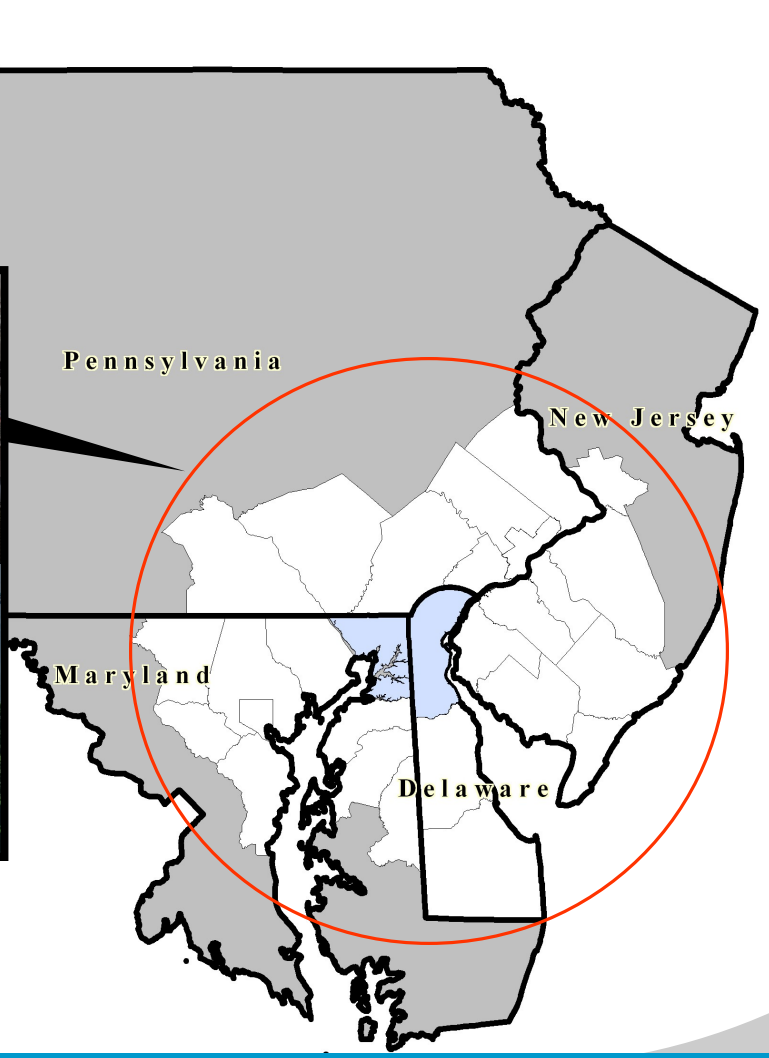
WILMAPCO

2018
Inter-Regional Report

Making Connections Across Our Region's Borders



WILMAPCO

2018 Inter-Regional Report

Prepared by the staff of the
Wilmington Area Planning Council

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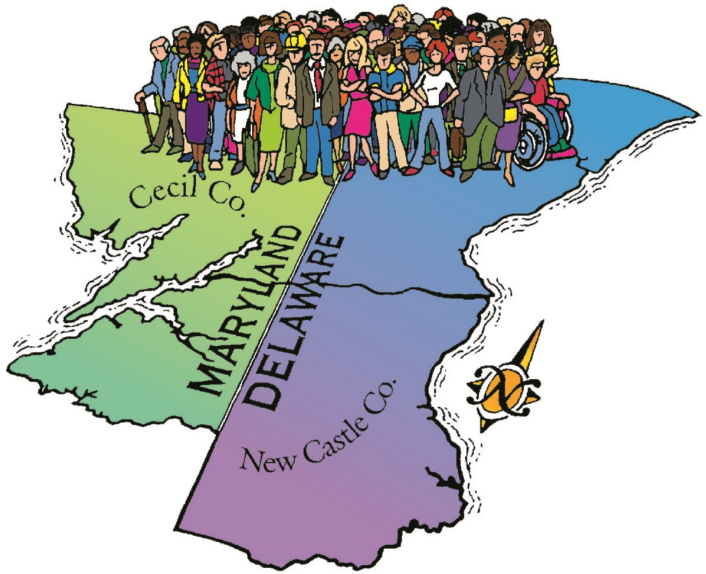
Who is WILMAPCO?

The Wilmington Area Planning Council (WILMAPCO) is a federally mandated Metropolitan Planning Organization (MPO) consisting of two counties: Cecil County, Maryland and New Castle County, Delaware. Our mission is to serve the citizens and stakeholders of the Wilmington region by carrying out a comprehensive, continuing and cooperative regional transportation planning process consistent with federal transportation legislation. WILMAPCO informs and involves the public on transportation planning decisions, guides the investment of federal transportation funds, coordinates transportation investments with local land use decisions, and promotes the national transportation policy expressed in federal transportation law.

WILMAPCO is responsible to all the residents of the region to ensure the development of the best transportation plan for the region. The implementation of the transportation plan is carried out by WILMAPCO's member agencies. We collect, analyze and evaluate demographic, land use and transportation-related data and seek public input to understand the transportation system requirements of the region. Understanding these requirements allows for the development of plans and programs and the implementation of a transportation system that provides for the efficient transport of people, goods and services.



Executive Summary

Nationally, major demographic changes and travel challenges are foreseen that will impact many regions. The Wilmington Area Planning Council (WILMAPCO) has a vested interest in our region's infrastructure, conditions that will shape it in the future, and how it can more effectively serve current and future users.

In response, WILMAPCO has adopted an Inter-Regional Report which is updated periodically, dating back to 2004. WILMAPCO has utilized a two-step approach to inter-regional studies which entails improving communication with adjacent planning agencies and strengthening data collection and sharing with those agencies. This report provides snapshots of trends beyond our regional borders to ensure every necessary measure is taken to preserve and enhance the transportation system.

The broad goals of this report are to provide a current and future demographic and travel behavior profile of the study area, and to gain an understanding of the effects of growth on transportation infrastructure. The report begins by identifying the study area which consists of Metropolitan Planning Organizations (MPO) and county planning departments surrounding the region. It then captures a variety of data which include travel speeds, work commute time, volume to capacity ratios, freight volumes, transportation equity, and more. The report closes with an analysis of inter-regional transportation corridors and updates on inter-regional activities.

Below are some of the major findings:

- From 2015 to 2040, the population of the study area is expected to grow by more than 1.3 million residents.
- Cecil County, Maryland is expected to see the highest rate of growth in population by 2040, and Lancaster County, Pennsylvania will see the highest rate of growth in employment.
- By 2040, employment for the study area is forecasted to grow by 9.9%, adding nearly 600,000 new jobs.
- 78% of workers in the study area drive alone to work. The counties with the lowest percentage are Philadelphia at 51% and Baltimore City at 59%.
- From 2010 to 2016, the average commute time increased by 3.2 minutes to 28.7 minutes.
- Truck volumes are expected to grow by 55% by 2045.
- Within the study area, roughly 12% of the population is below poverty and 35% are minority. The minority population grew by nearly 100,000 between 2010 and 2016.
- Similar to the national expansion of urban areas, the study area is becoming more urban in its composition.

Based on the results of the analyses, one of the important targets for future actions is to work more closely with neighboring planning agencies to establish a coordinated plan of action to accommodate significant future growth.

A Broad Perspective of Key Issues

The future of the United States is being shaped by significant population growth and demographic shifts such as employment changes and aging population. The nation's population is expected to grow by nearly 40%, reaching 420 million people by 2050, which will create both opportunities and challenges[1]. It is recognized at national, state, and regional levels that critical investments are essential to accommodate growth, propel sustainable land use and transportation, maintain economic competitiveness in a global market, and enhance quality of life.

These demographic changes are transforming existing metropolitan regions into emerging megaregions. Megaregions are geographical units described as clusters of major metropolitan regions interconnected by job markets, transportation networks, and land use that have similar social, cultural and environmental characteristics. In decades to come, more than 70% of the nation's population growth is expected to occur within eleven identified megaregions[2].

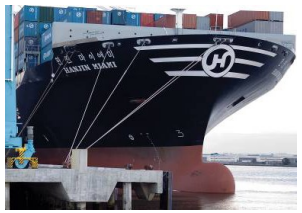
The Northeast megaregion stretches over 11 states from Maine to Maryland and the District of Columbia. It is a major thoroughfare for travel along the Northeast Corridor via Interstate 95 and railways, and encompasses several east coast metropolitan areas such as Philadelphia, New York, and Baltimore.

Additionally, 46 million acres of existing urban land could exceed 200 million acres by 2050 if current population growth and land consumption continue to climb[3]. Along with notable rates of growth and expansion of urban areas, other expected trends include aging transportation infrastructure, longer commute times, global climate change, rising goods movements, and congested airports.

Understanding the future impact of these present and future planning challenges will help in the identification of necessary measures to ensure that our future growth contributes to the success of the greater Northeast region. In an effort to coordinate future transportation planning and other goals, the following pages of this report will evaluate the transportation network of surrounding counties which border the WILMAPCO region.








[1]Regional Plan Association, "America 2050: A Prospectus" New York: September 2006
[2]Ross, Catherine L., "Megaregions, Competiveness and Freight Planning". July 2009
[3]Carbonell, Armando, "American Spatial Development and the New Megalopolis". April 2008

Introduction

Study History and Goals

In step with the goals of our region's long-range transportation plan, WILMAPCO began including inter-regional coordination as part of our core planning work dating back to 2000. During that time the MPO joined conversations with other planning agencies from Delaware, Maryland, and New Jersey to define common inter-regional issues. These early collaboration efforts led to WILMAPCO's development and adoption of its first Inter-Regional Report in 2004.

The goals of this report are to:

- Re-evaluate present and future demographic and travel changes.
- Examine key roadways where large amounts of traffic traverse our borders.
- Identify existing and potential conflicts within the inter-regional transportation system and ways to devise solutions through coordinated efforts.

The initial 2004 report looked at projected demographics and travel behavior from 2000 to 2025. In 2008, a new report included updated analyses that expanded to 2030 and 2035; the 2012 report expanded analyses to 2040. This present 2018 report includes new Census data, recalculated projections through 2045, detailed transit and highway data, and an updated transit service feasibility scoring. Overall, the Inter-Regional Report is intended for use as a technical tool to guide transportation investments and informed decision making, with cross-border coordination in mind.

Along with compiling these reports, WILMAPCO has been involved in a number of organizations and committees with an inter-regional focus that brings together a variety of agencies from various jurisdictions. A complete list and summary of these initiatives and WILMAPCO's involvement is found in Section 8: Path Forward.

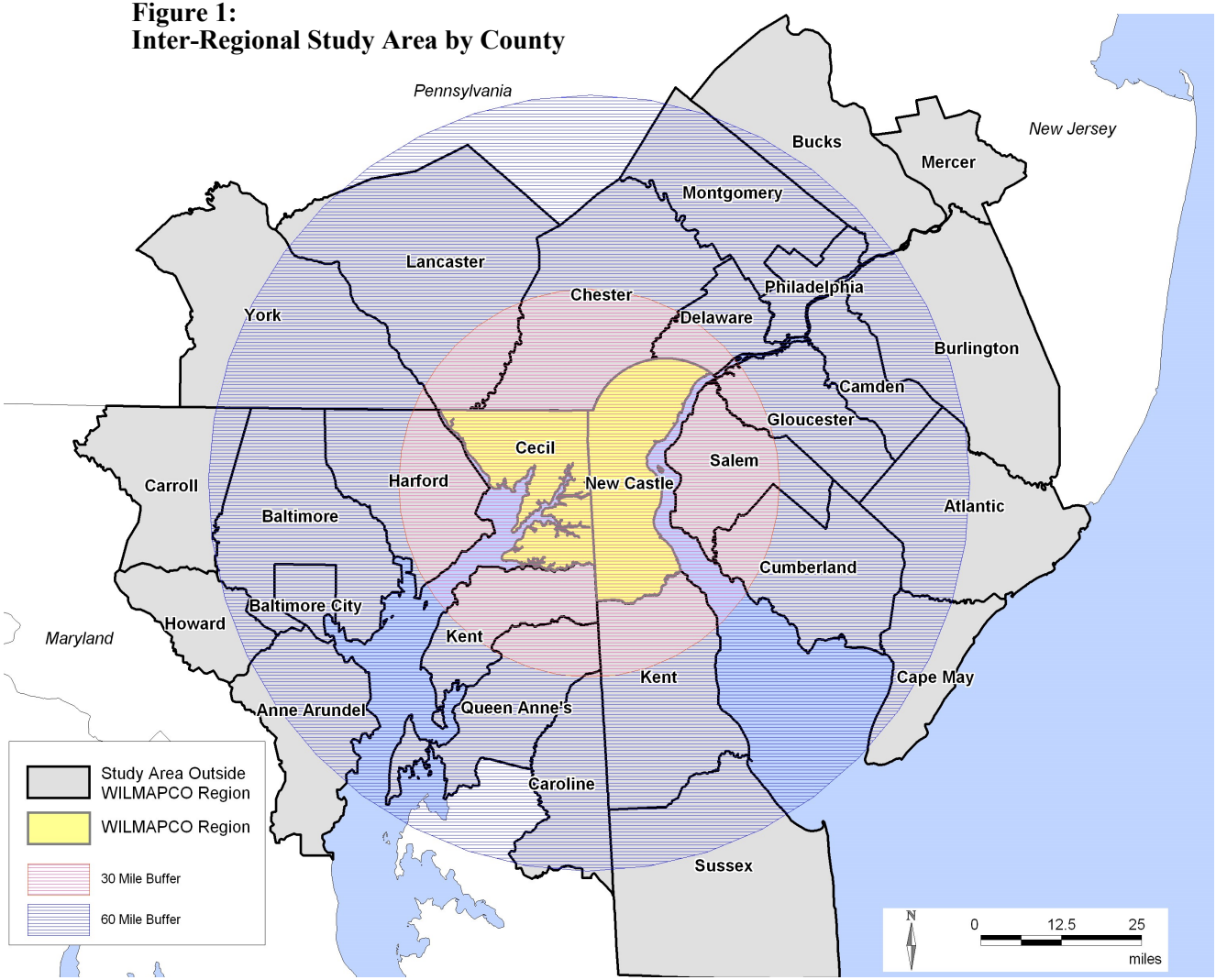
Study Area

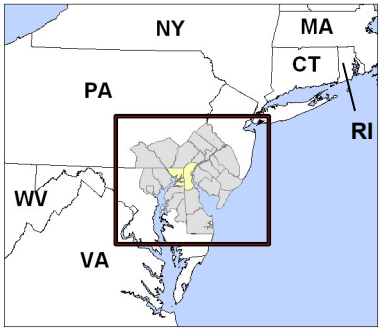
At the center of the study area is the WILMAPCO region, which is a major thoroughfare for travel along the Northeast Corridor via Interstate 95 and rail lines. The Port of Wilmington in New Castle County serves as a major Mid-Atlantic access point for a myriad of import and export commodities. Our region is also in close proximity to several east coast metropolitan areas such as Philadelphia, New York, and Baltimore. In addition to goods, large amounts of people travel through the two WILMAPCO counties to reach other prime destinations. Due to vast amounts of traffic, transportation conflicts along the Northeast Corridor and within the WILMAPCO region are expected. Many of our region's challenges are shared by adjacent counties and planning organizations, and the findings of this Inter-Regional Report seeks to frame those issues.

Inter-Regional Study Area

The study area, shown in **Figure 1**, was derived by identifying Metropolitan Planning Organizations (MPOs) and counties that are approximately 60 miles from the center of the WILMAPCO region. In total, the report looks at 28 counties, covering four states. Regional data from the study area was collected to analyze the effects that changing demographics, transportation, and land use issues have on the WILMAPCO region.

Figure 1:
Inter-Regional Study Area by County

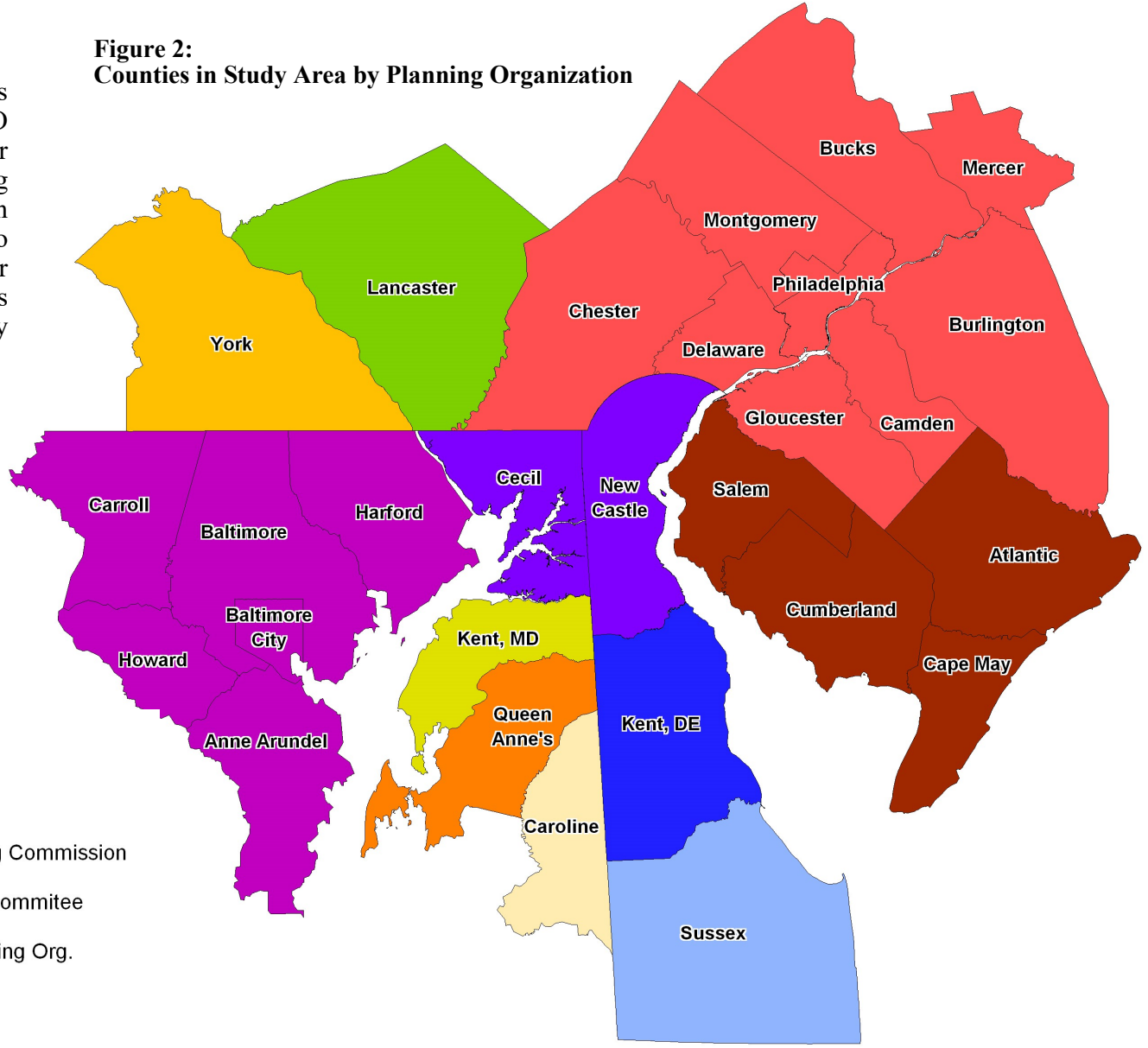




Regional Agencies

There are ten planning entities that surround the WILMAPCO region, which include other MPOs and county planning departments. Collaboration with these agencies will help us to identify regional agendas for improvements. **Figure 2** depicts the counties in the study area by their planning organization.

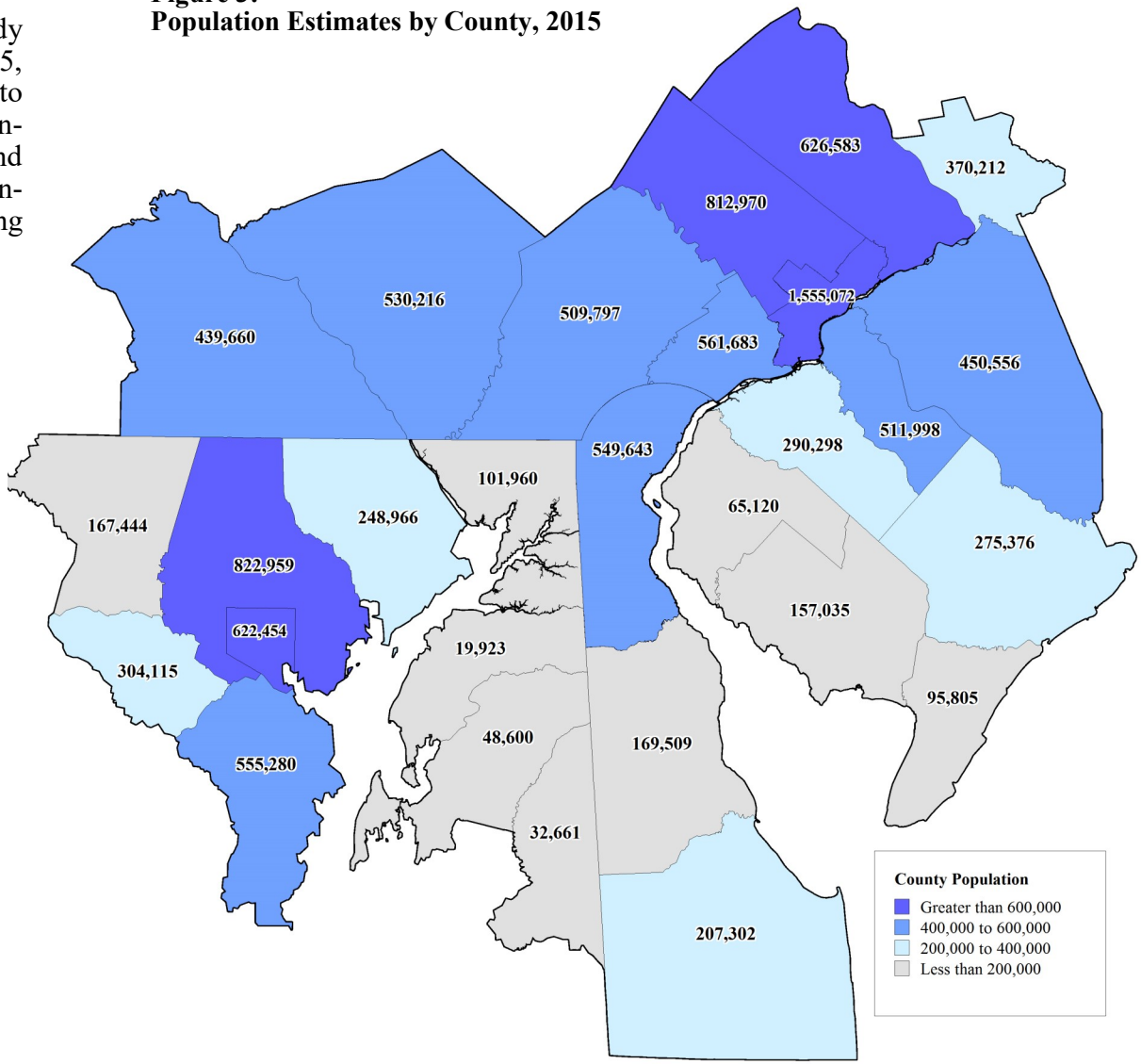
Figure 2:
Counties in Study Area by Planning Organization



Population by County

In 2000, the population for the study area was about 10.3 million. By 2015, the population increased by 7.2% to roughly 11.1 million people. The counties of Baltimore and Philadelphia, and several adjacent counties have maintained the highest populations during the last five years.

Figure 3:
Population Estimates by County, 2015



Source: American Community Survey, 2015

Population Change by County

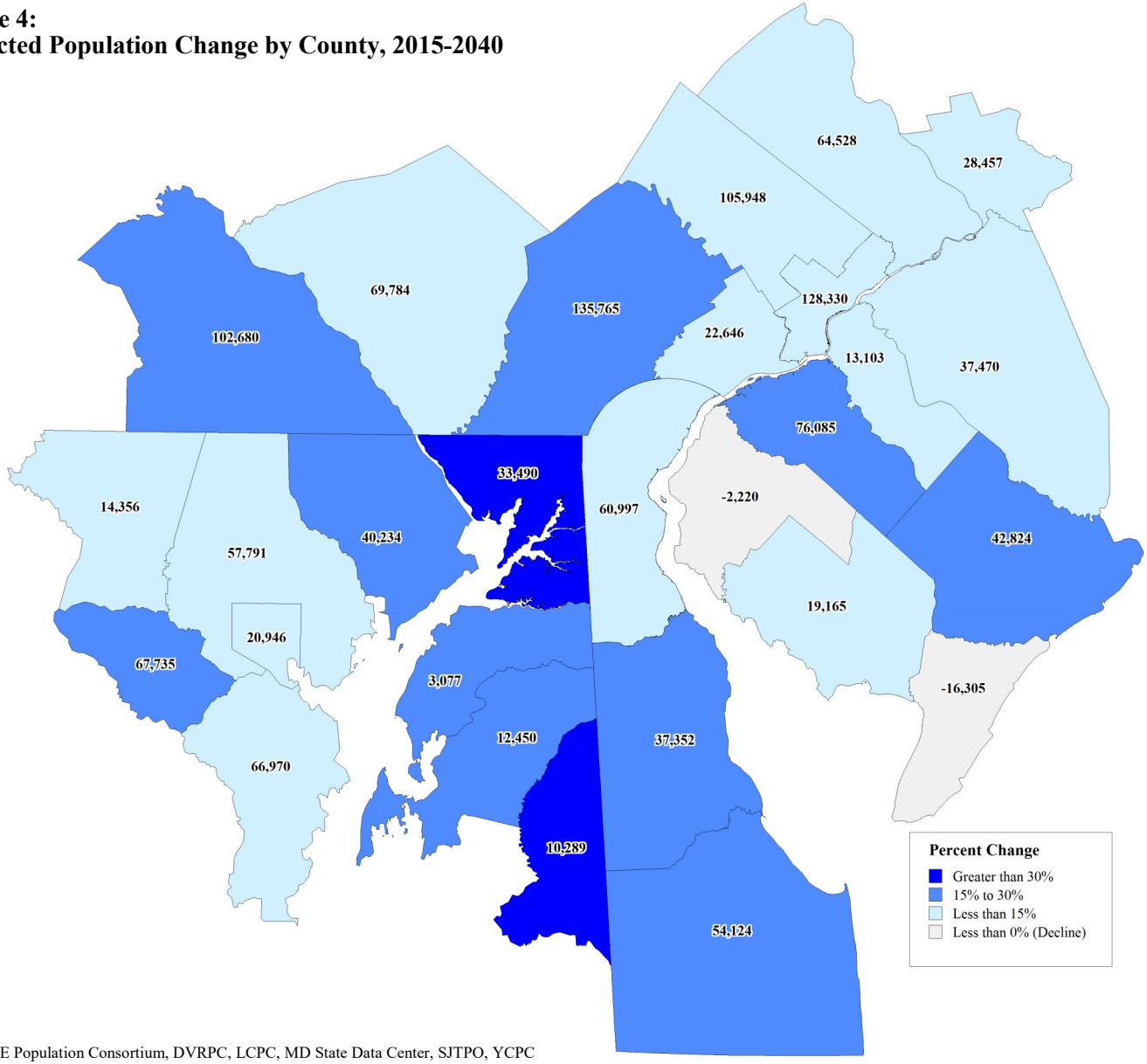
Anticipating population growth is one way planners adequately prepare for future travel demand. In the study area, from 2015 to 2040, the total population is expected to grow by more than 1.3 million, or 11.8%. In the 2012 report, Philadelphia, the area's largest city, was the only county expected to decline in population, with a 3% loss through 2035. That projection has reversed, with over 8% growth projected through 2040. Cape May and Salem are now the only counties expected to decline in population, with a 17% and 3% loss, respectively. Cecil County continues to have the greatest percentage increase, followed closely by Caroline County. Camden County is expected to have the least change, with less than 3% growth over 25 years.

Table 1: Projected Population Change, 2015-2040

State, County	2015	Rank	2040	Rank	Absolute Change	2015-40 % Change	Rank
Delaware							
Kent	169,509	20	206,861	20	37,352	22.0%	9
New Castle	549,643	8	610,640	8	60,997	11.1%	17
Sussex	207,302	19	261,426	19	54,124	26.1%	5
Maryland							
Anne Arundel	555,280	7	622,250	7	66,970	12.1%	16
Baltimore City	622,454	5	643,400	6	20,946	3.4%	25
Baltimore	822,959	2	880,750	3	57,791	7.0%	23
Caroline	32,661	27	42,950	27	10,289	31.5%	2
Carroll	167,444	21	181,800	21	14,356	8.6%	19
Cecil	101,960	23	135,450	23	33,490	32.8%	1
Harford	248,966	18	289,200	18	40,234	16.2%	10
Howard	304,115	15	371,850	15	67,735	22.3%	8
Kent	19,923	28	23,000	28	3,077	15.4%	12
Queen Anne's	48,600	26	61,050	26	12,450	25.6%	6
New Jersey							
Atlantic	275,376	17	318,200	17	42,824	15.6%	11
Burlington	450,556	12	488,026	13	37,470	8.3%	20
Camden	511,998	10	525,101	12	13,103	2.6%	26
Cape May	95,805	24	79,500	24	-16,305	-17.0%	28
Cumberland	157,035	22	176,200	22	19,165	12.2%	15
Gloucester	290,298	16	366,383	16	76,085	26.2%	4
Mercer	370,212	14	398,669	14	28,457	7.7%	22
Salem	65,120	25	62,900	25	-2,220	-3.4%	27
Pennsylvania							
Bucks	626,583	4	691,111	4	64,528	10.3%	18
Chester	509,797	11	645,562	5	135,765	26.6%	3
Delaware	561,683	6	584,329	10	22,646	4.0%	24
Lancaster	530,216	9	600,000	9	69,784	13.2%	13
Montgomery	812,970	3	918,918	2	105,948	13.0%	14
Philadelphia	1,555,072	1	1,683,402	1	128,330	8.3%	21
York	439,660	13	542,340	11	102,680	23.4%	7
Total Study Area	**11,103,197**		**12,411,268**		**1,308,071**	**11.8%**	

Sources: 2015 US Census, Delaware Population Consortium, DVRPC, LCPC, MD State Data Center, SJTPO, YCPC

Figure 4:
Projected Population Change by County, 2015-2040



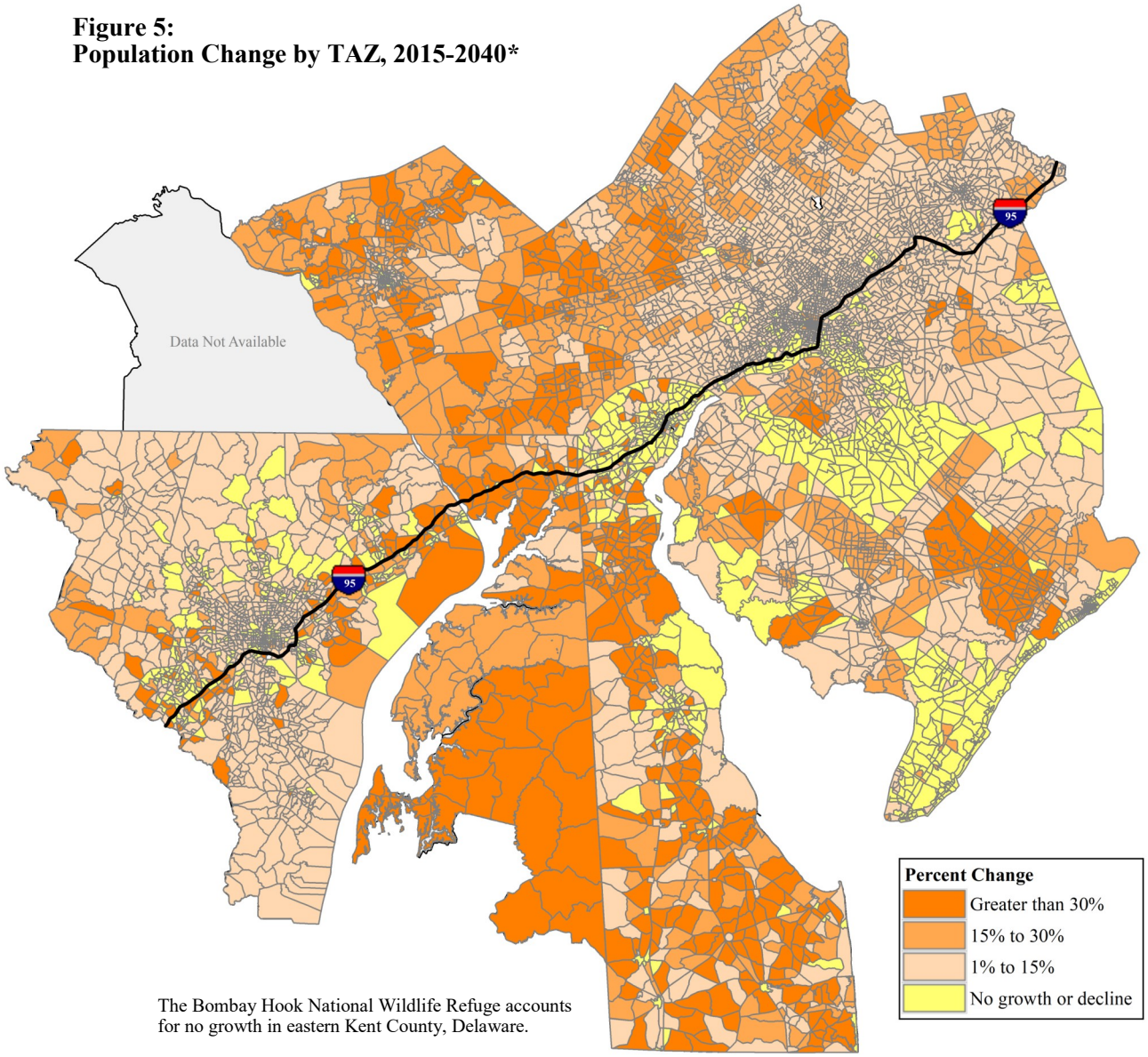
Sources: 2015 US Census, DE Population Consortium, DVRPC, LCPC, MD State Data Center, SJTPO, YCPC

Population Change by Traffic Analysis Zone

Traffic Analysis Zones (TAZ) were used to identify where average or above average population changes may take place beyond the county level. Areas in and surrounding Philadelphia, Wilmington, Camden, and Baltimore City continue to show either a static or declining population, similar to past projections. Future growth estimates remain higher outside of these urban cores and away from the I-95 corridor.

In the WILMAPCO region, higher increases of population will occur in several small pockets of northern New Castle County and in the majority of Cecil County, with heavy projected growth in southern New Castle County. While absolute gains for the counties of Maryland's upper eastern shore are modest, percentage wise these counties are slated to grow significantly.

Figure 5:
Population Change by TAZ, 2015-2040*



The Bombay Hook National Wildlife Refuge accounts for no growth in eastern Kent County, Delaware.

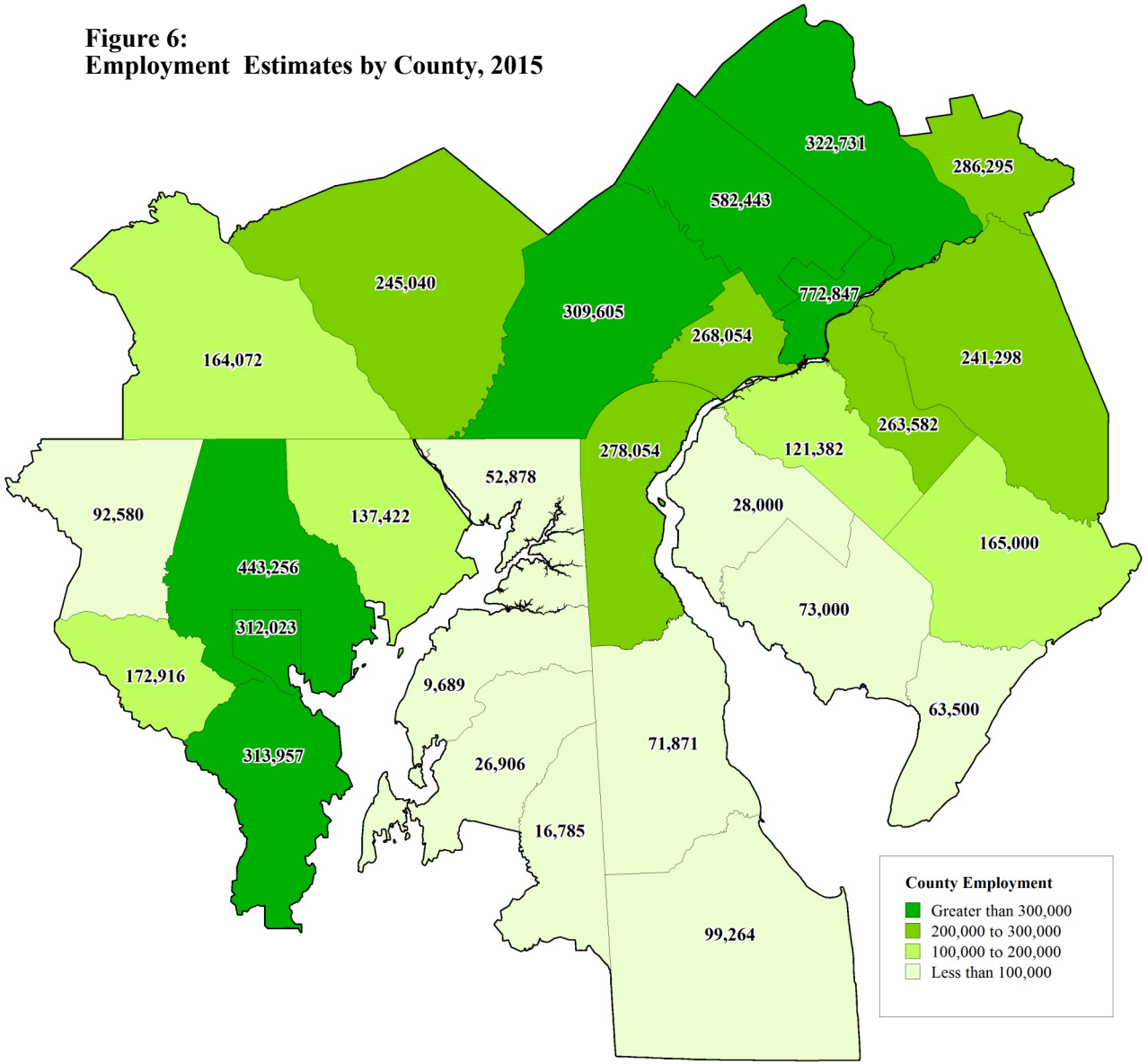
Sources: BMC, DVRPC, LCPC (*2007-40), SJTPO, WILMAPCO

Employment by County

In 2015, total employment for the study area was about 5.9 million jobs, compared to 5.7 in 2010 and 5.6 in 2005. In the past decade, employment grew by 5%. Similar to 2005, the majority of jobs in 2015 were located in and around the major cities of Philadelphia and Baltimore. Philadelphia continues to hold the greatest number of jobs, and the city has reversed its decline with seven percent growth since 2010. Montgomery County follows with the second highest employment, with 11 percent growth.

Counties that continue to maintain the least employment were located along Maryland's eastern shore. Along with its population, Kent County, Maryland had the least number of jobs. In New Jersey, southern counties had low employment when compared to the central counties.

Figure 6:
Employment Estimates by County, 2015



Sources: Delaware Population Consortium, DVRPC, LCPC, Maryland State Data Center, SJTPO , YCPC

Employment Change by County

In conjunction with population projections, future employment figures help with strategies to maintain and strengthen mobility for the region. Looking out to 2040, employment for the total study area is forecasted to grow by 9.9%. Despite adding nearly 600,000 new jobs, the area is expected to see much less growth during the next 25 years compared to the last decade.

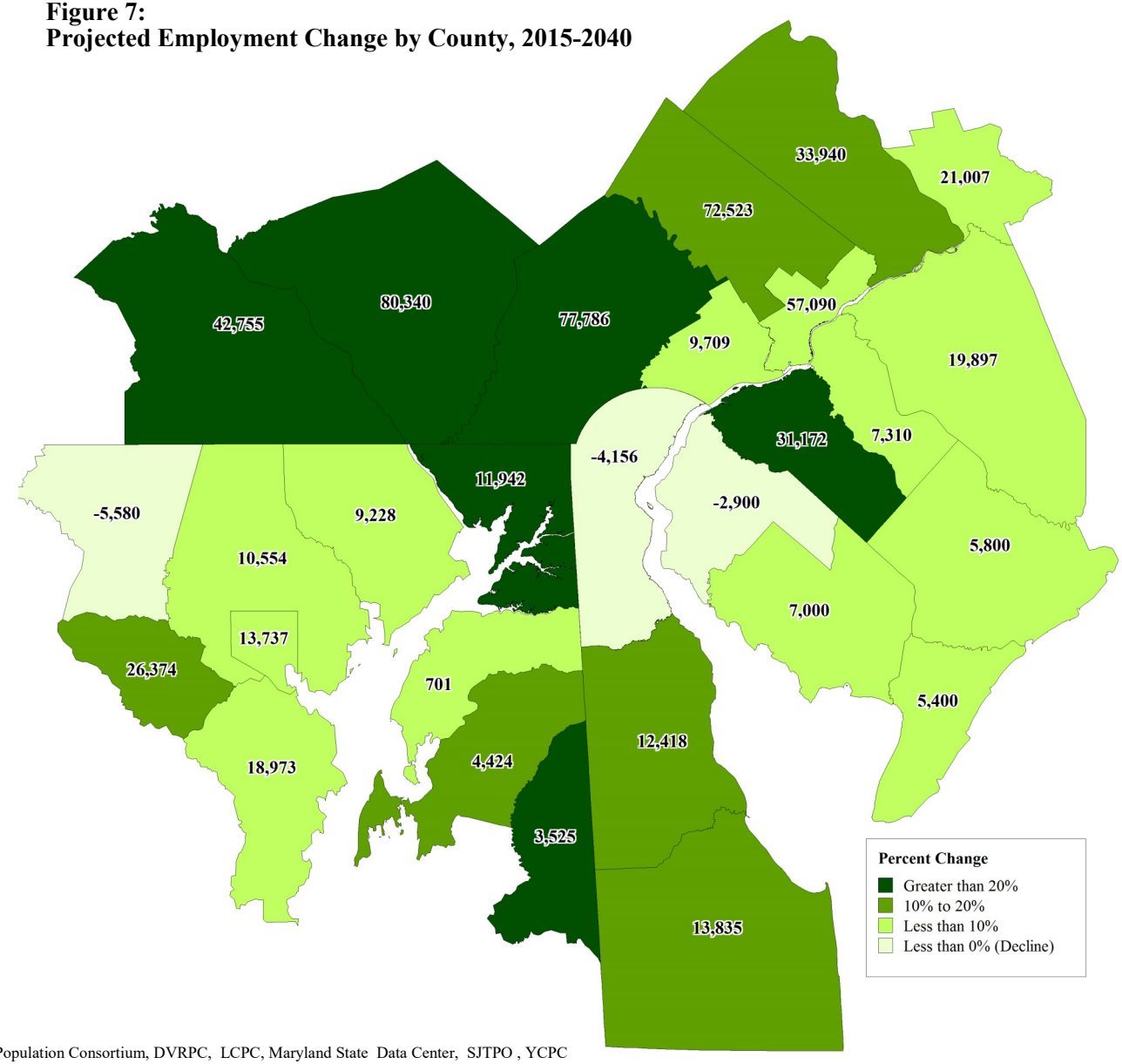
By 2040, Lancaster County will be the largest contributor to job growth, adding over 80,000 jobs, or nearly 14% of total growth for the study area. Other significant contributors include Chester, Montgomery, and Philadelphia Counties. Maryland and Pennsylvania counties in the study area could comprise more than 70% towards the 6.5 million total jobs in the area by 2040. By contrast, New Castle, Carroll, and Salem Counties are expected to see decreases in employment. Counties with the least impact on job growth include Kent, Caroline, and Queen Anne's Counties in Maryland, each contributing fewer than 5,000 jobs.

Table 2: Employment Change, 2015-2040

State, County	2015	Rank	2040	Rank	Absolute Change	2015-40 % Change	Rank
Delaware							
Kent	71,871	22	84,289	21	12,418	17.3%	7
New Castle	278,054	9	273,898	11	-4,156	-1.5%	26
Sussex	99,264	19	113,099	19	13,835	13.9%	10
Maryland							
Anne Arundel	313,957	5	332,930	6	18,973	6.0%	20
Baltimore City	312,023	6	325,760	7	13,737	4.4%	21
Baltimore	443,256	3	453,810	3	10,554	2.4%	25
Caroline	16,785	27	20,310	27	3,525	21.0%	6
Carroll	92,580	20	87,000	20	-5,580	-6.0%	27
Cecil	52,878	24	64,820	24	11,942	22.6%	5
Harford	137,422	17	146,650	18	9,228	6.7%	19
Howard	172,916	14	199,290	15	26,374	15.3%	9
Kent	9,689	28	10,390	28	701	7.2%	18
Queen Anne's	26,906	26	31,330	25	4,424	16.4%	8
New Jersey							
Atlantic	165,000	15	170,800	16	5,800	3.5%	23
Burlington	241,298	13	261,195	13	19,897	8.2%	15
Camden	263,582	11	270,892	12	7,310	2.8%	24
Cape May	63,500	23	68,900	23	5,400	8.5%	14
Cumberland	73,000	21	80,000	22	7,000	9.6%	13
Gloucester	121,382	18	152,554	17	31,172	25.7%	3
Mercer	286,295	8	307,302	9	21,007	7.3%	17
Salem	28,000	25	25,100	26	-2,900	-10.4%	28
Pennsylvania							
Bucks	322,731	4	356,671	5	33,940	10.5%	12
Chester	309,605	7	387,391	4	77,786	25.1%	4
Delaware	268,054	10	277,763	10	9,709	3.6%	22
Lancaster	245,040	12	325,380	8	80,340	32.8%	1
Montgomery	582,443	2	654,966	2	72,523	12.5%	11
Philadelphia	772,847	1	829,937	1	57,090	7.4%	16
York	164,072	16	206,827	14	42,755	26.1%	2
Total Study Area	**5,934,450**		**6,519,254**		**584,804**	**9.9%**	

Sources: Delaware Population Consortium, DVRPC, LCPC, Maryland State Data Center, SJTPO , YCPC

Figure 7:
Projected Employment Change by County, 2015-2040



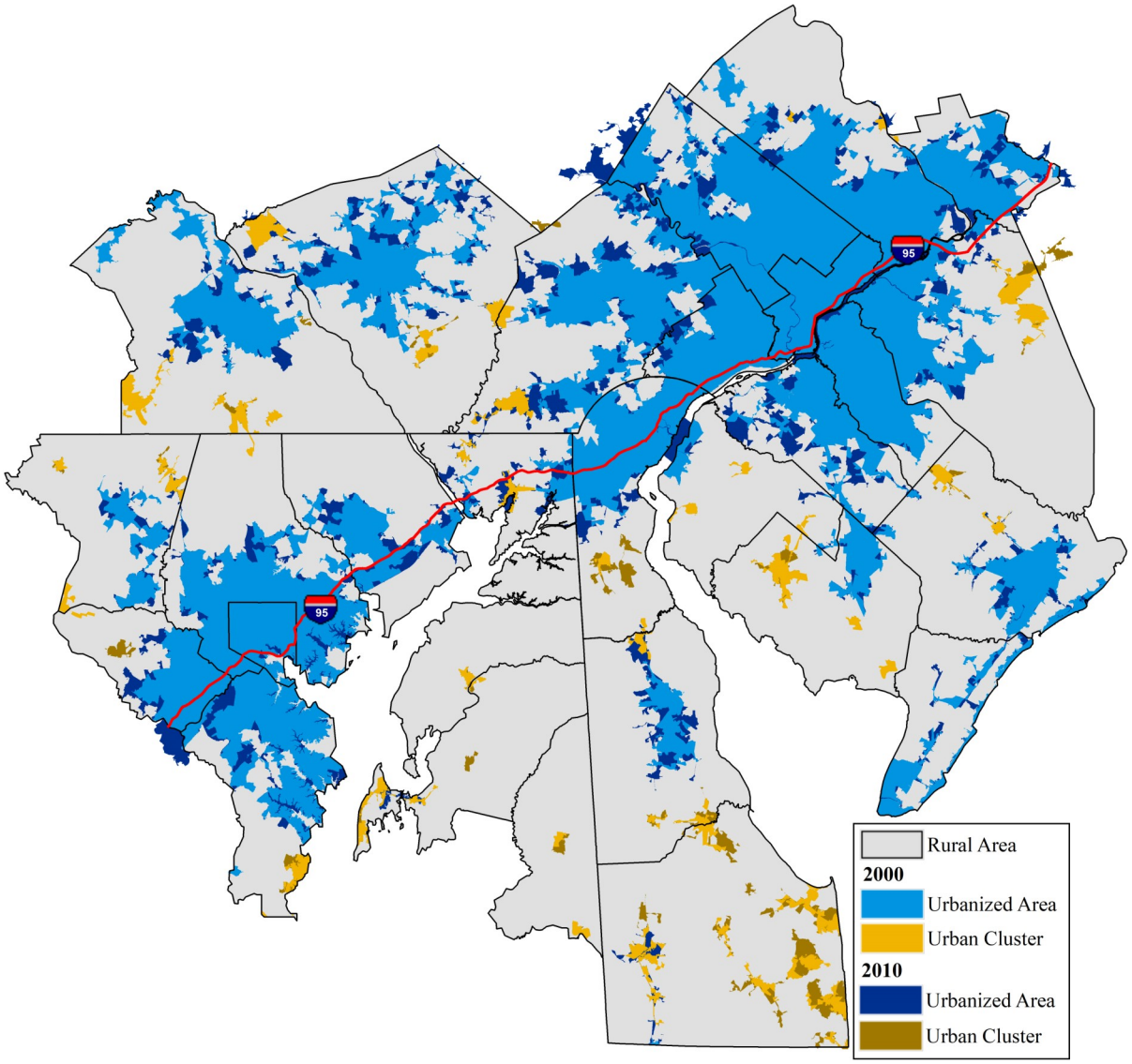
Sources: Delaware Population Consortium, DVRPC, LCPC, Maryland State Data Center, SJTPO , YCPC

Urban and Rural Areas

Urban areas have densely settled cores of population and more intense land uses, which support greater numbers of population and employment. Urban areas are classified by two categories. Urbanized areas have 50,000 or more people, whereas urban clusters have less than 50,000, but greater than 2,500 people.

As a nation, we are becoming more urban. In 2000, 79% of the United States population was defined as urban. By 2010 it grew to 80.7%. Similarly, the study area is becoming more urban in its composition due to expanding urban areas over the last decade. More noticeable is the spreading of urbanized areas than urban clusters. However, urban clusters within southern New Castle County and Sussex County, Delaware have grown significantly in comparison to other counties. Maryland's upper eastern shore counties have remained largely rural.

Figure 8: Changes in Urban Areas and Urban Clusters, 2000-2010

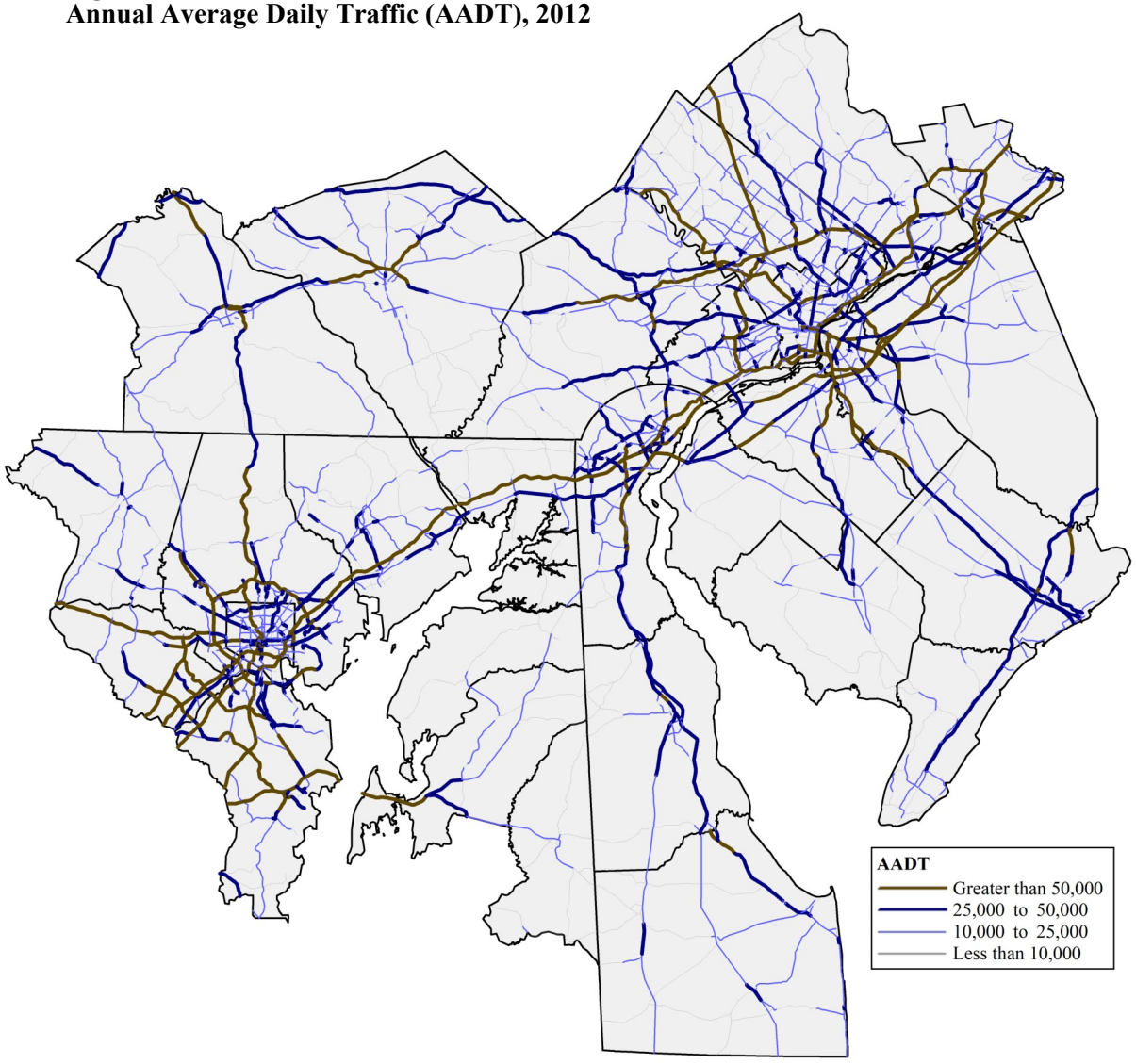


Source: U.S. Census Bureau, 2000-10

Current Traffic Volumes

Figure 9 depicts the annual average daily traffic in 2012. The average road segment in the study area carried over 31,000 vehicles each day. The I-95 corridor continues to carry significant amounts of regional traffic with an average of over 120,000 daily vehicles, contributing to mobility challenges within the Mid-Atlantic region. Generally, the heaviest traffic moves north and south between Baltimore and Philadelphia, including northern New Castle County, and along highways connecting these cities to suburban areas.

Figure 9:
Annual Average Daily Traffic (AADT), 2012

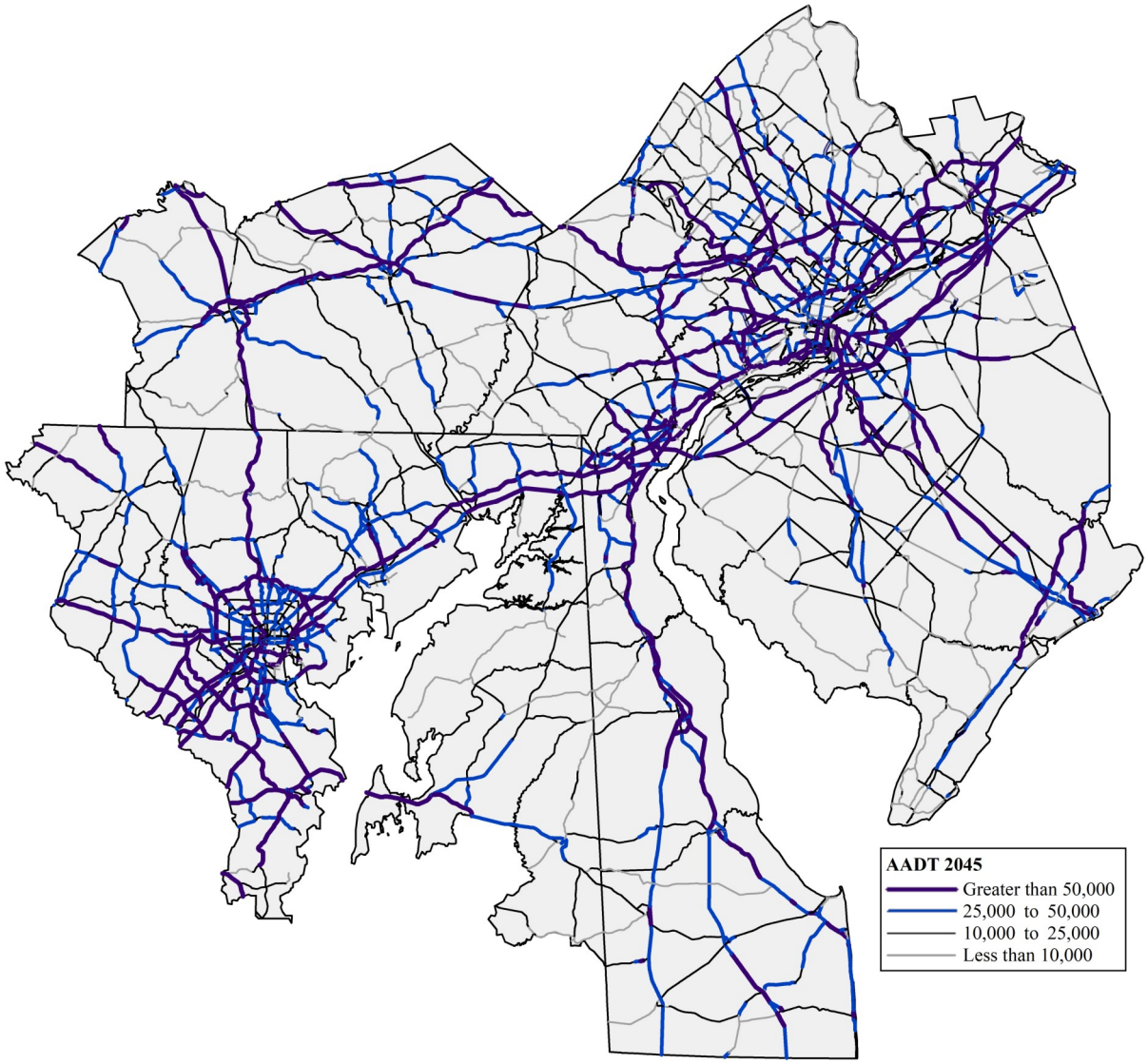


Source: FHWA, Freight Analysis Framework

Projected Traffic Volumes

Concurrent with increases in population and jobs, traffic volumes are forecasted to increase in the study area. From 2012 to 2045, traffic volumes are estimated to rise by 53%. By 2045, 51% more vehicles are expected to traverse the I-95 corridor throughout the study area. The WILMAPCO region will see an 81% increase of vehicles by 2045. Much less traffic is expected on major roads along Maryland's upper eastern shore counties and southern coastal New Jersey counties.

Figure 10:
Estimated Annual Average Daily Traffic (AADT), 2045



Source: FHWA, Freight Analysis Framework

Travel Speeds

Table 3 shows the change in average travel speeds during peak periods for each county from 2007 to 2017. Overall, the study area showed no change in average travel speeds in the past ten years. However, significant changes occurred at the county level. Baltimore City, Philadelphia, and New Castle County saw the largest speed decreases, at 36%, 29%, and 19%, respectively. Speed increases occurred in less densely populated counties, with the greatest increases in Kent County, Maryland and Cumberland and Cape May Counties in New Jersey, at 35%, 27%, and 23%, respectively.

Table 3: Percentage Change in Travel Speeds by County

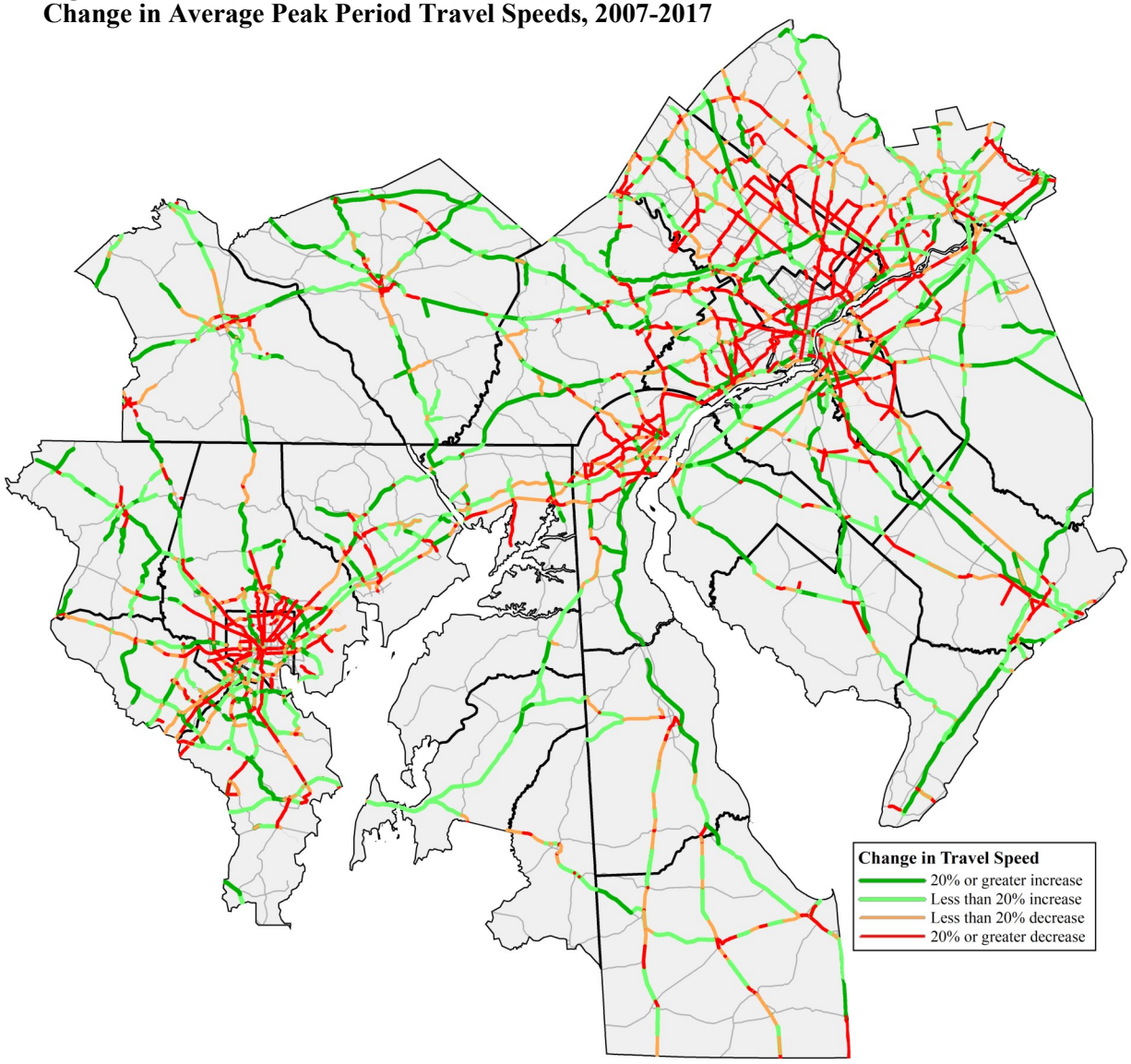
State, County	2007 Avg Mph	2017 Avg Mph	% Change	Rank
Delaware				
Kent	40.23	45.74	13.70%	7
New Castle	40.46	32.88	-18.73%	26
Sussex	39.38	39.68	0.76%	14
Maryland				
Anne Arundel	38.52	40.45	5.01%	11
Baltimore City	37.72	24.27	-35.66%	28
Baltimore	38.21	35.00	-8.40%	19
Caroline	44.39	44.90	1.15%	13
Carroll	34.08	34.68	1.76%	12
Cecil	41.28	35.58	-13.81%	23
Harford	38.50	34.98	-9.14%	21
Howard	39.77	42.57	7.04%	9
Kent	42.14	56.72	34.60%	1
Queen Anne's	49.29	57.28	16.21%	6
New Jersey				
Atlantic	36.98	36.50	-1.30%	15
Burlington	40.25	36.75	-8.70%	20
Camden	37.77	35.94	-4.85%	18
Cape May	35.31	43.37	22.83%	3
Cumberland	36.79	46.70	26.94%	2
Gloucester	40.19	43.08	7.19%	8
Mercer	38.70	37.26	-3.72%	16
Salem	39.11	46.06	17.77%	5
Pennsylvania				
Bucks	39.03	33.70	-13.66%	22
Chester	36.83	39.22	6.49%	10
Delaware	33.31	28.06	-15.76%	24
Lancaster	33.97	40.03	17.84%	4
Montgomery	36.83	30.40	-17.46%	25
Philadelphia	35.06	25.04	-28.58%	27
York	38.01	36.48	-4.03%	17
Total Study Area	**38.65**	**38.69**	**-0.16%**	

Sources: FHWA, Freight Analysis Network (2007), NPMRDS (2017)

Travel Speeds, Continued

Figure 11 shows the percentage change in average travel speeds during peak periods for major roadways in the study area from 2007 to 2017. The greatest decreases in travel speeds occurred in densely populated areas, including the Philadelphia region, northern New Castle County, and Baltimore City, with a significant portion of roadways seeing a 20% or greater decline in measured speeds. The majority of roadways in rural areas saw noticeable speed increases.

Figure 11:
Change in Average Peak Period Travel Speeds, 2007-2017



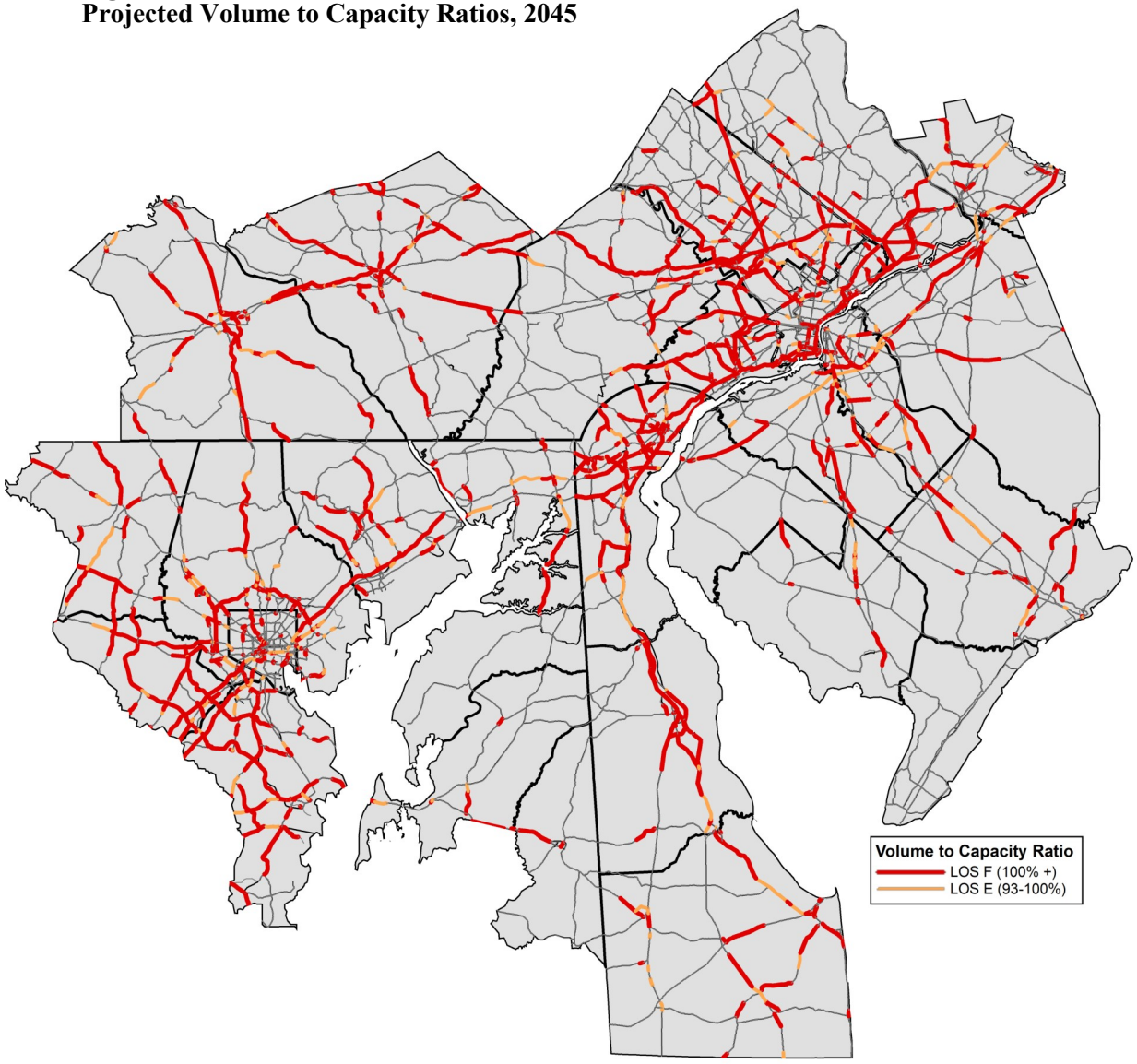
Sources: FHWA, Freight Analysis Network (2007), NPMRDS (2017)

Projected 2045 Volume to Capacity Ratios

Managing congestion improves mobility and travel time reliability. One measure of congestion is the volume to capacity ratio. The higher the ratio, the closer a road is to surpassing its carrying capacity. Associated letter grades represent the roadway's level of service it provides, where "A" means free-flowing conditions, and "F" indicates failing conditions. The map displays projected capacity of major roadways.

By 2045, if no infrastructure changes are made, congestion is expected to significantly impede traffic flows throughout the region, especially counties within the DVRPC and BMC regions. Based on estimates, roadway segments at and beyond capacity are expected to increase by more than 65% in annual average of daily traffic from 2012 conditions. Similar to past 2040 projections, capacity exceedance continues along the I-95 corridor. However, 2045 projections show an increase in the number of congested segments in Southern New Jersey and Southern Delaware compared to 2040 projections.

Figure 12:
Projected Volume to Capacity Ratios, 2045

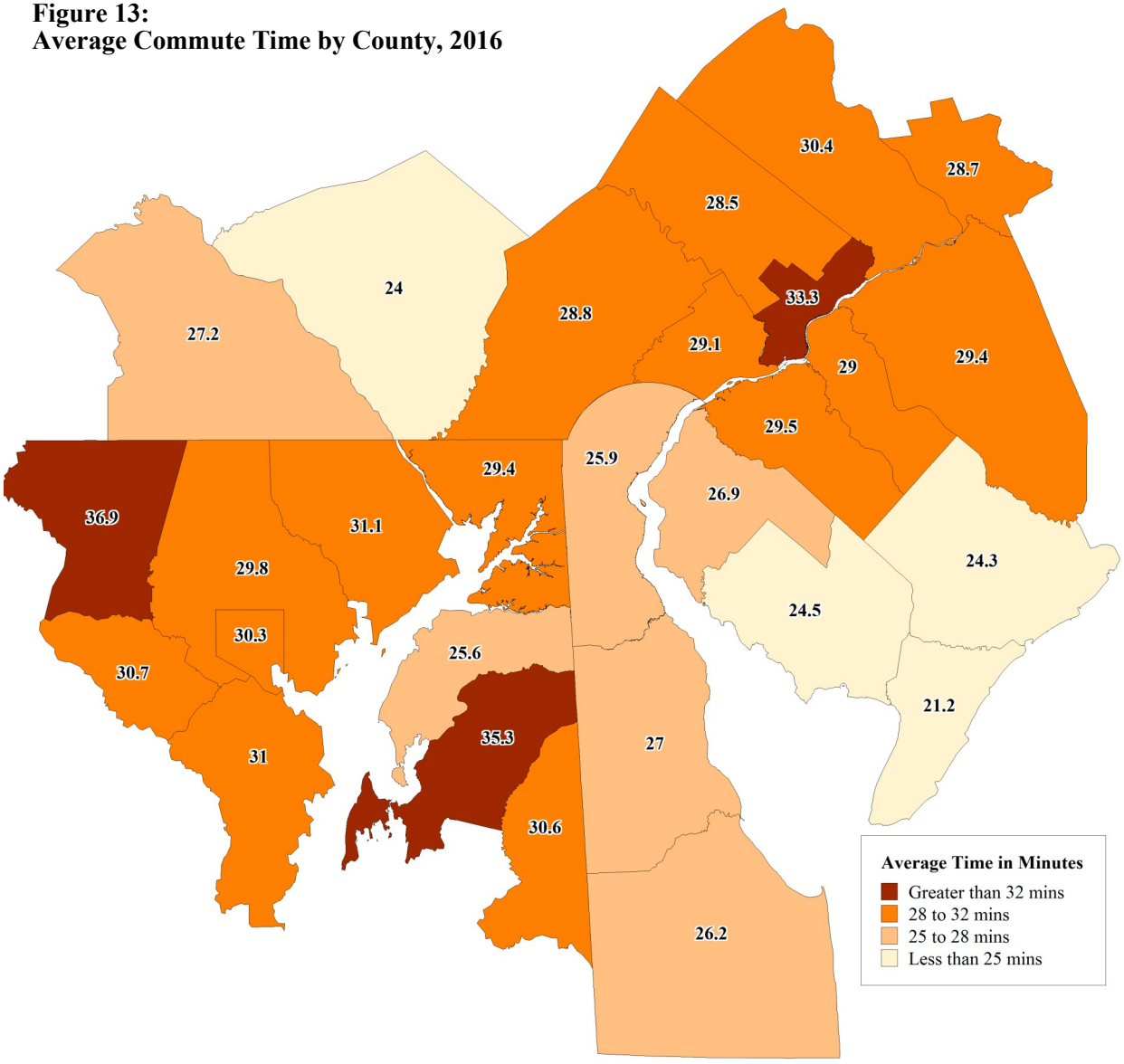


Source: FHWA, Freight Analysis Framework

Commute Patterns

Much of the roadway traffic in the WILMAPCO region is work-related, as large numbers of commuters travel to and from neighboring counties. Congestion during peak times causes undesirable delays and lengthens trip times to work. Since 2010, the average commute time in the study area increased by 3.2 minutes, from 25.5 to 28.7 minutes. **Figure 13** indicates that more than half of the counties exceeded the regional average of 28.7 minutes. Well above the regional average with greater than 32 minutes each way, Philadelphia, Carroll, and Queen Anne's Counties had the greatest commute times. Cape May County continues to have the shortest commute time. Atlantic, Cumberland, and Lancaster Counties also witnessed below average travel time to work. Mercer County saw a significant increase in travel time, from 22 to 28.7 minutes.

Figure 13:
Average Commute Time by County, 2016



Sources: American Community Survey, 2016

Commute Patterns

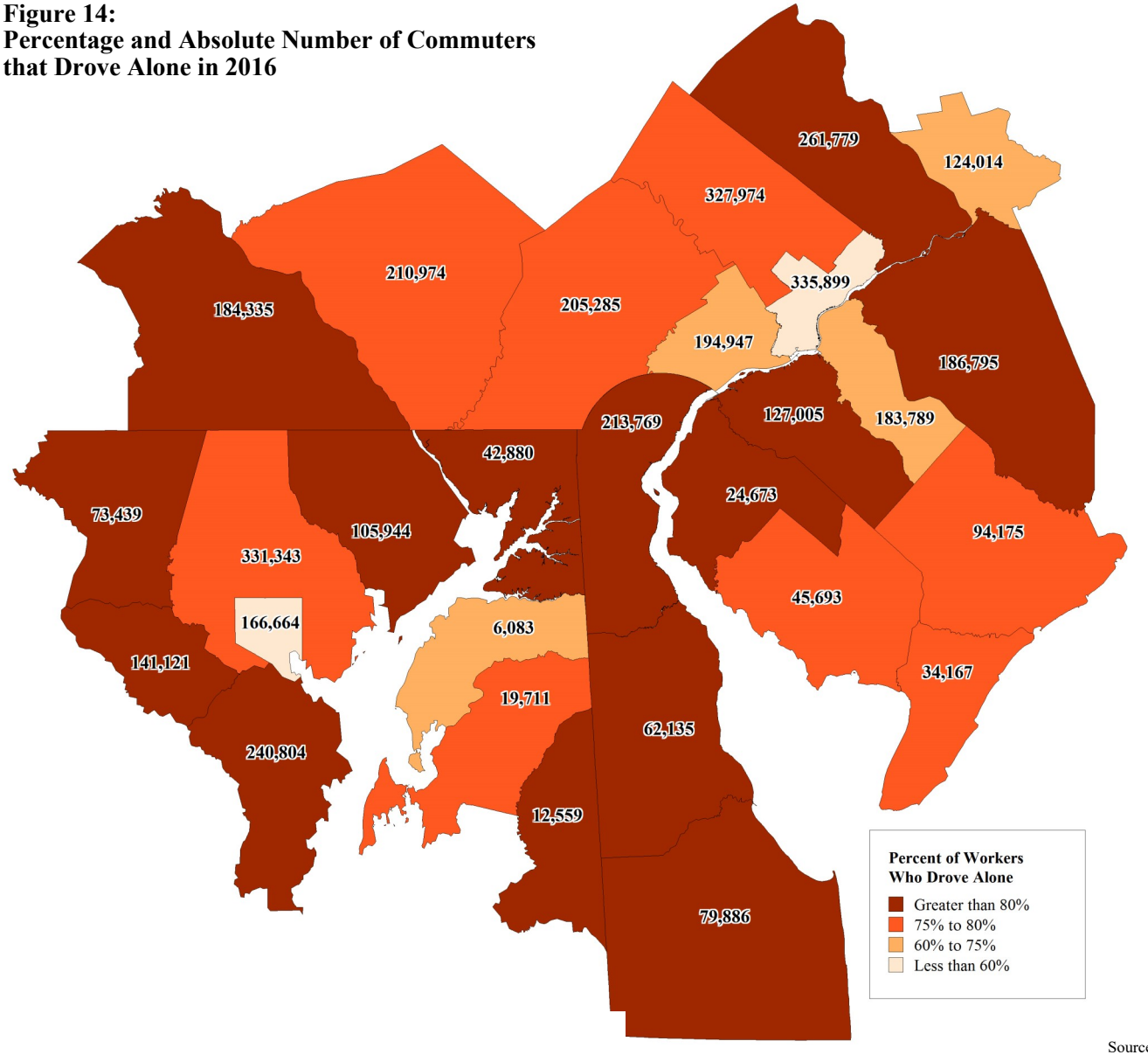
Most congestion on roadways is the result of more vehicles than the road can physically carry at any given time. Many of these vehicles are single passenger vehicles travelling for work commutes. Counties with the greatest percentage of commuters who drove alone were York County, Pennsylvania and Carroll County, Maryland, followed by Gloucester and Salem Counties in New Jersey. Philadelphia and Baltimore City, the two most populous counties in the study area, had the lowest percentage of workers who drove alone in 2010 and 2016. The availability of public transit, dense land use patterns conducive for walk commutes, and carpooling give residents more travel choices. In 2010, roughly 80% of commuters drove alone in the WILMAPCO region, which remained steady in 2016. Other counties with the least percentage of commuters who drove alone were Kent, Maryland, Mercer, New Jersey, and Delaware, Pennsylvania.

Table 4: Percentage of Workers who Drove Alone by County, 2010-2016

State, County	2010	% Drove Alone	Rank	2016	% Drove Alone	Rank	% Change 2010-16
Delaware							
Kent	57,848	83.1	7	62,135	80.3	13	7.4%
New Castle	202,329	79.2	17	213,769	80.2	14	5.7%
Sussex	64,599	81.7	10	79,886	83.8	5	23.7%
Maryland							
Anne Arundel	218,915	79.4	15	240,804	80.4	12	10.0%
Baltimore	315,244	79.4	16	331,343	79.4	16	5.1%
Baltimore City	153,912	60	27	166,664	59.5	27	8.3%
Caroline	12,682	88.6	1	12,559	82.8	9	-1.0%
Carroll	72,123	82.8	8	73,439	85.4	2	1.8%
Cecil	37,749	80.7	13	42,880	82.9	8	13.6%
Harford	101,567	84	5	105,944	83.5	6	4.3%
Howard	122,491	80.9	12	141,121	81.8	11	15.2%
Kent	6,352	66	26	6,083	68.2	26	-4.2%
Queen Anne's	18,529	78.5	21	19,771	78.9	18	6.7%
New Jersey							
Atlantic	97,106	78.5	20	94,175	77.3	21	-3.0%
Burlington	179,160	82.8	9	186,795	83	7	4.3%
Camden	182,301	78.1	22	183,789	74.5	23	0.8%
Cape May	30,993	75.2	24	34,167	79.2	17	10.2%
Cumberland	48,428	80.5	14	45,693	76.2	22	-5.6%
Gloucester	117,139	86.1	4	127,005	85.4	3	8.4%
Mercer	117,784	69.3	25	124,014	70.7	25	5.3%
Salem	23,251	87.2	2	24,673	84.4	4	6.1%
Pennsylvania							
Bucks	261,669	83.5	6	261,779	82.1	10	0.0%
Chester	200,581	80.9	11	205,285	78	20	2.3%
Delaware	199,471	76.6	23	194,947	72.7	24	-2.3%
Lancaster	191,966	78.6	19	210,974	79.5	15	9.9%
Montgomery	317,820	78.8	18	327,974	78.7	19	3.2%
Philadelphia	291,003	49.9	28	335,899	50.7	28	15.4%
York	182,410	86.4	3	184,335	86.1	1	1.1%
Area	**3,825,422**	**78.5%**		**4,037,900**	**78.1%**		**5.6%**

Sources: American Community Survey, 20010-2016; 2010 US Census

Figure 14:
Percentage and Absolute Number of Commuters that Drove Alone in 2016

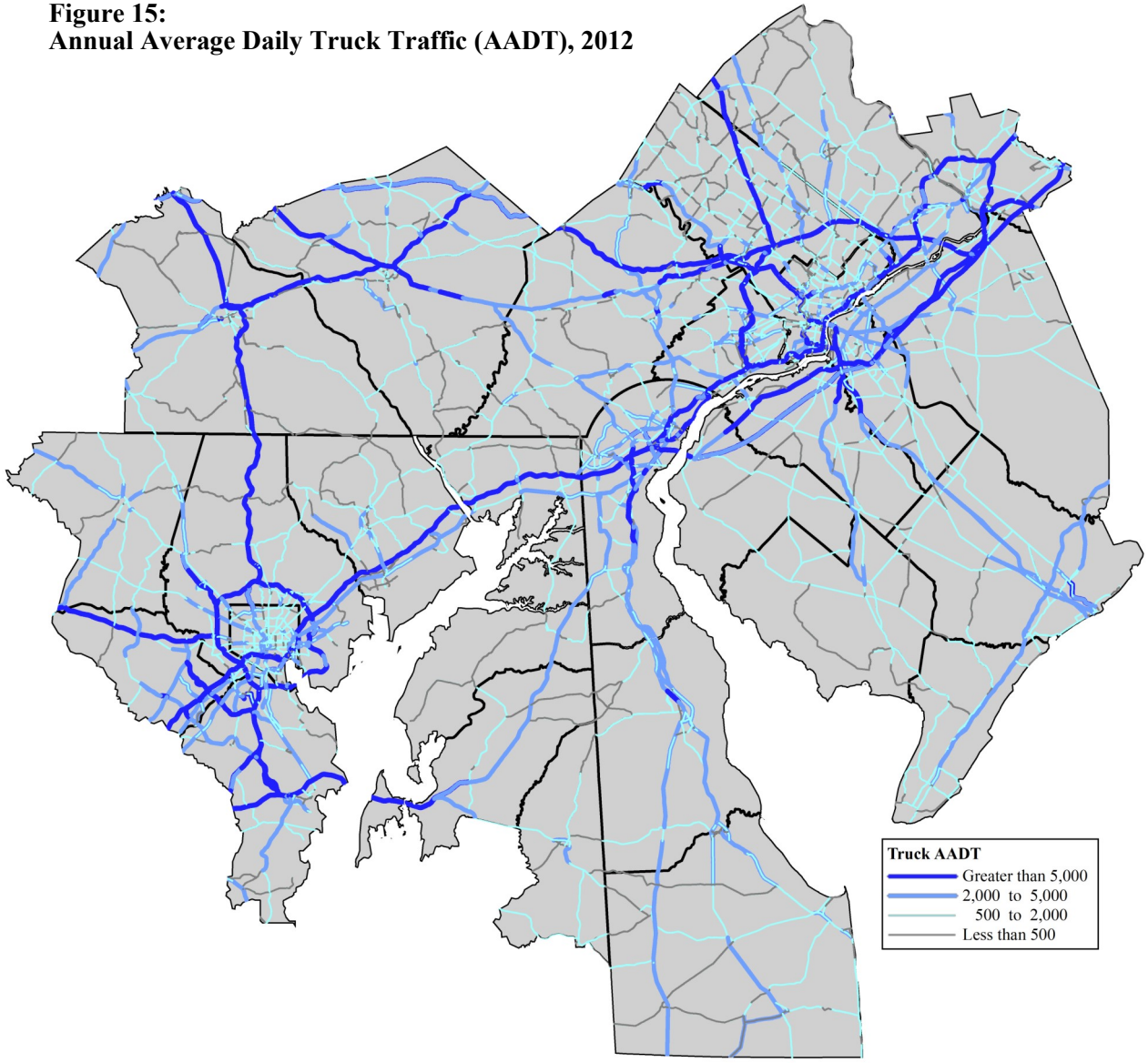


Sources: American Community Survey, 2016

Current Truck Volumes

Traffic congestion and vehicle delay can impede the efficient movement of goods and services and economic activity. Freight shipments and services serving the region moves mostly along I-95. Nationally, I-95 in the Mid-Atlantic region is the most heavily traveled truck route. Throughout the study area, I-95 carried nearly 14,000 daily trucks on average. Regional highways with truck volumes of more than 2,000 trucks per day comprised 76.5% of total daily volume, compared to 56.3% of roads with more than 5,000 trucks daily. In the WILMAPCO region, trucks made up 10% of all traffic on major roadways. In addition to the I-95 corridor, a notable amount of trucks moved along I-83 connecting Baltimore City and York County, I-76 connecting Philadelphia to Lancaster County, and I-295 connecting New Jersey counties.

Figure 15:
Annual Average Daily Truck Traffic (AADT), 2012

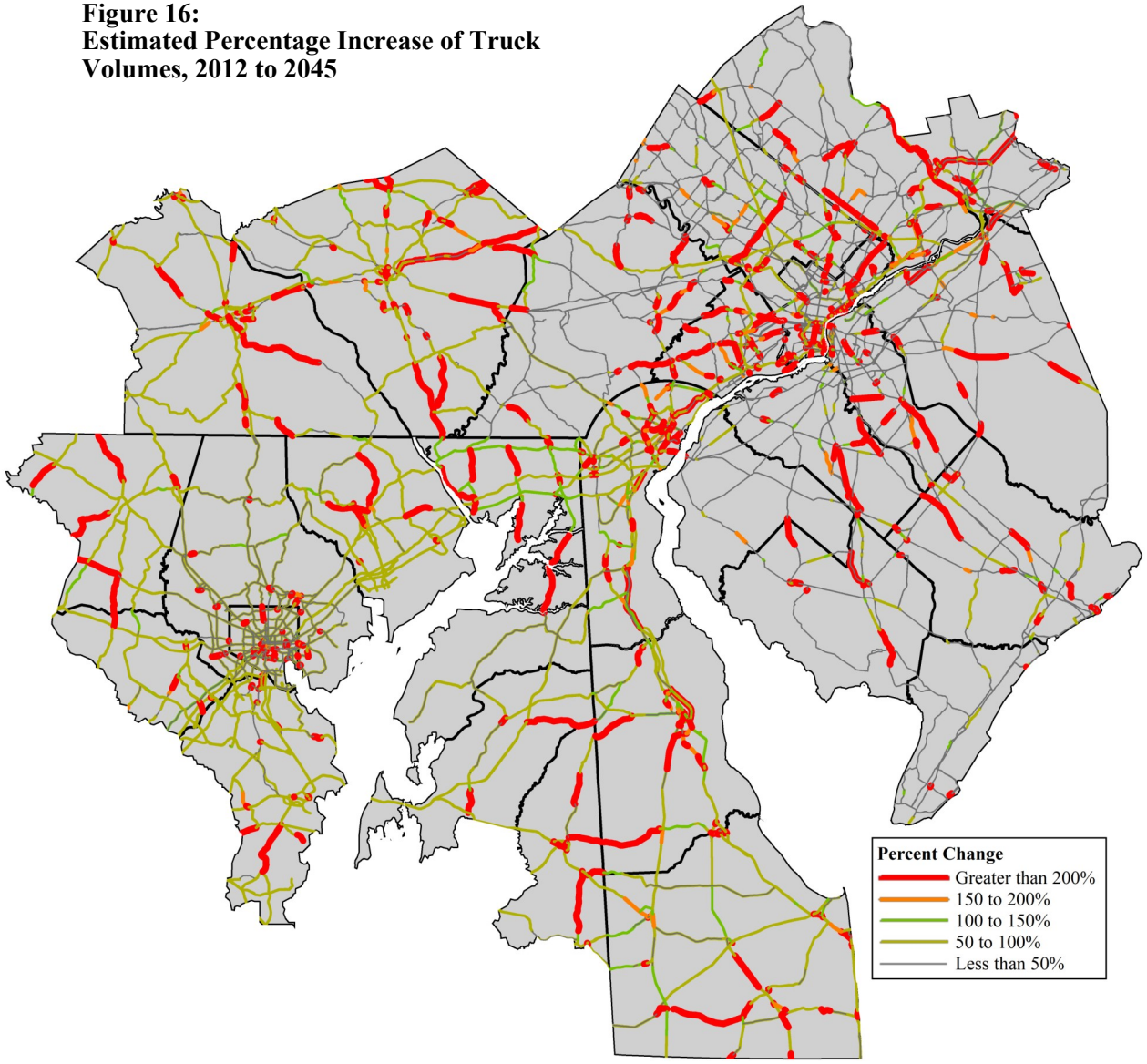


Source: FHWA, Freight Analysis Framework

Projected Truck Volumes

Moving trucks and other modes for freight activity is essential to maintaining an efficient and reliable system that meets regional needs. By 2045, truck traffic is expected to grow by 55% from 2012 and comprise 8% of all vehicles, with growth occurring on roadways throughout the study area. Daily truck volumes along I-95 are estimated to grow by 50%, reaching an average of nearly 20,700 daily trucks in 2045. In 2012, 24% of traffic was classified as long distance. This figure is expected to rise to 27.5% by 2045. In the WILMAPCO region, truck traffic as a percentage of all traffic will remain steady at about 10%.

Figure 16:
Estimated Percentage Increase of Truck Volumes, 2012 to 2045



Source: FHWA, Freight Analysis Framework

Freight Impact on the WILMAPCO Region

The WILMAPCO region is a major thoroughfare for goods moving along the busy northeast corridor on Interstate 95, the CSX Transportation (CSX), and Norfolk Southern (NS) railroads. Much of this freight passes through on the interstates and rail lines to the major population centers in the Northeast, but a significant portion travels on local roads serving places like Harrisburg and the Delmarva Peninsula. It is clear that I-95 is a major route that sees heavy traffic flows, and likely carries the majority of the region's freight traffic, connecting key locations of Wilmington, Newark, and Elkton. Also connected are major economic and population centers of Philadelphia and New York to the north and Baltimore and Washington to the south of the region. Commodity flow data indicates that freight is moving primarily north and south along I-95, US 301, US 40 and US 13. All these routes travel through multiple states and metropolitan areas.

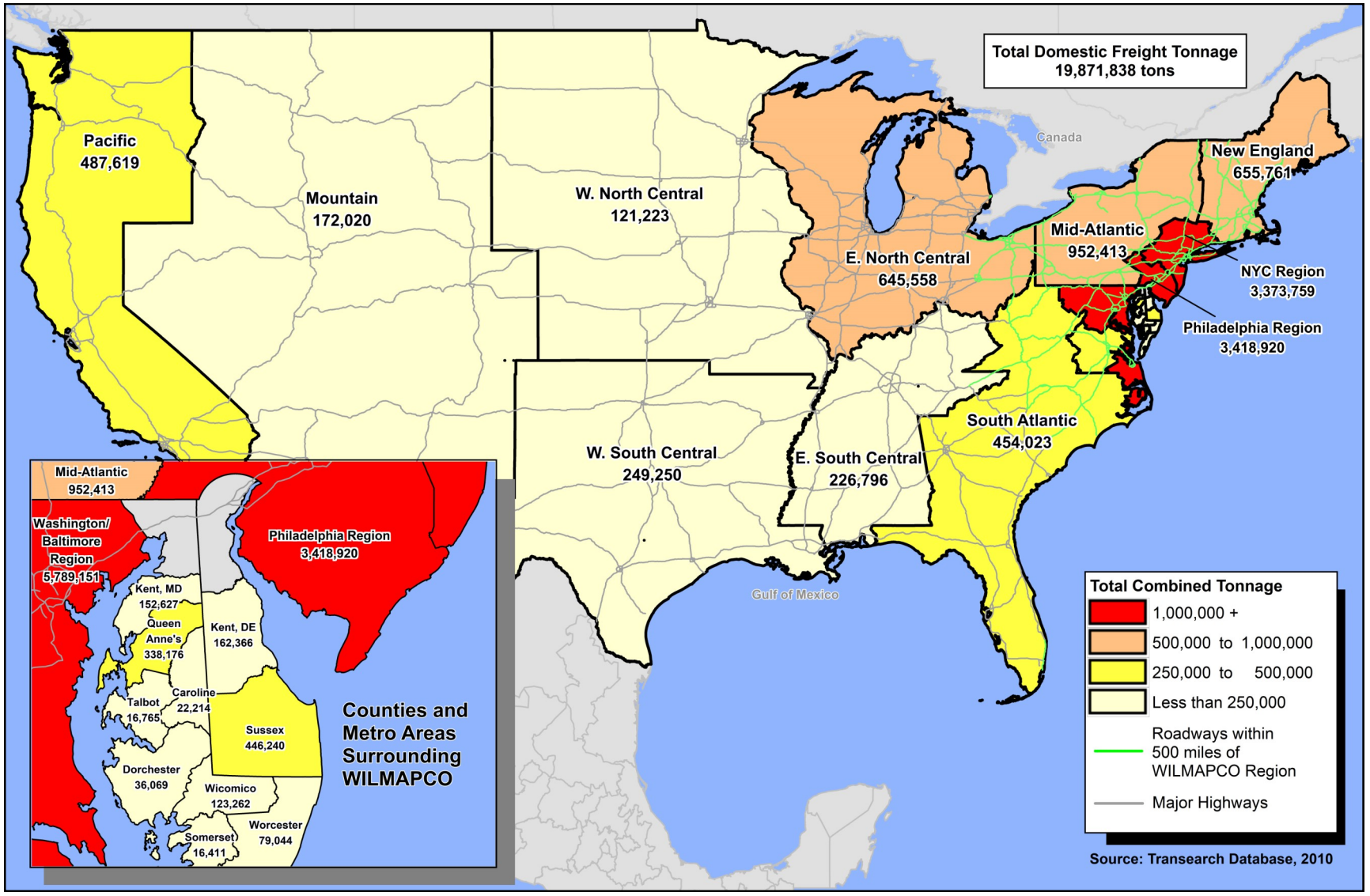
In 2010, nearly 20 million tons of domestic freight originated or terminated in the WILMAPCO region. An additional 4.2 million tons were produced locally and stayed within the region. The region's largest trading partners were the three major surrounding metropolitan areas of Washington, Philadelphia, and New York City. 93% of freight movement (18.6 million tons) occurred within 500 miles of the WILMAPCO region. More locally, 1.5 million tons or about 7% of trade occurred within the Delmarva Peninsula.

Table 5: WILMAPCO Region Trading Partners, Ranked by Total Combined Inbound/Outbound Tonnage, 2010

Rank	Region/County	Combined Tonnage
1	Washington/Baltimore Region	5,789,151
2	Philadelphia Region	3,418,920
3	NYC Region	3,373,759
4	VA Beach/Norfolk Region	1,619,346
5	Mid-Atlantic	952,413
6	New England	655,761
7	E. North Central	645,558
8	Pacific Coast	487,619
9	South Atlantic	454,023
10	Sussex County, DE	446,240
11	Queen Anne's County, MD	338,176
12	Richmond, VA Region	288,453
13	W. South Central	249,250
14	E. South Central	226,796
15	Mountain	172,020
16	Kent County, DE	162,366
17	Kent County, MD	152,627
18	Wicomico County, MD	123,262
19	W. North Central	121,223
20	Worcester County, MD	79,044
21	Dorchester County, MD	36,069
22	Accomack/Northampton, MD	24,372
23	Caroline County, MD	22,214
24	Talbot County, MD	16,765
25	Somerset County, MD	16,411
	Total	**19,871,838**
	Local Freight Movement	**4,208,937**

Source: Transearch Database, 2010

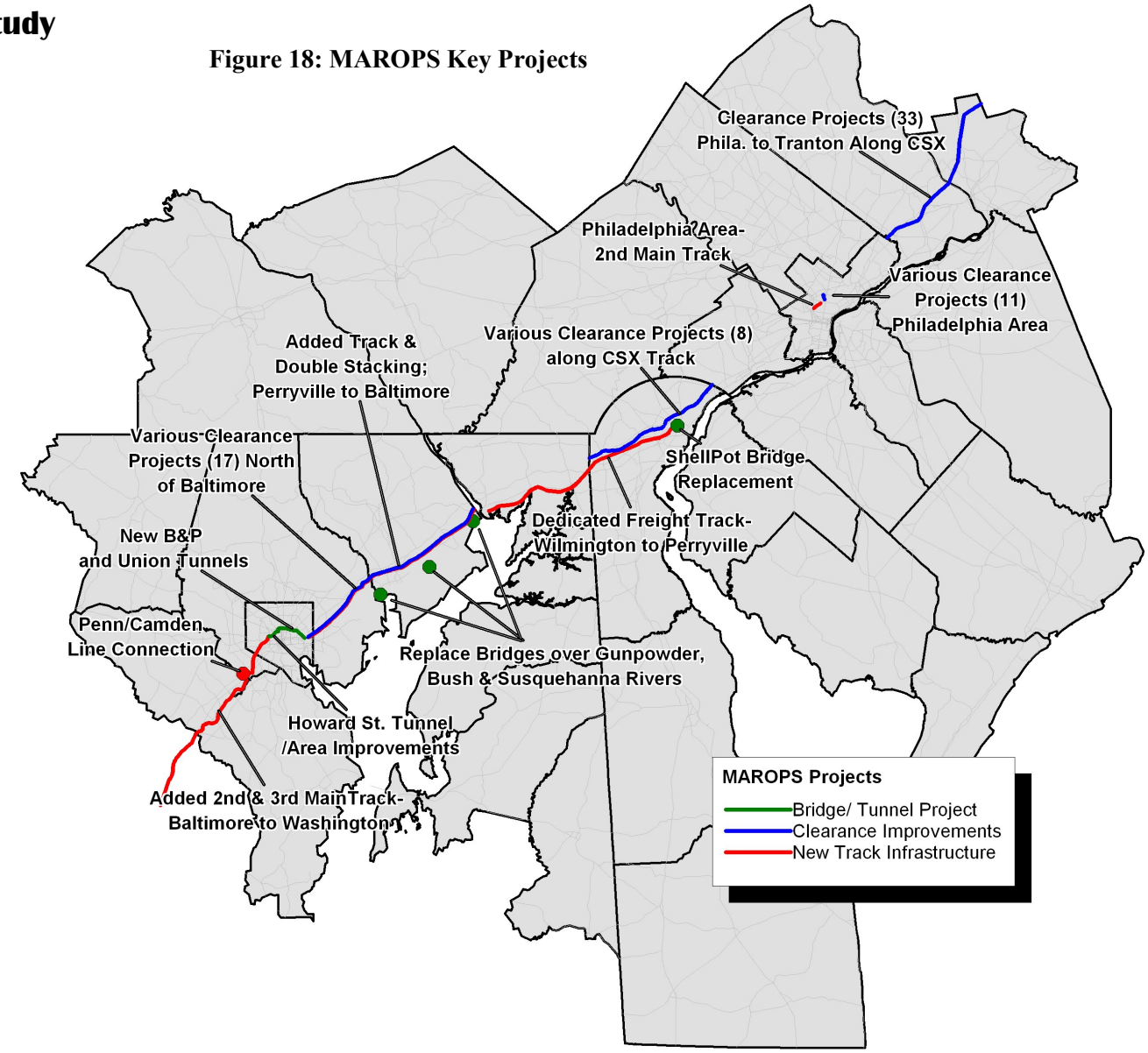
Figure 17: Total Domestic Freight Tonnage Originating/Terminating in the WILMAPCO Region, 2010



Mid-Atlantic Rail Operations Study

In 2003, the I-95 Corridor Coalition completed the Mid-Atlantic Rail Operations Study (MAROPS) which recognizes that rail activity in the Mid-Atlantic contributes to the region's political and financial status. The report concludes that the Mid-Atlantic region has and will continue to experience severe capacity issues along its major highways. To alleviate some burdens, Class I railroads within the five states of the Mid-Atlantic region and the District of Columbia must be improved to reduce the demand on the roadway network. A total of 71 infrastructure projects and information and technology improvements were proposed, estimated to cost more than $6 billion (excluding engineering). **Figure 18** shows projects within the study area, estimated to cost more than $1 billion. With the exception of the Shellpot Bridge, however, many of these projects are still awaiting funds for design, engineering and construction. The Mid-Atlantic has an extensive rail network that is capable of serving a much larger role in meeting the region's transportation needs.

Figure 18: MAROPS Key Projects



Source: The Interstate 95 Corridor Coalition

Marine Highways

Ports, railways, and highways across the nation have become increasingly congested. In response in 2010, U.S. DOT identified 18 marine corridors, eight projects, and six initiatives for further development as part of "America's Marine Highway Program." The entire Eastern seaboard was selected as a corridor. This effort is the first step to focus public and private efforts on using waterways to relieve congested land corridors, reduce greenhouse gas emissions, curb energy use, increase system resiliency, and reduce landside infrastructure costs.

From 2016 through 2018, additional funding opportunities enabled the growth of the Marine Highway Program, which now supports 21 projects. Projects located in or near the study area are listed in the table below.

Figure 19: U.S. Marine Highway Routes

Table 6: Marine Highway Projects

Project Title	Description
New England Marine Highway Expansion Project (Maine DOT)	Improve capacity and reilability, expand an existing container-on-barge service operation
Gulf Atlantic Marine Highway Project	Transport containerized freight on a modern fleet of U.S. flag vessels
Trans-Hudson Rail Service (Port Authority of NY and NJ)	Expand the quality and capacity of an ongoing cross-harbor rail float service
James River Container Expansion (Virginia Port Authority)	Expand existing container-on-barge service by increasing frequencies and a new barge service
M-495 Potomac River Commuter Ferry Project (Northern Virginia)	Develop a commuter ferry service along the Potomac, Occoquan, and Anacostia Rivers
New York Harbor Container and Trailer-on-Barge Service	Expand two existing container-on-barge services and establish new route within New York Harbor
Philadelphia-Canaveral Direct Service	Establish new domestic marine highway service between Philadelphia and Central Florida
Mid-Atlantic Barge Service (Port of Virginia)	Expand the frequency of existing service between Hampton Roads, VA, Baltimore, MD, and Philadelphia, PA
Port of Davisville/Brooklyn/Newark Container on Barge Service	Establish container-on-barge service between Brooklyn, NY, Newark, NJ, and the Port of Davisville, RI

Source: US DOT, Marine Highway Initiative

Inter-Regional Transit

Fostering transportation choice is critical to reducing automobile usage and can significantly reduce household transportation costs. Since the 2012 Inter-Regional Report, the number of inter-county transit routes in the WILMAPCO region has increased. In 2014, DART eliminated its Route 65 from Elkton, Maryland to Newark, Delaware, but that service was replaced by Cecil Transit Route #4, Elkton-Newark Connection, which began service in January 2015. In November 2016, DART launched Route 302 between Newark and Dover, Delaware. In April 2018, Cecil Transit launched Route #5, Commuter Connection, which bridges the gap in commuter rail service between the Perryville, Maryland MARC station and the Newark, Delaware SEPTA station.

DART Route 301 from Wilmington to Dover remains the most successful inter-county bus route in the region, reaching nearly 220,000 annual riders in fiscal year 2014. However, the introduction of private ride-sharing services led to a decrease in ridership in the past few years. Elkton-Newark Connection has seen growth from nearly 3,000 riders in its first year of operation to over 11,000 in fiscal year 2018. Similarly, Route 302 grew from 5,500 annual riders to nearly 16,000 between its first and second year. Ridership on SEPTA's Wilmington/Newark line saw significant (52%) growth between fiscal year 2001 and 2010, but remained relatively stagnant from fiscal year 2011 to 2018. Recent planning efforts may lead to improved train service and increased ridership in the coming years, including train station redevelopments at Newark and Claymont and a feasibility study for a potential MARC Penn Line extension from Perryville to Newark, as well as completing a track expansion project between Wilmington and Newark.

Figure 20: Ridership for Inter-County Bus Routes in WILMAPCO Region

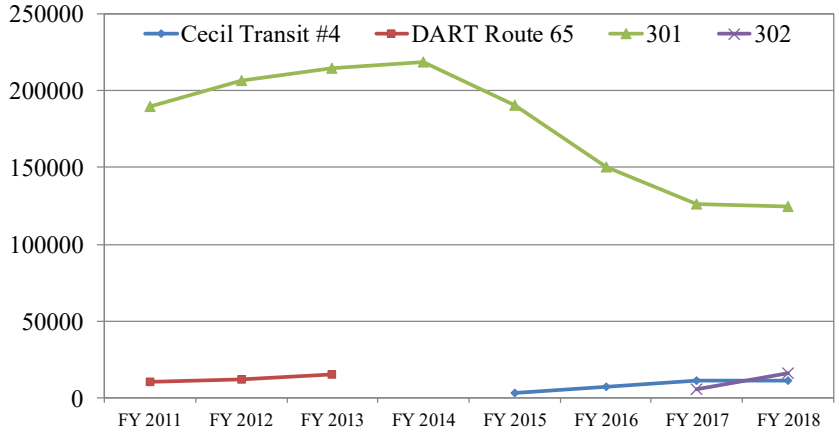
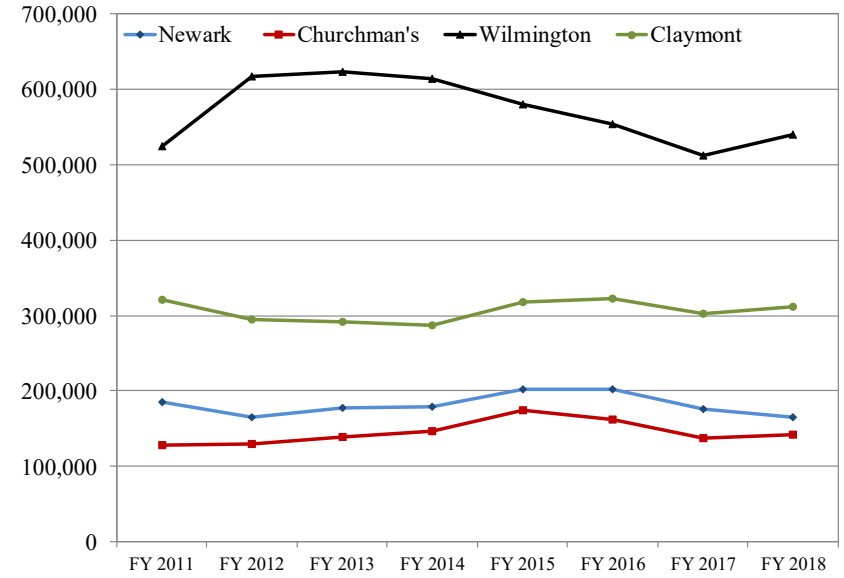


Figure 21: Ridership for SEPTA Wilmington/Newark Regional Rail Line

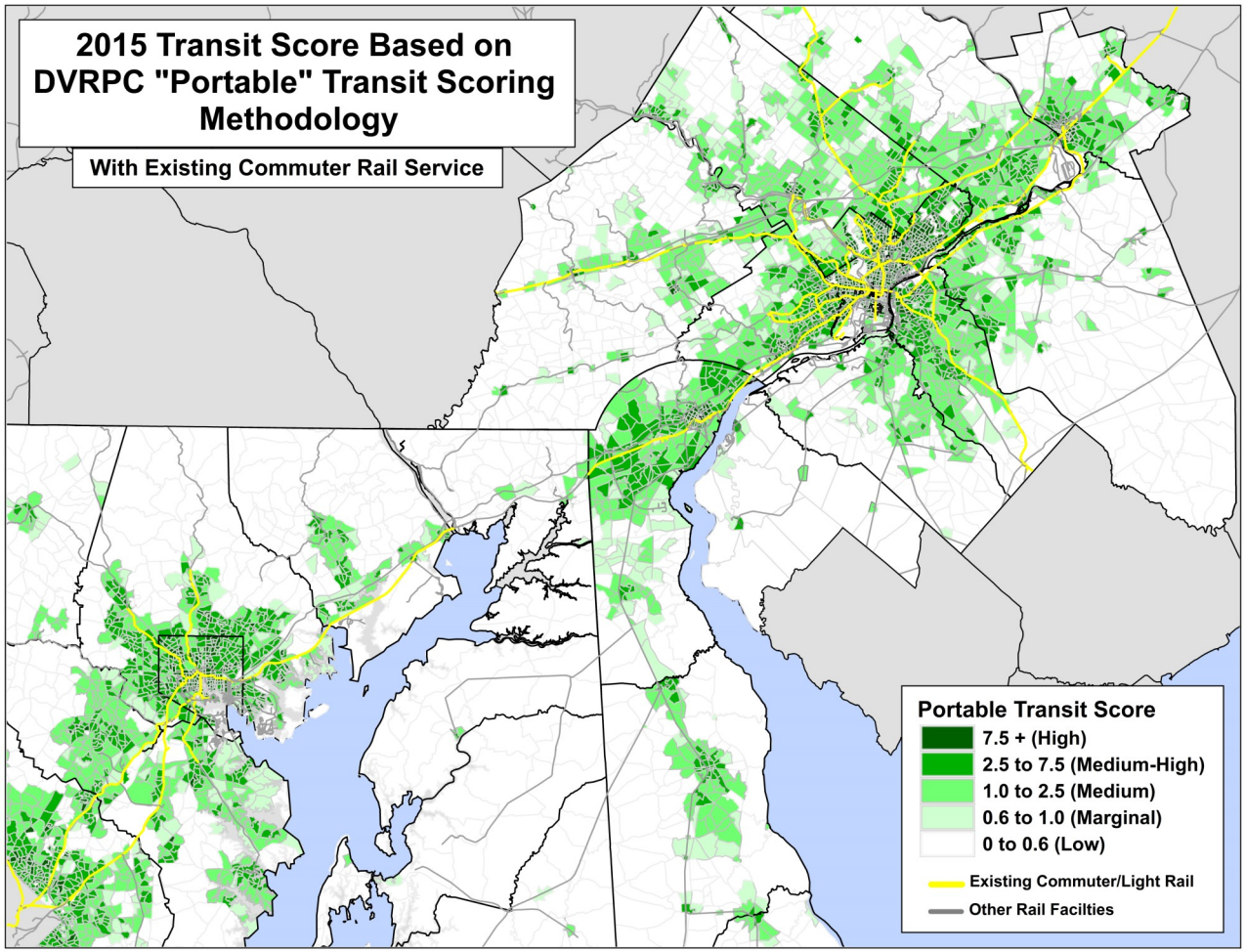


Sources: Delaware Transit Corporation (DTC), Cecil Transit

Transit Assessment By TAZ

The DVRPC Portable Transit Score tool is a methodology that indicates the ability of an area to support transit investments, using factors including population, employment, and zero-car households. The tool has broad applicability in regional planning and can be useful in congestion management and long-range plans. The results in **Figure 22** show that lighter-shaded TAZs warrant smaller investments, while darker-shaded areas can support greater transit investments and services. The highest scoring areas include the densely populated cores of Philadelphia, Wilmington, and Baltimore, with gradually declining scores in their surrounding suburbs. Since 2005, population and employment growth along the DE-1 corridor has led to increased transit scores, particularly in Middletown, Smyrna, and the Dover area. In Cecil County, Maryland, the towns of Elkton and North East have seen increased transit scores, both of which are along the Northeast Corridor railroad.

Figure 22: Transit Scoring by TAZ

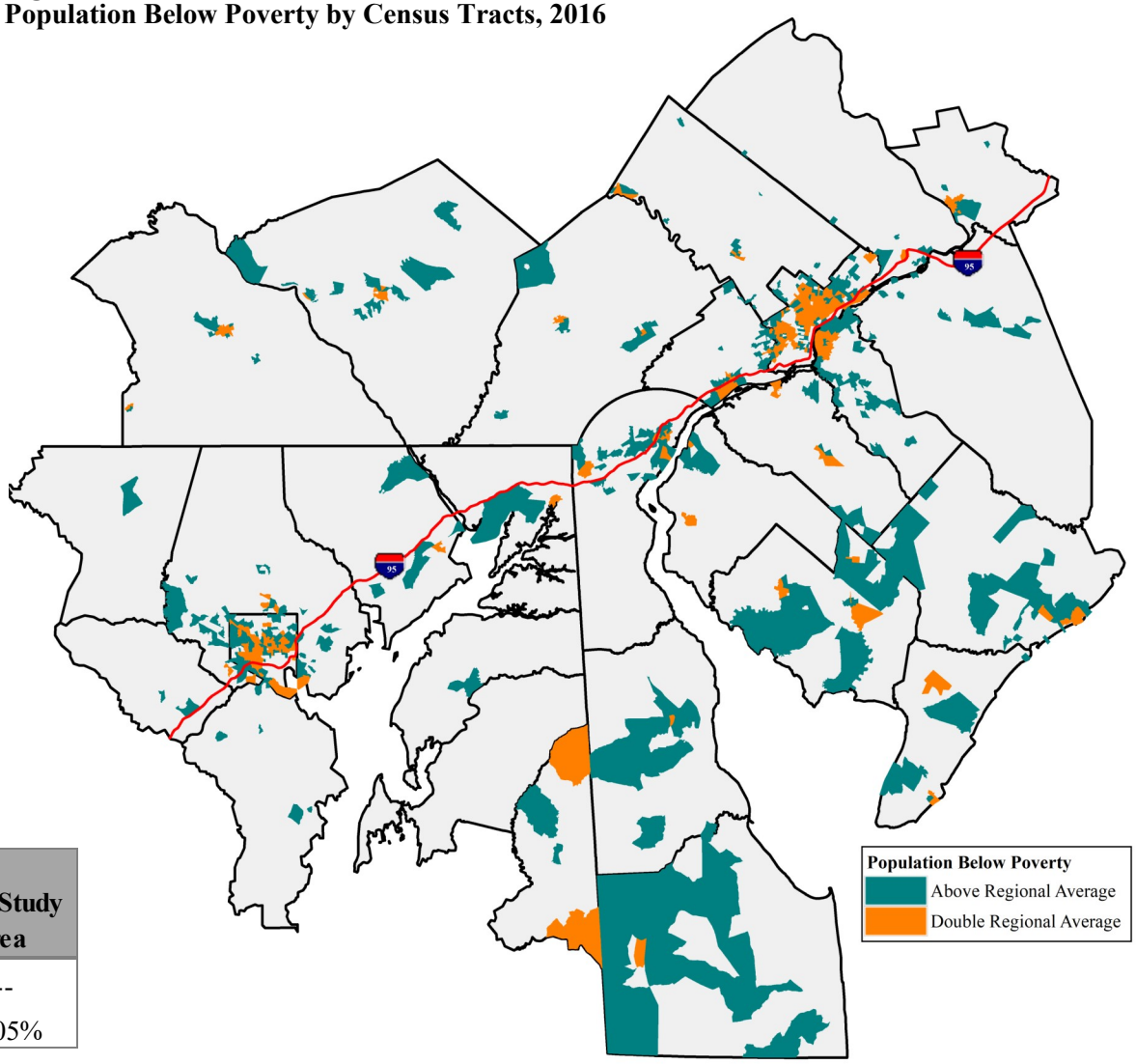


Source: DelDOT, DVRPC, MDSHA

Identification of Low-Income Populations

Under the law, transportation equity must consider the needs and participation in the planning process of low-income and minority communities. Low-income is defined as populations below the poverty threshold. From 2010 to 2016, the number and percentage of low-income individuals remained steady. However, concentrations of poverty within cities along I-95 have reduced, especially in Philadelphia, Wilmington, and Baltimore. Census tracts with above average poverty are slightly more distributed throughout the study area compared to 2010. Both significant and moderate concentrations can be found in suburban counties and some rural areas.

Figure 23:
Population Below Poverty by Census Tracts, 2016



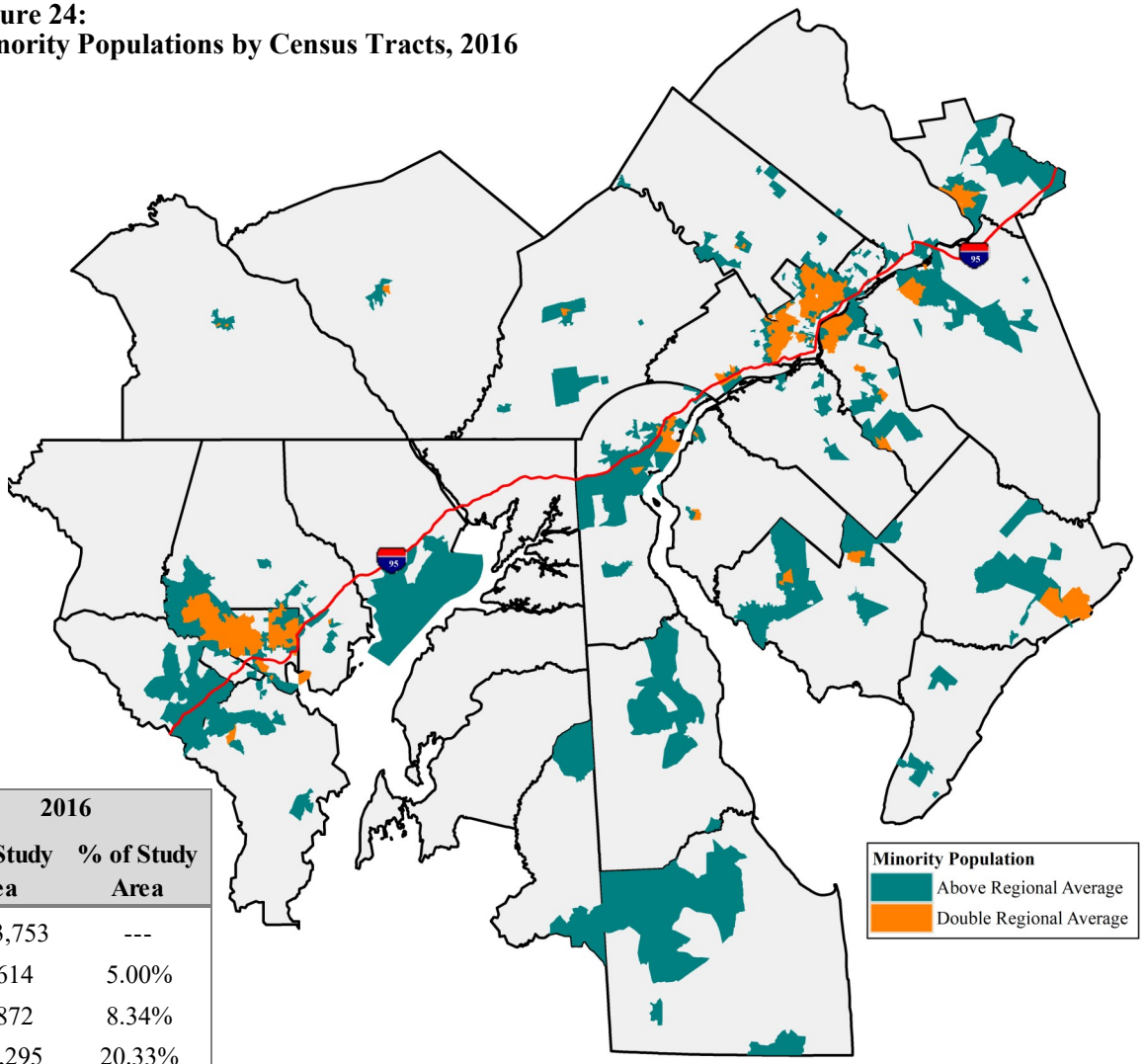
	2016	
	Total Study Area	% of Study Area
Total Population	11,133,753	---
Population Below Poverty	1,341,945	12.05%

Source: U.S. Census Bureau, 2016

Identification of Minority Populations

Both low-income groups and ethnic and racial minorities are historically known to bear undue burdens of transportation investments, and a fewer share of the benefits. From 2010 to 2016, the minority population grew by nearly 100,000. More than one-third of the region's population include minority individuals (35.5%). The spatial arrangement of significant minority populations has remained fairly static. Similar to low-income groups, higher concentrations are within major cities along I-95, with smaller pockets sprinkled throughout suburban communities.

Figure 24:
Minority Populations by Census Tracts, 2016



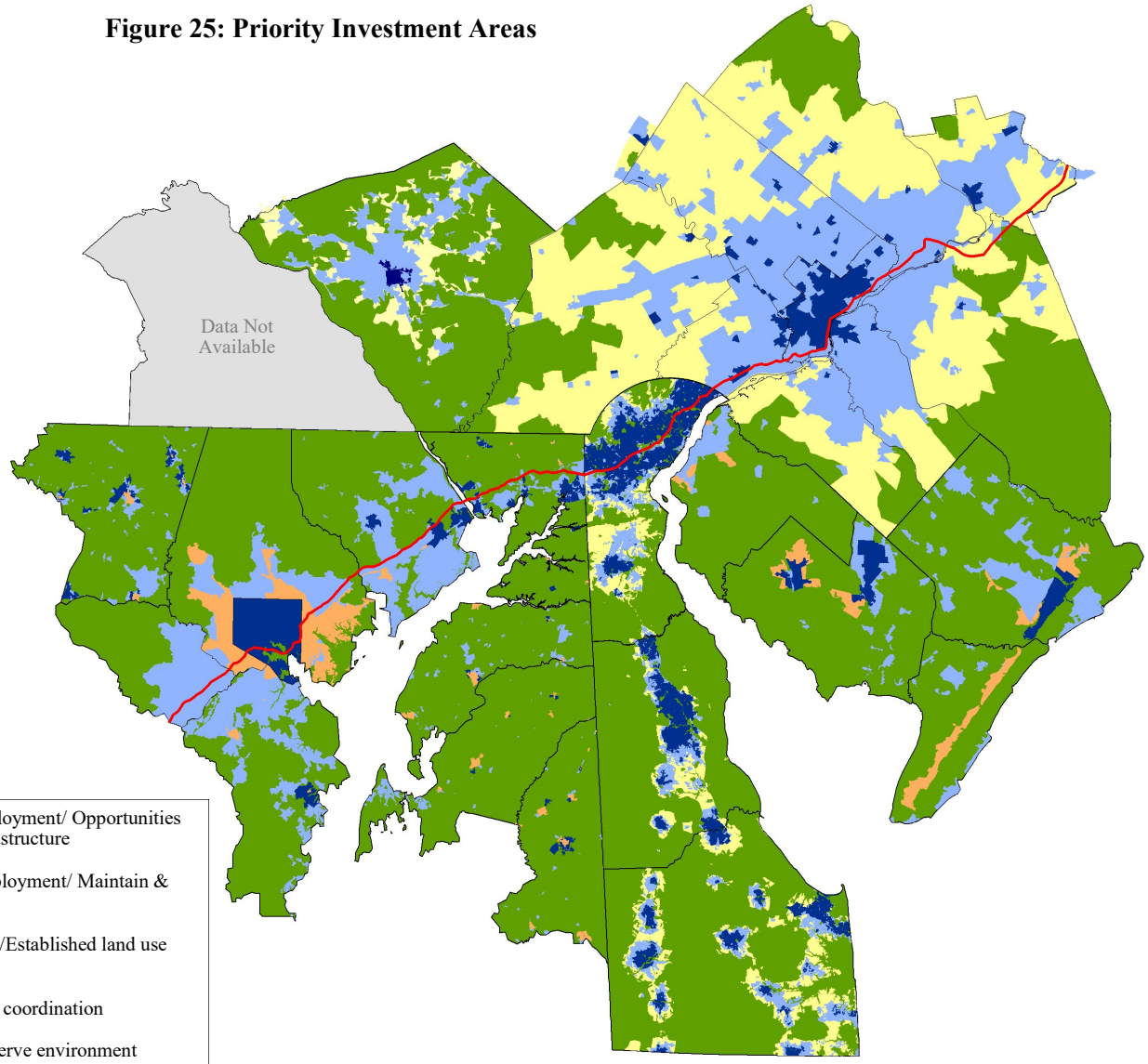
	2010		2016	
	Total Study Area	% of Study Area	Total Study Area	% of Study Area
Total Population	11,014,269	---	11,133,753	---
Asian	473,321	4.30%	556,614	5.00%
Hispanic	774,974	7.04%	928,872	8.34%
Black	2,208,299	20.05%	2,263,295	20.33%
Minority Population	3,850,853	34.96%	3,949,187	35.47%

Source: U.S. Census Bureau, 2016

Transportation Investments

Investment strategies are used to create links between transportation and land use and to coordinate local government spending. Well defined strategies maximize limited resources and help to address growth management issues. Overall, investment strategies vary across MPOs and counties included in the study area. This map shows a generalized overview of investment strategies, as each agency sets their own definitions based on current and projected land use patterns.

Figure 25: Priority Investment Areas



Source: MD Dept. of Planning , DE Dept. of Planning, DVRPC, NJ State Data, PA Spatial Data Access

Section 7: Inter-Regional Projects

Significant Regional Transportation Projects

Based on the Transportation Improvement Programs (TIP) of surrounding agencies, there are several major projects in progress or slated for completion in the future. **Table 7** lists projects within or near WILMAPCO's borders that may have a significant effect on traffic flows to and from the region. More than $550 million is estimated to be spent on these projects to FY 2021 and beyond. As the table reflects, the vast majority of our major transportation projects are highway upgrades, suggesting our continued over-reliance on that system. Most recently completed projects include a passenger rail study for the Newark Regional Transportation Center project, toll facilities and added capacity along the I-95 corridor through Delaware, SR 41 improvements in Delaware, and US 202 corridor improvements through Pennsylvania. A map corresponding to this table is shown on the next page.

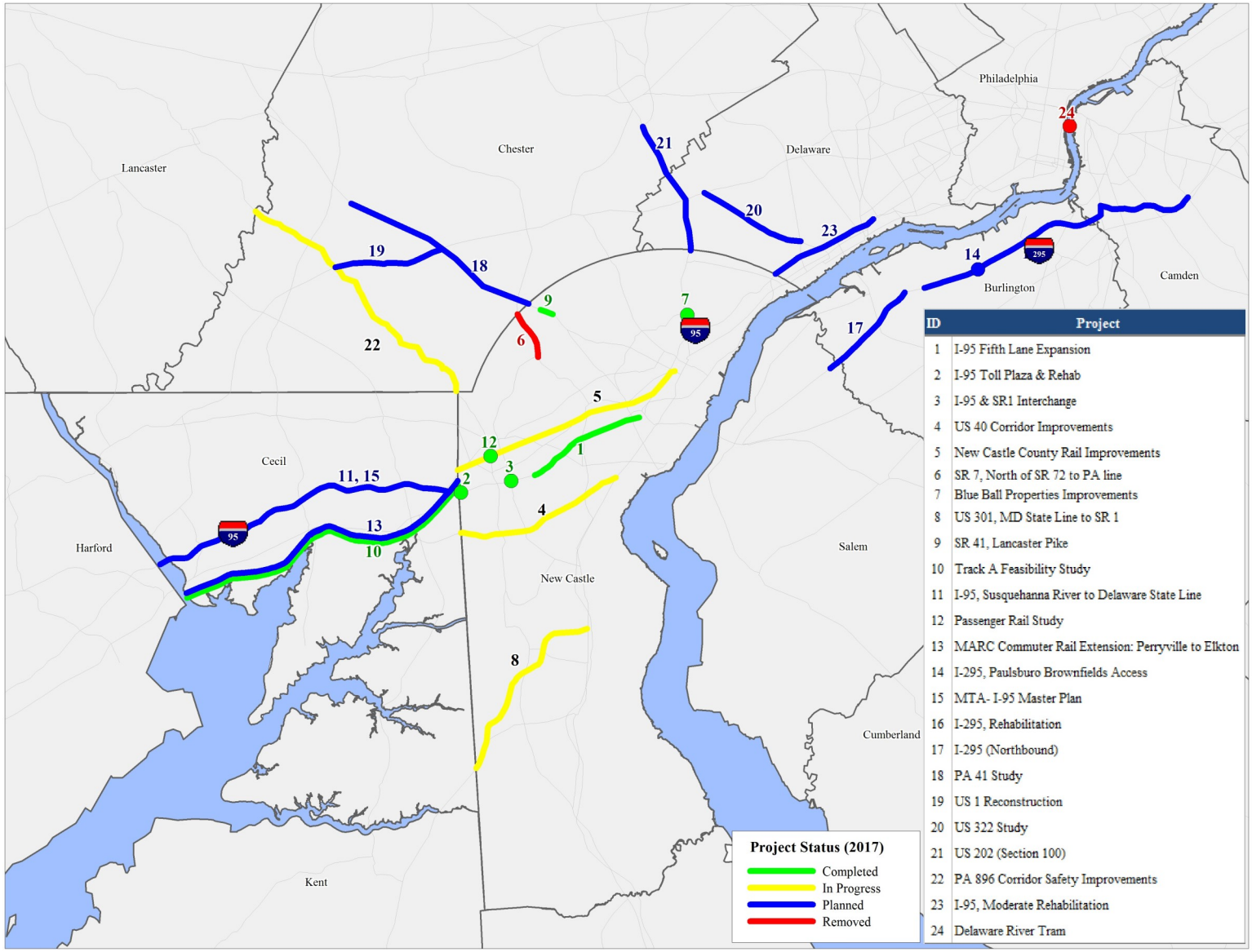
Table 7: Significant Inter-Regional Projects

ID	State	Project	2017 Status	Current Funding	Outyear Funding
1	DE	I-95 Fifth Lane Expansion	Completed	$0	$0
2	DE	I-95 Toll Plaza & Rehab	Completed	$0	$0
3	DE	I-95 & SR1 Interchange	Completed	$0	$0
4	DE	US 40 Corridor Improvements	In Progress	$25,834	$12,500
5	DE	New Castle County Rail Improvements	In Progress	$75,833	$5,900
6	DE	SR 7, North of SR 72 to PA line	Removed	$0	$0
7	DE	Blue Ball Properties Improvements	Completed	$0	$0
8	DE	US 301, MD State Line to SR 1	In Progress	$281,137	$22,947
9	DE	SR 41, Lancaster Pike	Completed	$0	$0
10	MD	Track A Feasibility Study	Completed	$0	$0
11	MD	I-95, Susquehanna River to Delaware State Line	Planned	$0	$0
12	DE	Passenger Rail Study	Completed	$0	$0
13	MD	MARC Commuter Rail Extension: Perryville to Elkton	Planned	$0	$0
14	NJ	I-295, Paulsburo Brownfields Access	Planned	$0	$0
15	MD	MTA- I-95 Master Plan	Planned	$0	$0
16	NJ	I-295, Rehabilitation	Planned	$0	$0
17	NJ	I-295 (Northbound)	Planned	$0	$0
18	PA	PA 41 Study	Removed	$0	$0
19	PA	US 1 Reconstruction	Planned	$11,645	$108,993
20	PA	US 322 Study	Planned	$19,098	$0
21	PA	US 202 (Section 100)	Planned	$0	$0
22	PA	PA 896 Corridor Safety Improvements	In Progress	$4,500	$0
23	PA	I-95, Moderate Rehabilitation	Planned	$0	$0
24	PA, NJ	Delaware River Tram	Removed	$0	$0

Shaded lines are completed projects; other are not complete.

Sources: Chester County, DVRPC, NJDOT, WILMAPCO

Figure 26:
Significant Inter-Regional Projects



Sources: Chester County, DVRPC, NJDOT, WILMAPCO

Section 8: Path Forward

Key Regional Corridors

In the 2008 Inter-Regional Report, seven corridors that span across more than one metropolitan area and would benefit from planning and coordination at a wider multi-state level were identified. These corridors are based on a variety of past plans and studies. Likewise, future development activity within these corridors also make them of interest to a variety of planning stakeholders. Key points for each corridor along with some updated projection figures, are summarized here:

1. **SR 41**— This busy corridor stretches from SR-141 in Delaware to Lancaster, PA, and is widely used by commuters and trucks. Several roadway segments and intersections (particularly around Wilmington in the WILMAPCO region) are currently functioning at LOS E or F in the a.m. and p.m. peak periods, and that trend is expected to continue through 2045. The corridor falls within the Developing and Community Transportation Investment Areas (TIAs) and notably lacks significant transit service.

Future population is projected to grow 11% and 25% by 2040 for New Castle and Chester Counties, respectively, where the corridor stretches. However, employment will remain stagnant in New Castle County, while Chester County will see 25% growth in jobs. TAZs within one mile of the corridor are expected to grow by 10% in population from 2015 to 2040. In 2016, 80% of workers living nearby this roadway drove alone to work.

The Average Annual Daily Traffic (AADT) is projected to increase as well. On average, traffic is projected to rise by 60% from 13,500 vehicles per day in 2012 to roughly 21,700 in 2045. Truck volumes along SR 41 are projected to rise by 65% by 2045. Average peak period travel speeds along the roadway fell by 16% between 2007 and 2017.

2. **US 1**— This thoroughfare makes connections from Philadelphia to Baltimore and destinations beyond the study area. Most of the corridor is located in the Developing and Rural TIAs, and traffic is expected to grow by 77% by 2045. While much less developed than further east on US 1, the area is mostly comprised of suburban development. In 2010 and 2016, 80% of commuters drove alone, as transit services are lacking. Based on updated projections, the population within one mile of this corridor is expected to increase by 9% between 2015 and 2040.

US 1 is classified by DVRPC as a congested corridor. The majority of roadway sections, especially near Philadelphia and Baltimore, are expected to see more than 50,000 AADT per segment by 2045. The average road segment will see an increase from nearly 38,000 AADT in 2012 to nearly 67,000 AADT in 2045. In that same time period, congestion is expected to increase by 75%, exceeding its capacity by 2045. Travel speeds along the corridor fell by 7% between 2007 and 2017.

3. **US 202**— US 202 is identified as a congested corridor in both the DVRPC and WILMAPCO regions. The corridor does not presently provide transit services. For a short time, the SEPTA Route 306 provided bus service between Claymont, Delaware and Malvern, Pennsylvania, working as an interregional transit service. In 2010 the service, which was funded as part of major US 202 corridor improvements, was terminated due to lack of funds and low ridership. The Chester County Transit Study, completed by DVRPC in January 2017, examines the potential of reintroducing transit service in this area. In addition, development has begun for a Master Plan for the US 202 corridor. These two studies are described in more detail in the Inter-Regional Activity Updates section.

Most of the corridor is located in the Developing or Core TIAs, and it is recognized as one of the most heavily developed corridors in the region. Population totals by TAZs along the corridor are expected to increase by 10% by 2040. Commute times average just under 28 minutes per trip, which is slightly below the regional average. Travel speeds have maintained constant between 2007 and 2017, averaging at about 36.5 miles per hour during peak periods. However, congestion on US 202 is expected to double, reaching LOS F by 2045.

4. **I-95**— Mobility along this corridor will continue to remain challenged within the Mid-Atlantic region and throughout the study area. Most of the I-95 corridor is located in the Core TIA. Accordingly, it is slated to receive funding for a number of roadway and interchange improvements. Investments along this major corridor must also be sensitive to underserved populations, especially within and surrounding large urban centers.

According to recent Census data, a significant percentage of low-income and minority populations are concentrated nearby this major interstate and have grown since 2010. These populations could be inadvertently burdened by transportation investments. The population of TAZs within one mile of I-95 is expected to grow by 45% by 2045, a reversal of earlier projections shown in the 2012 Inter-Regional Report.

Consistent with population growth projections, both passenger vehicles and truck volumes along I-95 will increase by 50% by 2045. Congestion is expected to slow traffic flowing through the corridor, especially near large cities. By 2045, the I-95 corridor is expected to exceed its carrying capacity, growing from LOS E to F, if significant improvements are not made. These challenges further support the need for investments in passenger rail, as well as waterways to move freight and relieve pressure along roadways.

5. **AMTRAK's Northeast Corridor (NEC)**— Recognized as one of the busiest and most complex track structures, AMTRAK's NEC is the primary corridor for AMTRAK, MARC and SEPTA passenger rail, and freight trains in the WILMAPCO region. Currently, only AMTRAK provides passenger rail service across the entire WILMAPCO region. However, this service has limited stops and it is not intended to serve as a local rail service. WILMAPCO's Regional Transportation Plan urges the implementation of commuter rail service between Newark and Perryville, which would eliminate the one notable gap in the regional passenger rail system. Several rail projects will improve service levels and capacity and passenger amenities within the WILMAPCO region.

In 2011, the historic Wilmington Train Station underwent a restoration project totaling $37.7 million to restore the exterior including the façade, platforms and canopies, and to renovate the interior to improve passenger amenities and add revenue-generating retail space. In FY 2017, this station was cited as AMTRAK's 13th busiest in the country, serving 688,000 passengers that year, down from 12th busiest and 730,000 passengers in FY 2011.

Roughly eleven miles north of the Wilmington station, the Claymont Train Station attracts riders from a wide area, including Pennsylvania. Ridership at this station grew more than 22% from FY 2001 to 2010, but it has remained stagnant since. The North Claymont Area Master Plan proposes redeveloping the area to support mixed-use and transit-oriented development, which may lead to increased ridership. The planned Claymont Regional Transportation Center will enable the station to support increased ridership by improving bicycle and pedestrian access and increasing parking capacity. Located in the Core designated TIA, population of TAZs within one mile of the station is expected to grow by 6% by 2040.

To address the need for rail capacity, the Third Rail Track Expansion project in New Castle County will add tracks and interlocking to increase capacity for commuter service between Wilmington and Newark. This project will eliminate a choke point and improve reliability and is currently under construction. When this project is completed, the Delaware Transit Corporation will be able to add up to 10 more daily SEPTA trains between Wilmington and Newark.

Another funded project includes the Newark Regional Transportation Center (NRTC), which broke ground in May 2018. The NRTC will feature a relocated and expanded passenger rail platform (with ADA-compliance), a new freight track to preserve existing train movements, and improved passenger facilities. Directly to the south of the NRTC is the University of Delaware's growing STAR Campus, a transit-oriented development that will support an increasing number of mixed uses, including institutional, office, and retail.

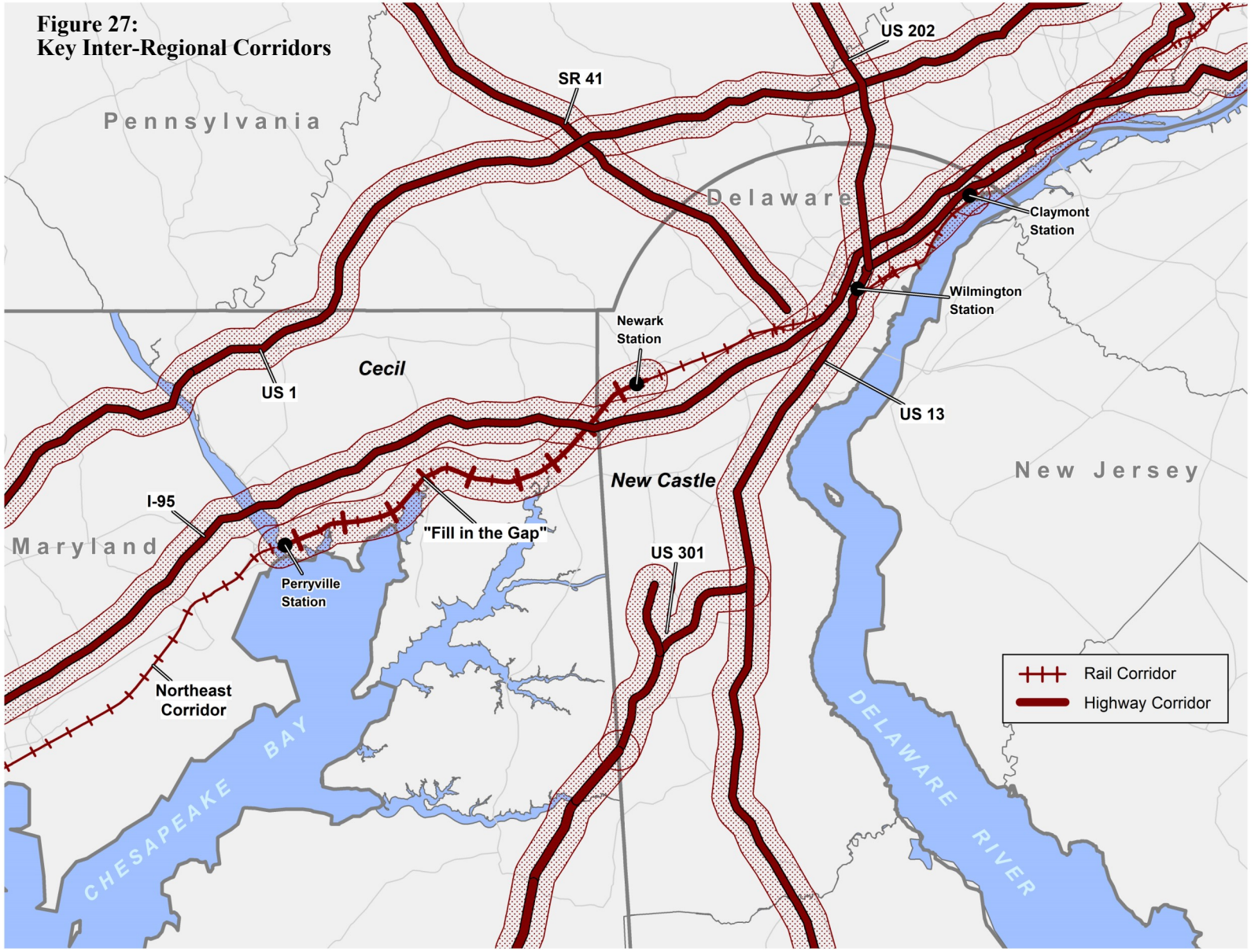
In Cecil County, there are ongoing efforts to fund a project that would add track length and interlocks between Perryville and Elkton, Maryland. Closing this rail gap would allow for the expansion of MARC train service to Elkton, Maryland and Newark, Delaware, as proposed in the MTA Growth & Expansion Plan. The population of TAZs within one mile of this rail gap is expected to increase by nearly 25% by 2040. This rail corridor is located in the Center and Core TIAs, is a significant metropolitan transit link, and is home to pockets of low-income communities. Another element tying everything together within this corridor is the NEC Future, which is a comprehensive plan developed by the Federal Rail Administration (FRA). NEC Future creates a framework for investments needed to improve passenger rail capacity and service through 2040 and beyond. The effort brings together stakeholders to determine the direction of critical investments within the corridor.

6. **US 301**— Primarily used as a truck diversion route for I-95 between Delaware and Maryland, this corridor has seen increases in truck volumes and safety concerns have mounted. There is a significant amount of funding in the approved Transportation Improvement Program to create a four-lane limited access expressway from the Maryland state line to SR 1. Most of the corridor is located in Developing or Rural TIAs. The project is intended to reduce traffic congestion, improve safety, and manage truck traffic. However, an impact may be an increased volume in truck traffic along the eastern shore of Maryland and surrounding points.

The population in this corridor is expected to increase by 75% between 2015 and 2040. Its AADT is projected to increase by 55% by 2045, with truck volumes increasing by 60%. Between 2007 and 2017, travel speeds along the roadway increased by 6%. Transit service is lacking along the corridor, and there are no future plans for transit.

7. **US 13**— With a current population exceeding 1,090,000, most of the corridor is located in the Center and Core TIAs. The corridor is home to increasing pockets of low-income and minority communities that are well served by transit options in the area. Along the Delaware River, there are several large scale economic development projects in Chester and Marcus Hook in Pennsylvania, redevelopment activity in Claymont, Delaware, and population and employment growth in Middletown, Smyrna, and Dover. With new potential land use opportunities along this corridor, increased demand is likely. Updated projections by TAZs show that the population in this corridor is expected to grow by 11% to over 1,200,000 by 2040. Its AADT and truck volumes are estimated to increase by nearly 80% by 2045. Between 2007 and 2017, travel speeds along the roadway fell by nearly 30%. Congestion is expected to increase by 65% by 2045.

Figure 27:
Key Inter-Regional Corridors



Section 8: Path Forward

INTER-REGIONAL ACTIVITY UPDATES

Along with updating this report, WILMAPCO has gauged its inter-regional efforts based on participation in committees and initiatives having an inter-regional element. Several of these listed efforts are summarized below:

- North Claymont Area Master Plan
- US 202 Corridor Master Plan
- DVRPC Chester County Transit Study
- Susquehanna River Rail Bridge Project
- MARC/SEPTA Rail Extension Ridership Analysis
- NEC Future
- East Coast Greenway
- Senate Resolution 10 Special Committee

North Claymont Area Master Plan

In January 2017, WILMAPCO endorsed the North Claymont Area Master Plan, which focuses on the redevelopment of the northern section of Claymont, Delaware between I-495 and the Pennsylvania state line. The area's existing land use mix of industrial, commercial, residential, and open space is underutilized and has significant potential for economic development due to ease of access to surrounding highways, the Delaware River, and public transit services, including the Amtrak Northeast Corridor.

The plan presents a vision for the area including a mix of land uses, multimodal transportation options, and a more walkable, livable environment. The focal point is the planned Claymont Regional Transportation Center, a relocation and enhancement of the Claymont Train Station, including a multimodal hub and multi-use trail connections. Land use changes include a variety of mixed uses within walking distance to the train station, as well as a waterfront park, medical or educational institutions, and separated industrial areas. The plan envisions North Claymont as a regional destination that will facilitate multimodal transportation options across county and state lines.

US 202 Corridor Master Plan

In 2018, WILMAPCO, DelDOT, and New Castle County jointly began development of the US 202 Corridor Master Plan, encompassing an area between the City of Wilmington and the Pennsylvania state line. The plan will provide a 20-year vision that identifies cohesive land use and transportation strategies to ensure the corridor will continue to be a safe, accessible, and economically thriving place for all. The plan will build on the results of the 2017 US 202 Market Assessment, with the objective of redeveloping US 202 as a high-quality multimodal corridor that integrates land use and transportation and promotes walkability, bikeability, and place-making.

Chester County Transit Study

In January 2017, DVRPC completed a study examining the potential of transit service between Chester County, Pennsylvania and New Castle County, Delaware. The study analyzed land use patterns, existing and historic transit services, commuting statistics, and travel trends between the two counties to determine the best path forward for developing a transit service across the state line. Two primary transportation alternatives were determined to be the most realistic options for the study area: limited stop bus service and vanpools. The study will help guide area transit providers in implementing a transit alternative in the study area. .

Susquehanna River Rail Bridge Project

The Susquehanna River Rail Bridge is a two-track rail bridge crossing between Havre de Grace and Perryville, Maryland. Built in 1906, the bridge currently carries Amtrak, MARC commuter rail, and Norfolk Southern trains across the Susquehanna River. In 2013, MDOT received a $22 million award to rehabilitate or replace the bridge to maintain ongoing rail services. In May 2017, the NEPA process was completed with the release of a Finding of No Significant Impact (FONSI). Next steps for this project include identifying funding sources for final design and construction. The project is intended to provide future improvements to capacity, trip time, and safety for commuter, freight, and intercity rail services, as well as improve the navigation channel for marine users.

MARC/SEPTA Commuter Rail Extension Ridership Analysis

On the 460 miles of Amtrak's Northeast Corridor railroad, there is only one gap in commuter rail service, between Perryville, Maryland and Newark, Delaware. The MARC Penn Line currently provides service between Washington, D.C. and Perryville, and the SEPTA Wilmington/Newark Line provides service between Newark and Philadelphia. In August 2017, WILMAPCO completed an analysis to determine the potential ridership that would result from filling this gap. Multiple scenarios were explored for a new connecting commuter rail service or extension of one of the two existing lines, which would also bring the possibility of reintroducing rail service to Elkton, Maryland. The projected ridership analysis supports the goal of connecting these two services; however, there are currently no funds in place for operation or construction.

NEC Future

In February 2012, the Federal Railroad Administration launched a comprehensive planning effort to define, evaluate, and prioritize future investments in Amtrak's Northeast Corridor, which stretches from Washington, D.C. to Boston. In July 2017, the FRA selected a preferred alternative as a corridor-wide vision. The FRA seeks to achieve modern, efficient passenger rail service for travelers on the NEC, including improving rail service, expanding rail capacity, and modernizing infrastructure. These improvements promise more frequent train service, faster trip times, improved airport connections, and increased access to employment opportunities.

East Coast Greenway

The East Coast Greenway will be a long-distance multi-use trail network that will link from Florida to Maine. Once completed, the greenway will connect multiple cities by trails, park paths, waterfronts, abandoned railroads, and other facilities.

Forty-three miles of the greenway travel through Delaware. 62% of off-road trail mileage is completed, and an additional 8% is funded. Presently, New Castle County has several completed trails designated as the East Coast Greenway. Most recently designated is the Jack A. Markell Trail, formerly known as the New Castle Industrial Track Greenway, which connects the Wilmington riverfront with the City of New Castle. The Delaware East Coast Greenway, DelDOT, WILMAPCO, and local agencies are working to plan and implement additional segments in conjunction with larger transportation improvements. In Maryland, 166 miles of greenway are planned. To date, Cecil County has not improved the greenway. Signs were installed for the entire interim on-road route in Cecil County during 2017.

Section 8: Path Forward

Senate Resolution 10 Special Committee Recommendations

In 2017, the 149th General Assembly of the Delaware State Senate passed Senate Resolution No. 10 (SR 10). SR 10 created a Special Committee to study and make recommendations regarding truck traffic movement along SR 41, SR 48, and SR 7 in New Castle County, Delaware. The Special Committee's recommendations were published in a January 2018 report titled "Special Committee to Study and Make Recommendations Regarding Truck Traffic & Freight Movements Along SR 41, SR 48 & SR 7." The committee developed these recommendations with the goals of reducing the number of trucks traveling along these roadways and improving the quality of life for those that live nearby. The recommendations that involve inter-regional efforts include the following:

- Conduct a feasibility study of constructing a bypass between US 1 and I-95.
- Conduct a feasibility study of constructing a passenger and freight rail spur from Wilmington that parallels the SR 41 corridor, including impacts to SR 7, SR 41, and SR 48.
- Conduct a feasibility study of constructing a dedicated freight line along the NE corridor from Perryville, MD to Newark, DE.
- Conduct a feasibility study of restricting trucks on SR 7, SR 41 and SR 48 during specified times, in specified directions, and based on loaded vs. unloaded conditions, determining impacts to, and improvements needed, on alternate routes.
- Conduct a feasibility study for improvements to the SR 896 corridor, including a potential alternate parallel route, to encourage trucks to use I-95 to SR 896.
- Continue to study options described in the 2016 Delaware Valley Regional Planning Commission (DVRPC) Chester County New Castle County Transit Study.
- Establish a bi-state working/coordination group to discuss and address issues associated with regional freight movement. The working group should be comprised of representatives from DelDOT, PennDOT, WILMAPCO, Delaware Valley Regional Planning Commission (DVRPC), Delaware State Police, Pennsylvania State Police, and other relevant stakeholders.

Section 8: Path Forward

Summary and Recommendations

Based on the findings of this report, more people, jobs, passenger vehicles, and trucks will continue to move in and through the 28-county study area. By 2040, overall population is anticipated to increase by 11.8%, while employment is expected to grow by 9.9%. From 2012 to 2045, total traffic and truck volumes are projected to rise by 53% and 55%, respectively. In the past decade, travel speeds have decreased in metropolitan areas and increased in rural areas. Congestion is expected to significantly impede traffic flows throughout the region by 2045, with a 65% increase in the number of roadways reaching or exceeding their carrying capacity.

Improvements to public transportation in the region will provide more accessible, more frequent, and more efficient transportation options and reduce the need for single-occupancy vehicles. The number of inter-regional transit routes has grown in recent years, providing more options for travelers crossing county lines. A number of completed and ongoing planning efforts seek to improve the public transit experience, including two major passenger rail station upgrades, feasibility studies to expand or introduce new transit services, a long-range plan for intercity rail, and area plans that encourage transit-oriented development and greater density to support transit and walkability. Closing the rail service gap in Cecil County (from Newark, Delaware to Perryville, Maryland) continues to remain a key initiative, which would improve connections in commuter rail service. New and expanded trails along the East Coast Greenway continue to provide increased options for active transportation.

Continued efforts should be made to expand inter-county transit services and reduce single-occupancy vehicle trips, put more freight on rails and waterways to mitigate the increasing congestion on major roadways, promote dense and walkable land use patterns, and coordinate overall planning activities to reduce greenhouse gases. Overall, current inter-regional involvement and activities should continue. Through further inter-agency communication, additional measures to take can be determined.

It is the aim with each iteration of this document that reported demographic and travel forecasts for 2040 and 2045 would prompt planning agencies to explore innovative strategies that will result in a desirable and prosperous outcome. By using this document as a resource to identify strengths and opportunities for improvements, all participating agencies should be better prepared to communicate with one another in a manner which will ultimately accomplish shared inter-regional objectives.

Appendix: Regional Coordination Agencies

The following agencies comprise the study area.

Baltimore Metropolitan Council (BMC)

The BMC is an organization of the elected executives of Baltimore City and Anne Arundel, Baltimore, Carroll, Harford, and Howard counties. The executives identify regional interests and develop collaborative strategies, plans, and programs which will improve the quality of life and economic vitality throughout the area. BMC staff provides technical support to the Baltimore Regional Transportation Board, and is also engaged in economic and demographic research, computer mapping applications, air and water quality programs, cooperative purchasing, and rideshare coordination.

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Caroline County, Maryland Department of Planning and Codes

The Department of Planning and Codes Administration identifies and plans for the appropriate scale, type and location for the county's future residential growth, public facilities and economic development while working to preserve important agricultural industry and natural resources. The Department also protects public safety and welfare, property values and the environment by implementing and enforcing land development, building construction, and licensing regulations.

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Delaware Valley Regional Planning Commission (DVRPC)

Established in 1965, the DVRPC provides transportation planning for Bucks, Chester, Delaware, Montgomery and Philadelphia counties in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey. DVRPC's mission is to plan for future growth providing technical assistance and services; conducting high priority studies; foster cooperation among various constituencies on diverse regional issues; determine and meet the needs of the private sector; and continuing public outreach efforts that promote two-way communication and public awareness of regional issues.

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Dover/Kent County Metropolitan Planning Organization

The Dover/Kent County MPO is the federally-designated agency responsible for coordinating transportation planning and programming in Kent County, DE, including the towns of Milford and Smyrna. Plans and programs adopted by the MPO outline how federal transportation funds will be spent and must comply with federal laws governing clean air and transportation.

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Appendix: Regional Coordination Agencies

Kent County, Maryland Department of Planning and Zoning

The Kent County Department of Planning and Zoning conducts long range plans, provides preservation and enhancement and guides development in Kent County, Maryland.

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Lancaster County Transportation Coordinating Committee (LCTCC)

The LCTCC is the MPO designated by the Governor of Pennsylvania to carry out the transportation planning process in Lancaster County. The 22-member LCTCC includes all nine Lancaster County Planning Commission members and other members representing the County Commissioners, City of Lancaster, State Legislature, the local transit and airport authorities, and PennDOT. Staff along with PennDOT and other planning partners and consultants, is responsible for developing federally required plans and programs.

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South Jersey Transportation Planning Organization (SJTPO)

The SJTPO is the MPO for the southern New Jersey area, covering Atlantic, Cape May, Cumberland, and Salem counties. Formed in mid-1993, SJTPO replaced three smaller, existing MPOs while incorporating other areas not previously served. SJTPO works to provide a regional approach to solving transportation problems. SJTPO coordinates the planning activities of participating agencies and provides a forum for cooperative decision-making among state and local officials, transit operators, and the general public.

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Queen Anne's County, Maryland Department of Planning

Queen Anne's is a Code Home Rule County located to the south and west of WILMAPCO. Queen Anne's County is a part of the Baltimore, Maryland Primary Metropolitan Statistical Area. It is governed by a five-member elected Board of County Commissioners. The staff consist of a county administrator, engineers, planners and those specializing in financial analysis, housing and community development, emergency services and parks and recreation.

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Appendix: Regional Coordination Agencies

Sussex County, Delaware Department of Planning

Transportation Planning for Sussex County is conducted by the Delaware Department of Transportation in cooperation with Sussex County.

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York County Planning Commission (YCPC)

The YCPC was created in 1959 by the Board of County Commissioners. The commission prepares a comprehensive plan, as well as administers Federal programs such as the Community Development Block Grant Program and the Metropolitan Transportation Planning Program. Technical assistance is provided to municipalities requesting planning services such as development of Comprehensive Plans, Zoning Ordinances and Subdivision\Land Development Ordinances. The Planning Commission also reviews and makes recommendations to municipalities on proposed plans, ordinances and ordinance amendments as well as all subdivision and land development plans.

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