

Chapter 1: Sussex County Demographic Analysis

This chapter presents demographic and socio-economic characteristics of Sussex County, New Jersey. Demographics discussed include urban and rural designation; population, population change and population density; youth and senior population density and percentage of total population; income and poverty; employment; travel to work characteristics; and major employers inside and outside of Sussex County. These demographics were chosen to focus on the distribution of the general population and certain segments of the population throughout the region (characteristics that lend themselves to demand for public transportation and characteristics that define where and how residents are currently getting to work).

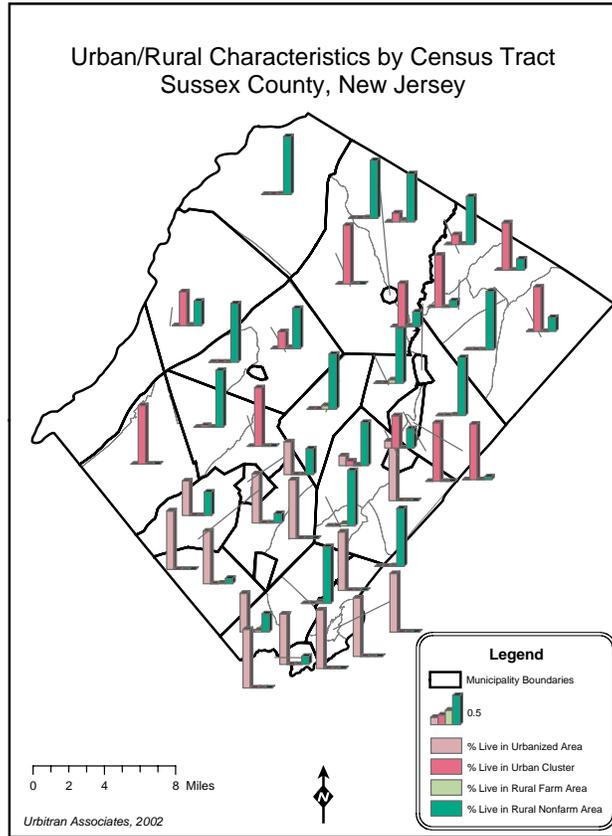
Information for Sussex County is presented based on three standard land divisions: Census Block, Census Tract and Municipality Boundary depending upon the subject of analysis. Local-level information is compared to County-wide and State-wide numbers in order to calibrate the meaning of the local situation in the context of the region. Most of the information presented comes from Census 2000 results, but some economic information comes from 1999. Also, population change information from 1990 to 2000 comes from the 1990 and 2000 Census results. New Jersey Department of Labor information comes from 2001 calculations.

Urban/Rural Characteristics

Sussex County is diverse in its configuration of urban and rural communities. Figure 1-2 outlines the location of urban and rural residents in Sussex County by Census Tract from Census 2000 data. Both urban and rural designations have two definitions. Census-defined 'Urbanized Areas' require a central place and adjacent territory with a population density of 1,000 people per square mile or more and a minimum population total of 50,000 people. Alternatively, 'Urban Clusters' are densely populated areas with a total population between 2,500 and 50,000 people. Rural areas are classified as either 'Farm Areas' or 'Nonfarm Areas.' Sussex County has very little farm area.

As can be seen in Figure 1-2, the northern section of Sussex County has a larger percentage of people who live in rural nonfarm areas or small urban clusters where the southern portion of the county (closer to the New York Metropolitan Area) has a larger percentage of people living in urbanized areas. Overall, 42% of Sussex county residents lived in rural nonfarm areas, 32% lived in urbanized areas, 25% lived in urban clusters and 1% lived in rural farm areas. Thus, Sussex County residents mostly either live in rural areas or in larger urban areas. Also, a quarter of people live in small urban clusters.

Figure 1-2: Urban/Rural Characteristics of Sussex County Residents



Population Change and Density

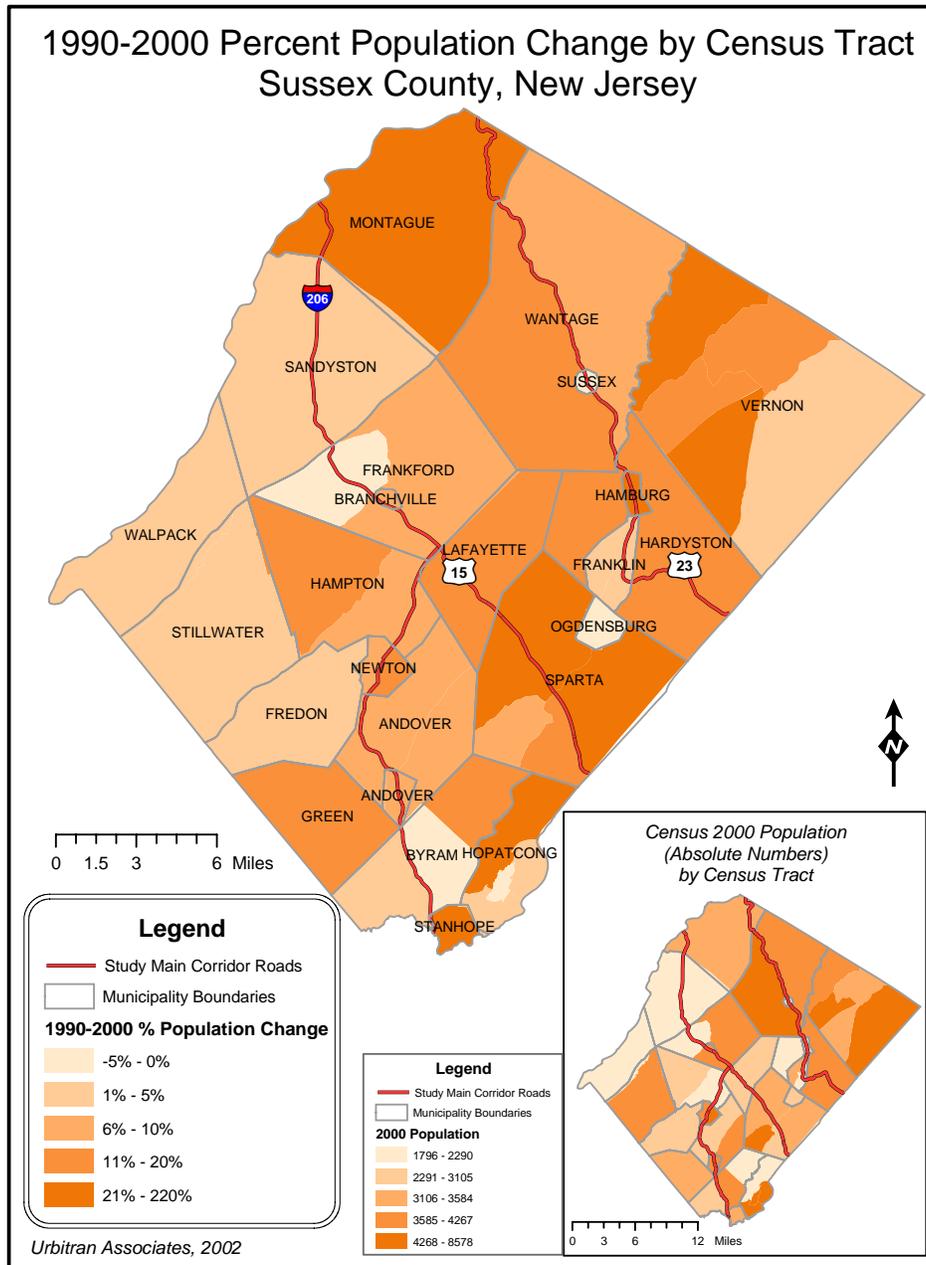
Past Population Change

Population change explains where people have historically lived and gives some indication of where future demographic shifts will occur. Anticipating and preparing for change are key steps in efficient and effective planning to avoid future congestion and other problems. The 10-year time-frame of this plan allows action to be taken.

Over the period 1995 to 2025, the population of New Jersey is projected to increase from 7.9 million people to 9.6 million people, according to US Census estimates. Considering the changes that have already occurred, the population of New Jersey increased by 8.85% from 1990 to 2000. Sussex County population increased at higher rate than the state rate with 10.1% growth. Figure 1-3 shows the Census Tract level percent population change within Sussex County from 1990 to 2000. The inset map shows the absolute population count from Census 2000 by Tract. The absolute numbers help gauge the relevance of the percent change in terms of magnitude. The Census Tracts with the largest total number of people in 2000 were in western Vernon (8,578 people) and south central Sparta (8,190 people). The tracts with the lowest total population were

in eastern Franklin (1,796 people) and the tract that contains all of Walpack and Sandyston (1,866 people).

Figure 1-3: 1990 Percent Population Change by Census Tract for Sussex County, New Jersey



The cities of Sussex and Ogdensburg as well as significant portions of Byram, Hopatcong and Frankford declined in population from 1990 to 2000. However, all Census Tracts lost less than 150 people. The smallest positive change in population occurred in the southern part of Byram and in Stillwater. The largest percent increase in population occurred in Stanhope with an increase of 220% (a gain of 2,464 people). Stanhope's increase of 2,464 people was also the largest Census Tract population increase in the county from 1990 to 2000 in absolute numbers.

The next two highest increases in both percent population and absolute population increase occurred in tracts in Hopatcong and Vernon.

Population change in Sussex County occurred from 1990 to 2000 with no overall obvious pattern. Only when combining other information with the population change figures can explanation for the pattern emerge. This will be discussed this later in the chapter.

Projected Population Change

Sussex County population is projected to increase by 21.2% from 2000 to 2020. Not every municipality is expected to grow at this high rate and some are even projected to lose population. Population projections are not estimations or expectations, but rather a continuation of prior trends. Therefore, projections should only be used as a guide for preparation and should not be taken literally. The population data presented for Sussex County has both a low projection and a high projection. The high and low projections allow for a range of possible population values to be determined. Having a range of projected values allows greater room for error and makes the usefulness of the numbers more feasible. The data presented in this section was obtained from the County of Sussex Strategic Growth Plan.

The greatest amount of population growth is projected to occur in the interior of the county along the major road corridors. Table 1-1 shows the low population projections for each municipality in Sussex County for 2010 and 2020. From 2000 to 2010, Hardyston is projected to have the highest percentage of population growth, 79.9%. At the other end of the scale, Walpack is projected to decline in population by 34.1% between 2000 and 2010. Next, between 2010 and 2020, Hardyston is again projected to have the most growth, but at a lower rate of 20.7%. The municipality projected to lose the greatest proportion of population between 2010 and 2020 is Sussex, with a loss of 16.4%.

Hardyston is projected to have the most growth from 2000 to 2020 with a huge 117.3% increase in population. Hardyston is the only municipality projected to have greater than 100% growth. Walpack, with 34.1% decline between 2000 and 2010 and 0% change between 2010 and 2020, is expected to have the greatest population decline with 34.1% loss from 2000 to 2020.

Table 1-1: Projected Population Change by Municipality, 2000-2020 (Low Projection)

Low Projection									
Municipality			2000 to 2010			2000 to 2020		2010 to 2020	
	2000	2010	Change	%Change	2020	Change	%Change	Change	%Change
Andover borough	658	778	120	18.2%	793	135	20.5%	15	1.9%
Andover township	6033	6490	457	7.6%	6706	673	11.2%	216	3.3%
Branchville borough	845	744	-101	-12.0%	644	-201	-23.8%	-100	-13.4%
Byram township	8254	8970	716	8.7%	8803	549	6.7%	-167	-1.9%
Frankford township	5420	6250	830	15.3%	6790	1370	25.3%	540	8.6%
Franklin borough	5160	7024	1864	36.1%	7869	2709	52.5%	845	12.0%
Fredon township	2860	3434	574	20.1%	3816	956	33.4%	382	11.1%
Green township	3220	3706	486	15.1%	4170	950	29.5%	464	12.5%
Hamburg borough	3105	3238	133	4.3%	3351	246	7.9%	113	3.5%
Hampton township	4943	5750	807	16.3%	6364	1421	28.7%	614	10.7%
Hardyston township	6171	11104	4933	79.9%	13407	7236	117.3%	2303	20.7%
Hopatcong borough	15888	16021	133	0.8%	16041	153	1.0%	20	0.1%
Lafayette township	2300	2506	206	9.0%	2796	496	21.6%	290	11.6%
Montague township	3412	3905	493	14.4%	4500	1088	31.9%	595	15.2%
Newton town	8244	8756	512	6.2%	9203	959	11.6%	447	5.1%
Ogdensburg borough	2638	2567	-71	-2.7%	2244	-394	-14.9%	-323	-12.6%
Sandyston township	1825	1990	165	9.0%	2108	283	15.5%	118	5.9%
Sparta township	18080	18864	784	4.3%	19967	1887	10.4%	1103	5.8%
Stanhope borough	3584	3497	-87	-2.4%	3498	-86	-2.4%	1	0.0%
Stillwater township	4267	4718	451	10.6%	4828	561	13.1%	110	2.3%
Sussex borough	2145	1962	-183	-8.5%	1641	-504	-23.5%	-321	-16.4%
Vernon township	24686	29574	4888	19.8%	31192	6506	26.4%	1618	5.5%
Walpack township	41	27	-14	-34.1%	27	-14	-34.1%	0	0.0%
Wantage township	10387	12290	1903	18.3%	14024	3637	35.0%	1734	14.1%
County Totals	144166	164165	19999	13.9%	174782	30616	21.2%	10617	6.5%

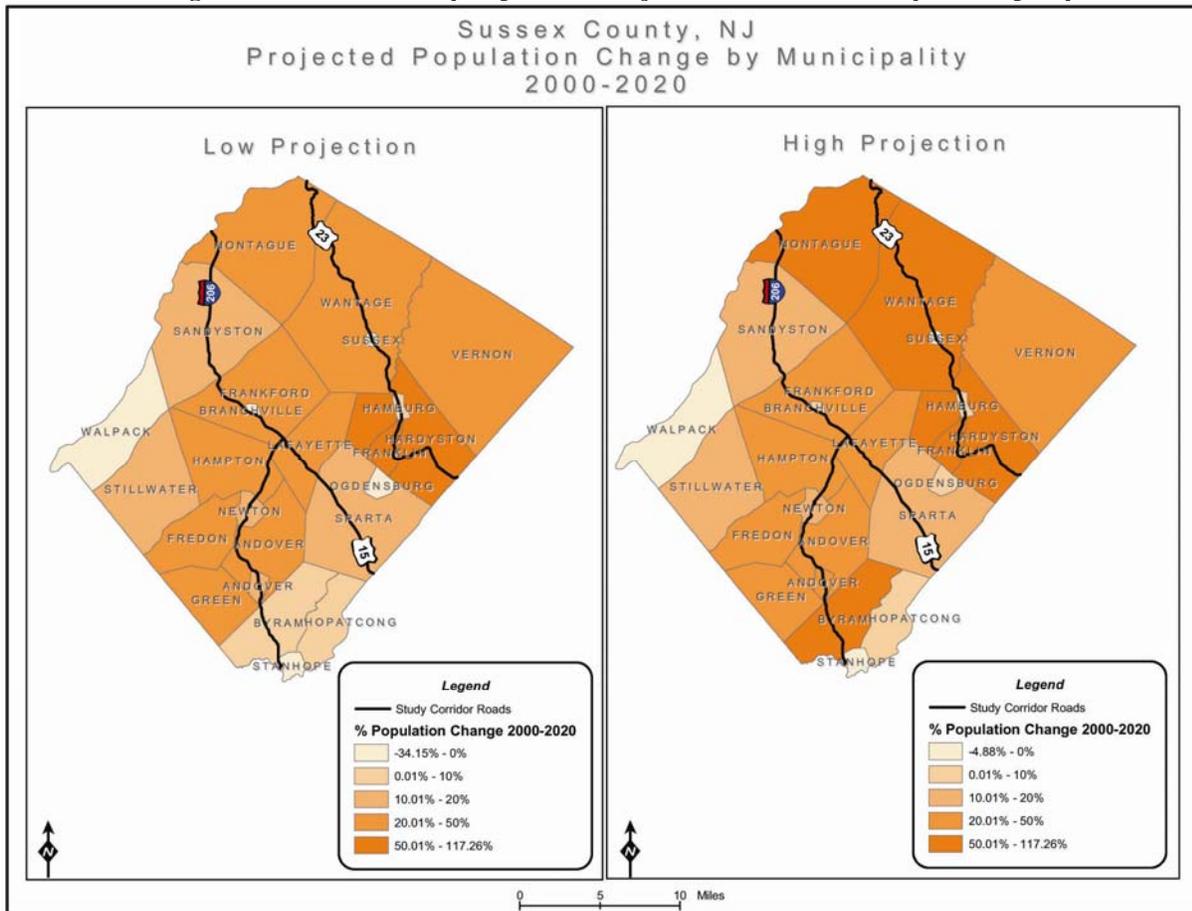
Table 1-2 shows the other end of the 2000-2020 population change projection range. The 2000 to 2020 population projections for Hardyston and Hamburg are the same for both the low and high projections. As with the low projections, the high population projections also say that Hardyston is expected to have the most growth and Walpack is expected to have the largest population decline during the periods 2000 to 2010 and 2000 to 2020. However, between 2010 and 2020, Montague is projected to have the most growth with 24.6% and Branchville is projected to lose the greatest proportion of population with only .7% loss. The range of values for percent population change is 29.2 percentage points, or a decrease of 19.3% between the 2000-2020 low and high projections.

Table 1-2: Projected Population Change by Municipality, 2000-2020 (High Projection)

High Projection									
Municipality			2000 to 2010		2020	2000 to 2020		2010 to 2020	
	2000	2010	Change	% Change		Change	% Change	Change	% Change
Andover borough	658	781	123	18.7%	799	141	21.4%	18	2.3%
Andover township	6033	7079	1046	17.3%	7921	1888	31.3%	842	11.9%
Branchville borough	845	855	10	1.2%	849	4	0.5%	-6	-0.7%
Byram township	8254	11124	2870	34.8%	12835	4581	55.5%	1711	15.4%
Frankford township	5420	6627	1207	22.3%	7488	2068	38.2%	861	13.0%
Franklin borough	5160	7217	2057	39.9%	7869	2709	52.5%	652	9.0%
Fredon township	2860	3469	609	21.3%	3868	1008	35.2%	399	11.5%
Green township	3220	3841	621	19.3%	4407	1187	36.9%	566	14.7%
Hamburg borough	3105	3351	246	7.9%	3351	246	7.9%	0	0.0%
Hampton township	4943	5907	964	19.5%	6623	1680	34.0%	716	12.1%
Hardyston township	6171	11286	5115	82.9%	13407	7236	117.3%	2121	18.8%
Hopatcong borough	15888	16400	512	3.2%	16520	632	4.0%	120	0.7%
Lafayette township	2300	2742	442	19.2%	3233	933	40.6%	491	17.9%
Montague township	3412	4500	1088	31.9%	5606	2194	64.3%	1106	24.6%
Newton town	8244	8941	697	8.5%	9533	1289	15.6%	592	6.6%
Ogdensburg borough	2638	2709	71	2.7%	2714	76	2.9%	5	0.2%
Sandyston township	1825	2022	197	10.8%	2164	339	18.6%	142	7.0%
Sparta township	18080	19320	1240	6.9%	20416	2336	12.9%	1096	5.7%
Stanhope borough	3584	3501	-83	-2.3%	3502	-82	-2.3%	1	0.0%
Stillwater township	4267	4827	560	13.1%	5036	769	18.0%	209	4.3%
Sussex borough	2145	2145	0	0.0%	2145	0	0.0%	0	0.0%
Vernon township	24686	30304	5618	22.8%	35535	10849	43.9%	5231	17.3%
Walpack township	41	39	-2	-4.9%	39	-2	-4.9%	0	0.0%
Wantage township	10387	13201	2814	27.1%	15716	5329	51.3%	2515	19.1%
County Totals	144166	172188	28022	19.4%	191576	47410	32.9%	19388	11.3%

Figure 1-4 presents the information from Tables 1-1 and 1-2 graphically: the darker the shade of orange, the higher the projected percentage growth for 2000 to 2020. The left side of the map shows the municipalities shaded by percent change for the low projection and the right side does the same for the high projection. The lightest shade shows municipalities that are projected to lose population from 2000 to 2020. For the low projection, the main trend in population growth extends diagonally across the county from northeast to southwest and bisects the major road corridors. For the high projection, the main trend is obvious along the State Route 23 corridor with the notable exception of the small cities (Sussex and Hamburg). For the low projection, the southern tip municipalities are expected to lose population or only grow slightly, but in the high projection, Byram is projected to grow more substantially. Overall, the population is expected to grow the most in the interior of the county and along the border with New York State. Growth along the major road corridors is also quite evident.

Figure 1-4: Sussex County Population Projections for 2000-2020 by Municipality



Understanding current population patterns makes projecting into the future more feasible. Population density for the year 2000 is presented in the next section.

Population Density

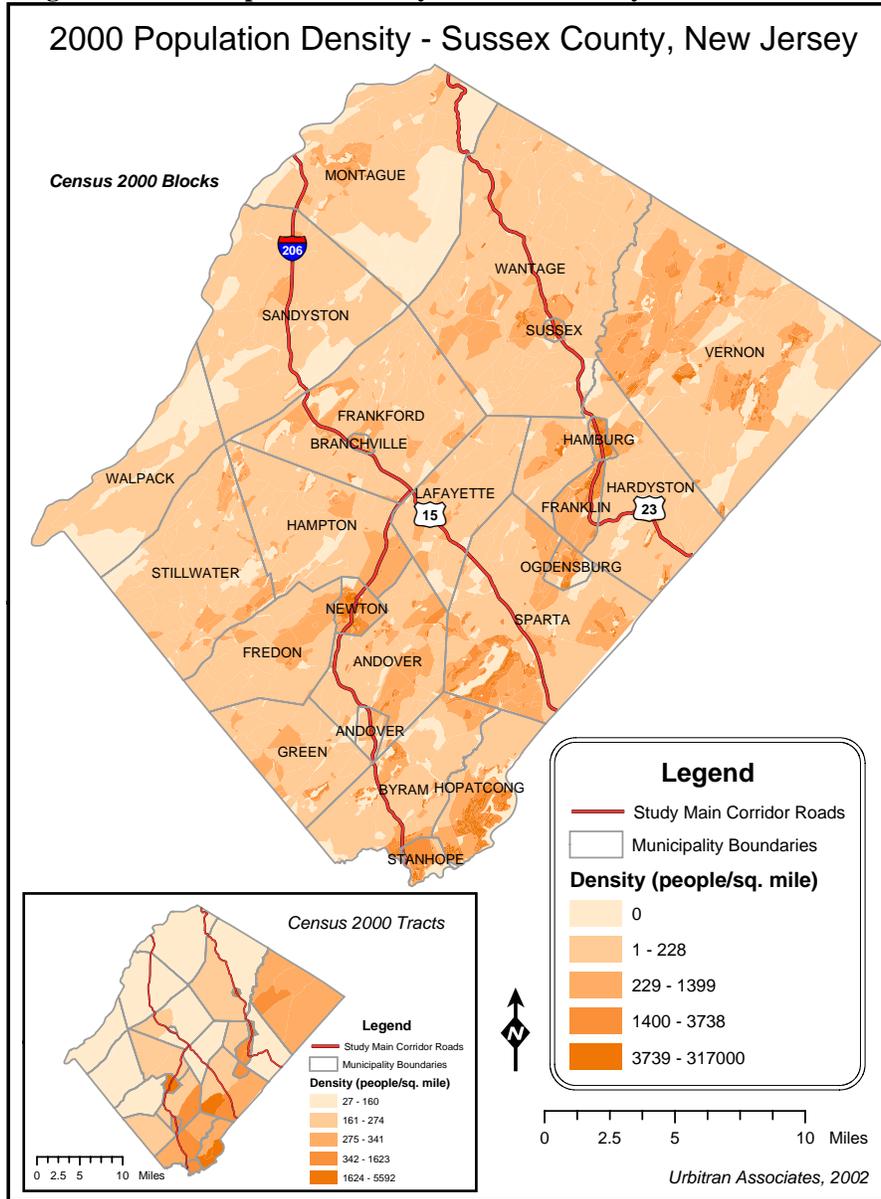
Population density is another important demographic measure because of its inherent ability to show concentrations of people across a landscape. Figure 1-5 illustrates population density in Sussex County for the year 2000 at the Census Block Level. The inset map in Figure 1-5 presents population density at a more generalized scale – the Census Tract Level.

Densities are very useful for their ability to show concentrations of people but can be misleading due to the composition of the landscape. People do not live in heavily forested areas, in wetlands or in lakes, but the area that is comprised of these types of land cover is not excluded when calculating population density (people per area). The figures presented here are general density figures because they use total land area per political designation, *not* just habitable land.

Looking at Sussex County as a whole, the southern portion of the county is the most densely populated area. This high density in the south can be explained by its designation as part of the New York Metropolitan Area and its proximity to this urban setting. The small cities of Newton

and Sussex are also densely populated but are not located in the extreme southern portion of the county. The western part of the county has the lowest population densities.

Figure 1-5: 2000 Population Density for Sussex County in Blocks and Tracts



The most densely populated Census Block in 2000 was located in Andover on the border of Sparta and had a population density of 317,000 people per square mile. The area of the densely-packed block is only a very small portion of a square mile. The lowest population density (0 people per square mile) was widespread throughout Sussex County and was found mostly in Census Blocks containing parkland, forests, bare land, wetlands and water bodies. The average Census Block population density for Sussex County was 1,983.6 people per square mile.

The most densely populated (5,592 people per square mile) Census Tract in 2000 was found in Hopatcong on the border of Morris County and within the New York Metropolitan Area. The

Census Tract that contains the entirety of Walpack and Sandyston had the smallest population density with 27.38 people per square mile. The average Census Tract population density for Sussex County was 883.1 people per square mile.

The total population density for Sussex County was 276.6 people per square mile in 2000. For all of New Jersey the population density was 1,134.4 people per square mile. Thus, overall population density in Sussex County was only a quarter of the statewide density.

New Construction

Another way of looking at changes to population size, density and location is by examining the number of building permits granted annually during an extended time period. Table 1-3 shows the number of building permits distributed in 1980 and 2002 per municipality. Overall, from 1980 to 2002, the number of building permits granted annually in Sussex County increased by 310 permits, or 84%. Thus, the growth in annual permits was not high. As with population change, the change in number of building permits was not uniform. Throughout the 22-year period, the number of permits distributed varied widely from year-to-year due to factors such as the economic situation, available land, and zoning, among others. Several municipalities decreased the number of permits they distributed from 1980 to 2002. The greatest increase in annual permits issued was found in Stanhope, where 0 permits were distributed in 1980 and 18 were distributed in 2002. A similar situation was found in Hamburg where the number increased from 2 to 37 over the period. Andover and Ogdensburg each only distributed 1 permit in 1980 and 0 in 2002, which resulted in a 100% decline in annual permits for the period.

Sussex County did not experience high growth in building permits over the period, but did experience great fluctuation in both location of new permits and in number of permits allowed. The number of building permits issued in a year speaks to some degree to the prosperity of the citizens and the rate of raw population and population density change.

Table 1-3: Change in Building Permits Granted, 1980-2000 by Municipality

Municipality	<i>2002 Building Permits</i>	<i>1980 Building Permits</i>	<i>Change 1980 to 2002</i>	<i>Percent Change 1980 to 2002</i>
Andover borough	0	1	-1	-100.0%
Andover township	34	18	16	88.9%
Branchville borough	2	1	1	100.0%
Byram township	34	16	18	112.5%
Frankford township	23	27	-4	-14.8%
Franklin borough	4	10	-6	-60.0%
Fredon township	40	16	24	150.0%
Green township	16	12	4	33.3%
Hamburg borough	37	2	35	1750.0%
Hampton township	23	12	11	91.7%
Hardyston township	114	23	91	395.7%
Hopatcong borough	10	13	-3	-23.1%
Lafayette township	13	8	5	62.5%
Montague township	42	7	35	500.0%
Newton town	7	3	4	133.3%
Ogdensburg borough	0	1	-1	-100.0%
Sandyston township	16	5	11	220.0%
Sparta township	134	42	92	219.0%
Stanhope borough	18	0	18	1800.0%
Stillwater township	5	18	-13	-72.2%
Sussex borough	6	4	2	50.0%
Vernon township	33	98	-65	-66.3%
Walpack township	0	0	0	0.0%
Wantage township	68	32	36	112.5%
<i>County Totals</i>	<i>679</i>	<i>369</i>	<i>310</i>	<i>84.0%</i>

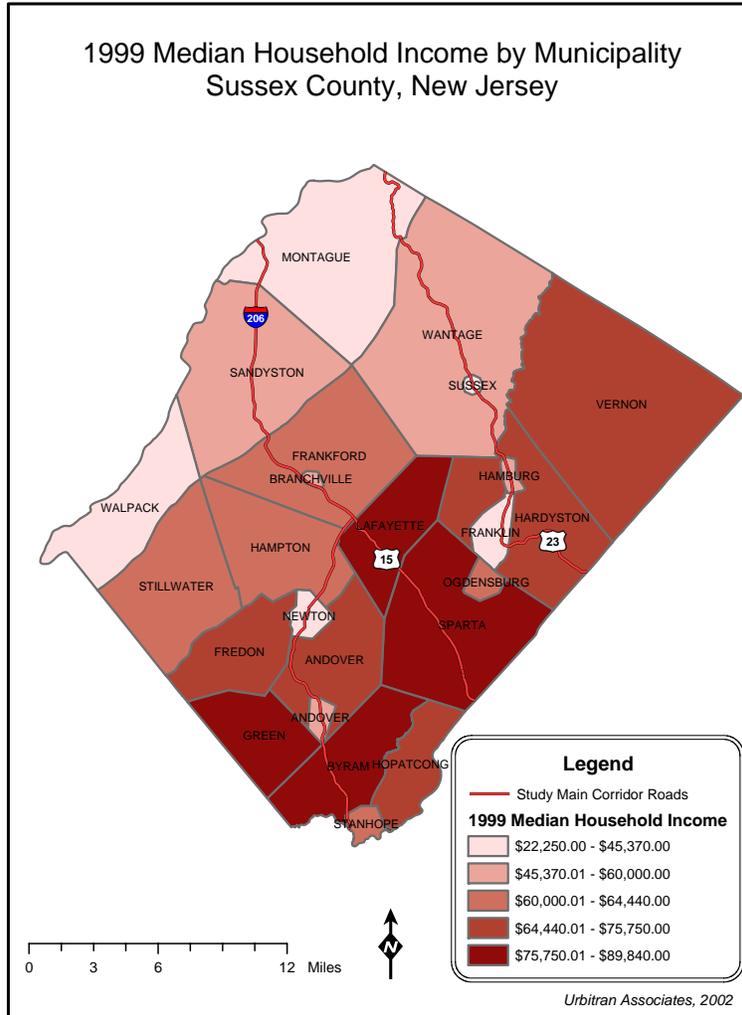
Income

Income determines the type of transportation that people are able to use to get to work. People with lower incomes are more likely to be in need of public transportation options than people with higher incomes who can afford private transportation. However, there are different types of public transportation and income also plays a role in determining which type of public transportation commuters choose. Rail travel is more expensive and is only reasonable for longer distance commutes. Thus, only people who have the financial means and employment situation that make long distance commutes feasible use rail transit. On the other hand, bus travel is far less expensive than rail travel. People who have shorter commutes or lower income choose the bus for public transportation.

New Jersey statewide 1999 median household income was \$55,146. In Sussex County median household income was \$65,266. Thus, residents of Sussex County are better off financially than the state as a whole. Figure 1-6 displays median household income as reported by the US Census Bureau for the year 1999 by municipality in Sussex County. Walpack reported the lowest median household income for Sussex County in 1999 at \$22,250. Sparta boasted the highest median

household income for the county in 1999 at \$89,840. Six southern Sussex County municipalities (Lafayette, Fredon, Andover Township, Byram, Green and Sparta) experienced median household incomes over \$75,000.

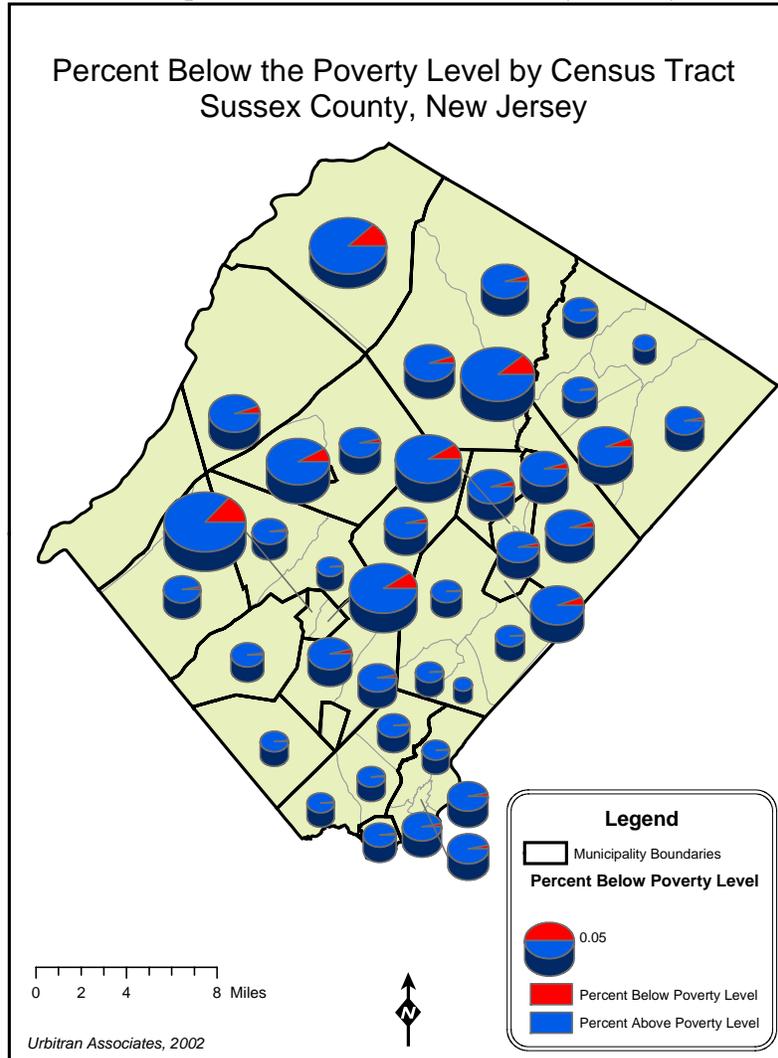
Figure 1-6: 1999 Median Household Income by Municipality for Sussex County



Alternatively, New Jersey per capita income was \$27,006 in 1999 and Sussex County per capita income was \$26,992. Thus, Sussex County per capita income was slightly lower than the statewide number. Within Sussex County, per capita income ranged from a low in Walpack at \$17,630 to a high in Sparta at \$36,910.

Figure 1-7 shows the spatial configuration of poverty in Sussex County. The size of the pie chart indicates the level of poverty in the Census Tract. The larger the pie chart, the higher the level of poverty.

Figure 1-7: Percent of Population Above and Below Poverty Level by 2000 Census Tract



Poverty in Sussex County was highest in the central region during Census 2000. Southern Sussex County had comparatively lower poverty levels. The lowest level of poverty in the county was found in the southeastern Census Tract of Sparta. The highest level of poverty was found in western Newton. Higher levels of poverty were found in small urban areas, not in the New York Metropolitan Area in southern Sussex County. More than 10% of Newton, Sussex and Montague residents were living below the poverty level in 2000. For a rural/suburban community such as Sussex County, poverty levels are of less of a concern from a commuter standpoint. Providing public transportation for people below poverty level, living in urban settings is more of a concern for a city than for the county. Sussex County, being the “bedroom community” that it is, experiences low levels of poverty since most of its residents are wealthy commuters to other counties.

Employment

Employment is a key factor in transportation and transit discussions because the trip to work is the most frequent and most important trip purpose. This section describes Sussex County residents work location, the largest employers in the county, and the level of unemployment by municipality. The origin/destination survey being conducted as part of this study will also provide a detailed profile of employment characteristics for Sussex County residents.

Residents of Sussex County are primarily employed in the businesses of manufacturing and retail trade. Table 1-4 lists the number of Sussex County residents employed by various industries.

Table 1-4: Industry of Employment for Sussex County Residents

Sussex County Residents' Industry of Employment		
<i>Industry Sector</i>	<i>#</i>	<i>%</i>
Manufacturing	9,840	13.3%
Retail trade	9,682	13.1%
Health care and social assistance	7,035	9.5%
Educational services	6,784	9.2%
Construction	6,118	8.3%
Professional, scientific, and technical services	5,066	6.9%
Finance and insurance	4,312	5.8%
Transportation and warehousing	3,501	4.7%
Public administration	3,362	4.5%
Accommodation and food services	3,183	4.3%
Wholesale trade	3,094	4.2%
Other services (except public administration)	2,984	4.0%
Information	2,865	3.9%
Administrative and support and waste management services	2,406	3.3%
Real estate and rental and leasing	1,231	1.7%
Arts, entertainment, and recreation	1,115	1.5%
Utilities	576	0.8%
Agriculture, forestry, fishing and hunting	389	0.5%
Mining	242	0.3%
Management of companies and enterprises	128	0.2%
Total	73,913	100.0%

Other industries that employ large numbers of Sussex County residents are health care and social assistance, educational services and construction. The places where these activities take place are spread throughout the county, surrounding counties, and adjacent states.

Place of Employment

Sussex County residents are employed primarily in other New Jersey counties. Figure 1-8 graphs where Sussex County residents are employed. Fifty-four percent of Sussex County residents work in another New Jersey county and 5% work outside of New Jersey entirely. The remaining 41% of residents work inside the county (US Census 2000). Figure 1-9 presents a spatial

representation of where Sussex County residents work based on the Census Tract of their residence.

The origin/destination survey of commuters along routes 15, 23, and 206 was undertaken in order to better understand exactly where people whose commutes take them outside of the county are going. Origin and destination municipality and county were determined for each survey respondent. The results will be presented in a later chapter.

Figure 1-8: Place of Employment for Residents of Sussex County

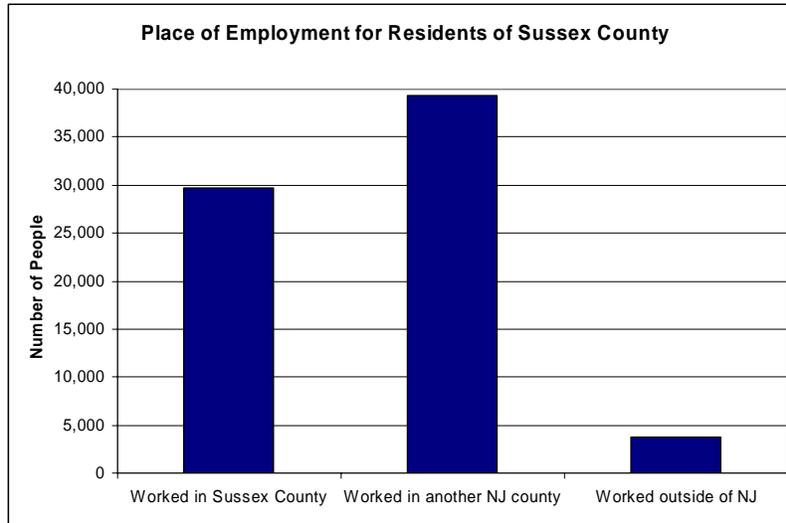
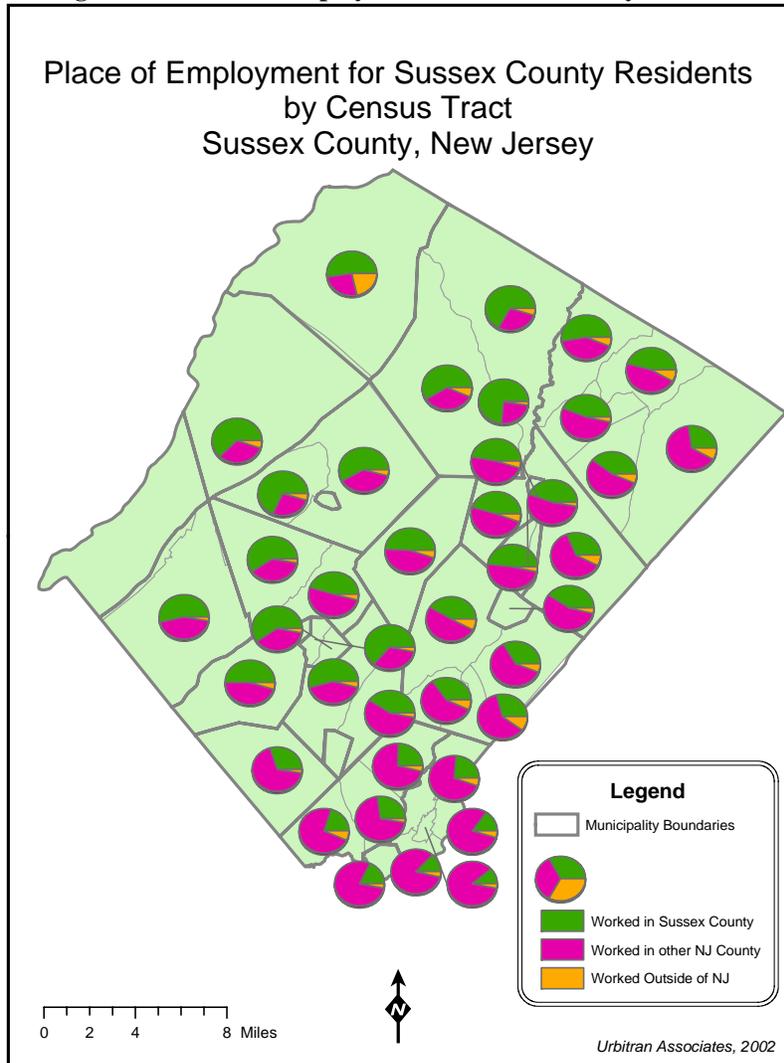


Figure 1-9 shows that Sussex County residents living in southern and eastern Census Tracts worked mostly in other New Jersey counties in 2000. Central Hopatcong reported the largest percentage of residents who worked outside the county in 2000 (85.8%). The smallest percentage of people who worked outside Sussex County was found in Sussex Borough (23.9%). Conversely, Sussex Borough had the largest percentage of residents who worked within the county (73.5%) and central Hopatcong had the smallest percentage of residents who worked within the county (11.1%). Hopatcong is located right on the border of Morris County, so it is not surprising that many residents work outside of the county (probably in the New York Metropolitan Area).

Figure 1-9: Place of Employment for Sussex County Residents



Sussex Borough is a small urban area that itself attracts employers and employees and is centrally located in the county, so it makes sense that Sussex had the most residents who worked inside the county. Generally, residents living in central and western counties worked mostly inside Sussex County. Residents working outside of New Jersey were spread throughout the county but found the largest concentration in Montague (21.3%). Green Township had the smallest percentage of residents who worked outside of New Jersey (2.4%). Green is located on the border of Warren County and very close to Morris County, so most of its residents work outside of Sussex County but still in New Jersey. Choice to work inside or outside of the county, from the spatial distribution shown on the map, depended at least in part on proximity to other states, other counties, or the New York Metropolitan Area.

Largest Employers in Sussex County

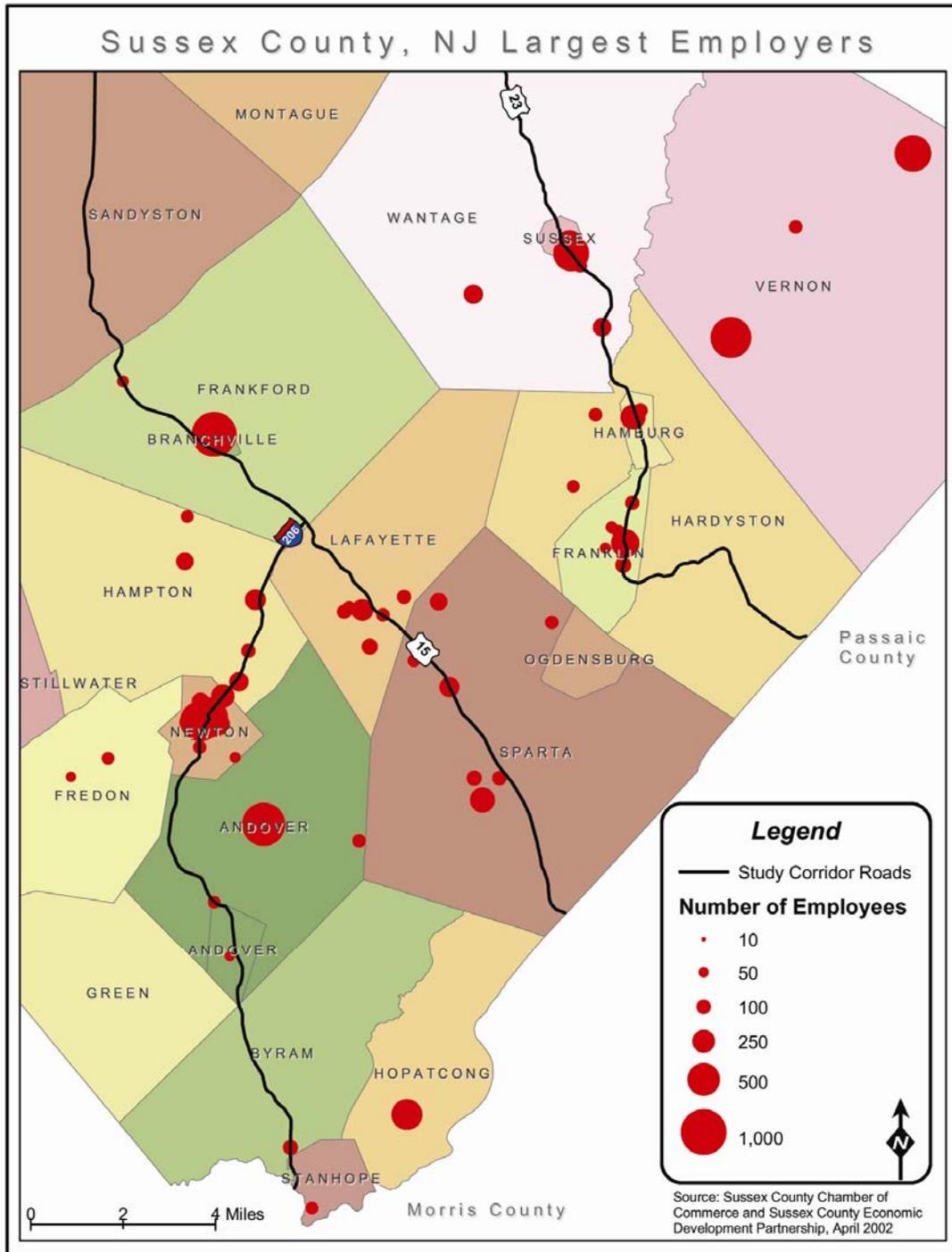
Large employers act as major trip generators because of the high number of people needing to get to and from one particular place at specific times during the day. This section presents the largest employers in Sussex County, which are important intra-county trip generators. Most Sussex County residents, however, leave the county for employment. Most work in adjacent counties to the south and east of Sussex County and only a few work out of state. The origin/destination survey being conducted as part of this study will provide much more detailed information on where exactly people who leave the county for employment work.

For the purpose of this study, major employers are those located in the county with 50 or more employees. According to information compiled by the Sussex County Chamber of Commerce and the Sussex County Economic Development Partnership in April of 2002, the largest employers in the county are concentrated in the southeastern portion of the county, especially in Newton and along the study corridors of State Highways 15 and 23 and US Highway 206. Figure 1-10 shows a proportional symbol map of the Sussex County's largest employers. The largest circles represent the employers with more than 500 employees but less than 1000 employees. The smallest circles represent employers with less than 50 employees and the rest of the circles are proportional to other numbers of employees in between. The density of major employers along the study corridor roads as noted above is obvious in Figure 1-10.

Overall, the major employers in Sussex County provided 13,720 jobs. Thirty percent of the jobs at the major employers in Sussex County can be found in Newton. Ten percent are found in Sussex and another 8% are found in each Andover and Sparta. The majority of the largest employers are located along the major roadways that are the focus of this study (routes 15, 23, and 206).

Other major Sussex County employers listed by the Chamber of Commerce and Economic Development Partnership, which were not located in Sussex County, were GPU Energy in Allenhurst with 72 employees, the Bank of New York in Cedar Knolls with 75 employees, Ronetco Supermarkets, Inc. in Ledgewood with 711 employees, Eastern Propane Corp. in Oak Ridge with 55 employees, and N.B. Fairclough & Son, Inc. in Paterson also with 55 employees.

Figure 1-10: Proportional Symbol Map of Sussex County's Largest Employers, April 2002



The database used to geocode the locations of the major employers in Figure 1-10 is also provided here. Table 1-5 lists the name, location and number of employees for each of the largest employers in Sussex County. Selective Insurance in Branchville with 954 employees is the largest employer in the county. Other companies with more than 500 employees include the Andover Subacute and Rehab Center, Mountain Creek/Intrawest, the County of Sussex, Newton Memorial Hospital, Vernon Township Board of Education, and Econo-Pac.

Table 1-5: Largest Sussex County Employers, April 2002

Company	City	# Employees
Selective Insurance	Branchville	954
Andover Subacute and Rehab Center	Andover	900
Mountain Creek/Intrawest	Vernon	800
County of Sussex	Newton	800
Newton Memorial Hospital Inc.	Newton	757
Vernon Township Board of Education	Vernon	629
F.O. Phoenix Inc. (Econo-Pac)	Sussex	600
Hopatcong Board of Education	Hopatcong	450
Wal-Mart	Franklin	380
Saint Clare's Hospital	Sussex	300
Sparta Board of Education	Sparta	300
Ames Rubber Corp.	Hamburg	300
SCARC, Inc.	Augusta	296
Weis Markets, Inc.	Newton	257
Schering-Plough Research Institute	Lafayette	233
Newton Board of Education	Newton	230
Lakeland Bank (formerly NBSC)	Branchville	224
Norwescap, Inc.	Newton	210
In Home Health Services	Sparta	200
Wal-Mart #2604	Newton	180
High Point Regional Board of Education	Sussex	175
Sussex County Technical School	Sparta	157
Kittatinny Regional High School	Newton	157
PSA Pediatric Services of America, Inc.	Newton	150
All Quality Care, Inc.	Newton	150
Sussex County Community College	Newton	150
Barn Hill Care Center	Newton	130
Weis Markets, Inc.	Franklin	130
New Jersey Herald, Inc.	Newton	127
Sunrise House Foundation	Lafayette	120
Center for Humanistic Change of NJ, Inc.	Stanhope	113
Stop and Shop	Sparta	112
Sussex Bank	Franklin	105
Sprint	Lafayette	103
Sparta Township	Sparta	100
Condit Ford Inc.	Newton	100
Newton Trust Co.	Newton	100
Waste Management of Northwest NJ	Lafayette	100
Village Bus Co., Inc.	Lafayette	100
Accurate Forming	Hamburg	100
Legends Resort and Country Club	McAfee	94

Table 1-5: Largest Sussex County Employers, April 2002 (cont'd)

Franklin Borough Board of Education	Franklin	93
Great Atlantic & Pacific Tea Co, Inc.	Sussex	90
Sussex Technology, Inc.	Sparta	87
Wallkill Valley Regional Bd. Of Education	Hamburg	87
Acme Markets, Inc.	Newton	85
Lafayette House	Lafayette	85
Franklin Mutual Insurance Co.	Branchville	85
Perona Farms	Andover	85
Sussex County Library System	Newton	82
Lakeland Bank	Newton	80
No. American Sterization & Packaging	Franklin	80
Isolatek International	Stanhope	77
Valley National Bank	Fredon	75
First Student, Inc.	Andover	75
Thorlabs, Inc.	Newton	70
Borough of Franklin	Franklin	65
Newco Inc.	Newton	60
NJ Dept. of Human Services	Newton	60
Clausen Machine	Franklin	57
Health Choice, Inc.	Newton	54
Ja-Bar Silicone Corp.	Andover	53
Fredon Township Board of Education	Newton	50
Net Access Corp.	Newton	50

Less than half of Sussex County’s residents work inside the county, so a look needs to be taken at employment opportunities outside the county to see where residents work. Major employers in Morris County will be discussed next.

Largest Employers in Morris County

Morris County, located to the south and southeast of Sussex County, is a major employment destination for Sussex County residents. Morris County has forty major employers with 500 or more employees. Sixteen of these major employers have facilities in Parsippany and seven have facilities in Morristown, making these municipalities prime trip generators. Table 1-6 lists all of the employers in Morris County with 500 or more employees. Morristown Memorial Hospital is the largest employer in the county with 4,435 employees.

Table 1-6: Largest Employers in Morris County, February 2002

COMPANY	LOCATIONS	EMPLOYEES
Atlantic Health System (Morristown Memorial Hospital)	Morristown	4,435
AT&T	Morristown, Hanover, Florham Park, Parsippany	3,200
US Army Armament R&D	Rockaway/Jefferson	3,158
Lucent Technologies	Mt. Olive, Chester, Hanover Parsippany, Morristown	3,004
Pfizer Inc.	Morris Plains/Parsippany	2,917
Novartis Pharmaceutical	East Hanover	2,882
County of Morris	Various Locations	2,800
St. Clare's Health Services	Dover/Denville/Boonton	2,655
Cendant	Parsippany (5)	2,350
Kraft Foods	East Hanover/Parsippany	2,000
United Parcel Service *	Parsippany	1,799
BASF Corp.	Mt. Olive	1,722
Verizon	Hanover/Madison	1,680
Automated Data Processing	Parsippany (3)	1,459
Chilton Memorial Hospital	Pompton Plains	1,330
Greystone Park Psychiatric Hospital	Parsippany	1,314
Tiffany & Co.	Parsippany	1,150
PriceWaterhouseCoopers	Florham Park	1,138
Automatic Switch Company	Florham Park/Parsippany	1,100
Honeywell	Morristown	1,100
Bear Stearns	Hanover	1,066
Howmet Castings, an Alcoa business	Dover	1,050
Wyeth	Madison/Florham Park	1,014
Intel	Parsippany	1,000
Merck-Medco Containment	Parsippany	964
Deloitte & Touche (Deloitte Consulting)	Parsippany	950
Morris School District	Morristown	850
National Prescription Administrators	East Hanover	781
Champion Mortgage (KeyCorp.)	Parsippany	750
Roxbury Board of Education	Roxbury	700
Lincoln Park Subacute & Rehab Ctr.	Lincoln Park	700
Jersey Central Power & Light – A FirstEnergy Co.	Morristown, Dover, Boonton East Hanover	700
Transistor Devices, Inc.	Cedar Knolls, Randolph, Washington Twp.	637
Dun & Bradstreet	Parsippany	630
Colgate Palmolive	Morristown	600
Pershing Division of CSFB	Florham Park	550
Prudential Financial	Florham Park	500
Unilever Cosmetics International	Mt. Olive	500
Drew University	Madison	500
New York Life Investment, LLC	Parsippany	500

Source: Telephone Confirmation of Figures
January 15-February 15, 2002
Morris Area Development Group

*The UPS figure includes full-time and part-time workers. The UPS facility in Mt. Olive has 300 full-time & part-time employees. The figures for Drew University, Roxbury Board of Education, and Morris School District include, faculty, administration, maintenance staff, and both full-time and part-time employees.

^ The Jersey Central Power & Light figure includes multiple facilities and both JCP&L employees and corporate FirstEnergy employees
() indicates how many facilities a company has in that municipality.

Morris County has several very large employers with facilities in multiple locations throughout the county. Twenty-four of the major employers have 1,000 or more employees. Just looking at these numbers compared to the numbers for Sussex County's largest employers, it can be seen why Sussex County residents leave the county for employment opportunities. Sussex County's largest employer has fewer than 1,000 employees. Two of the three study roadway corridors (Routes 15 and 206) lead directly into Morris County. Route 23 leads into Passaic County, just a short distance north of the Morris County border. The exact destination of Sussex County

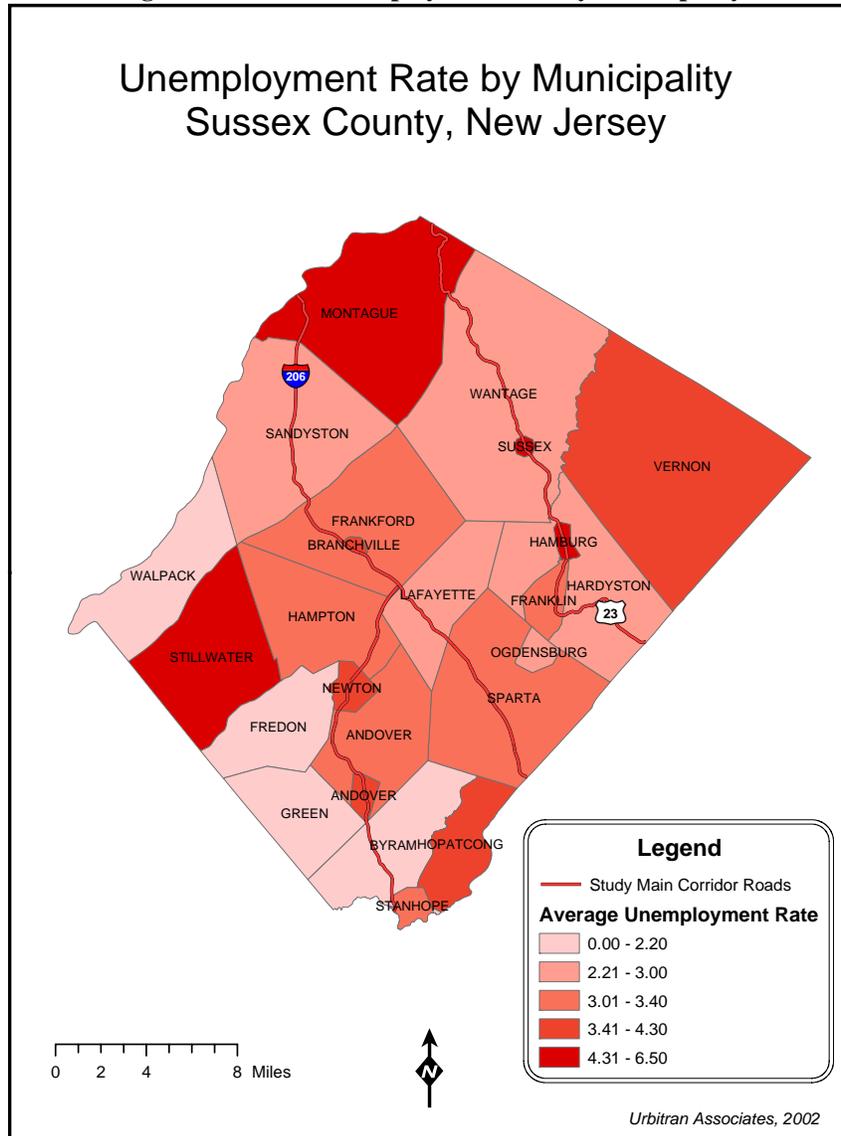
residents in Morris County will be discovered and detailed in the results of the origin - destination survey section of this study, which will be presented in a later chapter.

Despite the number of large employers in Sussex County and in its surrounding counties, some municipalities located at a distance from these employment centers and major road corridors as well as more urbanized municipalities, still have some problems with unemployment. This can be attributed to the distance from employment, urbanized centers & major corridors.

Unemployment

Figure 1-11 presents the estimated unemployment rate by municipality for Sussex County as reported by the New Jersey Department of Labor. In 2001 Walpack had the lowest unemployment rate at 0 (38 people in the labor force). Stillwater, with an unemployment rate of 6.5, had the highest rate in Sussex County in 2001 (2,447 people in the labor force).

Figure 1-11: 2001 Unemployment Rate by Municipality



Travel Mode and Commute Time

Sussex County, being a predominantly rural/suburban community, is expected to have residents that use private transportation to get to work and that have long commute times because they need to travel to get to the urban centers for job opportunities. The data presented is from Census 2000.

Means of Transportation

The percentage of workers in New Jersey who drove alone increased by 3.6% from 1990-2000 and the percentage of people who used public transportation increased by 10.3%, but the percentage of people who carpooled decreased by 12.6%. Sussex County was one of only five New Jersey counties that did not experience an increase in public transportation usage between 1990 and 2000. Less than 2% of workers in Sussex County used public transportation.

The largest percentage of workers who drove alone to work in the State of New Jersey is found in Sussex County (83.9%). Table 1-7 and Figure 1-12 present the modes of transportation to work used by Sussex County residents.

Figure 1-12: Means of Transportation to Work for Sussex County Residents

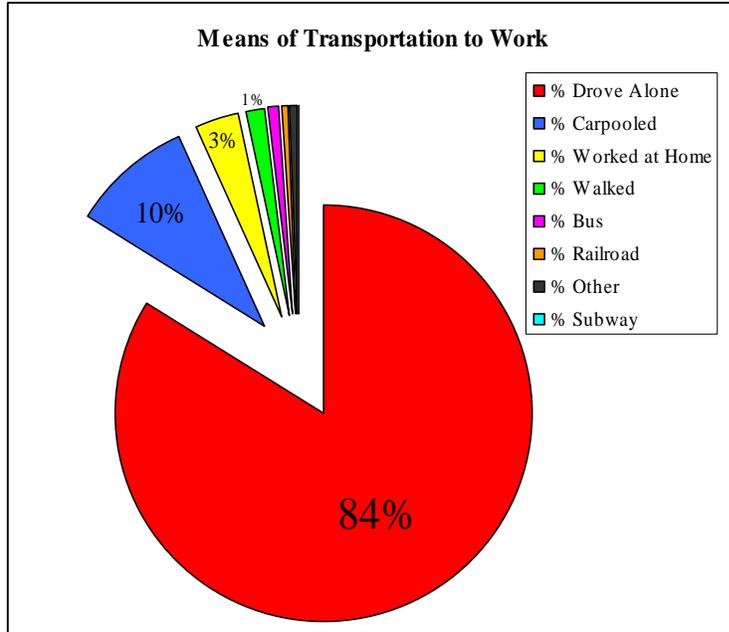


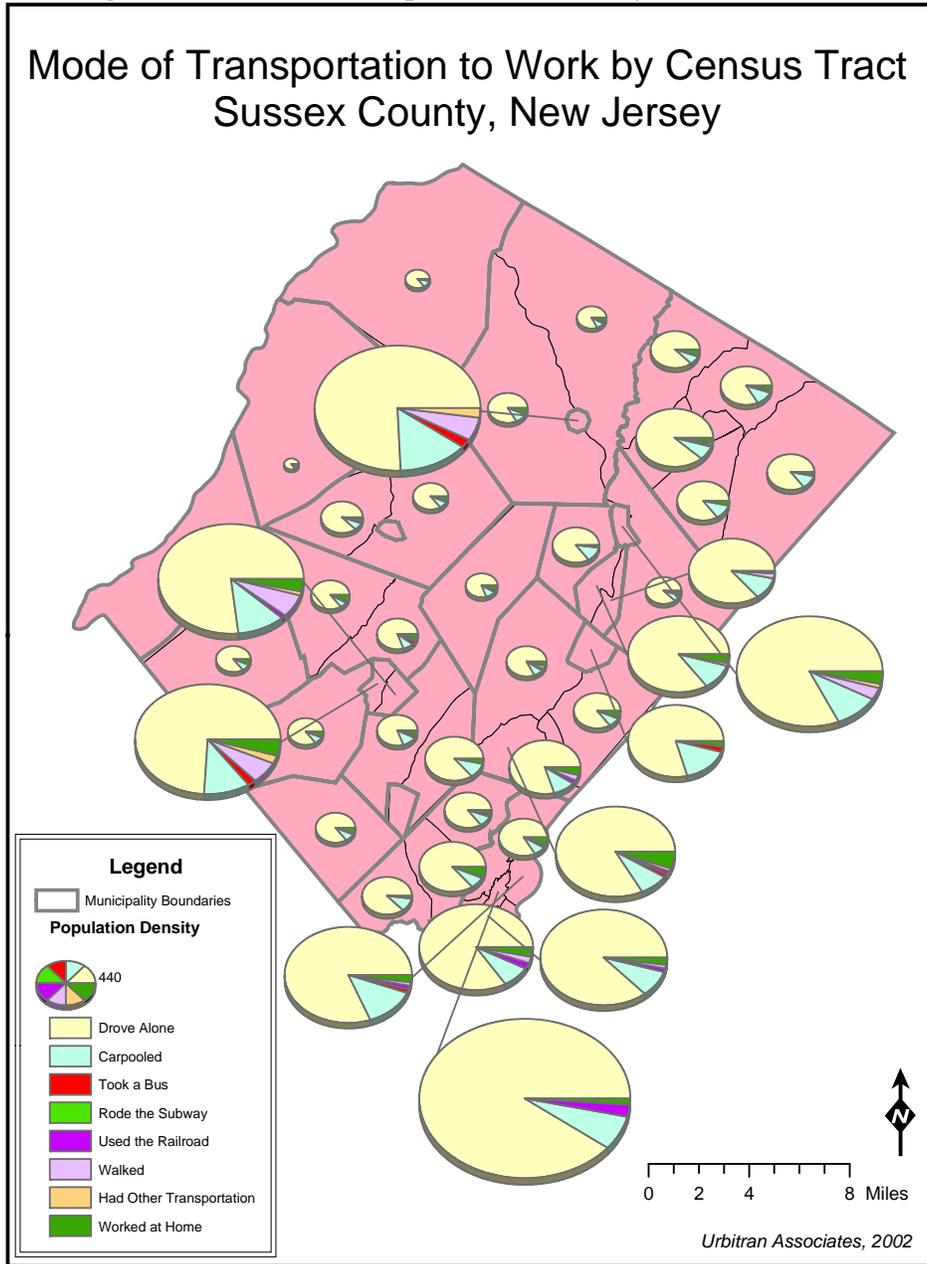
Table 1-7: Means of Transportation for Sussex County Residents

Means of Transportation to Work for Sussex County Residents	
Drove Alone	61,033
Carpooled	6,836
Worked at home	2,442
Walked	965
Bus	566
Railroad	386
Other Means	336
Subway	62
Bicycle	47
Taxicab	32
Motorcycle	23

As noted the largest percentage of people drove alone, with carpooling a distant second place. Of those people who carpool, 86% participated in 2-person carpools, 9% in 3-person carpools and 5% in carpools or vanpools with 4 or more people. Figure 1-13 describes the mode of transportation utilized by Sussex County residents by Census 2000 Tract. The size of the pie charts represents the population density of the Census Tract.

Residents of central Hopatcong drove alone and rode the railroad the most in Sussex County. North-central Sparta produced the largest percentage of carpoolers. The largest percentage of bus riders was found in eastern Hampton and the largest percentage of subway riders came from western Sparta. Western Newton produced the largest number of people who walked to work in the county and western Hampton residents created the largest percentage of people who worked from home in the county.

Figure 1-13: Means of Transportation to Work by Census 2000 Tract

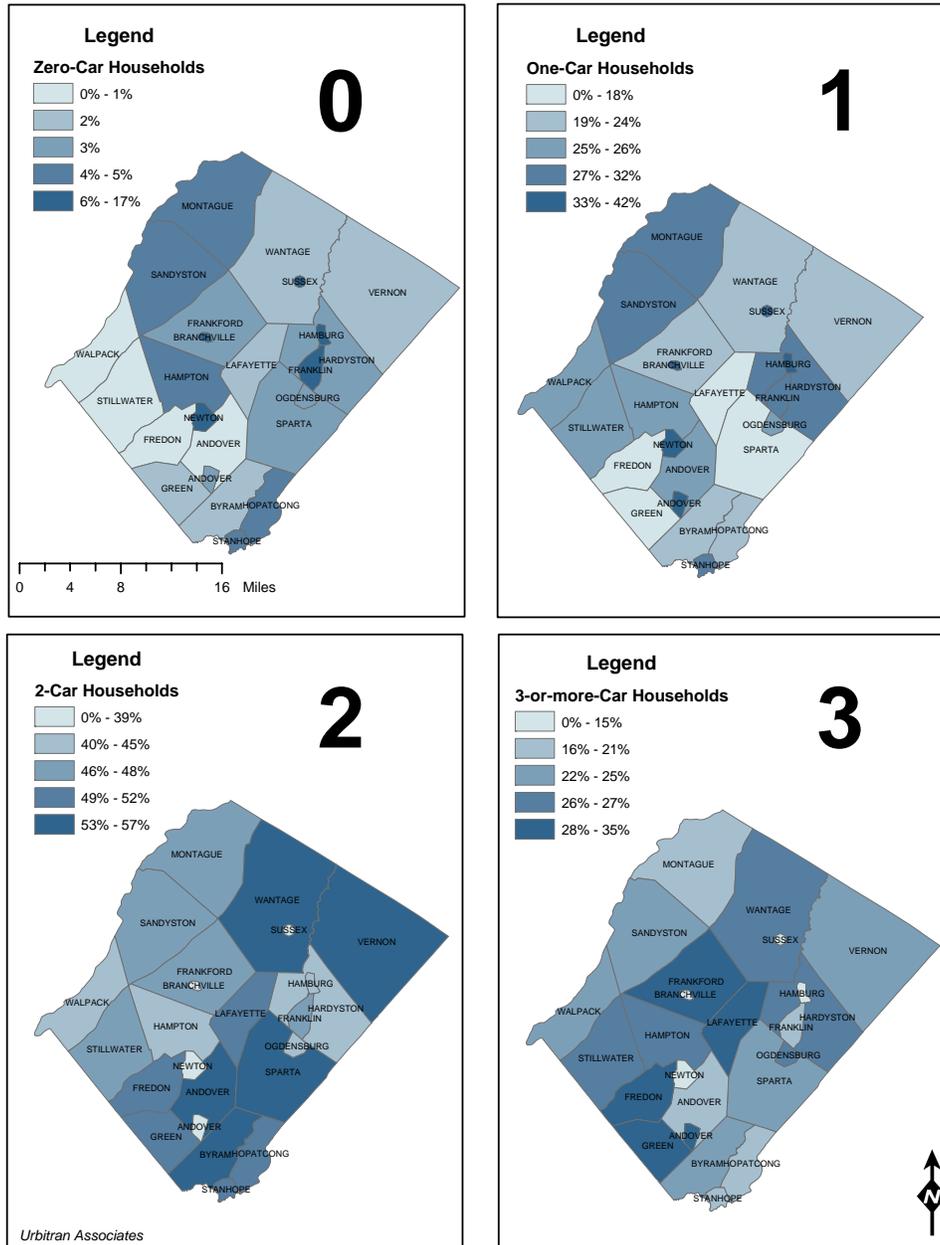


Residents of Sussex County have no shortage of vehicles with which to drive alone to work as presented in the next section.

Cars per Household

Numbers of cars per household is an important statistic to analyze because it describes vehicle dependence and in turn, transit demand in the region. Because Sussex County is a rural/suburban area and not an urban area, the number of cars per household is expected to be high. Generally, zero-car households are considered to be entirely dependent upon alternate transportation sources. At the time of Census 2000, 66% of Sussex County households owned more than one vehicle (second in the state), which was much higher than the state average of 52.6%. Figure 1-14 describes the spatial configuration of the percentage of households with 0, 1, 2, and 3 or more cars.

Figure 1-14: Number of Cars per Household by Municipality for Sussex County



As can be seen from Figure 1-14, Sussex County has very few households without vehicles. The municipality with the largest percentage of zero-car households only reported 17% of households without cars (Newton). Newton is a more urbanized area, so this is not surprising. At the other end of the spectrum, the municipality with the largest percentage of households with 3 or more vehicles reached 35% of all households (Green). The following municipalities had the smallest and largest percentages of households with 0, 1, 2, and 3 or more cars:

0-car households	High: Newton (17.1%)	Low: Walpack (0%)
1-car households	High: Branchville (41.8%)	Low: Green (13.8%)
2-car households	High: Sparta (56.9%)	Low: Sussex (28.3%)
3-or-more-car households	High: Green (35.4%)	Low: Newton (11.5%)

The only transit-dependent people in Sussex County were found in the small urban areas in the interior of the county. The other obvious trends were found in 2-car households where municipalities from the center to the eastern portion of the county experienced the highest percentage of 2-car households and with 3-or-more-car households diagonally across the center of the county with the highest percentages. Throughout Sussex County the largest percentage of households owned 2 cars. Table 1-8 lists the cars per household for all of Sussex County from Census 2000.

Table 1-8: Number of Cars per Household for Sussex County

Number of Cars	# Households	%
0 cars	2132	4.19%
1 car	12180	23.96%
2 cars	25111	49.40%
3 or more cars	11408	22.44%
Total Households	50831	100.00%

Almost 96% of Sussex County households own at least one car. Nearly 75% of county households own 2 or more cars. Obviously Sussex County residents are automobile-dependent due to both the percentage of people who drive alone in the county and the percentage of multiple-car households in the county.

Commute Time

Statewide commute time rose from 25.3 minutes in 1990 to 30 minutes in 2000. New Jersey commute time at 30 minutes ranked third in the United States below only New York (31.7 minutes) and Maryland (31.2 minutes). In addition to its distinction as the county with the largest number of people who drove alone, in 2000 Sussex County also boasted the longest commute time in the state at 38.3 minutes. Sussex County is a “bedroom community” and as such, its residents generally live in rural or suburban areas of the county and commute to work in other counties or other states. Residents living in this type of community generally choose to do so and thus, choose to make long commutes for employment purposes.

Table 1-9 describes the distribution of commute times for Sussex County.

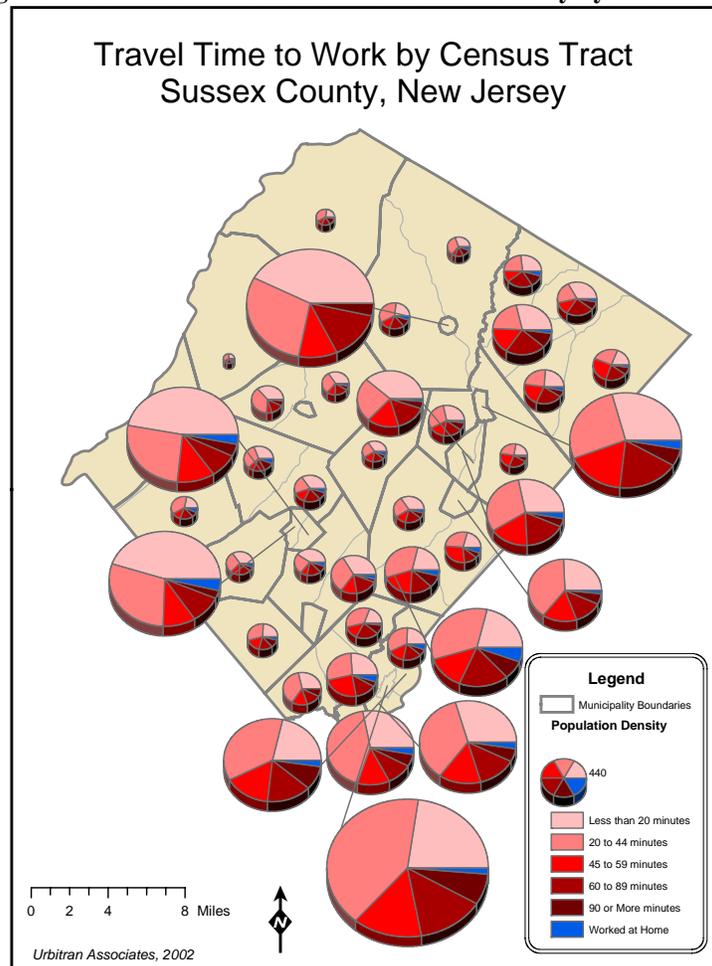
Table 1-9: Overall Sussex County Travel Time to Work

Overall Sussex County Travel Time to Work	
Less than 20 Minutes	38%
20 to 44 Minutes	20%
45 to 59 Minutes	15%
60 to 89 Minutes	17%
90 or more Minutes	7%
Worked at Home	3%

As can be seen in Table 1-9, as many county residents have short commutes as have very long commutes, which can be attributed to the varying urban and rural characteristics throughout the county. People living in urban areas live close to their places of employment and thus have short commute times; the reverse is true of people living in suburban/rural areas.

Figure 1-15 shows travel time to work for Sussex County residents by Census 2000 Tract. The sizes of the pie charts represent population density in the Census Tract.

Figure 1-15: Travel Time to Work for Sussex County by Census Tract

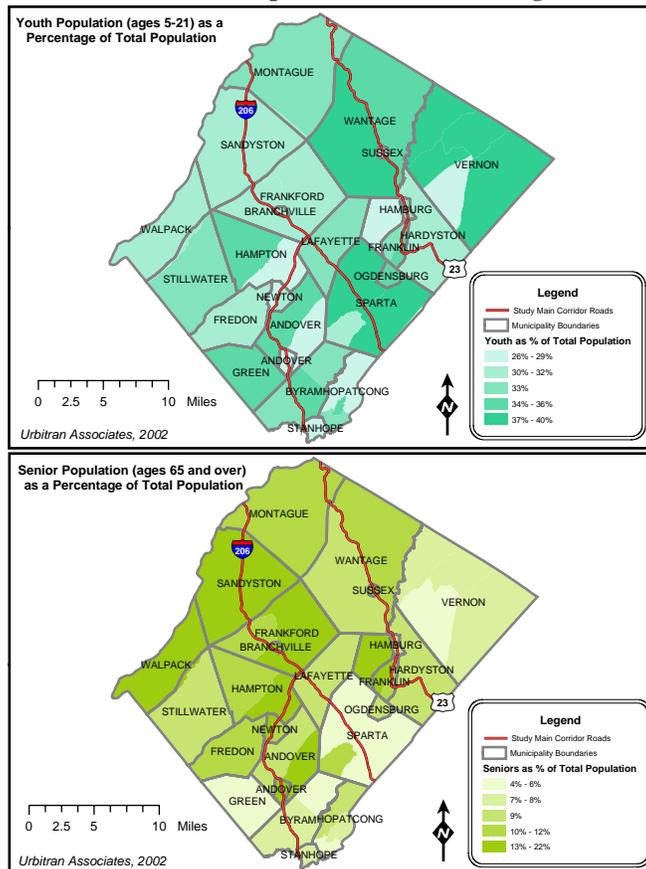


As can be seen in Figure 1-15, the southernmost and more rural Census Tracts experienced longer travel times than the tracts representing urban areas located within the county. Newton residents experienced the largest percentage of commuters who had to travel 20 minutes or less to work. Stanhope residents represented the largest percentage of 20-44 minute commuters in the county. Residents of eastern Sparta experienced the largest percentage of 45-59 minute commuters and residents of north central Vernon came in with the largest percentage of 60-89 minute commuters. Finally, residents of Montague experienced the largest percentage of 90-minute or more commute times.

Youth and Senior Populations

The younger and older ends of the age spectrum present unique transit opportunities. Generally speaking, young people need access to schools and jobs and may not have a driver’s license or may not be able to afford their own car. At the other end, older people may not be physically able to drive anymore or may not be able to afford their own car and need access to healthcare and shopping centers. Youth and senior populations have smaller activity spaces than the working class populations so thus, make shorter trips. The focus for youths and seniors is, then, on trips made inside Sussex County rather than on the inter-county trips for employment purposes discussed earlier in the chapter. Figure 1-16 illustrates the percentage of the total population per Census 2000 Tract that is made up by youth and seniors.

Figure 1-16: Youth and Senior Populations as a Percentage of Total Population



As can be seen in Figure 1-16, the youth population made up the largest percentage of total population in the northeastern quadrant of Sussex County in 2000. Youths aged 5 to 21 made up between 26 and 40% of total population by Census Tract in the county. Seniors made up the largest proportion of people diagonally through the central and northwestern portions of the county. Seniors over 65 years of age comprised between 4 and 22% of the population by Census Tract in Sussex County. Overall, youth made up 33% and seniors made up 9% of the total population in Sussex County in the year 2000.

The youth population is concentrated in the more urban sections of the county. Youths normally tend to cluster in urban areas for the services (such as schools) available at close proximity to residence. Again, youths are less mobile than adults for financial and age-related reasons. The Census Tract density of youth is smallest in Walpack and Sandyston with a density of less than 9 people aged 5 to 21 per square mile. The largest density of youths is found in central Hopatcong with a density of 1,874 youths per square mile.

Seniors also tend to cluster in urban areas for the services available (such as healthcare and public transportation) at close proximity for people who have more trouble getting around. The senior population is most dense in western Newton with 573 people per square mile. The lowest concentration of seniors is found in Walpack and Sandyston, as with the smallest youth density, and has less than 4 seniors per square mile. Generally, senior density is greatest through the center of the county with the highest densities reached in urban areas. As was mentioned in the section on poverty in Sussex County, providing public transportation services to youths and seniors, also clustered in urban areas like the people below the poverty level, is more appropriate for municipalities than for the county.

In conclusion, with regard to demographics, Sussex County is not particularly diverse. This can be expected for a “bedroom community.” Sussex County residents are fairly wealthy and travel long distances to get to their work places. Despite a certain level of homogeneity in the demographics of the community, there is great diversity and distance between residents’ places of employment. The largest employers in Sussex County, however, are generally clustered along major road corridors, specifically routes 15, 23 and 206, which are analyzed in this study. Morris County has many more employment opportunities than Sussex County both in terms of number of employers and in terms of large employers with thousands of employees. In order to get to these disparate work places, Sussex County residents overwhelmingly use single-occupant vehicles.