	2020	Tradepoint Atlantic
6	103 Chesapeake Park Plaza	Baltimore County	1.38M	1940	Lockheed Martin Corp.
7	7030 Tradepoint Ave.	Baltimore County	1.35M	2018	Tradepoint Atlantic
8	4000 Principio Parkway E.	Cecil	1.21M	2007	Industrial Logistics Properties Trust
9	600 Principio Parkway W.	Cecil	1.15M	2017	Clarion Partners
10	1 Principio Parkway	Cecil	1.08M	2019	Stewart Cos.
11	630 Hanover Pike	Carroll	1.04M	2000	STAG Industrial Inc.
12	1500 Woodley Road	Harford	1.03M	2020	MRP Industrial
13	1701 Trimble Road	Harford	1.02M	1991	Kohl's Department Stores Inc.
14	238 Belvidere Road	Cecil	1.02M	2003	Clarion Partners
15	2010 Broening Highway	Baltimore County	1.02M	2015	Duke Realty Corp.
16	3300 Fashion Way	Harford	1.01M	1988	May Department Stores Co.
17	6001 Bethlehem Blvd.	Baltimore County	979,200	2018	Tradepoint Atlantic
18	8901 Snowden River Pkwy	Howard	965,153	1971	Deutsche Bank AG
19	400 Hahn Road	Carroll	955,552	1979	Penguin Random House Inc.
20	1467 Perryman Road	Harford	945,720	2014	Prologis Inc.
21	601 Chelsea Road	Harford	885,000	1998	Rite Aid Corp.
22	626 Hanover Pike	Carroll	868,019	1952	BTR Capital Group
23	1225 S. Philadelphia Blvd.	Harford	860,000	2020	Merritt Properties
24	1700 Sparrows Point Blvd.	Baltimore County	857,514	2018	Tradepoint Atlantic
25	7600 Assateague Drive	Howard	853,503	1972	Grandview Partners

Source: Baltimore Business Journal, "Largest Warehouses in Greater Baltimore", 5/7/2020. Notes: The list includes Baltimore City and Anne Arundel, Baltimore, Carroll, Cecil, Harford and Howard counties.

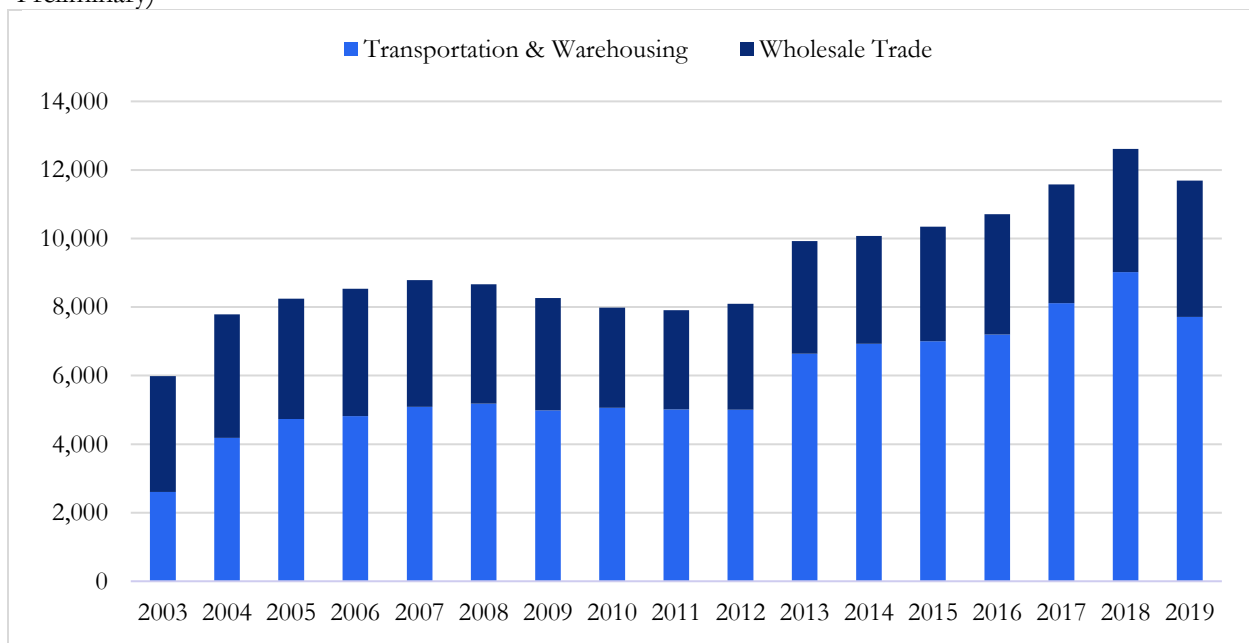
Exhibit 7 reflects the level of logistics/distribution employment in the Susquehanna region over time. While transportation/warehousing supports more employment today than wholesale trade (66% vs. 34% in 2019), this was not always the case.

In 2003, wholesale trade was the larger employment segment, but the emergence of e-commerce and its ability to directly link producers and consumers has eliminated many positions for “middle men and women”, who have been disintermediated in many instances. At the same time, the e-commerce boom has created more demand for warehouse space and logistical support. The number of jobs has flourished as a result despite the rampant automation that characterizes many large-scale fulfillment centers.

Accordingly, over the last 10 years, employment in logistics/distribution in the Susquehanna region, which has been especially adept at attracting large-scale facilities, has grown substantially. Regional employment in logistics/distribution expanded by a total of 41.6 percent between 2010 and 2019, or at an average annual rate of 3.5 percent.

Data indicate that regional distribution/employment declined in 2019, perhaps due to growing stress among certain retailers and their diminished need for distribution services. Last year represented a record year for store closures in the U.S. COVID-19 has driven even more retailers to the edge, with prominent American retailers such as J. Crew, Neiman Marcus, and J.C. Penney declaring bankruptcy as the pandemic spread through the economy. Automation may have also played a meaningful role. However, this may simply be a function of erratic data. The 2019 figures are preliminary, and are therefore susceptible to revision, including upward revision.

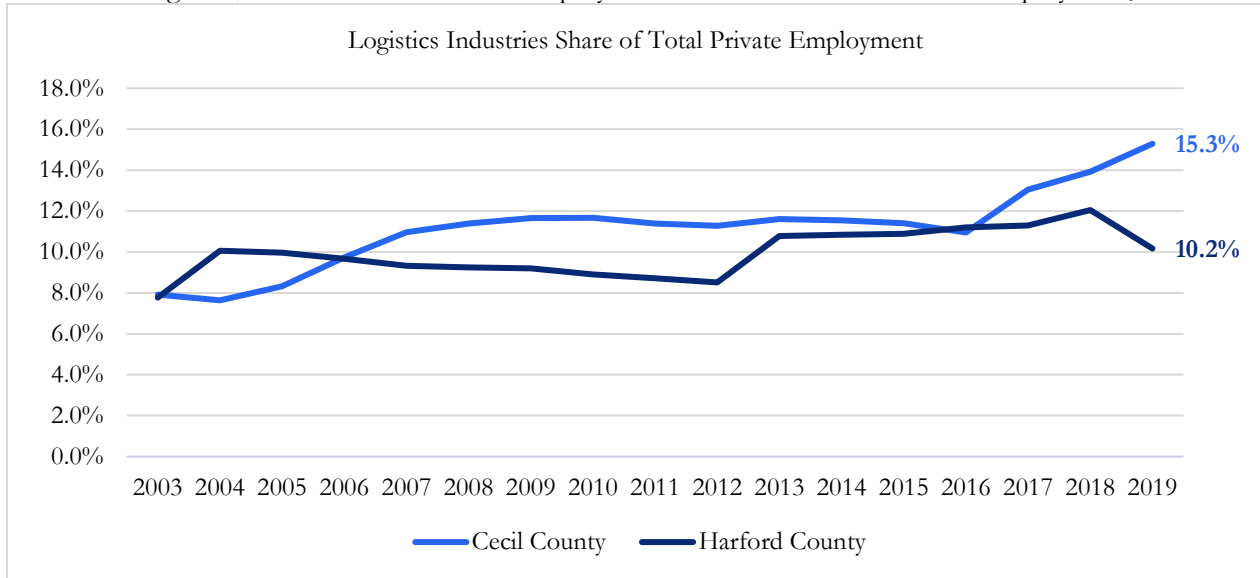
Exhibit 7. Susquehanna Region Logistics/Distribution Industries Employment, 2003-2019 (2019 Figures are Preliminary)



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) program; Sage. Notes: 1. Data are not seasonally adjusted (NSA).

In 2019, logistics industries represented 11.5 percent of total regional private employment. Exhibit 8 indicates that logistics/distribution is much more concentrated in Cecil County as a share of total employment than in Harford County. In Cecil County, logistics industries represent 15 percent of total private employment compared to 10 percent of total private employment in Harford County.

Exhibit 8. Logistics/Distribution Industries Employment as a Share of Total Private Employment, 2003-2019



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) program; Sage.
Notes: 1. Data are not seasonally adjusted (NSA).

Distribution employment has grown much more quickly in the Susquehanna region than in balance of Maryland. Between 2009 and 2014, logistics/distribution employment expanded at an average annual rate of 4.1 percent in the Susquehanna region compared to a growth rate of 0.4 percent statewide. Between 2014 and 2019, overall regional logistics/distribution employment grew only slightly faster than statewide logistics/distribution employment, but it still managed to expand rapidly in Cecil County. Cecil County logistics/distribution employment grew at an average annual rate of 7.8 percent between 2014 and 2019.

Exhibit 9. Recent Growth in Logistics/Distribution Employment, Maryland v. Susquehanna Region

	Employment			Net Growth		CAGR	
	2009	2014	2019	2009-2014	2014-2019	2009-2014	2014-2019
Maryland	149,598	152,447	175,886	2,849	23,439	0.4%	2.9%
Susquehanna WIA	8,258	10,078	11,690	1,820	1,612	4.1%	3.0%
Cecil County, MD	2,556	2,821	4,112	265	1,291	2.0%	7.8%
Harford County, MD	5,702	7,257	7,578	1,555	321	4.9%	0.9%

Source: U.S. Bureau of Labor Statistics; Quarterly Census of Employment and Wages (QCEW) program; Sage.
Notes: 1. Data are not seasonally adjusted (NSA).

Exhibit 10 breaks down logistics/distribution employment in the Susquehanna region by detailed industry as of 2019Q2. For data at this detailed level, not all industries are represented because the U.S. Bureau of Labor Statistics suppresses figures when they do not meet U.S. Census Bureau publication standards regarding confidentiality.

The largest logistics/distribution employment category in the Susquehanna region is warehousing and storage, hardly surprising given the substantial numbers of large-scale distribution facilities in the region. Merchant wholesalers of nondurable and durable goods represent the next largest employment segments, followed by truck transportation. The number of couriers and messengers is likely vastly undercounted. Many couriers, for instance, work as independent contractors, and therefore may not be captured in employment data.

Exhibit 10. Susquehanna Region Logistics/Distribution Employment by Detailed Industry, 2019Q2

Industry	Stable Employment
Warehousing and Storage	3,395
Merchant Wholesalers, Nondurable Goods	1,684
Merchant Wholesalers, Durable Goods	1,541
Truck Transportation	1,516
Transit and Ground Passenger Transportation	597
Wholesale Electronic Markets and Agents and Brokers	445
Support Activities for Transportation	201
Water Transportation*	168
Couriers and Messengers	110
Air Transportation	22

Source: U.S. Bureau of Labor Statistics, LED Extraction Tool - Quarterly Workforce Indicators (QWI); Sage.
 Notes: 1. Data are not seasonally adjusted (NSA). 2. Employment figures are the number of stable jobs; the number of jobs that are held on both the first and last day of the quarter with the same employer. 3. Some logistics/distribution industries are not represented above because the U.S. Bureau of Labor Statistics suppresses figures when they do not meet US Census Bureau publication standards.
 *Data for these industries may be distorted/fuzzed.

As of 2019, there were 618 logistics/distribution business establishments in the Susquehanna region representing around 8 percent of total private business establishments. Merchant wholesalers of durable goods represent just over 30 percent of logistics/distribution establishments while truck transportation establishments account for just over 21 percent. Merchant wholesalers of nondurable goods and wholesale electronics each account for around 12 percent of these establishments. While warehousing and storage is the largest logistics/distribution employment segment, it represents relatively few establishments.

Exhibit 11. Regional Logistics/Distribution Business Establishments by Detailed Industry, 2019

Industry	Total Susq. Region	
	# of Establishments	% of Total Sector Establishments
Merchant Wholesalers, Durable Goods	189	30.6%
Truck Transportation	132	21.4%
Merchant Wholesalers, Nondurable Goods	78	12.6%
Wholesale Electronic Markets and Agents and Brokers	76	12.3%
Transit and Ground Passenger Transportation	53	8.6%
Support Activities for Transportation	43	7.0%
Warehousing and Storage	27	4.4%
Couriers and Messengers	12	1.9%
Water Transportation	5	0.8%
Air Transportation	2	0.3%
Scenic and Sightseeing Transportation	1	0.2%
Total Logistics/distribution	618	100.0%

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) program; Sage.
 Notes: 1. Data are not seasonally adjusted (NSA).

Average industry wages in the Susquehanna region are presented in Exhibit 12.

Distribution/logistics is neatly associated with many middle-wage industries. Within wholesale trade, the highest wages are in wholesale electronic markets. Within transportation and warehousing, the highest wages are in water transportation (not a significant employment segment in the region) and truck transportation (a significant employment segment in the region).

Exhibit 12. Average Wages in the Susquehanna Workforce Region for Select Industries, 2019Q3

Industry	Avg. Hourly Wage*	Avg. Weekly Wage	Avg. Annual Wage*
All Industries	\$25.70	\$1,028	\$53,456
Wholesale Trade	\$27.35	\$1,094	\$56,888
Wholesale Electronic Markets and Agents and Brokers	\$36.88	\$1,475	\$76,700
Merchant Wholesalers, Durable Goods	\$29.08	\$1,163	\$60,476
Merchant Wholesalers, Nondurable Goods	\$24.53	\$981	\$51,012
Transportation and Warehousing	\$21.73	\$869	\$45,188
Water Transportation	\$49.48	\$1,979	\$102,908
Truck Transportation	\$28.73	\$1,149	\$59,748
Support Activities for Transportation	\$24.90	\$996	\$51,792
Postal Service	\$24.40	\$976	\$50,752
Couriers and Messengers	\$21.88	\$875	\$45,500
Warehousing and Storage	\$18.50	\$740	\$38,480
Transit and Ground Passenger Transportation	\$14.20	\$568	\$29,536
Air Transportation	\$9.78	\$391	\$20,332

Source: Maryland Workforce Exchange, Labor Market Statistics, Covered Employment and Wages Program; Sage. *Assumes a 40-hour week worked year round. **Wage data not available for the following transportation and warehousing industries: pipeline transportation; rail transportation; scenic and sightseeing transportation.

III. Looking Ahead: Meeting Future Demands in Distribution

Having defined and statistically detailed the industry nationally and regionally, this logistics industry brief addresses the following questions:

1. What are the realistic growth prospects for logistics/distribution employment in the Susquehanna region?
 2. To what extent is there evidence of inadequate human capital supply now and into the future with respect to regional logistics/distribution?
 3. What does an individual need to do to access logistics/distribution opportunities and are those opportunities available within the confines of the Susquehanna region?
1. What are the realistic growth prospects for logistics/distribution employment in the Susquehanna Region?
 - Projected Employment Growth in Key Industries and Occupations

Projections produced by the Office of Workforce Information and Performance (OWIP) within Maryland’s Department of Labor indicate that regional employment is expected to expand in both wholesale trade and transportation and warehousing between 2016 and 2026, but that transportation and warehousing will be the primary driver of growth. Regional wholesale trade employment is expected to expand by 0.2 percent annually between 2016 and 2026, while transportation and warehousing employment is expected to expand 1.4 percent annually. Combined, the two industries are expected to expand by a bit more than 1,200 position between 2016 and 2026. More than 90 percent of the expected job growth in transportation and warehousing employment in the region is attributable to warehousing and storage. As with many existing workforce projections, these do not consider the impacts of COVID-19. However, they reflect an underlying economic structure that remains relevant and will become even more so as the pandemic recedes into history.

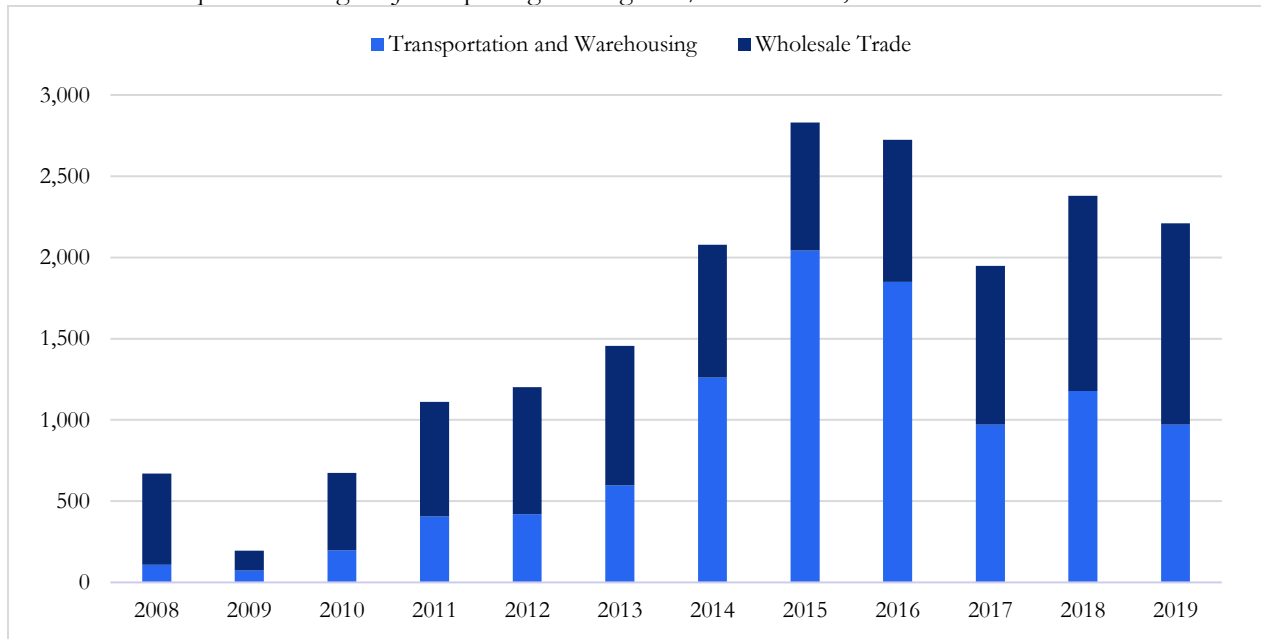
Exhibit 13. Susquehanna Region – Projected Employment Growth in Select Industries, 2016-2026

Industry	2016	2026	2016-2026	
			Total Growth	Annual % Growth
ALL INDUSTRIES	130,904	141,205	10,301	0.8%
Wholesale Trade	3,358	3,441	83	0.2%
Wholesale Electronic Markets and Agents and Brokers	534	593	59	1.1%
Merchant Wholesalers, Durable Goods	1,422	1,442	20	0.1%
Merchant Wholesalers, Nondurable Goods	1,402	1,406	4	0.0%
Transportation and Warehousing	7,222	8,340	1,118	1.4%
Warehousing and Storage	4,845	5,881	1,036	2.0%
Truck Transportation	1,394	1,433	39	0.3%
Support Activities for Transportation	151	166	15	1.0%
Transit and Ground Passenger Transport	594	607	13	0.2%
Water Transportation	161	172	11	0.7%
Couriers and Messengers	68	72	4	0.6%
Wholesale Trade + Transportation and Warehousing	10,580	11,781	1,201	1.1%

Source: Maryland Department of Labor, Licensing and Regulation (DLLR), Workforce Region Industry Projections; Sage.

Exhibit 14 indicates the number of job openings in the Susquehanna region in distribution industries posted online on the Maryland Workforce Exchange from 2008-2019. The number of job postings has been trending lower since 2015, but has remained elevated by historic standards. This data series tends to be erratic, with job postings surging as large facilities come on line episodically.

Exhibit 14. Susquehanna Region Job Openings in Logistics/Distribution, 2008-2019



Source: Maryland Workforce Exchange: Labor Market Information (Job Source: Online advertised jobs data); Sage.
 Notes: 1. The table shows the number of job openings advertised online in the Susquehanna Workforce Region (Jobs De-duplication Level 2).
 2. Jobs De-duplication Level 2: high level de-duplication of advertised job openings (for statistical analysis).

There were more than 1,200 job openings in wholesale trade and more than 970 job openings in transportation and warehousing in the Susquehanna region posted on the Maryland Workforce Exchange in 2019. Within wholesale trade, 68 percent of job openings were for positions in merchant wholesaling of nondurable goods (843 positions advertised throughout the year) and another 28 percent were for positions in merchant wholesaling of durable goods (349 positions). More than 50 percent of transportation and warehousing job openings were for positions in truck transportation (527 positions) and more than 30 percent were for positions in support activities for transportation (301 positions). Exhibit 15 supplies relevant statistical detail.

These industry labels are not especially helpful in attempting to understand the nature of skills required to satisfy occupational requirements. What precisely does a merchant wholesaler do on a daily basis? What is a transportation support activity? These issues are addressed in finer, more understandable detail later in the report.

Exhibit 15. Susquehanna Region Job Openings: Logistics/Distribution Job Openings by Top Detailed Industries in 2019

Industry	Job Openings
Wholesale Trade	
Merchant Wholesalers, Nondurable Goods	843
Merchant Wholesalers, Durable Goods	349
Wholesale Electronic Markets and Agents and Brokers	46
Transportation & Warehousing	
Truck Transportation	527
Support Activities for Transportation	301
Postal Service	67
Warehousing and Storage	31
All Other Transportation & Warehousing	46

Source: Maryland Workforce Exchange, Labor Market Information. Job Source: Online advertised jobs data; Sage.
 Notes: 1. The table shows the number of job openings advertised online in the Susquehanna Workforce Region in 2019 (Jobs De-duplication Level 2). 2. Jobs De-duplication Level 2: high level de-duplication of advertised job openings (for statistical analysis).

Exhibit 16 reflects the leading 10 logistics/distribution related occupations by projected growth in absolute terms between 2016 and 2026 in the Susquehanna region. In net terms, positions for hand laborers and freight/stock/material movers are expected to expand the most, by 1.9 percent annually or by more than 700 positions over the course of a decade. While these occupations are common in logistics, they overlap with other industries, including manufacturing. Other occupations expected to experience significant growth include stock clerks and order fillers, general and operations managers, industrial truck and tractor operators, heavy and tractor-trailer truck drivers, and shipping/receiving/traffic clerks.

Exhibit 16. Susquehanna Region – Projected Employment Growth in Select Detailed Occupations, 2016-2026

Occupations	2016	2026	2016-2026	
			Total Growth	Annual % Growth
ALL OCCUPATIONS	130,904	141,202	10,298	0.8%
OCCUPATIONS LIKELY TO BE EMPLOYED IN LOGISTICS/DISTRIBUTION*				
Hand Laborers and Freight, Stock, and Material Movers	3,445	4,156	711	1.9%
Stock Clerks and Order Fillers	3,068	3,379	311	1.0%
General and Operations Managers	2,032	2,187	155	0.7%
Industrial Truck and Tractor Operators	440	572	132	2.7%
Heavy and Tractor-Trailer Truck Drivers	1,543	1,669	126	0.8%
Shipping, Receiving, and Traffic Clerks	908	1,014	106	1.1%
Light Truck or Delivery Services Drivers	709	781	72	1.0%
Customer Service Representatives	635	692	57	0.9%
Hand Packers and Packagers	432	486	54	1.2%
Wholesale and Manufacturing Sales Representatives**	652	697	45	0.7%

Source: Maryland Department of Labor, Licensing and Regulation (DLLR), Workforce Region Occupational Projections; Sage.
 Notes: *Top 10 growing occupations in the Susquehanna region out of the 20 occupations representing the largest share of Wholesale Trade (NAICS 42) employment and the 20 occupations representing the largest share of Transportation and Warehousing (NAICS 48-49) employment, nationwide in 2018. **Except Technical and Scientific Products.

Exhibit 17 details the number of Susquehanna regional job openings in logistics/distribution related occupations in 2019. There were more than 500 job openings posted on the Maryland Workforce Exchange in the Susquehanna region throughout the year for each of the following occupations: industrial truck and tractor operators, heavy and tractor-trailer truck drivers, hand laborers and material movers, and stock clerks.

Many of the occupations listed below are considered transportation and material moving occupations. However, there are also openings in management, administrative support, and sales.

Exhibit 17. Susquehanna Region Job Openings: Select Logistics/Distribution Related Occupations, 2019

Occupation Title	Job Openings	Mean Annual Wage
Industrial Truck and Tractor Operators	541	\$31,369
Heavy and Tractor-Trailer Truck Drivers	514	\$51,182
Hand Laborers and Freight, Stock, and Material Movers	508	\$30,893
Stock Clerks- Stockroom, Warehouse, or Storage Yard	507	\$30,170
General and Operations Managers	286	\$75,629
Stock Clerks, Sales Floor	192	\$32,915
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	153	N/A
Light Truck or Delivery Services Drivers	146	\$49,530
Driver/Sales Workers	130	N/A
Customer Service Representatives	111	N/A
Office Clerks, General	106	\$27,386
Sales Managers	94	N/A
Shipping, Receiving, and Traffic Clerks	94	\$32,110
Bus and Truck Mechanics and Diesel Engine Specialists	90	\$50,365
Purchasing Agents, Except Wholesale, Retail, and Farm Products	72	N/A

Source: Maryland Workforce Exchange: Labor Market Information (Wage Data Source: Labor Market Statistics, Occupational Employment Statistics & Wages Program; Job Source: Online advertised jobs data); Sage. Notes: 1. The table shows the number of job openings advertised online in the Susquehanna Workforce Region in 2019 (Jobs De-duplication Level 2). 2. Jobs De-duplication Level 2: high level de-duplication of advertised job openings (for statistical analysis). *Occupations with the most job openings in the Susquehanna region out of the 20 occupations representing the largest share of Wholesale Trade (NAICS 42) employment and the 20 occupations representing the largest share of Transportation and Warehousing (NAICS 48-49) employment, nationwide in 2018.

2. To what extent is there evidence of inadequate human capital supply now and into the future with respect to regional logistics/distribution?

According to data from the U.S. Census Bureau, more than 10,000 people worked in wholesale trade and transportation/warehousing in the Susquehanna region in 2017, including people who do not live in the region. Of the logistics/distribution jobs in the region, approximately 7,000 were in transportation and warehousing and about 3,700 were in wholesale trade. The more than 10,000 regional logistics/distribution jobs represented 10.5 percent of regional employment.

There were more than 13,000 residents of the Susquehanna region working in these industries, many of whom commute outside of the region to work. Of those residents employed in logistics/distribution, approximately 6,500 were employed in transportation and warehousing and roughly 6,500 were employed in wholesale trade. The more than 13,000 residents who hold jobs in these industries represented 8.5 percent of the total number of employed residents.

Exhibit 18. Susquehanna Region Logistics/Distribution Employment: Work v. Home Area, 2017

Industry	Work Area	Home Area
Wholesale Trade	3,731	6,533
Transportation and Warehousing	7,011	6,511
All Industries	102,610	152,822

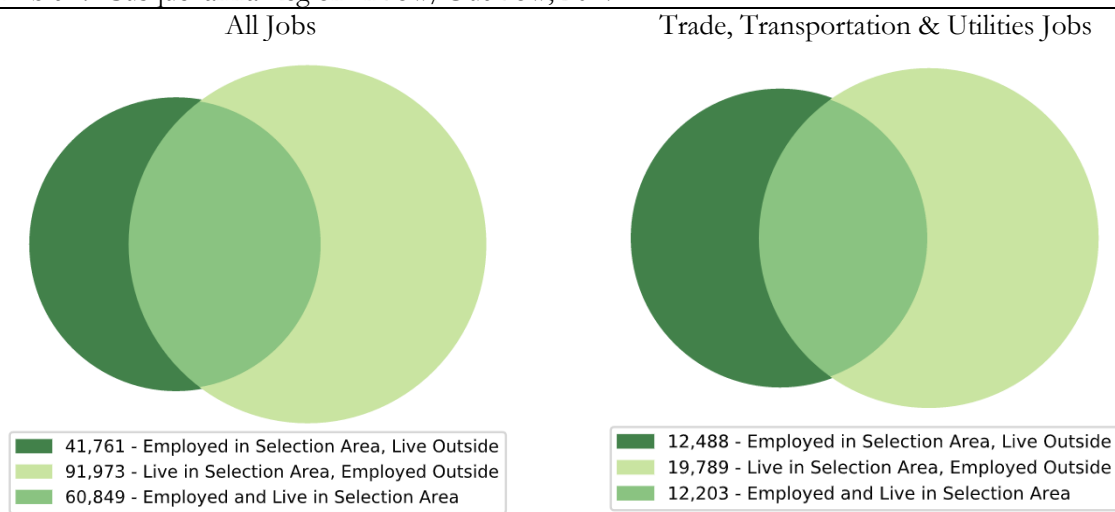
Source: U.S. Census Bureau. Longitudinal-Employer Household Dynamics Program, OnTheMap Application; Sage.
 Notes: 1. Numbers represent *primary* jobs, not total jobs. Primary Jobs: Public and private-sector jobs, one job per worker. A primary job is the highest paying job for an individual worker. 2. Job figures presented are for the Susquehanna Workforce Investment Area (WIA), which is comprised of Cecil County and Harford County.

Exhibit 19 presents data from the U.S. Census Bureau characterizing employment inflow/outflow in the Susquehanna region in all industries and in trade, transportation, and utilities. The larger circle pertains to the number of employed Susquehanna region residents who leave the region for work. The smaller, darker green circle represents the number of people who commute from beyond the region to work in Susquehanna. The overlapping area represents the population that both lives and works in the Susquehanna region. Note that trade, transportation, and utilities encompasses not only wholesale trade and transportation/warehousing, but also retail and utilities. This is the finest level of detail at which these data are available.

Of the approximately 102,000 jobs in all industries in the Susquehanna region, 60 percent are filled by residents (60,849). Of the approximately 24,000 trade, transportation, and utilities jobs in the Susquehanna region, 50 percent are filled by residents (12,203).

The implication is stark. Given the number of available job openings and the large numbers of people who commute into the region for jobs in distribution, there is enormous opportunity to train local residents for jobs within the region. But the data also indicate the presence of large numbers of jobs in logistics outside of the region as well, including those related to operations at the Port of Baltimore and Tradepoint Atlantic in Baltimore County.

Exhibit 19. Susquehanna Region Inflow/Outflow, 2017



Source: U.S. Census Bureau. Longitudinal-Employer Household Dynamics Program, OnTheMap Application.
 Notes: 1. Numbers represent *primary* jobs, not total jobs.

Exhibit 20 supplies statistical detail regarding the characteristics of logistics/distribution industry workers in the Susquehanna region. Logistics/distribution employees are predominately male (67%) and around 65 percent are between the ages of 25 and 54.

Relative to all industries, workers appear to have somewhat lower levels of education in wholesale trade and transportation/warehousing. A bit more than 30 percent of logistics/distribution workers have only a high school diploma, while another nearly 29 percent have some college/associate’s degree. Around 19 percent have a bachelor’s or advanced degree. Across all industries, around 25 percent of Susquehanna region workers have only a high school diploma, while 27 percent have some college/associate’s degree and 23.5 percent have a bachelor’s/advanced degree.

Exhibit 20. Characteristics of Logistics/Distribution Industries Employees in the Susquehanna Region, 2019Q2

	% of Total
SEX	
Male	66.6%
Female	33.4%
AGE	
<19	0.4%
19-24	7.6%
25-34	21.9%
35-44	20.6%
45-54	22.3%
55-64	19.8%
65+	7.4%
RACE	
White Alone	68.5%
Black or African American Alone	25.4%
All Other	6.1%
ETHNICITY	
Hispanic or Latino	6.5%
Not Hispanic or Latino	93.6%
EDUCATION LEVEL	
Less than high school	13.8%
High school or equivalent, no college	30.4%
Some college or Associate degree	28.9%
Bachelor’s degree or advanced degree	18.9%
Educational attainment NA*	8.0%

Source: U.S. Census Bureau, LED Extraction Tool - Quarterly Workforce Indicators (QWI); Sage.
 Notes: 1. Workers in Wholesale Trade (NAICS 42) and Transportation and Warehousing (NAICS 48-49).
 2. Data are not seasonally adjusted (NSA). 3. Employment figures are the number of stable jobs: the number of jobs that are held on both the first and last day of the quarter with the same employer.
 *Educational attainment not available—workers aged 24 or younger.

Exhibit 21 compares numbers of online job postings with candidates with active resumes in the Maryland Workforce Exchange for logistics/distribution related occupations in the region as of early June 2020. While this represents only a snapshot in time, it supplies some sense of the scale of the demand for workers in the sector as well as the supply of candidates.

According to these data, there is an ample number of candidates per job opening in most occupational categories. This may be a reflection of the pandemic-induced recession that began in

February 2020. Including candidates willing to work anywhere in the state, there is more than one candidate per available job opening in all ten of the occupations listed below.

In early June, there were nearly 10 candidates per job opening in the category of general and operations managers, the highest ratio of candidates to openings among the occupations listed below. This is hardly unusual. Many people strive to become managers/supervisors. The category with the fewest candidates per opening was retail salespersons, in which there were still more than two candidates per job opening.

As is often the case, data indicate that the majority of jobseekers are not firmly tied to the Susquehanna region. Ostensibly, these people are willing to work anywhere in Maryland and perhaps outside of Maryland as well. For example, there were 63 candidates seeking positions as heavy/tractor-trailer truck drivers in the Susquehanna region only, but another 188 candidates were willing to work anywhere in Maryland.

Many jobs in logistics/distribution require the physical movement of goods as part of the performance of the job, sometimes across counties, states, or regions. Other logistics/distribution related jobs like retail salespersons, stock clerks, shipping clerks, or managers likely require far less travel. The willingness to travel and/or spend significant time away from home represents an advantage that some jobseekers may want to leverage.

Exhibit 21. Susquehanna Region Job Openings & Candidates for Select Logistics/Distribution Related Occupations*, as of 6/11/2020

Occupation Title	Job Openings	Potential Candidates		Candidates Per Job Opening	
		Only Looking in Susq.	Willing to Work Anywhere in MD	Only Looking in Susq.	Willing to Work Anywhere in MD
Customer Service Representatives	116	224	876	1.93	7.55
Retail Salespersons	109	58	237	0.53	2.17
Computer User Support Specialists	91	61	234	0.67	2.57
Stock Clerks and Order Fillers	78	155	451	1.99	5.78
Heavy and Tractor-Trailer Truck Drivers	77	63	251	0.82	3.26
Hand Laborers and Freight/Stock/Material Movers	51	114	320	2.24	6.27
Driver/Sales Workers	39	57	187	1.46	4.79
General and Operations Managers	38	111	372	2.92	9.79
Industrial Truck and Tractor Operators	34	52	83	1.53	2.44
Shipping, Receiving, and Traffic Clerks	18	20	55	1.11	3.06

Source: Maryland Workforce Exchange: Labor Market Information (Wage Data Source: Labor Market Statistics, Occupational Employment Statistics & Wages Program; Candidate Source: Individuals with active resumes in the workforce system; Job Source: Online advertised jobs data); Sage.

Notes: 1. Jobs De-duplication Level 2: high level de-duplication of advertised job openings (for statistical analysis). *Occupations with the most job openings in the Susquehanna region out of the 30 occupations representing the largest share of Wholesale Trade (NAICS 42) employment and the 30 occupations representing the largest share of Transportation and Warehousing (NAICS 48-49) employment, nationwide in 2018.

3. What does an individual need to do to access logistics/distribution job opportunities and are those opportunities available within the confines of the Susquehanna region?

Exhibit 22 details entry level educational levels, training, and experience required for the top 10 logistics/distribution-related occupations associated with the most expected growth in the Susquehanna region from 2016-2026. Three of these 10 occupations require no formal educational credential and only some short-term on-the-job training. This group includes: 1. hand laborers/freight, stock, and material movers; 2. industrial truck and tractor operators; and 3. hand packers and packagers.

Five of the occupations require a high-school diploma or equivalency and some amount of on-the-job training. This group includes: 1. stock clerks and order fillers; 2. shipping, receiving, and traffic clerks; 3. light truck/delivery service drivers; 4. customer service representatives; and 5. wholesale and manufacturing sales representatives. One occupation requires a post-secondary non-degree award (heavy and tractor trailer truck drivers) and one occupation requires a bachelor's degree (general/operations managers). In short, the logistics/distribution sector offers plentiful opportunities for those who lack significant formal educational credentialing.

Exhibit 22. Education Requirements in Top 10 Logistics/Distribution Related Occupations with the Most Projected Growth in the Susquehanna Region

Occupation	2019 Median Pay (U.S.)	Entry Level Education	Work Experience in a Related Occup.	On-the-job Training	Licenses/Cert. Required
Hand Laborers and Freight, Stock, and Material Movers	\$28,710	No Formal Educ. Credential	None	Short-term OTJ Training	CDL required in some positions
Stock Clerks and Order Fillers	\$30,010	HS Diploma or Equivalent	None	Short-term OTJ Training	None
General and Operations Managers	\$104,690	Bachelor's Degree	5 years or more	None	Not required except for in some types of work
Industrial Truck and Tractor Operators	\$35,850	No Formal Educ. Credential	None	Short-term OTJ Training	Not required except for in some types of work
Heavy and Tractor-Trailer Truck Drivers	\$45,260	Postsecondary Non-degree Award	None	Short-term OTJ Training	CDL
Shipping, Receiving, and Traffic Clerks	\$30,010	HS Diploma or Equivalent	None	Short-term OTJ Training	None
Light Truck or Delivery Services Drivers	\$32,020	HS Diploma or Equivalent	None	Short-term OTJ Training	Driver's license
Customer Service Representatives	\$34,710	HS Diploma or Equivalent	None	Short-term OTJ training	Not required except for in some types of work
Hand Packers and Packagers	\$28,710	No Formal Educ. Credential	None	Short-term OTJ Training	CDL required in some positions
Wholesale and Manufacturing Sales Representatives**	\$63,000	HS Diploma or Equivalent	None	Moderate-term OTJ Training	Not required, optional***:

Source: U.S. Bureau of Labor Statistics, *Occupational Outlook Handbook*; Maryland Department of Labor, Licensing and Regulation (DLLR), Workforce Region Occupational Projections; Sage. Notes: *Top 10 growing occupations in the Susquehanna region out of the 20 occupations representing the largest share of Wholesale Trade (NAICS 42) employment and the 20 occupations representing the largest share of Transportation and Warehousing (NAICS 48-49) employment, nationwide in 2018. **Except Technical and Scientific Products. *** The Certified Professional Manufacturers' Representative (CPMR) certification and the Certified Sales Professional (CSP) certification are both offered by the Manufacturers' Representatives Educational Research Foundation (MRERF).

Exhibit 23 lists the job skill requirements associated with Susquehanna region job openings posted on the Maryland Workforce Exchange in logistics/distribution industries in May 2020. There is a need for workers with basic skills like attendance, the ability to work independently, attention to

detail, and problem solving. Customer service skills and interpersonal skills are also in demand. The ability to maintain records and the capacity to monitor physical inventory are also skills in demand. Most of these skills do not require a significant amount of formal education to master.

Exhibit 23. Susquehanna Region Advertised Jobs During the Month of May 2020
Job Skill Requirements for Job Openings in Logistics/Distribution Industries

Skill Rank	Job Skill	Skill Group
Wholesale Trade		
1	Good attendance	Basic Skills
2	Customer service	Customer Service Skills
3	Interpersonal skills	Interpersonal Skills
4	Conflict management	Interpersonal Skills
5	Problem solving/attention to detail	Basic Skills
Transportation & Warehousing		
1	Work independently	Basic Skills
2	Physical inventories	Warehouse Worker Skills
3	Delivers mail	Mail Clerk Skills
4	Customer service	Customer Service Skills
5	Maintains records	Technical Writer Skills

Source: Maryland Workforce Exchange, Labor Market Information. Job Source: Online advertised jobs data; Sage.

Notes: 1. The table shows the top advertised job skills found in job openings advertised online in Susquehanna Workforce Region (Jobs De-duplication Level 1) 2. Jobs De-duplication Level 1: low level de-duplication of advertised job openings (more jobs).

Exhibit 24 lists certification requirements associated with Susquehanna regional job postings on the Maryland Workforce Exchange in the wholesale trade and transportation/warehousing industries as of May 2020. Commercial driver's license (CDL) certification is the number one most requested certification in both wholesale trade and transportation/warehousing. Several of the in-demand certifications pertain to computer networks and information/cybersecurity. There is also a need for certification in some areas of emergency medicine/CPR/First Aid.

Exhibit 24. Susquehanna Region Advertised Jobs During the Month of May 2020
Certification Requirements for Job Openings in Logistics/Distribution Industries

Rank	Certification	Certification Category
Wholesale Trade		
1	Commercial Driver's License (CDL)	Ground Transportation
2	Cisco Professional Certifications	Computer Network
3	National Association of Forensic Counselors (NAFC) - Addictions Specialties	Counseling
4	Cisco Enterprise Certifications	Computer Network
5	(ISC) Certifications	Information and Cyber Security
Transportation & Warehousing		
1	Commercial Driver's License (CDL)	Ground Transportation
2	American Heart Association (AHA) CPR & First Aid Certifications	Nursing
3	National Registry of Emergency Medical Technicians (NREMT)	Fire Rescue
4	Cisco Associate Certifications	Computer Network
5	National Association of Emergency Medical Technicians (NAEMT) Certifications	Medical Treatment and Therapy

Source: Maryland Workforce Exchange, Labor Market Information. Job Source: Online advertised jobs data; Sage.

Notes: 1. The table shows the top advertised certifications found in job openings advertised online in Susquehanna Workforce Region (Jobs De-duplication Level 1) 2. Jobs De-duplication Level 1: low level de-duplication of advertised job openings (more jobs).

Exhibit 25 lists the tool/technology requirements associated with Susquehanna regional job postings on the Maryland Workforce Exchange in logistics/distribution industries as of May 2020. Predictably, most of the skills required relate to some type of material moving machinery, such as pallet trucks, jacks, hand trucks, and forklifts.

Exhibit 25. Susquehanna Region Advertised Jobs During the Month of May 2020
Tool & Technology Requirements for Job Openings in Logistics/Distribution Industries

Rank	Tool/Technology	Tool/Technology Group
Wholesale Trade		
1	Forklift	Forklifts
2	Pallet Jack	Pallet Trucks
3	Jacks	Jacks
4	Electric pallet jacks	Pallet Trucks
5	Hand Truck	Hand Trucks or Accessories
Transportation & Warehousing		
1	Forklift	Forklifts
2	Android	Development Environment Software
3	Jacks	Jacks
4	Mopeds	Mopeds
5	Motorcycle	Motorcycles

Source: Maryland Workforce Exchange, Labor Market Information. Job Source: Online advertised jobs data; Sage.

Notes: 1. The table shows the top advertised job skills found in job openings advertised online in Susquehanna Workforce Region (Jobs De-duplication Level 1) 2. Jobs De-duplication Level 1: low level de-duplication of advertised job openings (more jobs).

The region’s two community colleges offer ample programming to meet many of the certification and tool/technology needs listed above. Cecil College and Harford Community College (HCC) offer a number of relevant programs, including forklift operations, heavy equipment operations, and commercial driver’s license (CDL) training.^{10,11}

HCC also offers the following logistics/distribution related certificate programs: Green Supply Chain Professional Certificate, Distribution & Logistics Management Certificate, Purchasing and Supply Chain Management and Freight Broker/Agent Training Certificate, and Drone Technology Certificate. Cecil College offers Associate of Applied Science (AAS) programs in Transportation Logistics and Management and Supply Chain Management, as well as a Supply Chain Management Certificate program.¹²

¹⁰ Cecil College. *Workforce Training-Skilled Trades*. <https://www.cecil.edu/programs-courses/career-community-education/workforce-training/skilled-trades>.

¹¹ Harford Community College. *Community Education, Business & Applied Technology*. <http://www.harford.edu/Academics/CEBAT.aspx>.

¹² Economic Alliance of Greater Baltimore (EAGB). “Get to Know Logistics in the Greater Baltimore Region”. <https://www.greaterbaltimore.org/news/blog/get-know-logistics-greater-baltimore-region>.

In 2014 Cecil College received an Employment Advancement Right Now (EARN) grant to develop the Transportation and Logistics Strategic Industry Partnership (SIP). The EARN program provides Maryland organizations and business partnerships with State funding for worker training programs directly tailored to industry needs.¹³ The Susquehanna Transportation and Logistics SIP provides comprehensive, sequential training on advanced techniques and procedures, which is enhanced by the use of a simulator that mimics real-life experiences.¹⁴

This program appears to be successful. In 2019 the Susquehanna Transportation and Logistics SIP continued to implement training and in response to industry demand has begun providing CDL A and B training opportunities. Upon completion of the training program, students have the opportunity to attend a job fair and interview with employer partners such as Performance Food Group, Burris Logistics, and Schneider National. According to the Maryland Department of Labor's 2019 annual report regarding the EARN program, the Susquehanna Transportation and Logistics SIP continues to place nearly 90 percent of graduates into employment.¹⁵

Additionally, in 2019 Cecil College earned a National Standard of Excellence, becoming Professional Truck Driver Institute (PTDI) certified. This certification reflects the high standards of the Susquehanna Transportation and Logistics SIP and communicates to employers that students have the necessary skills to succeed in the industry. An added benefit/cost savings for employers is that insurance companies are more likely to waive the minimum years of experience required for new hires coming from PTDI certified schools.¹⁶

¹³ "28 EARN Maryland Workforce Training Initiative grants awarded", By Emily Kimball. June 02, 2014. <https://open.maryland.gov/blog/28-earn-maryland-workforce-training-initiative-grants-awarded/>.

¹⁴ Maryland Department of Labor, "EARN Maryland-Annual 2018 Report". <https://www.dlhr.state.md.us/earn/earnannrep2018.pdf>.

¹⁵ Maryland Department of Labor, "EARN Maryland-Annual 2019 Report". <https://www.dlhr.state.md.us/earn/earnannrep2019.pdf>.

¹⁶ Maryland Department of Labor, "EARN Maryland-Annual 2019 Report". <https://www.dlhr.state.md.us/earn/earnannrep2019.pdf>.

Conclusion

- The 2020s will be a decade of opportunity for logistics workers in the Susquehanna region

Between 2009 and 2014, logistics/distribution industry employment expanded at an average annual rate of 4.1 percent in the Susquehanna region. Sectoral employment in Cecil County expanded at an average annual rate of 7.8 percent between 2014 and 2019.

Regional logistics/distribution employment is expected to continue to expand, with transportation and warehousing the primary driver of growth. Transportation and warehousing employment is expected to expand 1.4 percent annually between 2016 and 2026 on average, with more than 90 percent of that attributable to warehousing and storage.

While the dislocating impacts of COVID-19 have rattled the prospects of many industries, including commercial real estate and brick-and-mortar retail, there have been a number of industries that have been catalyzed by the pandemic. Among these are manufacturing and e-commerce. The pandemic has induced many multinational CEOs to reconsider the workability of far-flung global supply chains, with many considering reshoring production to the United States. Meanwhile, with more Americans relying on e-commerce as they were sheltering in place, demand for workers at the nation's fulfillment centers surged. Local delivery services also became more centrally important.

Accordingly, the logistics/distribution sector will continue to offer plentiful opportunity to jobseekers going forward, including for those who lack significant formal educational attainment. Many of the occupational categories most closely tied to logistics/distribution are associated with middle-income wages.

Local two-year colleges are well positioned to continue to train the future workforce, and to date there is evidence that the workforce has been able to meet the needs of rapidly expanding employer demands. In short, SWN and similarly situated stakeholders should continue to consider logistics/distribution as an industry capable of offering abundant opportunity for those seeking to rise up the economic ladder, including for those who ultimately seek to become managers/supervisors.