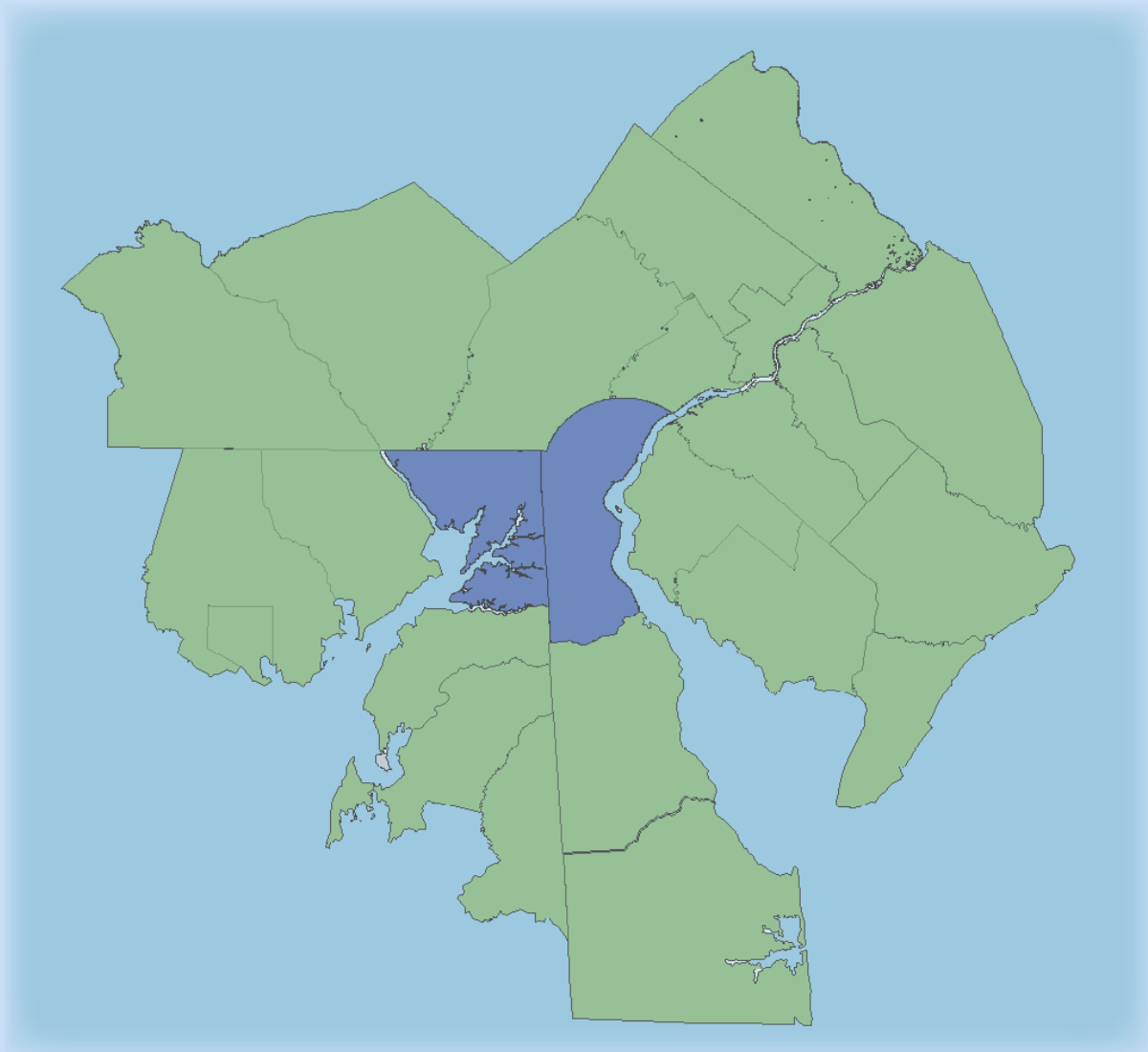


WILMAPCO

2004

Inter-Regional Report



WILMAPCO

2004 Inter-Regional Report

**Prepared by the staff of the
Wilmington Area Planning Council**

Adopted March 3, 2005

The preparation of this document was financed in part with funds provided by the Federal Government, including the Federal Transit Administration and the Federal Highway Administration of the United States Department of Transportation

Table of Contents

Executive Summary.....	i
Introduction	iii
Chapter 1: Demographics.....	1
Chapter 2: Urbanized Area.....	5
Chapter 3: Traffic and Travel	7
Chapter 4: Freight Movement	11
Chapter 5: Investment Strategies, Projects/Studies and Transit Service	15
Chapter 6: Path Forward	19
Appendix A: Regional Agencies	22
Appendix B: Workflow Matrix.....	26
Appendix C: Population Charts	27
Appendix D: Employment Charts.....	29

Figures

Inter-Regional Study Area.....	iv
Regional Agencies.....	v
Population Distribution 2000.....	2
Employment Distribution 2000.....	2
Population Change 1990-2000	3
Population Change 2000-2025.....	3
Employment Change 1990-2000.....	4
Employment Change 2000-2025.....	4
Urban Area Change 1990-2000.....	6
Urban Area Change (Bi-County WILMAPCO region).....	6
Local County to County Workflow 2000.....	8
Overview of County to County Workflow 2000.....	9
Average Annual Daily Traffic Change 1995-2003.....	10
Destination of Freight Originating in the WILMAPCO Region.....	12
Origin of Freight Terminating in the WILMAPCO Region.....	12
Destination of Trucks Originating in the WILMAPCO Region.....	13
Origin of Trucks Terminating in the WILMAPCO Region.....	13
Daily 2002 Truck Volumes.....	14
Investment Strategies.....	15
Major Projects / Studies.....	16
Inter-Regional Transit Service.....	17

Tables

Changes in Urbanized Area.....	i
Daily Commuter Volume Changes Entering and Leaving New Castle County.....	8
New Castle & Cecil Commuter Shifts 1990 - 2000	9
AADT Change at Cordon Point with 2000 Capacity.....	10
2002 Daily Truck Volumes at Cordon Points.....	14
Major Projects / Studies Description	16
Population Tables.....	27-28
Employment Tables.....	29-30

Executive Summary

The Wilmington Area Planning Council (WILMAPCO) has been engaged in an effort to better understand how land use and transportation investments impact our planning activities. The Inter-Regional Report is designed to be a data-orientated summary of demographic changes, travel characteristics, and the impact of freight traffic along regional roadway corridors. The goal of this report is to accomplish the following:

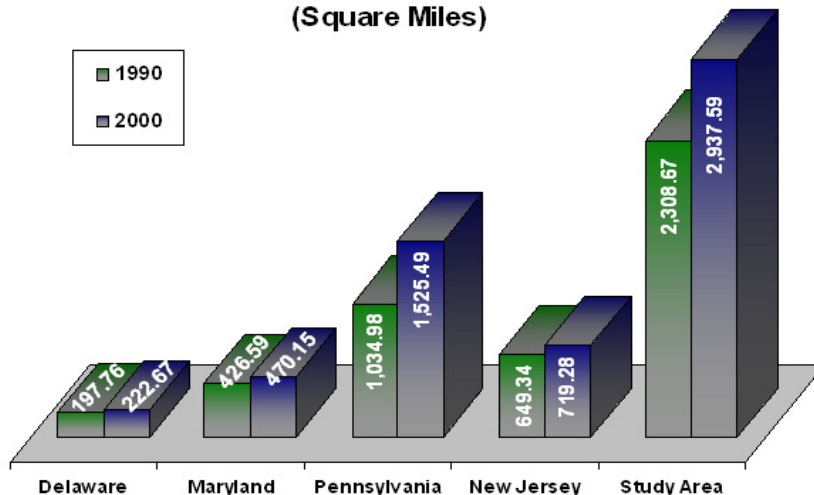
- Provide an accurate past, present and future demographic and travel behavior profile of the study area.
- Examine the expanding urban infrastructure of the study area.
- Outline and study key regional roadways which transfer large amounts of traffic to and from the WILMAPCO region.
- Point out key counties with which the WILMAPCO region exchanges large amounts of freight.
- Identify investment strategies of neighboring planning agencies.
- Identify future transportation improvement projects of neighboring agencies.

To truly understand the study area, we must know key details and trends that pertain to the goals listed above. Listed below are some of the more significant findings of this report.

Significant Findings

- Total study area population increased by 5.5% (471,958) between 1990 - 2000.
- Total study area employment increased by 4.6% (211,248) between 1990 - 2000.
- There was a 27.2% increase in urbanized area from 1990-2000 within the study area (see table 1)
- Urban areas make up 30% of the study area.
- Urban boundaries now border the WILMAPCO region along DE41, US40, DE52, and DE7
- The WILMAPCO region sends out approximately 2.8 million more tons of freight annually than it receives from other counties in the study area.
- The WILMAPCO region ships and receives more freight to and from Sussex County than it does from the entire state of New Jersey.
- A total of 59,522 commuters travel into New Castle County daily, with a total of 35,392 leaving New Castle County for other destinations. The resulting commuter shift is a net in-migration of 24,130 commuters.
- In 2000, Cecil County counted a net out-migration of 15,871 workers, with 23,609 workers traveling away from Cecil County for work while 7,738 commuters traveled to Cecil County for employment.
- From 1990 to 2000, the number of people traveling to New Castle County for work increased by 25.4%.

Table 1:
Changes in Urbanized Area
(Square Miles)



*Square Mileage in Urbanized Area chart does not include Urban Clusters.

Introduction

The WILMAPCO Inter-Regional Study was initiated in 1999 in order to better understand regional transportation issues and to foster collaboration among the region's planning agencies. Since then, WILMAPCO has adopted a two-pronged approach to the Inter-Regional Study. First, we sought to improve communication by meeting with other MPOs, citizens, elected officials and transportation planning agencies to discuss transportation planning issues. Second, we focused on improving data collection and sharing data with other agencies in the region.

This report will examine existing and projected population and employment in the Inter-Regional Study area. It will also explore commuter and freight flow within the area and its impact on the existing infrastructure. Finally, it provides a suggested course of action and identifies short and long term projects that will help address some of the transportation issues raised in this report.

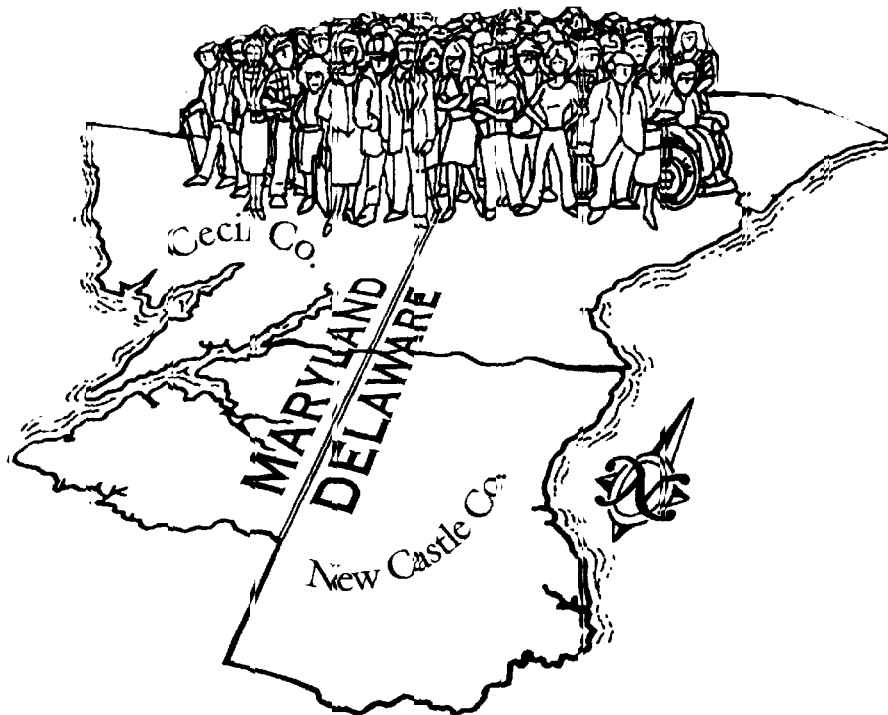


Figure 1 displays the Inter-Regional Study Area. We outlined our study area by selecting counties that are located approximately 60 miles from the center of the WILMAPCO region or about one hour's drive during peak hours. This area will be the focus of our analysis as we look at the potential future transportation impacts to, and their effects on, the WILMAPCO region.

Figure 1:

Inter-Regional Study Area

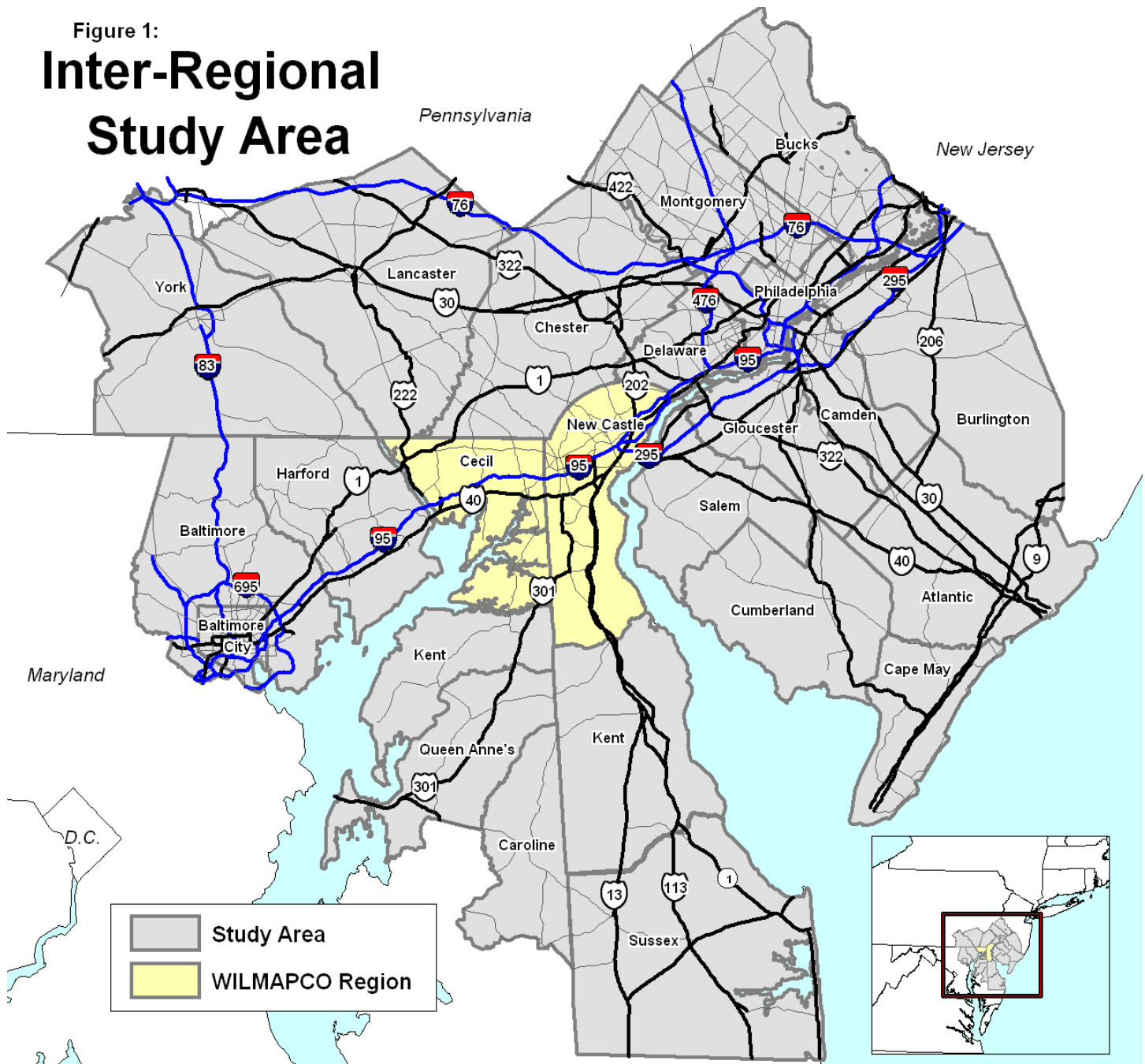
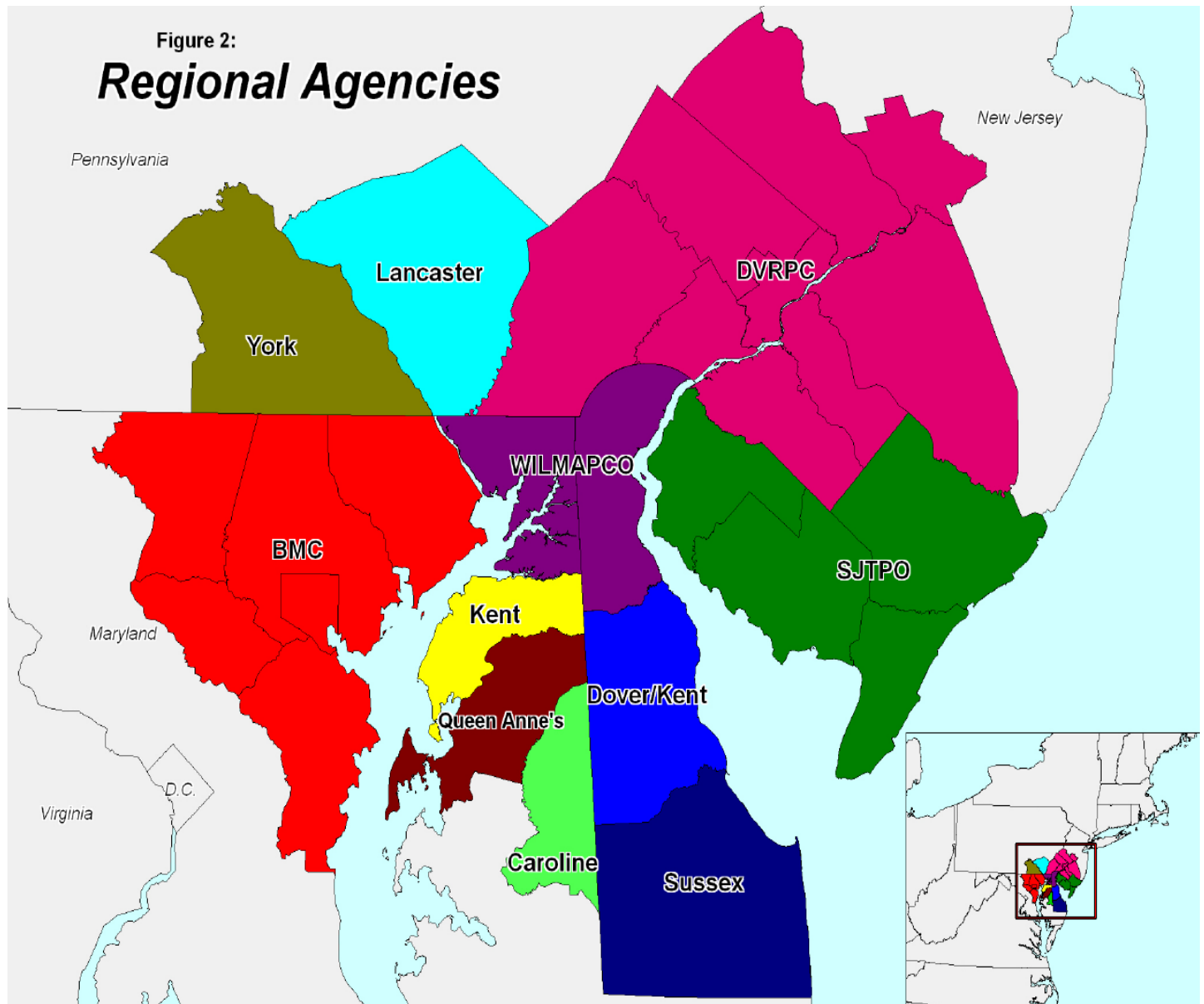


Figure 2 illustrates the agencies WILMAPCO contacted while producing this report. The agencies are listed on the following page, with a more detailed summary to follow in the appendix. While this report focuses on many data intensive analyses, the outcome will, hopefully, provide insight into issues where collaboration will be necessary in order to achieve improvements. Note that our study area may not reflect the entire jurisdiction of some agencies.



Interstate Coordination Agencies

•Baltimore Metropolitan Council (BMC)

The Baltimore Metropolitan Council serves a six-county area, all within central Maryland, including Harford, Baltimore, Baltimore City, Carroll, Howard and Anne Arundel Counties. The 2000 U.S. population in the BMC jurisdiction is 2.5 million people.

•Caroline County, Maryland Department of Planning and Codes

The Caroline County, Maryland Department of Planning and Codes serves all planning functions within Caroline County, in southeast Maryland. The 2000 U.S. population in Caroline County is 29,772.

•Delaware Valley Regional Planning Commission (DVRPC)

The Delaware Valley Regional Planning Commission serves a bi-state, nine-county area consisting of Burlington, Camden, Gloucester and Mercer Counties in New Jersey and Bucks, Chester, Delaware, Montgomery and Philadelphia Counties in Pennsylvania. The 2000 U.S. Population in the DVRPC jurisdiction is 5,387,407.

•Dover/Kent County Metropolitan Planning Organization

The Dover/Kent Metropolitan Planning Organization serves Kent County, Delaware including Milford and Smyrna. The 2000. U.S. Census population in Kent County is 127,085.

•Kent County, Maryland Department of Planning and Zoning

The Kent County, Maryland Department of Planning and Zoning serves as the planning agency for Kent County, Maryland. This county is located in eastern Maryland, just south of Cecil County, Maryland, and shares an western edge with the Chesapeake Bay. The 2000 U.S. Census population in Kent County is 19,197.

•Lancaster County Transportation Coordinating Committee (LCTCC)

The Lancaster County Transportation Coordinating Commission is the Metropolitan Planning Organization for Lancaster County, Pennsylvania. This county is located in southeastern Pennsylvania, located north of Harford County, Maryland. The 2000 U.S. Census population in Lancaster County is 470,658.

•Queen Anne's County, Maryland Department of Planning

Queen Anne's County, Maryland Department of Planning is responsible for the planning functions within Queen Anne's County, Maryland. This county is located in southeastern Maryland, directly south of Kent County, Maryland. The 2000 U.S. Census population in Queen Anne's County is 40,563.

•South Jersey Transportation Planning Organization (SJTPO)

The South Jersey Transportation Planning Organization is the Metropolitan Planning Organization for southern New Jersey, including the counties of Salem, Cumberland, Cape May and Atlantic. According to the 2000 U.S. Census, the population in SJTPO jurisdiction is 565,601.

•Sussex County, Delaware Department of Planning

The Sussex County, Delaware Department of Planning is responsible for all planning activities in Sussex County, Delaware. This county is located south of Kent County and shares borders with Maryland. The 2000 U.S. Census population in Sussex County is 157,430.

•York County Planning Commission (YCPC)

The York County Planning Commission provides planning related services for those living within York County, Pennsylvania. York is located west of Lancaster, and shares a southern border with Baltimore County, Maryland. The 2000 U.S. Census population in York County is 381,751.

Chapter 1

Demographics

This chapter will analyze the demographic profile of the study area. Data has been compiled for population and employment from the years 1990 - 2025. This information will help illustrate the distribution of jobs and people.

The character of our study area varies considerably. Wilmington, Baltimore and Philadelphia have very high population and employment densities. Contrary to these areas southern Delaware and southern New Jersey are more rural and, in the coastal areas, have good amenities to support retirement communities and vacations. For more demographic description of the study area, view the charts in Appendix C and D.

Population

The 2000 population distribution of the study area shows that most people live in or around the major metropolitan cities of Philadelphia, Baltimore and Wilmington. Kent County, MD had the lowest population with 19,197 residents while Philadelphia County, PA had the highest number of residents with 1,517,500 living in Philadelphia as of 2000.

Employment

The employment distribution mirrors the population distribution with employment concentrations located in and around the major metropolitan areas of Philadelphia, Baltimore and Wilmington. Fewer jobs are found in the more rural areas of the study area such as southern Delaware, eastern Maryland and southern New Jersey. Kent County, Maryland had the lowest employment with 11,600 workers while Philadelphia County, Pennsylvania had the highest employment with 786,150 employees.

Population and Employment Changes

Maps on the following pages illustrate population and employment changes in the study area for the time periods of 1990-2000 and 2000-2030. In these time periods, we notice a definite trend. The areas that recorded the highest percentage change in population being the more rural counties in the area. This trend is also concurrent with the employment data. Although the highest concentrations of jobs and people remain centered around the big cities, there are small percentage losses of population and employment in those areas.

Findings

- Study area population increased by 5.5% or 471,958 persons between 1990 - 2000.

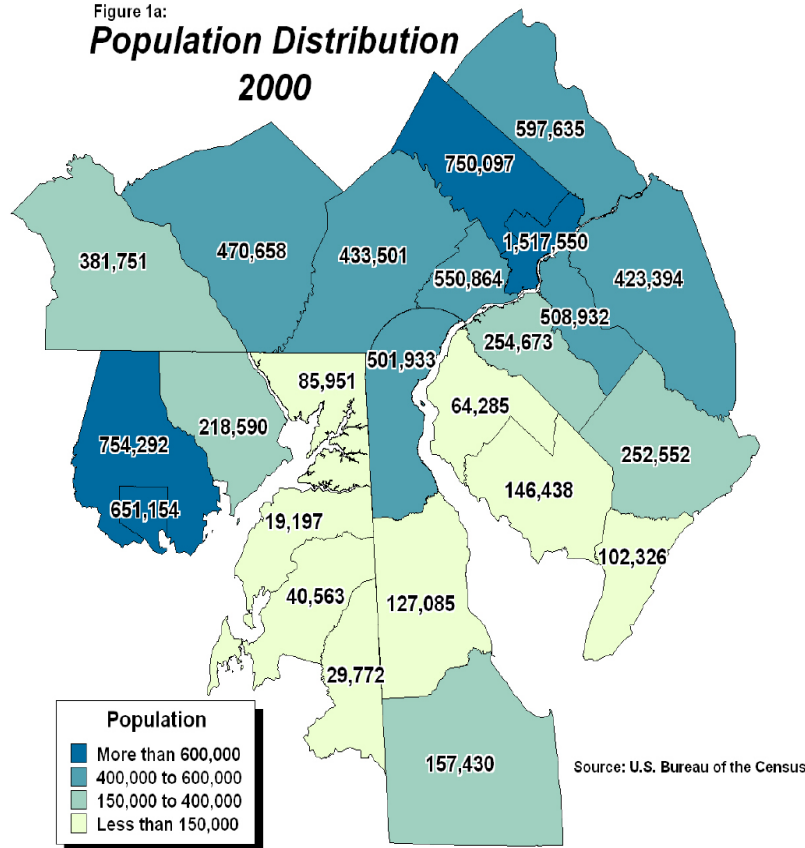
Top three counties with the largest percentage and absolute population increases:	
Percentage Change:	Absolute Change:
1) <i>Sussex County, DE: 38.3% (44,201)</i>	1) <i>Montgomery County, PA: 71,986 (10.6%)</i>
2) <i>Cecil County, MD: 20.5% (14,604)</i>	2) <i>Baltimore County, MD: 62,158 (9%)</i>
3) <i>Harford County, MD: 20% (36,458)</i>	3) <i>New Castle County, DE: 59,987 (13.6%)</i>

- Study area employment increased by 4.6% or 211,248 jobs between 1990 - 2000.

Top three counties with the largest percentage and absolute employment increases:	
Percentage Change	Absolute Change
1) <i>Sussex County, DE : 42.5% (20,141)</i>	1) <i>Baltimore County, MD : 49,851 (11.7%)</i>
2) <i>Queen Anne's County, MD: 33.5% (4,329)</i>	2) <i>New Castle County, DE : 37,559 (14.9%)</i>
3) <i>Harford County, MD: 29.3% (22,173)</i>	3) <i>Montgomery County, PA 33,699 (7.4%)</i>

Figure 1a:

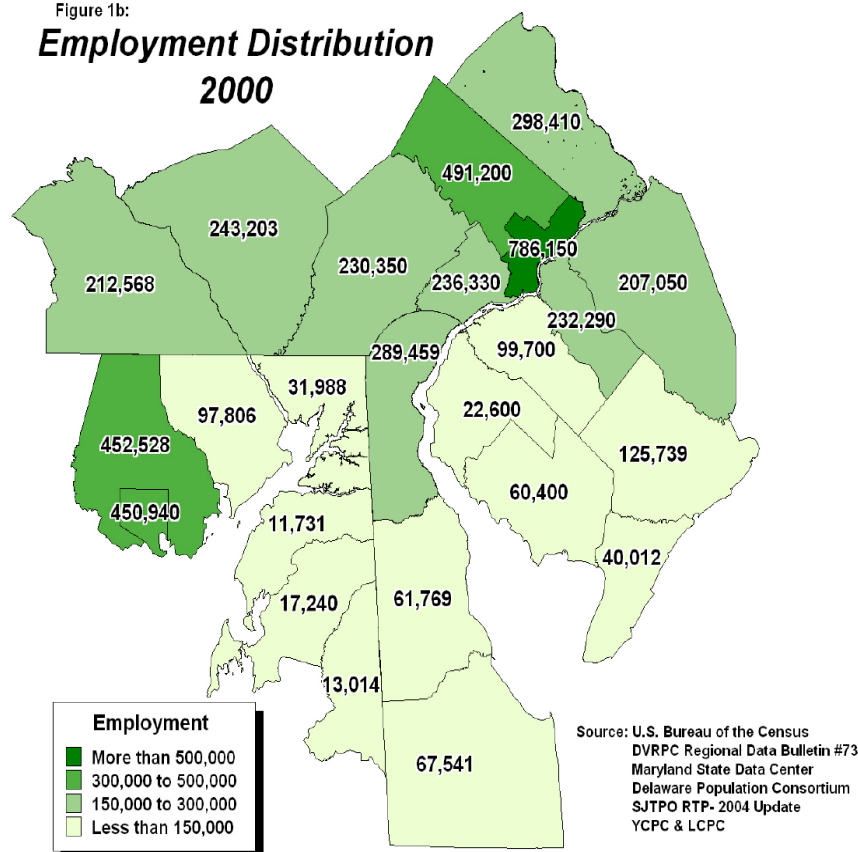
Population Distribution 2000



This map displays the population distribution in our study area as of 2000. The highest concentrations of population are in the major metropolitan areas of Philadelphia and Baltimore City. These two cities' populations make up 25% of the total 9,040,615 people who live in our study area. The 2003 Census population estimate has now grown to 9,196,293. The second largest populations are found in Montgomery County, PA and Baltimore County, MD.

Figure 1b:

Employment Distribution 2000



The employment concentrations in our study area are highest in Philadelphia and Baltimore. The lowest numbers are along the eastern shore of Maryland in the counties of Kent, Queen Anne's and Caroline. Overall, our study area has about 4.8 million jobs, including Baltimore City and Philadelphia, which alone account for close to 20% of the total employment. New Castle County has 289,459 jobs, making it the significant economic area in Delaware. With the exception of Baltimore, the highest number of jobs is in the northern part of the study area.

Figure 1c:

Population Change 1990 - 2000

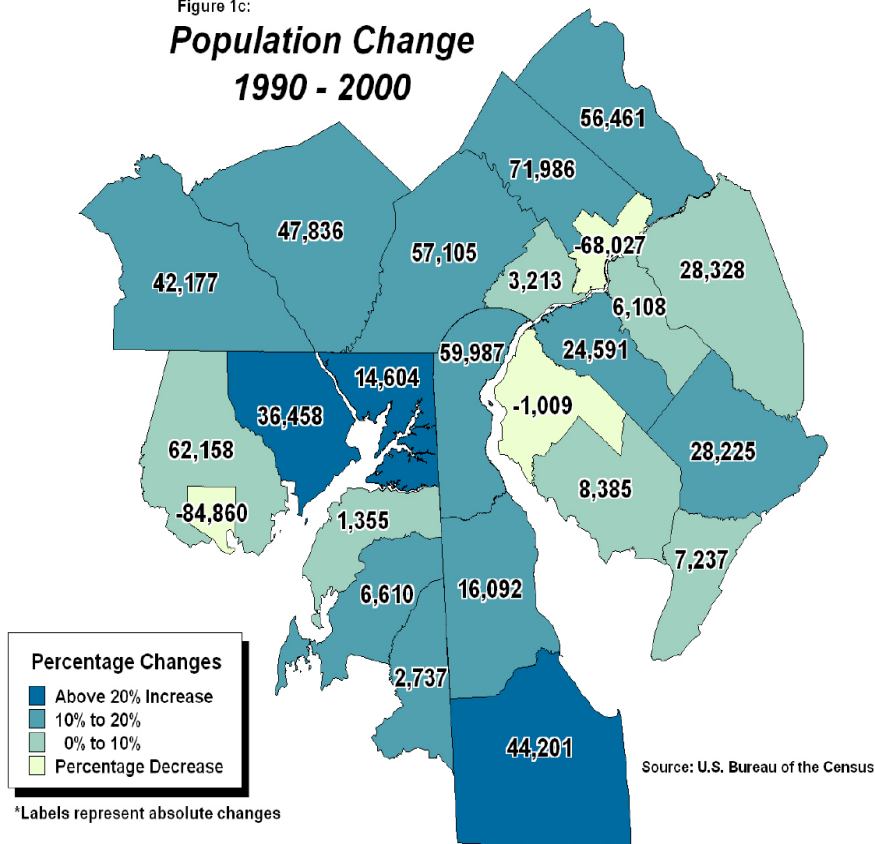
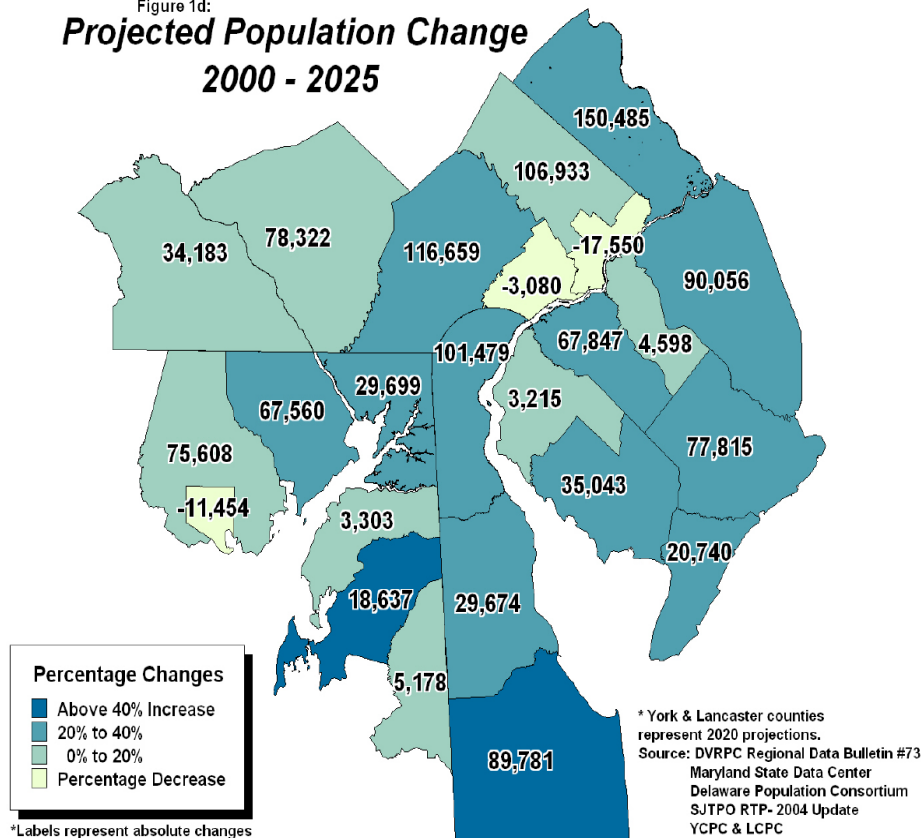


Figure 1c illustrates population change from 1990 to 2000. The varying shades of blue represent a percentage change in population with the label denoting the actual number of persons that make up that percentage change. The darkest blue represents the highest percentage of population change while the palest color represents a loss in population.

All but three areas, Baltimore City, Salem County, NJ and Philadelphia, experienced growth in population. Sussex County, DE ranks the highest with a growth rate of 38.3% from 1990-2000. Cecil County and Harford County, MA have the second highest percentage change with a 20% increase.

Figure 1d:

**Projected Population Change
2000 - 2025**



Projected change in population between 2000 and 2025 is depicted in figure 1d. The highest percentage increases are in the more rural counties of our study area. Sussex County, DE expects an increase of 89,781 persons, which is a 57% increase in population. Cape May County, NJ and Queen Anne's County, MA expect the next largest changes in population, with both counties expecting close to a 40% increase by 2025.

Figure 1e:
**Employment Change
1990 - 2000**

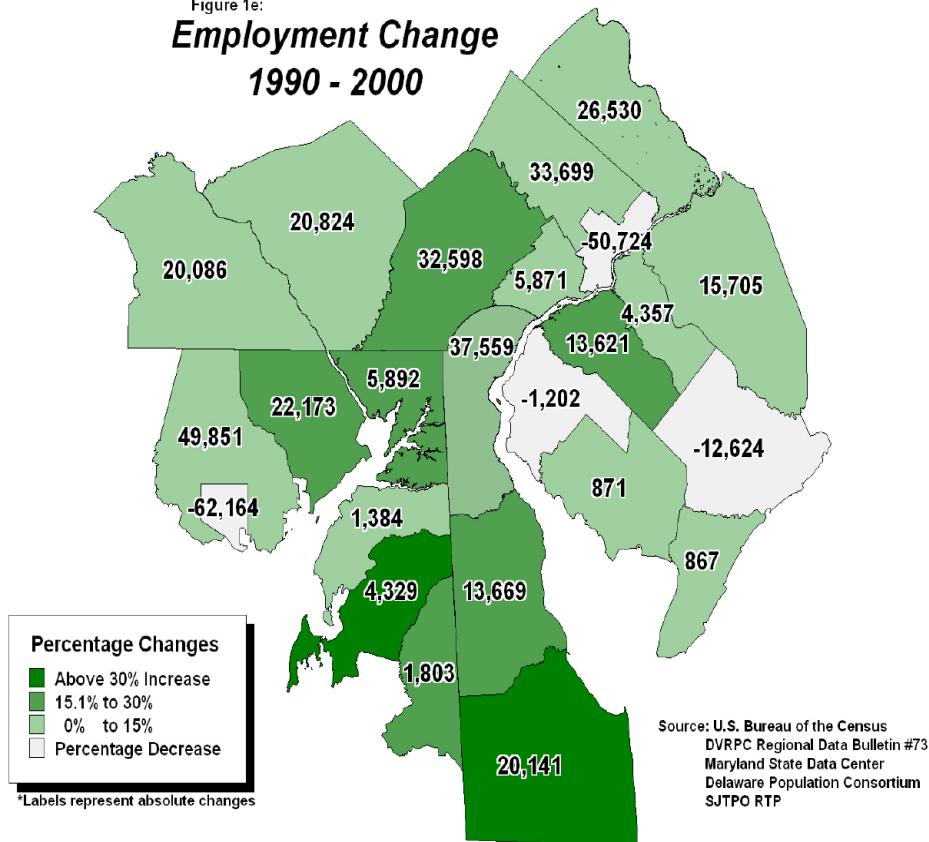


Figure 1e shows employment change from 1990 to 2000. In the past decade, the highest percent change in employment was in the rural areas of Queen Anne's County and Sussex County where employment increased over 30% in both counties. Chester County, PA also experienced a large increase in employment with a 16.5% increase, an additional 32,598 jobs since 1990.

Baltimore and New Castle Counties experienced the largest absolute growth, adding 49,851 and 37,559 employees, respectively. Philadelphia, Salem, Atlantic and Baltimore City have each lost employment over the past decade.

Figure 1f:
**Projected Employment Change
2000 - 2025**

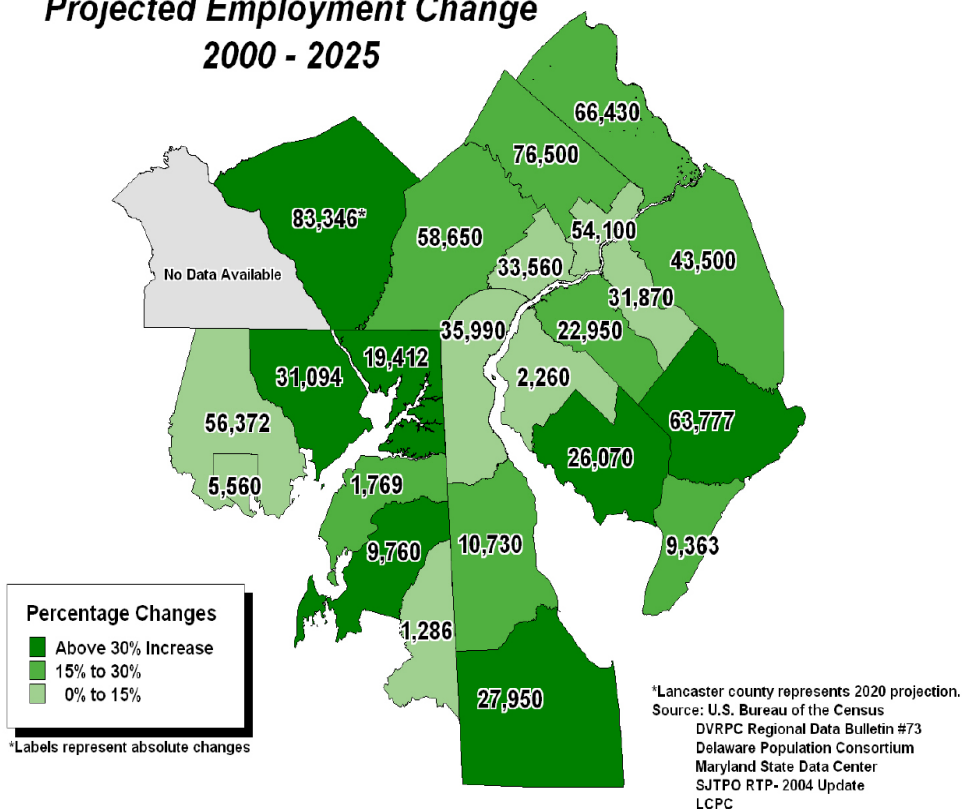


Figure 1f illustrates the projected change in employment for the years 2000 - 2025. Pennsylvania counties are projected to experience large increases in employment. Lancaster County is projected to have the highest change, with 83,346 additional jobs, or a 34.3% projected increase. Take note that this projection represents 2020 estimates. Although Atlantic County experienced a dip in employment from 1990-2000, its projection is for a 50.7% increase in employment in 25 years.

Chapter 2

Urbanized Area

Every ten years the U.S. Census releases data which designates new areas as urban in character. Urbanized areas are directly related to population with any statistical area with 50,000 people or more designated as urban. The U.S. Census designates areas as urban, rural and urban cluster. Urban clusters are a new level of geography that was released by the Census in 2000. This classification defines areas containing more than 2,500 but fewer than 50,000 people. This chapter will examine the expanding urban areas within our study area. On page 6 Figure 2a illustrates the geographic locations of the urbanized growth. Dark green represents areas of urban character in 1990. Areas in light green represent the newly designated urban areas as of 2000, and red depicts the new Urban Clusters.

Delaware

New Castle County experienced the largest increase of urban areas within Delaware. Newly designated areas appeared south of Newark and along the southern border of Route 40 in New Castle County. The state capital of Dover in Kent County, Delaware experienced small growth to the north but most growth areas are just south of the city sandwiched between US 13 and DE1. Sussex County has a small amount of classified urban area to the west of US 13 at the Maryland - Delaware state line. A significant number of urban clusters were designated in Sussex County in 2000. These clusters mainly appeared in the resort areas along the south eastern coast of the county, but also inland at Seaford. Between 1990 and 2000 Delaware gained nearly 25 square miles of urban areas, or a 12.6% increase.

Pennsylvania

The study area in Pennsylvania had the most newly designated urban areas in 2000. Counties in Pennsylvania experienced the most growth with 1,525 square miles making up its urban area in 2000, up from 1,035 in 1990. This is a 47.4% increase from 1990. Large sections of urban area appeared north of Philadelphia in Montgomery and Bucks Counties. Chester and Delaware Counties registered growth south of Route 1, towards New Castle County, DE and along US 322, towards Lancaster. Lancaster and York Counties expanded in all directions with newly designated urban areas and urban clusters.

New Jersey

Large swaths of new urban area were designated to the east and south of Camden in Burlington, Gloucester and Camden Counties. A large tract of urban area was designated west of Atlantic City. The resort areas along the eastern coast of Cape May County are now designated as urban as well as a large southern portion of the county around Wildwood. Cumberland County had a large urban cluster designated around Bridgeton. New Jersey increased its urban area by 10.7% or 69.94 square miles from 1990 - 2000.

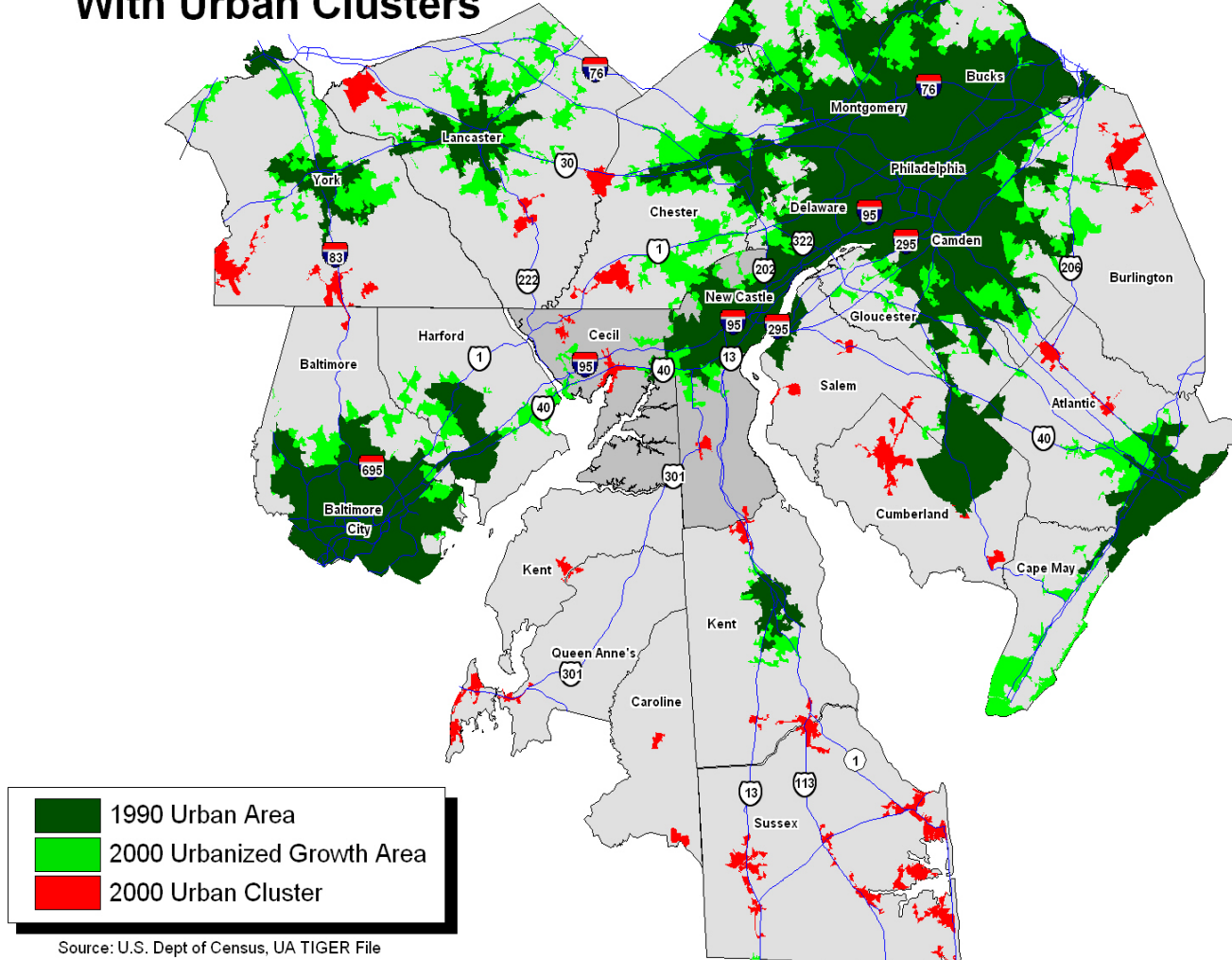
Maryland

Maryland had an additional 43 square miles of urban area designated in 2000. Most of the urban expansion in the Maryland portion of the study area was located to the north and east of Baltimore City in Baltimore and Harford County along US1, US40 and I-95. Small portions of Cecil County were newly designated as urban and urban clusters, mainly along US 40 and I-95.

Findings:

- The study area experienced a 27.2% increase in urban area from 1990-2000.
- Urban Areas make up 2,938 square miles, or 30% of the study area.
- In 2000, New Castle County had 178 square miles of urban area, an increase of 18 square miles, or 11.5%, from 1990.
- In 2000, Cecil County had 24 square miles of urban area, an increase of 11 square miles, or 87.6% from 1990. Cecil County had the highest percentage increase in urban area.
- Pennsylvania had the highest absolute growth in urban area with 490 square miles added between 1990 - 2000.

Figure 2a:
**Changes in Urbanized Area
1990 - 2000
With Urban Clusters**

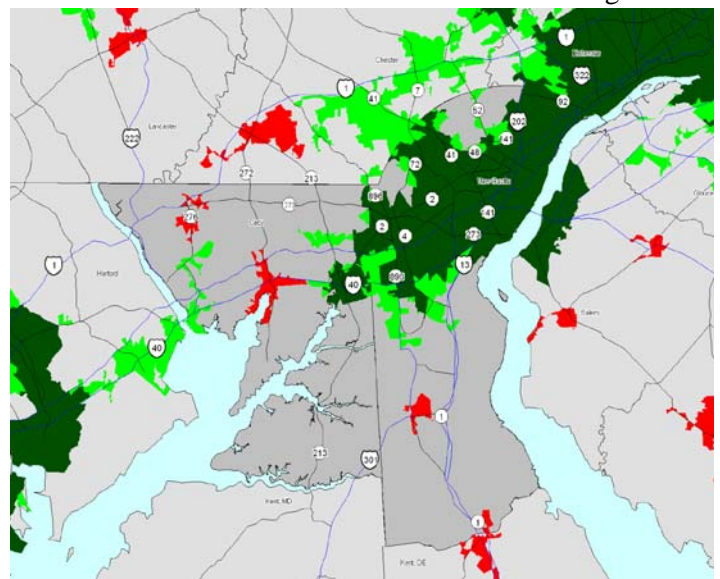


Source: U.S. Dept of Census, UA TIGER File

Figure 2b

Figure 2a depicts the growth of urbanized areas within the study area from 1990 - 2000. Dark green represents the urban area classification as of 1990. Light green represents the urban areas that were added as of 2000. Red indicates urban clusters.

Figure 2b is a close-up image of the WILMAPCO region's newly defined urban areas. Notice the large addition of urban area just northwest of New Castle County, DE in Chester County, PA.



Chapter 3

Traffic and Travel

Using the Census Transportation Planning Package (CTPP), a data set compiled on transportation activities throughout the United States, we can analyze how people get to their jobs. Using the CTPP's journey-to-work behavior we notice commuter shifts with counties adjacent to the WILMAPCO region but also with counties that are more than a county away. In conjunction with the CTPP information is the Average Annual Daily Traffic (AADT). The AADT provides information on the total volume of traffic on a roadway segment for one year, divided by the number of days in the year. Both directions of traffic volumes are reported as well as total two-way volume counts. Combining these data sets provides insight as to which roadways facilitate the travel of commuters to and from the WILMAPCO region on their journey to work each day.

Although this information is available for all the counties in our study area, we will specifically analyze the travel behavior to and from the WILMAPCO region with images depicting these traffic flows. A full inter-regional travel matrix depicting commuter shifts between every county in our study area is located in Appendix B.

New Castle County, Delaware

New Castle County's increasing economic vitality, population and employment have resulted in increased traffic volume on our roadways. This increase is not just residents of New Castle County, but also commuters who work in New Castle County and live in other counties and states.

Significant volumes of commuters enter New Castle County from over ten different counties in our study area. Counties that have the highest daily commuter exchanges are Chester County, PA, Delaware County, PA, Philadelphia County, PA, Kent County, DE and neighboring Cecil County, MD. These five counties alone send over 40,000 commuters to New Castle County each day. New Castle County retains just under 210,000 commuters daily.

Cecil County, Maryland

Cecil County has experienced growth over the past decade. Large increases of population have resulted in increased traffic volumes. Cecil County retains just over 18,000 commuters a day. An almost equal number amount of commuters are exchanged between Cecil and the neighboring counties of New Castle County, DE and Harford County, MD.

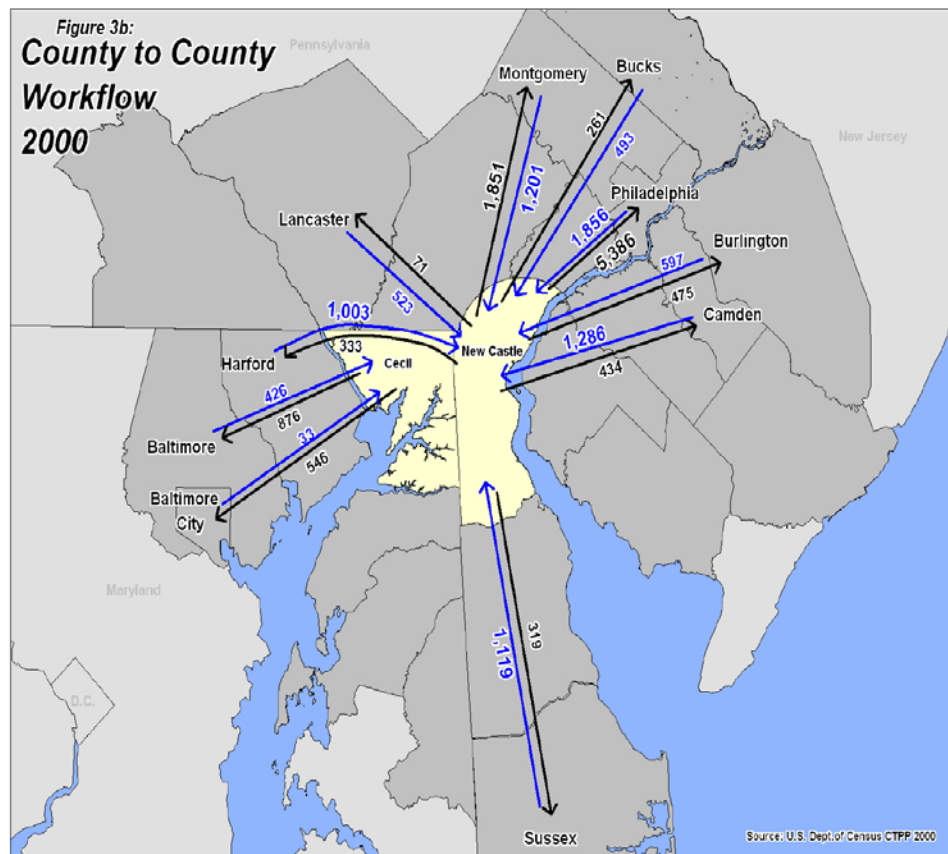
Findings:

- In 2000, New Castle County registered a 24,130 net in-migration of workers daily, with 59,522 workers traveling to New Castle County for employment and 35,392 New Castle County residents traveling away from the county for employment.
- Workers entering New Castle County for work are primarily coming from:
 - Chester County, PA : 21.8% (12,976)
 - Delaware County, PA : 15.1% (9,002)
 - Cecil County, MD : 23.6% (14,059)
 - Kent County, DE : 10.2% (6,058)
- In 2000, Cecil County counted a net out-migration of 15,871 workers. 23,609 workers traveled away from Cecil for work while 7,738 commuters traveled to Cecil for employment.
- Workers entering Cecil County for work are primarily coming from:
 - New Castle County, DE : 43.7% (3,379)
 - Harford County, MD : 21.2% (1,643)
- Roadways with significant average annual daily traffic percentage increases are:
 - DE 41 @ Pennsylvania border - 38.93%
 - MD 213 @ PA / MD border - 65.31%
 - MD 272 @ PA / MD border - 61.99%
 - MD 222 @ PA / MD border - 59.8%



Figure 3a displays not only the number of commuters coming into our region but also the workforce that leaves our region as well. Large shifts in commuters take place between New Castle County in Delaware and Chester County and Delaware County in Pennsylvania, Cecil County in Maryland and Kent County in Delaware. Large numbers of Cecil County employees commute to Harford County in Maryland. Table 3a displays the changes in commuter volumes entering and leaving New Castle County from 1990 - 2000.





Commuters traveling more than a county away for employment is a prevalent trend throughout our study area. Figure 3b illustrates the large shifts in commuters between New Castle County and Philadelphia County, Camden County, Sussex County, and Harford County. A large shift is also noted between Cecil County and Baltimore County. New Castle County and Philadelphia County trade just over 7,000 commuters daily. Montgomery County trades just over 3,000 workers with New Castle County. Table 3b displays changes in commuter shifts from 1990 - 2000 between New Castle County, Cecil County and selected counties within our study area.

Table 3b: New Castle & Cecil Commuter Shifts 1990 -2000						
Leaving New Castle	Philadelphia	Montgomery	Chester	Delaware	Cecil	Kent, DE
1990	4,697	903	3,514	6,188	2,104	2,028
2000	5,386	1,851	4,738	8,150	3,379	3,927
# Change	689	948	1,224	1,962	1,275	1,899
% Chng 90 - 00	14.67	104.98	34.83	31.71	60.60	93.64
Entering New Castle	Philadelphia	Chester	Delaware	Sussex	Kent, DE	Gloucester
1990	1,158	10,354	7,556	362	4,307	1,029
2000	1,856	12,976	9,002	1,119	6,058	1,662
# Change	698	2,622	1,446	757	1,751	633
% Chng 90 - 00	60.28	35.32	19.14	209.12	40.65	61.52
Leaving Cecil	New Castle	Harford	Baltimore	Balt. City	Chester	Delaware
1990	10,761	3,117	544	422	796	258
2000	14,059	4,441	876	546	941	373
# Change	3,298	1,324	332	124	145	115
% Chng 90 - 00	30.65	42.48	61.03	29.38	18.22	44.57
Entering Cecil	New Castle	Harford	Chester	Delaware	Baltimore	Kent, DE
1990	2,104	1,535	479	34	240	29
2000	3,379	1,643	557	192	426	243
# Change	1,275	108	78	158	186	214
% Chng 90 - 00	60.60	7.04	16.28	464.71	77.50	737.93

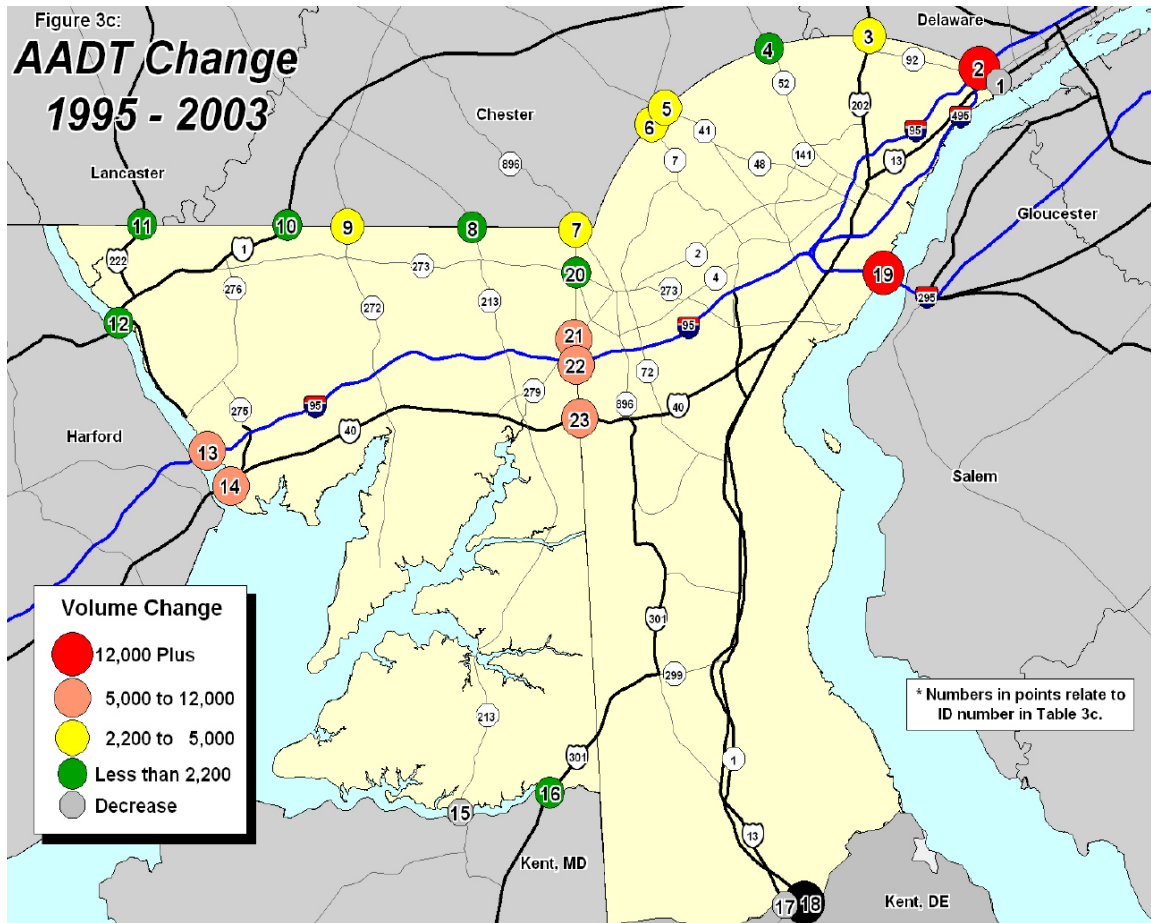


Figure 3c illustrates Average Annual Daily Traffic (AADT) change from 1995 to 2003. The cordon style analysis helps us identify traffic flows entering and leaving our area. Cordon Point 18 (DE Route 1) is displayed as black because in 1995 the roadway had not been completed. Refer to Table 3c for further detailed information about daily traffic and relative capacity at the cordon points.

Table 3c: AADT Change at Cordon Point with 2000 Capacity						
ID	Location	1995 AADT	2003 AADT	AADT Change	AADT % Change	2000 Capacity
1	US13 DE/PA Line	5,595	4,892	-703	- 12.56%	28,600
2	I95 DE/PA Line	107,402	127,906	20,504	19.09%	153,200
3	US202 DE/PA Line	39,826	44,219	4,393	11.03%	50,000
4	DE52 DE/PA Line	10,342	11,312	970	9.38%	16,400
5	DE41 DE/PA Line	9,864	13,704	3,840	39.93%	14,000
6	DE7 DE/PA Line	12,260	14,470	2,210	18.03%	13,000
7	MD896 MD/PA Line	8,975	11,625	2,650	29.53%	14,000
8	MD213 PA/MD Line	2,450	4,050	1,600	65.31%	19,000
9	MD272 PA/MD Line	4,275	6,925	2,650	61.99%	19,000
10	US1 PA/MD Line	5,500	7,625	2,125	38.64%	19,000
11	US222 PA/MD Line	2,550	4,075	1,525	59.80%	19,000
12	US1 Cecil/Harford Line	7,950	8,925	975	12.26%	19,000
13	I95 Cecil/Harford Line	69,468	81,314	11,846	17.05%	106,400
14	US40 Cecil/Harford Line	22,602	28,508	5,906	26.13%	56,000
15	MD213 Cecil/Kent,MD Line	5,208	4,950	-258	- 4.95%	19,000
16	US301 Cecil/Kent,MD Line	9,475	11,575	2,100	22.16%	19,000
17	US13 Kent/New Castle Line	25,117	22,916	-2,201	- 8.76%	43,200
18	DE1 Kent/New Castle Line	n/a	37,747	n/a	n/a	70,200
19	I295 NJ/DE Line	79,627	94,331	14,704	18.47%	153,200
20	DE273 MD/DE Line	8,199	8,836	637	7.77%	15,400
21	MD279 MD/DE Line	20,327	27,143	6,816	33.53%	32,400
22	I95 MD/DE Line	65,294	76,774	11,480	17.58%	153,200
23	US40 MD/DE Line	26,565	36,212	9,647	36.31%	48,400

Chapter 4

Freight Movement

Our transportation system is not only used to move people from one place to another, but also to ship the commodities that we need in our everyday life. Goods movement has a significant impact on our transportation system. Goods movement in Maryland and Delaware pushes nearly 57 million tons of freight valued at approximately \$38 billion through the WILMAPCO region. Roughly 69 % of this cargo moves via the roadway and interstate systems, not to mention freight-through traffic from other areas of the country. With projected growth in goods movement expected to be anywhere from 40% to 70% by 2025, it will be important to properly invest in transportation improvements geared toward goods movement in order to keep our region competitive.

Data obtained from freight data consultants Reebie & Associates has provided a better understanding of how we interact with counties near our borders.* It provides data on annual tonnage and a rough calculation on the number of trucks this represents. Pages 12 and 13 contain images that detail the annual county-to-county freight movements for several of the counties identified in this report. A more comprehensive study on freight & goods movement for the WILMAPCO region will be available in 2005.

Findings:

- The WILMAPCO region ships 23.8 million tons of goods via roadway annually.
- Our region receives 21 million tons of goods from other parts of the country annually.
- In total, this generates approximately 2.9 million truck trips to and from the WILMAPCO region annually.
- An average of 9,561 trucks travel to and from Cecil and New Castle counties daily.
- Out of the 23.8 million tons of goods the WILMAPCO region exported from the region via roadway, roughly 35% (8.4 million tons) have a destination within counties in the study area. This results in an estimated 563,000 truck trips generated from the WILMAPCO region.

The areas receiving the highest total tons of goods are:

Sussex County	3.03 million tons
Kent County, DE	1.6 million tons
Philadelphia, PA	1.1 million tons

- Out of the 21 million tons of goods the WILMAPCO region receives from other parts of the country via roadway, roughly 29% (6.2 million tons) is received from counties within the study area. This generates roughly 415,066 truck trips to the WILMAPCO region.

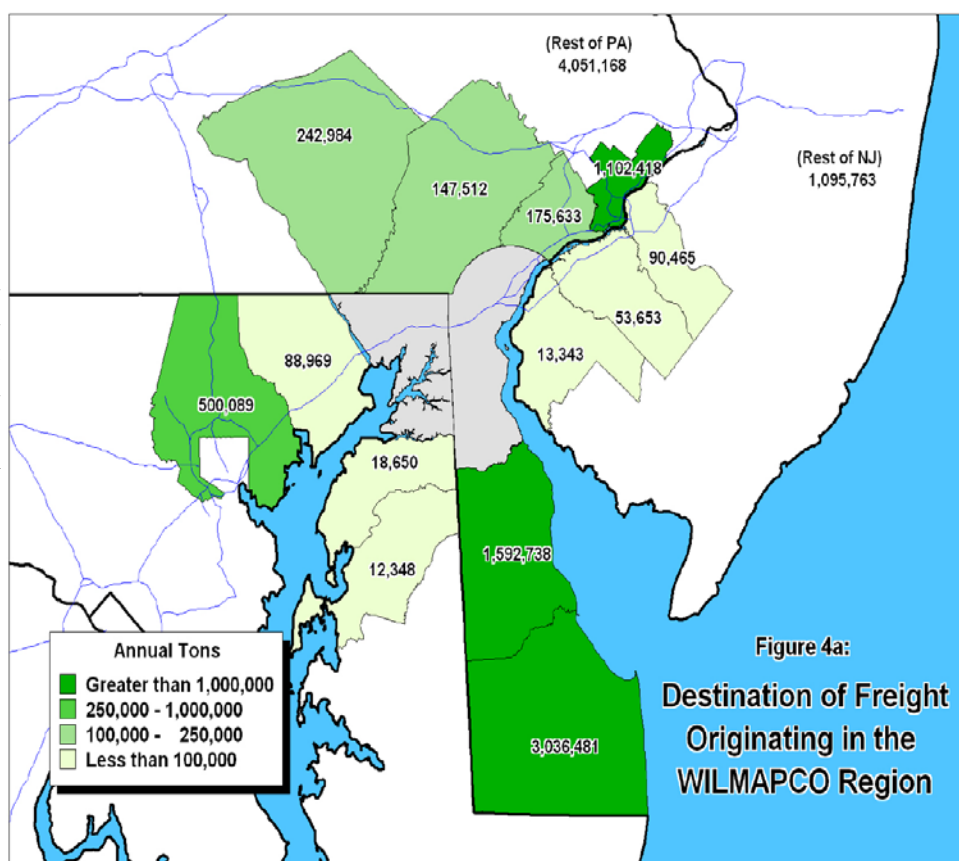
The areas sending the highest total tons of goods are:

Sussex County	1.49 million tons
Baltimore County	1.01 million tons
Kent County, DE	.61 million tons

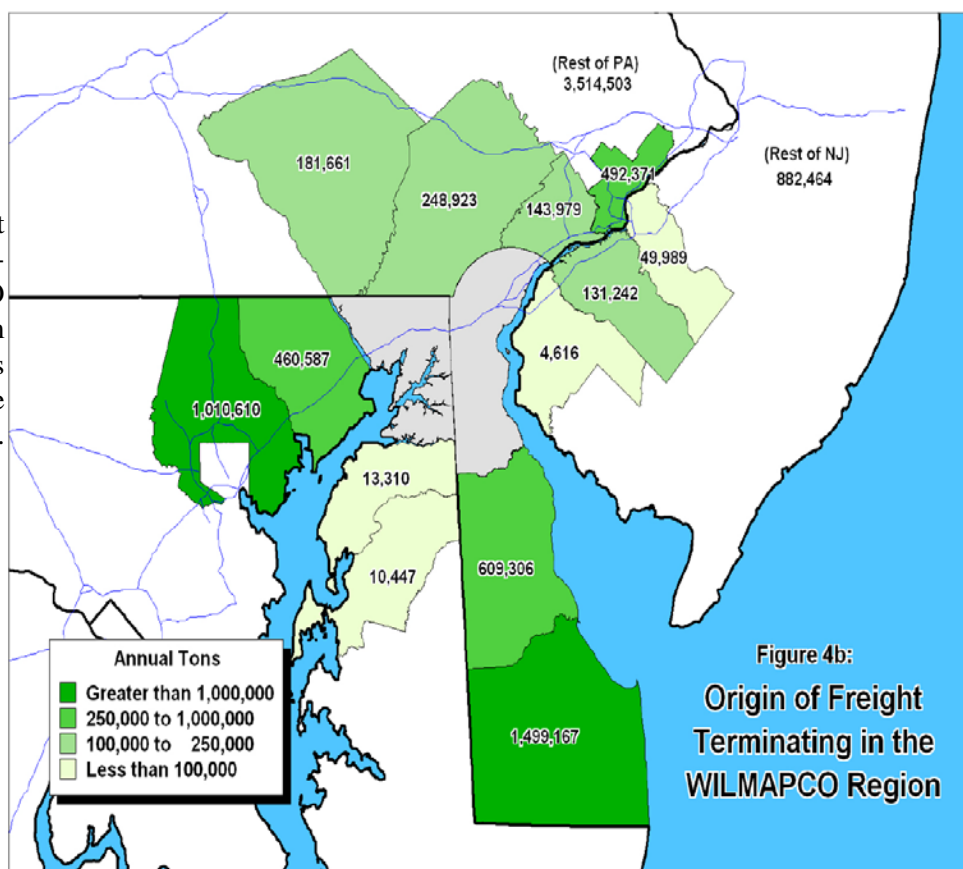
- At the state border, cordon points on DE 41, DE 7 and MD 272 have the three highest truck volumes for all non-U.S. or interstate designated route, each carrying more than 1,100 trucks daily.

* Baltimore City freight data was omitted due to budgetary constraints.

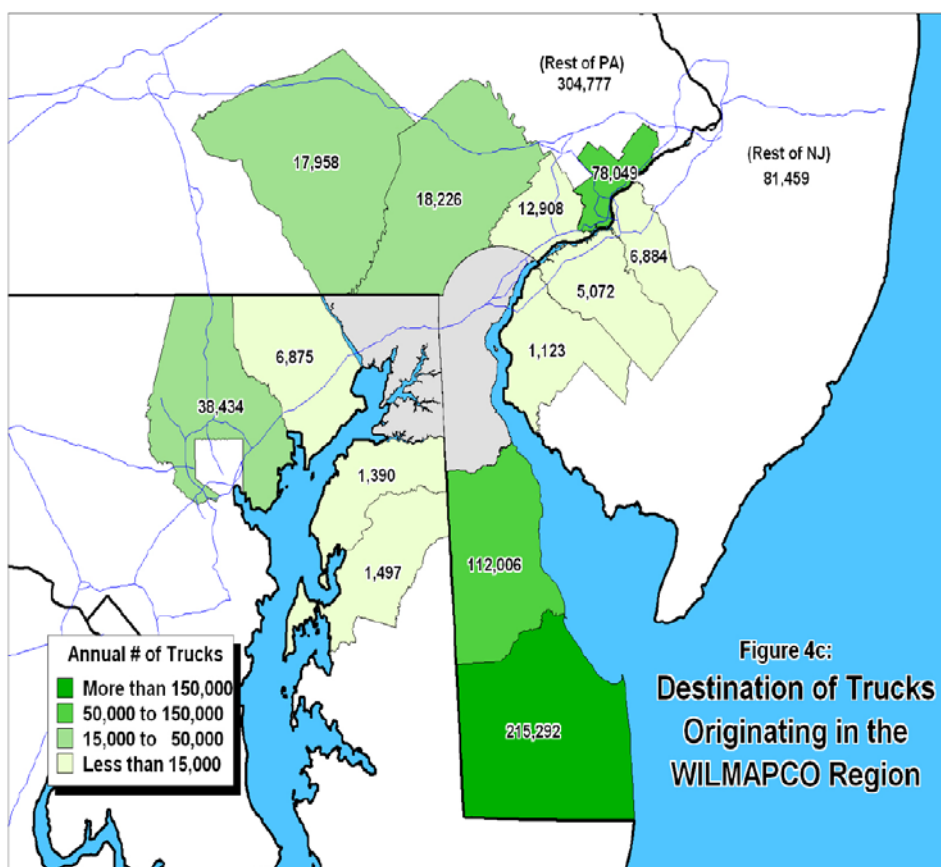
Figure 4a displays where freight originates and terminates in our region. Notice that the freight tonnage originating in the WILMAPCO region increases as the distance from our area increases. Large amounts of freight are shipped to Baltimore County, MD, Philadelphia, PA and to Kent and Sussex Counties in Delaware.



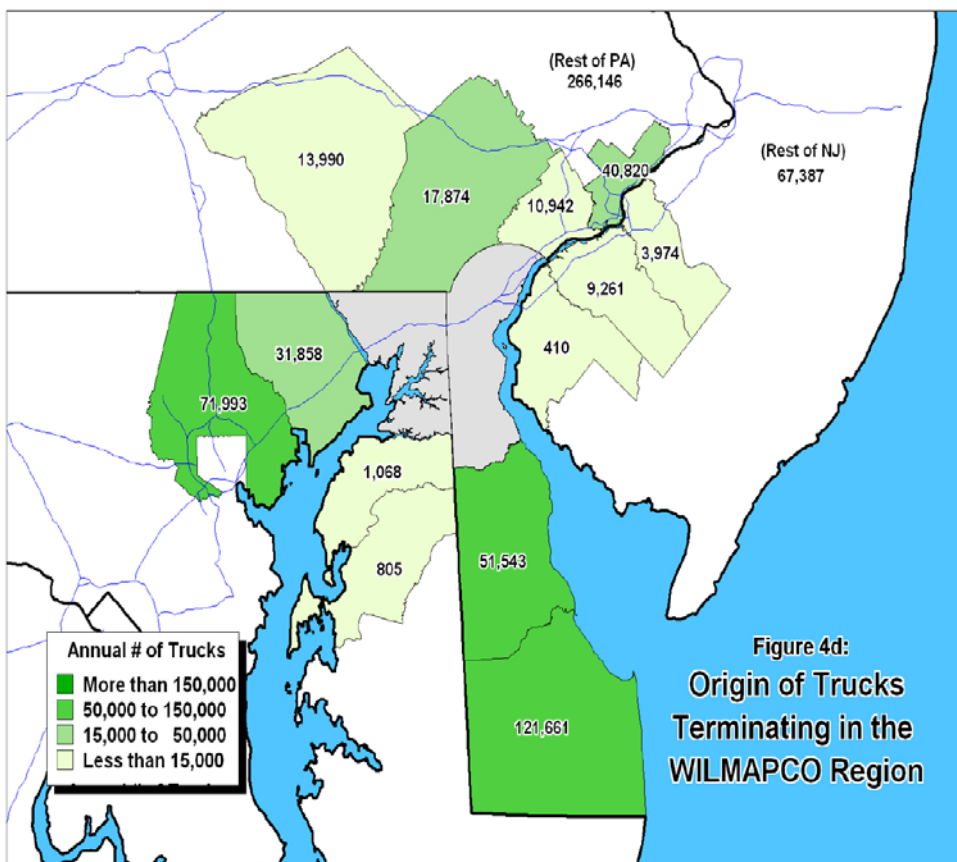
The theme in Figure 4b is consistent with the map above in that the tonnage terminating in the WILMAPCO region increases as the distance from our area increases. Large amounts of freight are coming from Baltimore County, MD and Sussex County, DE.

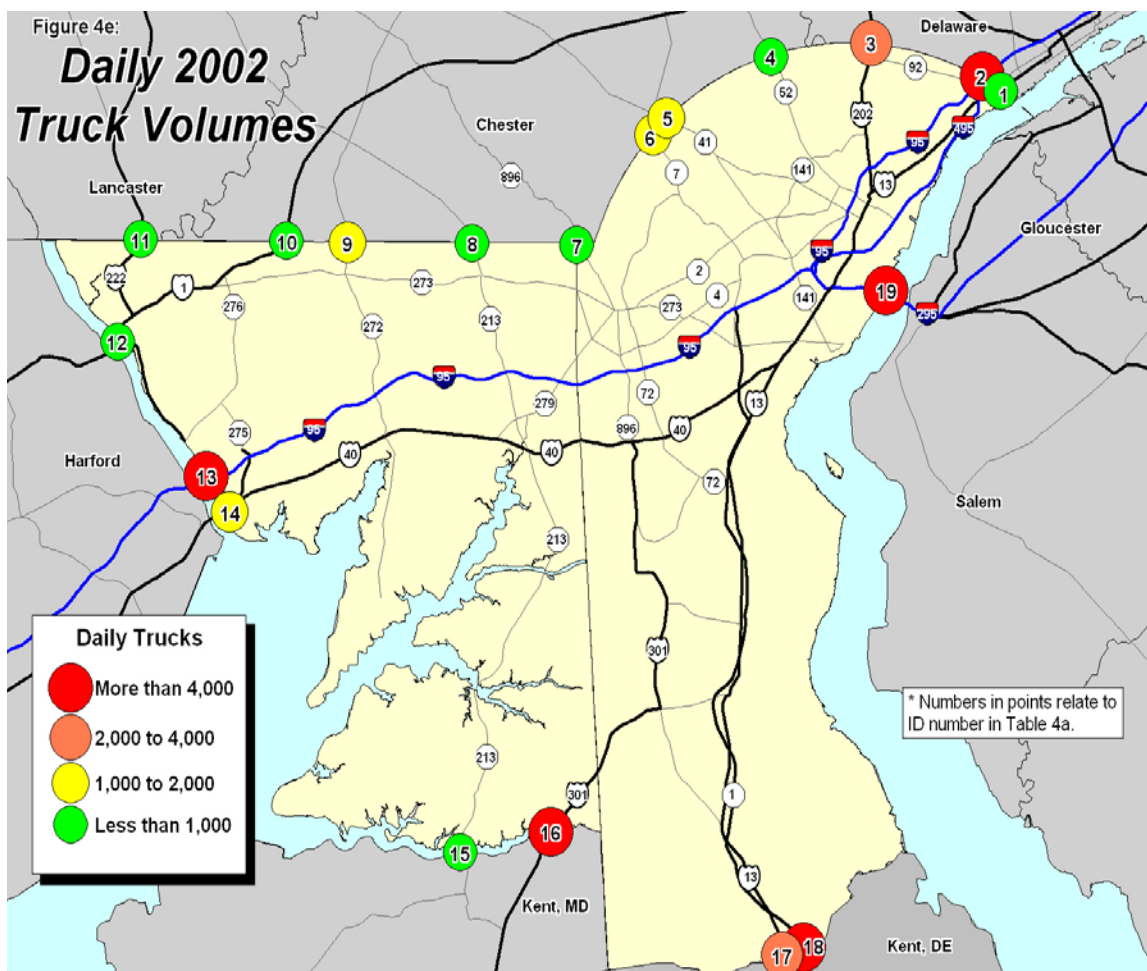


The destination of trucks originating in the WILMAPCO region is depicted in Figure 4c. Large numbers of trucks are destined for southern Delaware but as well as for Philadelphia County in Pennsylvania.



Concurrent with the image above, a large number of trucks are coming from southern Delaware, as well as from western Baltimore County in Maryland.





In 2002, large truck volumes were found on roads such as DE1, US13, US40, US301 and US202. These volumes represent all trucks with at least two axles, and six tires or more. On roads such as I-95 and I-295, many trucks are through travelers. But on roadways such as DE41, DE7 and US202, trucks often serve local businesses and residents. The cordon count at US301 of 6,024 trucks accounts for nearly half of all the daily traffic on that road in 2002. Table 4a lists the percentage that trucks represent of the total 2002 average annual daily traffic at cordon points on various roadways

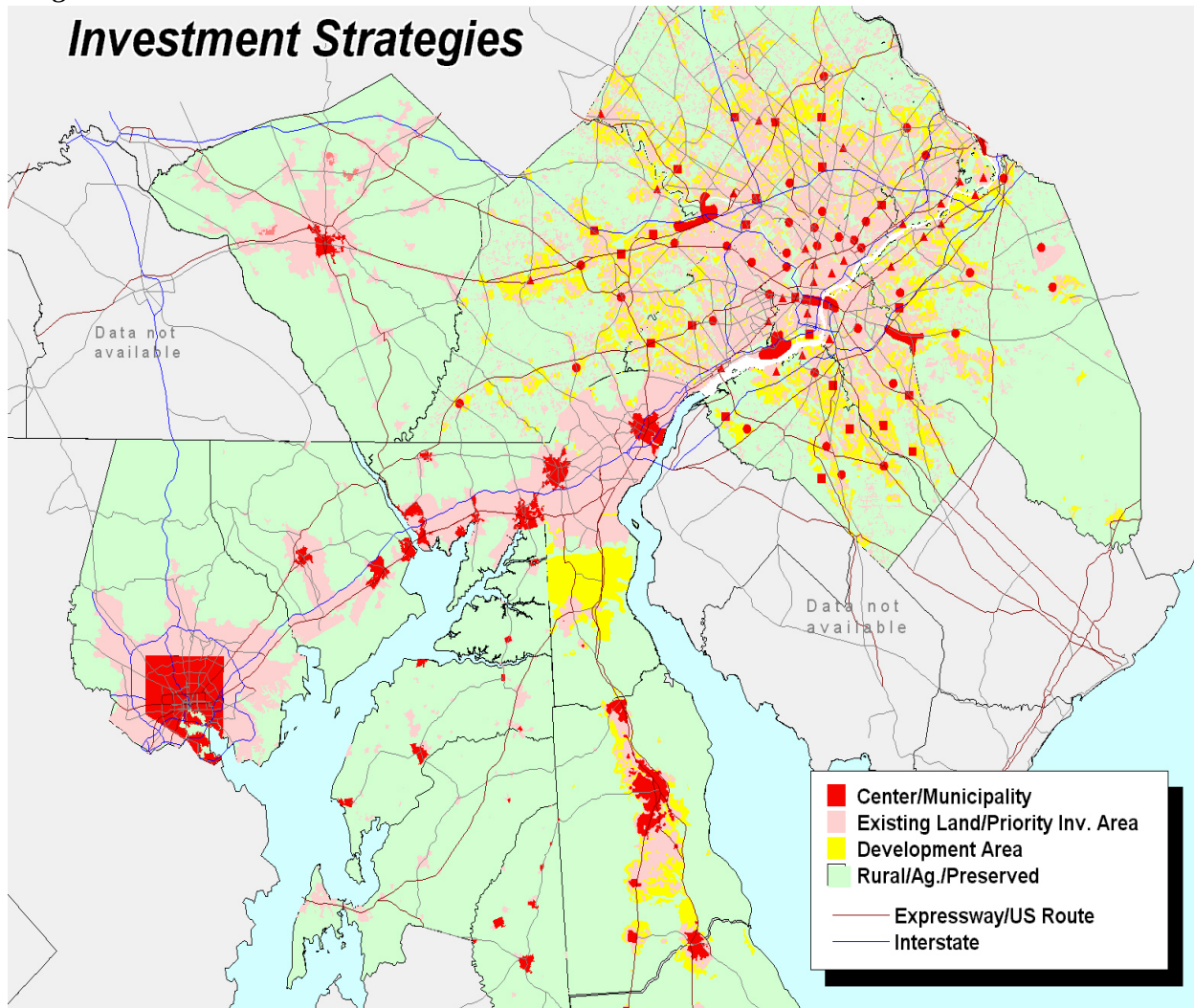
Table 4a: 2002 Daily Truck Volumes at Cordon Points				
ID	Location	2002 AADT	2002 Truck AADT	Truck %
1	US13 DE/PA Line	4,850	291	6.0 %
2	I-95 DE/PA Line	113,689	5,684	5.0 %
3	US202 DE/PA Line	43,671	2,620	6.0 %
4	DE52 DE/PA Line	11,721	469	4.0 %
5	DE41 DE/PA Line	11,785	1,414	12.0 %
6	DE7 DE/PA Line	14,056	1,124	8.0 %
7	MD896 MD/PA Line	9,302	651	7.0 %
8	MD213 PA/MD Line	3,975	290	7.3 %
9	MD272 PA/MD Line	6,850	1,123	16.4 %
10	US1 PA/MD Line	7,550	793	10.5 %
11	US222 PA/MD Line	4,325	839	19.4 %
12	US1 Cecil/Harford Line	8,850	699	7.9 %
13	I95 Cecil/Harford Line	81,761	18,969	23.2 %
14	US40 Cecil/Harford Line	27,430	1,828	6.7 %
15	MD213 Cecil/Kent,MD Line	4,875	722	14.8 %
16	US301 Cecil/Kent,MD Line	13,125	6,024	45.9 %
17	US13 Kent/New Castle Line	22,774	3,644	16.0 %
18	DE1 Kent/New Castle Line	35,887	5,383	15.0 %
19	I-295 NJ/DE Line	93,631	14,981	16.0 %

Chapter 5

Investment Strategies, Studies / Projects and Transit

Setting investment priorities is a key function for all planning agencies. Most regions in the study area have identified investment strategies for portions of their region, charting out and prioritizing future transportation improvements. Since the previous chapters reveal a great deal of inter connectivity among agencies, it is important that cohesive investment strategies be present. Figure 5a below assembles all available investment strategies for the study area. Areas in red indicate each region's core/central investment areas, while the pink shows areas that are reasonably established and will require significant funding for system preservation and management projects. The yellow areas capture relatively undeveloped lands which are likely to see development activity, bringing with it the need for upgrades in transportation infrastructure as development occurs. The green areas are rural lands which are not expected to see significant development, thus not needing major investments.

Figure 5a:



Findings:

- Priority investment areas are located along most of the major roadways throughout the study area.
- In most cases the strategies complement one another, although there are two areas that differ:
 - AREA #1- At the New Castle County / Kent County border, Kent County has an area of priority investment while New Castle has this portion of the county listed as more rural in terms of growth.
 - AREA #2 -At the Chester County /New Castle County border, WILMAPCO has categorized the area along the DE 7/DE 41 corridor as designated for management and possible expansion of the existing network while Chester County shows a more rural growth area with sporadic areas designated for development.

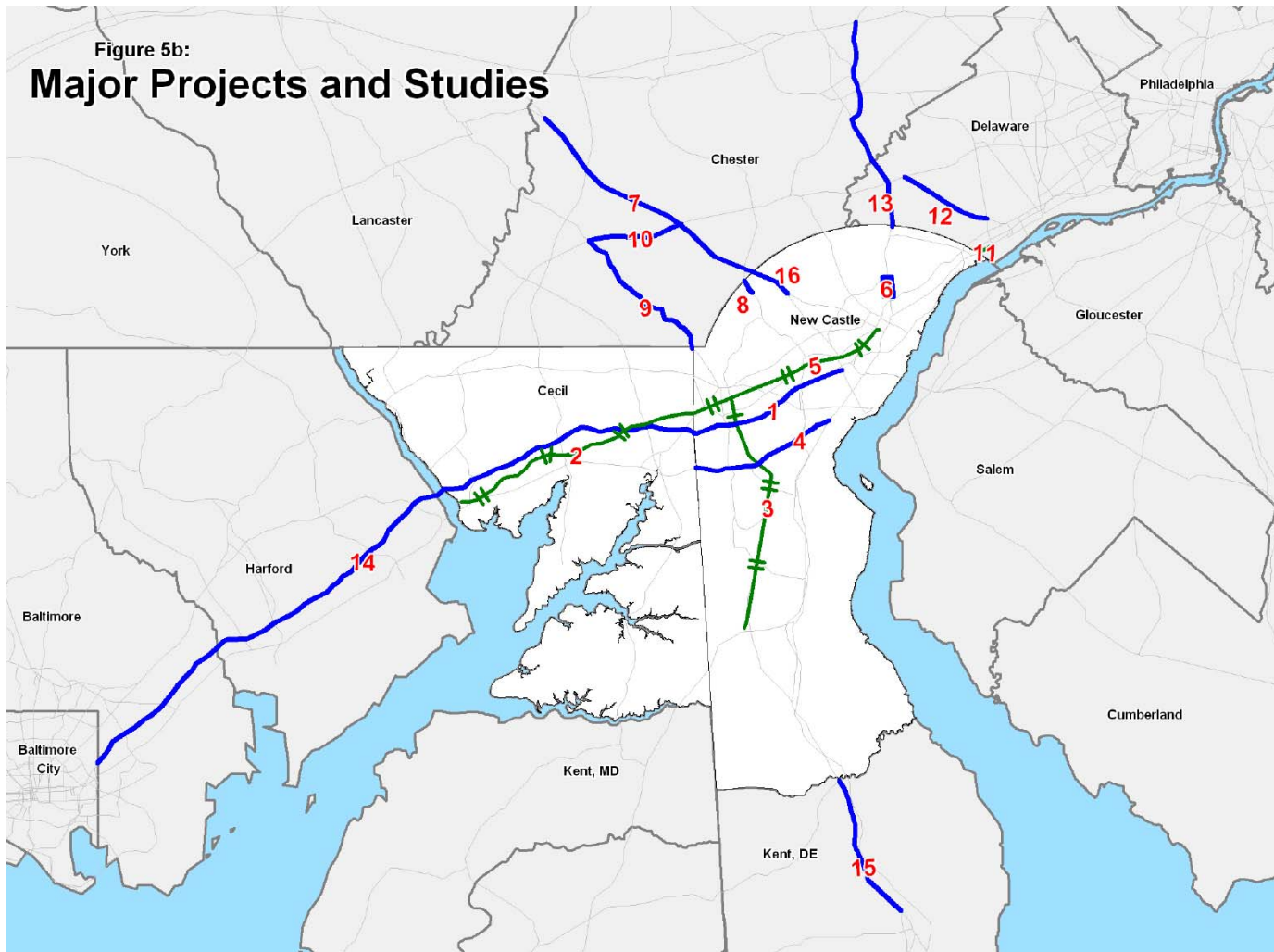
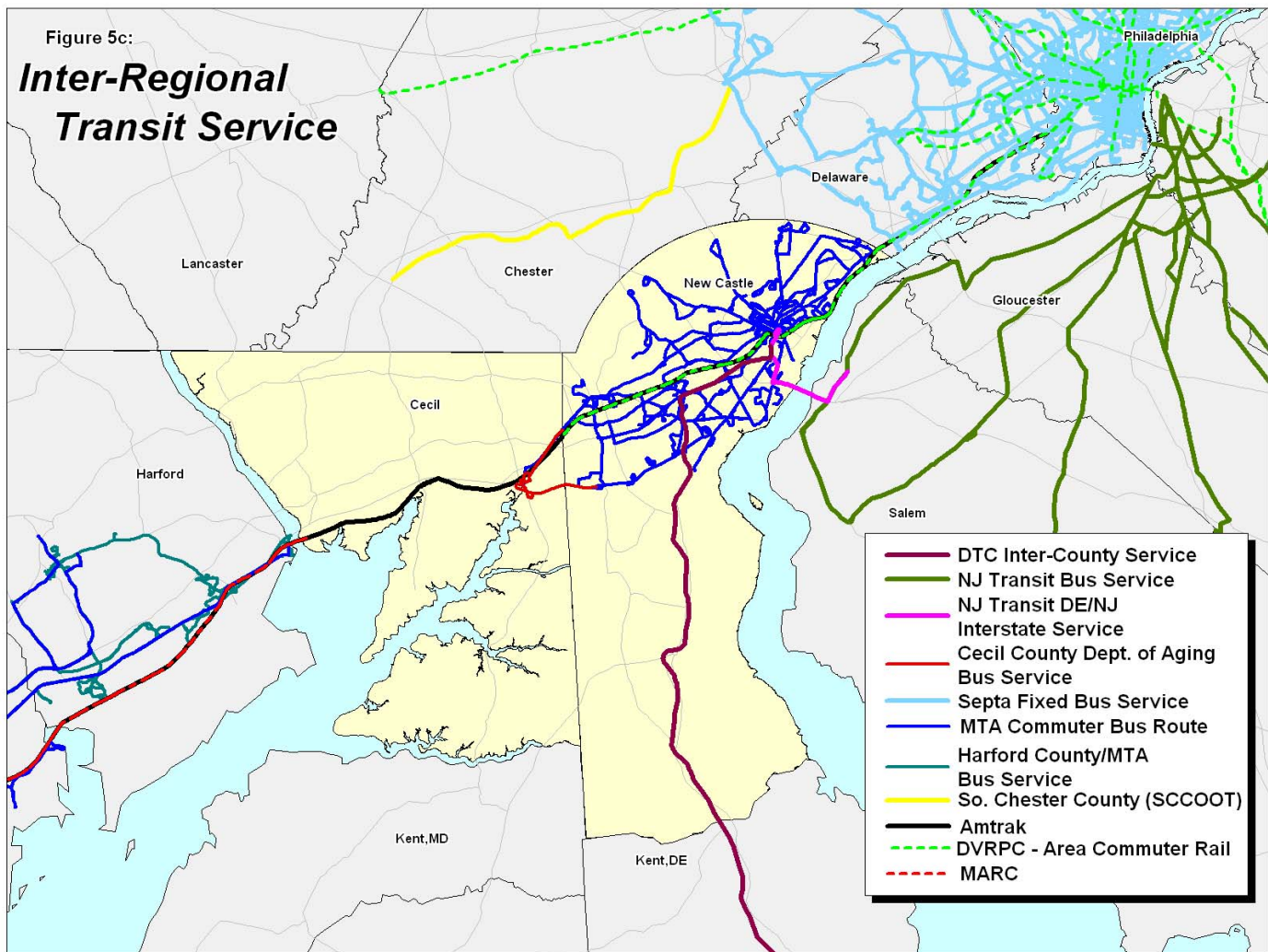


Figure 5b displays the major projects and studies that are significant to the WILMAPCO region. These projects were culled from long range plans and transportation improvement programs from various coordinating agencies outlined in the Introduction. The numbers on the map relate to the ID number in Table 5a which gives a description of each project. The projects were selected with emphasis on their effects to the WILMAPCO region. For further information on each agency's specific TIP or long range plan, visit their website, listed in Appendix A.

Table 5a: Major Projects / Studies	
ID	Description
1	I-95 Improvements Wilmington to MD Line
2	Track A Feasibility Study
3	Commuter Rail Service Middletown to Newark Study
4	US 40 Corridor Study
5	Expand Rail Service Newark to Wilmington
6	Blue Ball Properties Improvements
7	PA 41 Study
8	SR 7 Pennsylvania and Delaware Widening
9	PA896 Safety and Channelization Study
10	US 1 Reconstruction
11	Expand MARC Service
12	US 322 Study
13	US 202 Study
14	MdTA I-95 Master Plan
15	US 13 Commercial Corridor Plan
16	DE 41 Safety Improvements



Public transit planning is a coordinated effort between multiple agencies and is an essential part of moving people safely and efficiently. Transit service across the study area is depicted in Figure 5c. This image displays the multiple lines of commuter rail and bus service in each county. It is important to note that there are lines of cross-boundary commuter service. The commuter rail within the DVRPC region transfers commuters across eleven counties in three states. This service is operated by multiple carriers, including SEPTA, AMTRAK, New Jersey Transit, and PATCO. In Maryland, the MARC service runs primarily across eleven counties and two states. On a smaller scale, bus service within the study area also transfers across state borders. The Cecil County Department of Aging Bus Service moves passengers from Cecil County, Maryland to New Castle County, Delaware. Similar to this line is DART Route 65 which connects Cecil County, MD and New Castle, DE. On the opposite side, New Jersey Transit runs interstate bus service between New Castle County, DE and Salem County, NJ. This line runs across the Delaware Memorial Bridge from Wilmington, DE to Penns Grove, NJ. New Jersey Transit is very comprehensive, running the entire length of the state and transferring commuters into Delaware, Pennsylvania and New York. SEPTA fixed bus service runs across six counties with over one hundred routes with a stop as far north as Trenton, NJ. Within Delaware, DART service runs in all three counties with inter-county service.

Chapter 6

Path Forward

The 2004 WILMAPCO Inter-Regional Report is the foundation for future regional initiatives. Information examined in this report is subject to further study based on feedback from the WILMAPCO Council. WILMAPCO staff designed the report for clear and concise reading, however, in doing so staff may have omitted some information considered important to our planning partners. We will review the existing content for possible revisions in future updates since data intensive studies require frequent updates as new data is released. When new data is available, WILMAPCO will communicate its availability to metropolitan planning organizations and transportation agencies within the study area.

WILMAPCO will continue working to strengthen our collaborations with coordinating agencies in the study area. We will continually review the list of participating agencies and try to identify any additional stakeholders to include in our outreach. We also hope to hold more meetings in the southern portion of our study area.

It is our hope that this and future reports will provide valuable information to key decision makers within the study area and provide a mechanism to help link our individual planning efforts.

Appendix

Appendix A: Regional Agencies.....	22
Appendix B: Workflow Matrix.....	26
Appendix C: Population Charts.....	27
Appendix D: Employment Charts.....	29

*The following Agencies serve in the WILMAPCO Inter-Regional study area.
We thank all those who have helped in our data collection efforts.*

Baltimore Metropolitan Council (BMC)

The Baltimore Metropolitan Council is an organization of the elected executives of Baltimore City and Anne Arundel, Baltimore, Carroll, Harford and Howard counties. The executives are committed to identifying regional interests and developing 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.

Contact Information

Larry Klimovitz

Phone: (410) 732-9563

email: lklimovitz@baltometro.org

website: <http://www.baltometro.org>

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.

Contact Information

Phone: (410) 479-8100

email: info@carolineplancode.org

website: <http://www.carolinemd.org/governmt/planning>

Delaware Valley Regional Planning Commission (DVRPC)

Established in 1965, the Delaware Valley Regional Planning Commission (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 that respond to the requests and demands of member states and local governments; fostering cooperation among various constituencies to forge a consensus on diverse regional issues; determining and meeting the needs of the private sector; and continuing public outreach efforts that promote two-way communication and enhance public awareness of regional issues.

Contact Information

Rich Bickel

Phone: (215) 238-2831

email: rbickel@dvrpc.org

website: <http://www.dvrpc.org>

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 town's 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.

Contact Information

Juanita Wieczoreck

Phone: (302)760-2713

email: juanita.wieczoreck@state.de.us

website: <http://www.doverkentmpo.org>

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.

Contact Information

Timothy Chelius

Phone: (856) 794-1941

email: sjtpo@sjtpo.org

website: <http://www.sjtpo.org>

Sussex County, Delaware Department of Planning

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

Contact Information

Lawerence Lank

Phone: (302) 855-7878

email: <http://www.sussexcounty.net/contact.cfm?id=27&type=1>

website: <http://www.sussexcounty.net>

York County Planning Commission (YCPC)

The York County Planning Commission was created in 1959 by the Board of County Commissioners. The commission prepares a comprehensive plan, as well as administering 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.

Contact Information

Felicia Dell

Phone: (717)771-9870

email: fdell@ycpc.org

website: <http://www.ycpc.org>

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.

Contact Information

Gail Webb Owings

Phone: (410) 778-7475

email: gowings@kentgov.org

website: <http://www.kentcounty.com/gov/planzone>

Lancaster County Transportation Coordinating Committee (LCTCC)

The LCTCC is the metropolitan planning organization 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 of the Lancaster County Planning Commission, with assistance from PENNDOT and other planning partners and consultants, is responsible for developing federally required plans and programs.

Contact Information

Ronald Bailey

Phone: (717) 299-8333

email: planning@co.lancaster.pa.us

website: <http://www.co.lancaster.pa.us/planning>

Queen Anne's County, Maryland Department of Planning

Queen Anne's County, Maryland 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. Queen Anne's County 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.

Contact Information

Faith Elliot-Rossing

Phone: (410)758-1255

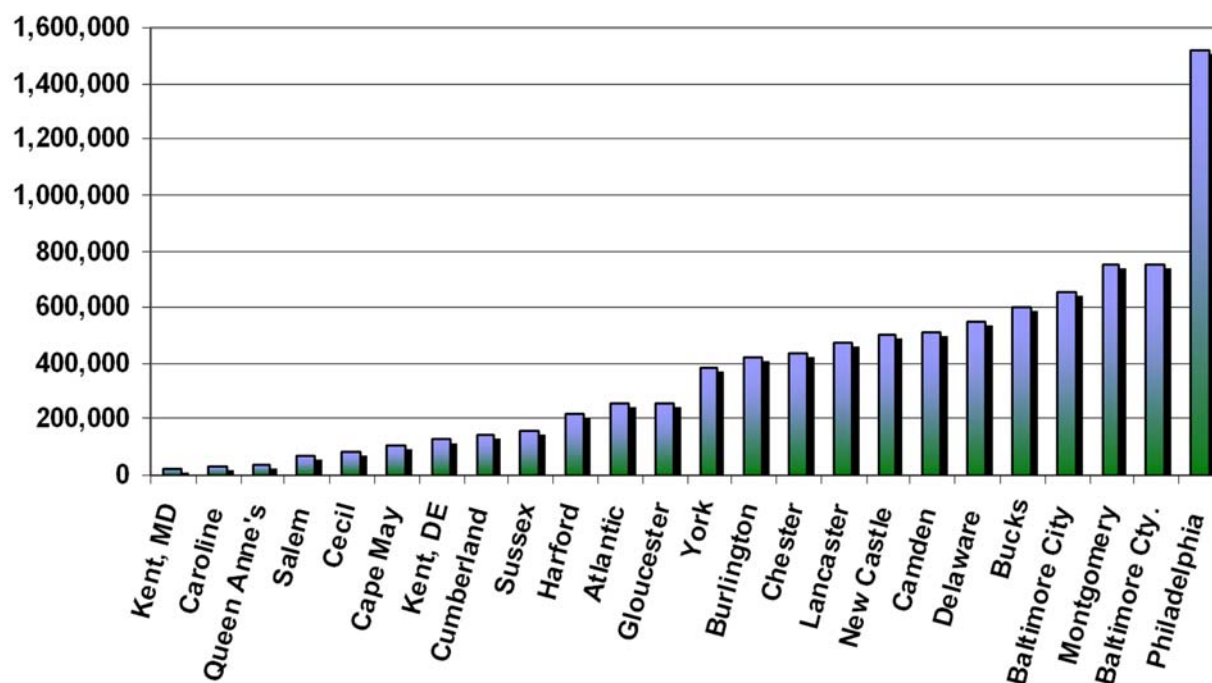
email: felliottrossing@qac.org

website: <http://www.qac.org/depts/planzone/>

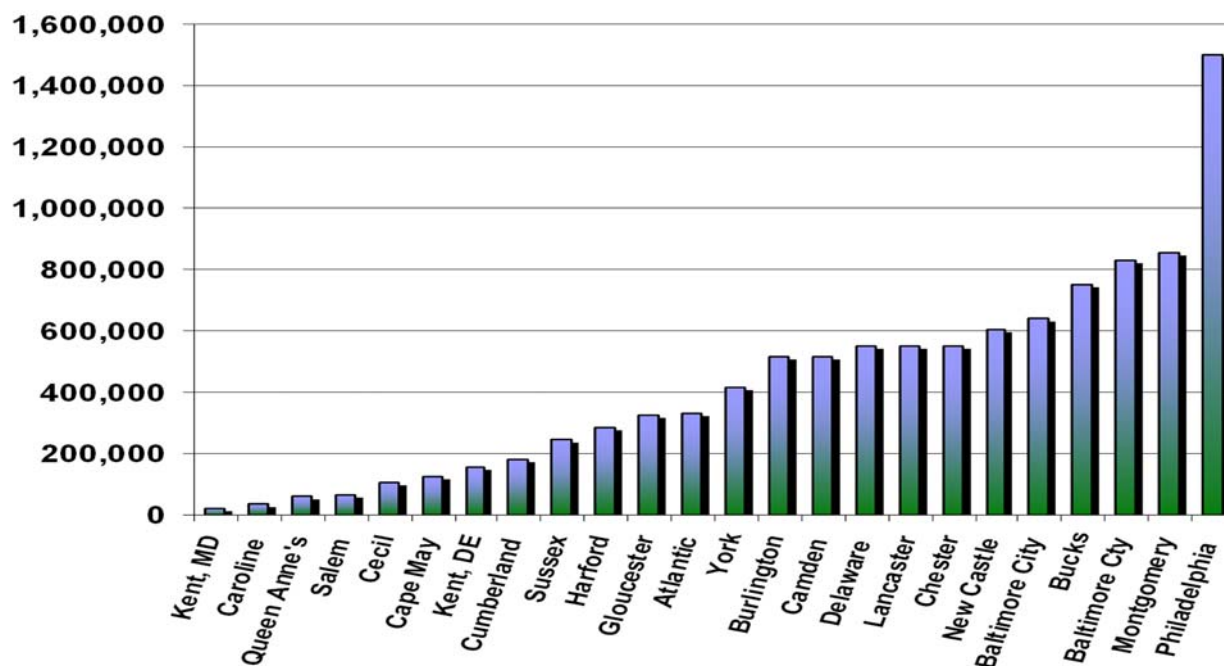
This table outlines commuter flows between every county in the study area. This information was obtained from the 2000 Census Transportation Planning Package.

Commuter Flows																									
WORKPLACE	RESIDENCY	New Castle	Kent	Sussex	Cecil	Kent, MD	Queen Anne's	Caroline	Harford	Baltimore	Balt. City	York	Lancaster	Chester	Delaware	Philadelphia	Montgomery	Bucks	Burlington	Atlantic	Cape May	Cumberland	Salem	Gloucester	Camden
New Castle		209,742	3,927	319	3,379	60	17	n/a	173	142	205	82	142	3,514	6,188	4,697	903	251	254	142	6	74	1,724	562	558
Kent		6,058	47,455	3,779	243	201	95	166	9	25	32	n/a	10	34	69	122	16	7	53	19	n/a	7	42	3	28
Sussex		1,119	5,704	52,073	42	3	26	631	4	35	58	14	3	15	n/a	93	36	n/a	1	9	12	n/a	19	n/a	n/a
Cecil		14,059	186	33	18,446	190	22	16	3,117	544	422	86	129	796	258	324	43	35	n/a	14	n/a	21	98	n/a	18
Kent, MD		566	204	8	260	6,528	626	70	17	14	44	n/a	8	31	43	21	23	n/a	10	n/a	n/a	3	n/a	n/a	n/a
Queen Anne's		192	353	33	33	1,731	7,319	229	16	307	438	n/a	n/a	17	8	17	13	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Caroline		129	731	504	37	219	677	6,318	8	77	49	n/a	2	n/a	n/a	9	12	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a
Harford		1,003	12	n/a	1,643	10	8	n/a	51,824	22,333	14,667	454	116	37	27	48	25	11	45	23	n/a	n/a	23	14	7
Baltimore		333	9	15	426	4	103	21	4,716	181,837	123,587	526	43	51	37	135	29	n/a	n/a	35	n/a	n/a	25	n/a	19
Baltimore City		96	n/a	8	33	8	n/a	24	n/a	65,870	203,387	26	44	21	n/a	145	20	9	15	n/a	n/a	n/a	n/a	n/a	13
York		128	n/a	9	84	n/a	10	n/a	1,497	6,605	1,891	135,259	3,845	83	52	122	171	33	17	n/a	10	n/a	n/a	2	23
Lancaster		523	19	25	203	n/a	41	n/a	161	103	63	3,359	188,071	5,174	369	690	617	129	29	17	n/a	5	23	40	83
Chester		12,976	131	29	557	12	8	n/a	98	58	109	231	2,060	118,433	18,301	11,771	25,411	1,083	613	58	27	15	123	230	1,027
Delaware		9,002	112	15	192	n/a	n/a	n/a	40	43	67	103	136	14,568	144,062	59,652	23,934	1,994	1,246	254	134	84	283	976	2,699
Philadelphia		1,866	65	39	52	n/a	n/a	n/a	n/a	59	168	58	228	5,303	15,161	513,167	54,113	23,866	4,820	949	295	79	84	1,394	10,083
Montgomery		1,201	41	33	64	5	13	10	6	65	45	43	162	17,920	10,933	55,956	229,923	20,986	1,484	136	34	32	22	474	2,808
Bucks		493	18	n/a	18	9	n/a	n/a	n/a	31	27	21	55	2,044	2,000	30,692	41,886	152,140	3,888	113	45	43	61	614	2,799
Burlington		597	20	n/a	13	n/a	n/a	5	6	78	29	39	25	503	1,612	17,142	3,007	4,148	116,439	2,168	102	n/a	239	2,229	27,941
Atlantic		175	n/a	9	n/a	n/a	n/a	n/a	n/a	n/a	6	n/a	n/a	26	186	1,120	251	135	806	98,601	2,531	2,601	106	1,024	1,853
Cape May		109	n/a	9	n/a	n/a	n/a	n/a	n/a	10	n/a	n/a	34	55	119	715	151	80	220	8,044	29,261	924	24	174	513
Cumberland		171	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	13	n/a	7	17	61	405	34	59	285	5,404	1,090	47,485	1,611	1,734	594
Salem		3,258	25	8	38	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10	80	394	490	108	44	326	272	84	2,568	17,545	3,052	724
Gloucester		1,662	35	7	10	n/a	n/a	n/a	13	19	24	7	11	521	2,442	13,501	1,412	952	5,179	3,182	366	3,368	2,694	51,372	21,708
Camden		1,286	57	26	11	n/a	n/a	n/a	5	49	58	24	35	863	2,754	38,252	3,895	2,223	26,712	6,540	283	982	740	13,076	130,616
Total		266,734	59,104	56,981	25,784	8,960	8,965	7,490	61,710	278,321	345,399	140,332	195,176	170,096	205,076	749,286	385,973	208,191	162,442	125,980	34,280	58,308	25,491	76,970	204,114

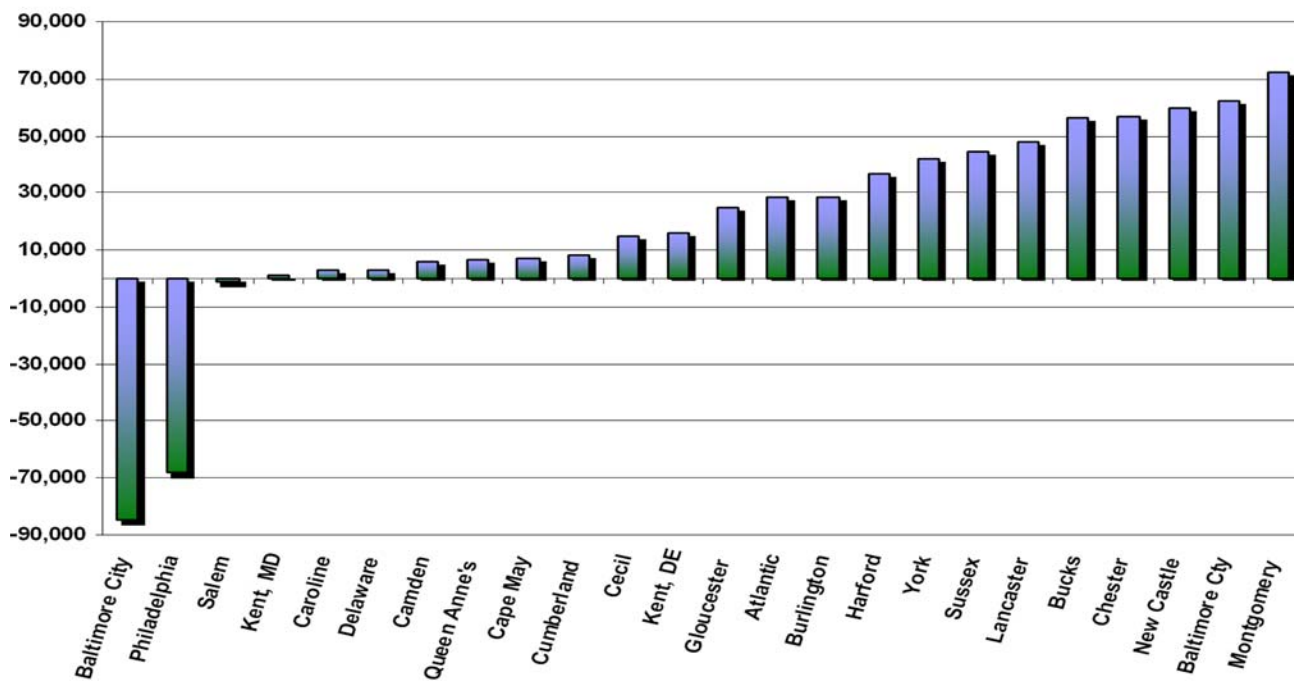
Population 2000



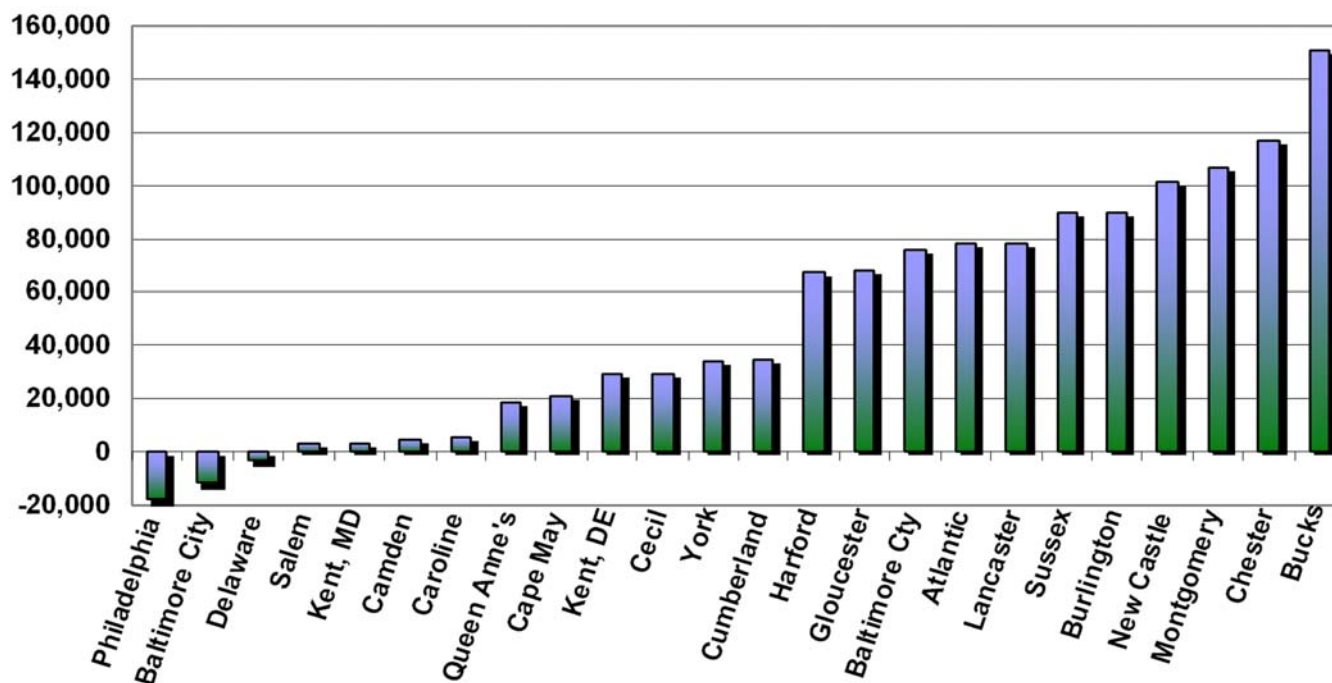
Population 2025



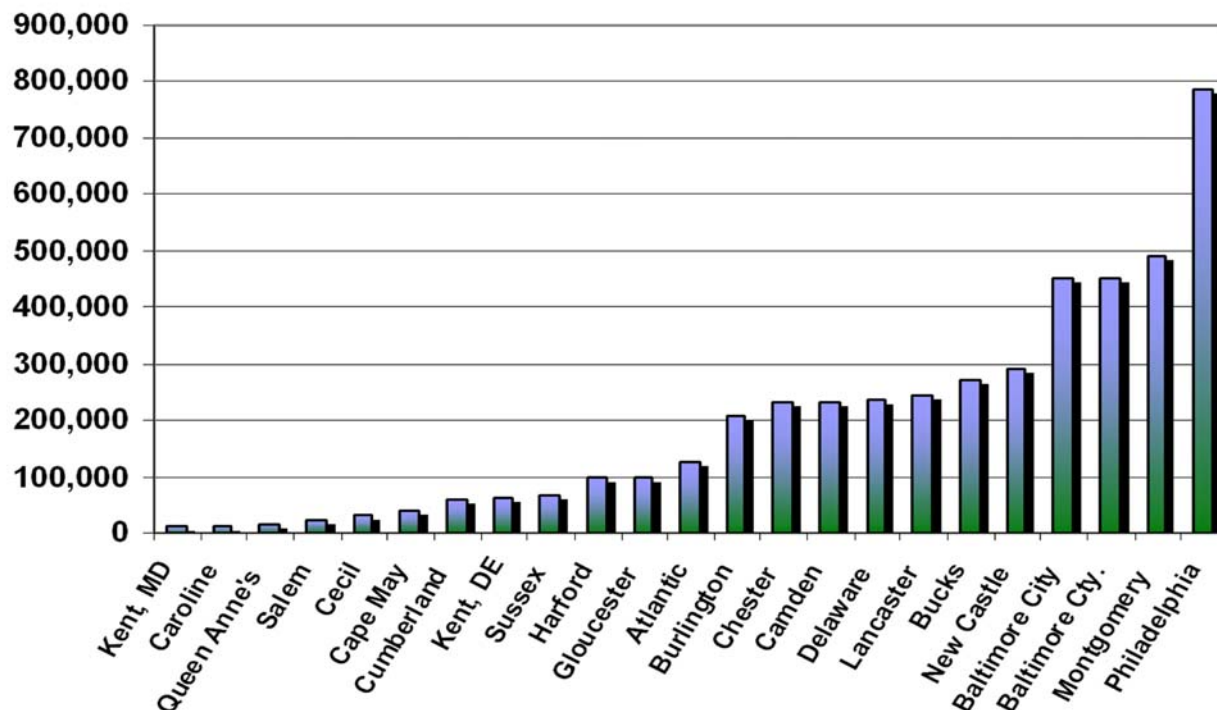
Population Change 1990-2000



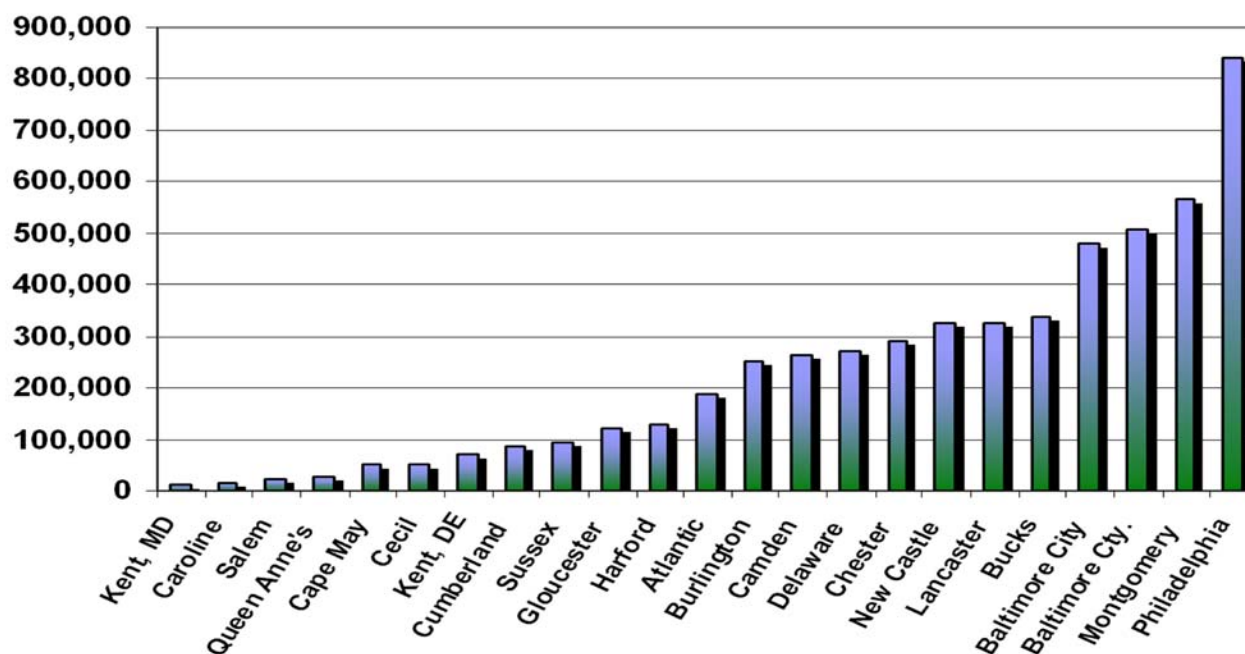
Population Change: 2000-2025



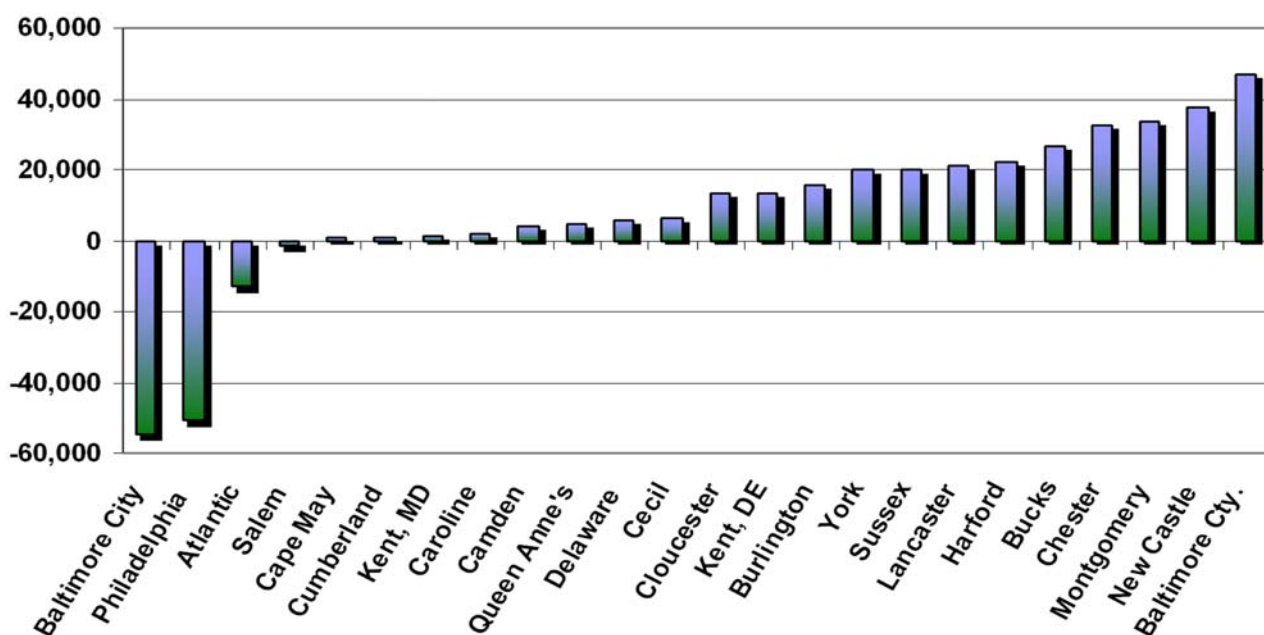
Employment 2000



Employment 2025



Employment Change 1990-2000



Employment Change 2000-2025

