

## Chapter 3.5 Population Element

### 3.5.1: OVERVIEW

#### Purpose and Intent

*The purpose and intent of the following population data and recommendations is to identify the demographics of the current and future population of the County to help guide policy decisions forecast population growth through the lifespan of this Plan (2020) to establish benchmarks for the functionality of the Future Land Use Plan, and to identify future service needs of the population which can be addressed through this Comprehensive Plan update.*

### 3.5.2: BACKGROUND AND INVENTORY OF EXISTING CONDITIONS

Assembling population estimates and forecasts for the update of this Plan prompts several challenging questions. Eight years have elapsed since the 2000 Census, so what source(s) provide the best estimate for the population in the County today? How are municipal boundaries that reflect the most recent annexations taken into account in estimating the population in the County's municipalities today? What growth forecasts explicitly address in-migration for employment opportunities? Growth variables for

the unincorporated and incorporated portions of the County may be different – how are those variables addressed? Miley, Gallo, and Associates prepared a **Demand Analysis** that addresses these issues and also considered any potential conflicts this study could have with plans of adjacent jurisdictions and found that this study was consistent with the plans and trends of adjacent jurisdictions. Data used in the **Demand Analysis** was compiled from:

- Berkeley-Charleston-Dorchester Council of Governments (BCDCOG)
- Charleston Metro Chamber of Commerce
- Charleston Regional Development Alliance (CRDA)
- S.C. Office of Research and Statistics (ORS)
- S.C. Employment Security Commission
- S.C. Department of Commerce
- S.C. Department of Labor
- U.S. Bureau of Labor Statistics (BLS)
- U.S. Bureau of Economic Analysis (BEA)
- Woods & Poole Economics, Inc.
- Environmental Systems Research Institute, Inc. (ESRI)

Based on research performed on the Region's projected growth, it was determined that the econometric model used by Woods & Poole Economics, Inc. (W&P) would be very useful in this analysis. W&P produces a well-respected database containing more than 900 economic and demographic variables for every county in the U.S. for every year from 1970 to 2030. Regional projection techniques are used by W&P to link counties together to capture regional flows and constrain the results to a projected U.S. control total. This methodology avoids common pitfalls in regional projections.

Selecting a credible data source for spatially generated, small area population forecasts was also necessary since determining appropriate municipal population and employment capture ratios, based on current municipal boundaries, are key assumptions in the demand analysis produced as support for the development of the Comprehensive Plan update. ESRI, founded in 1969 as Environmental Systems Research Institute, Inc., is a privately held consulting firm that specializes in land-use analysis and Geographic Information System (GIS) software projects. Using the ESRI database, current estimates and five-year

demographic projections can be obtained for states; census tracts; places; county subdivisions; ZIP codes; or any user-defined site, circle or polygon.<sup>1</sup> The information contained in this element includes historical Census data as well as estimates and forecasts based analysis of data from the sources listed above. The demographic information listed below includes estimates and/or forecasts for population, municipal capture rates, age composition, racial composition, and household size. Other demographics that could impact future development such as education levels, income levels and poverty levels are difficult to predict; therefore, only historical data related to these demographics are included in this plan.

**Population Estimates and Forecasts**

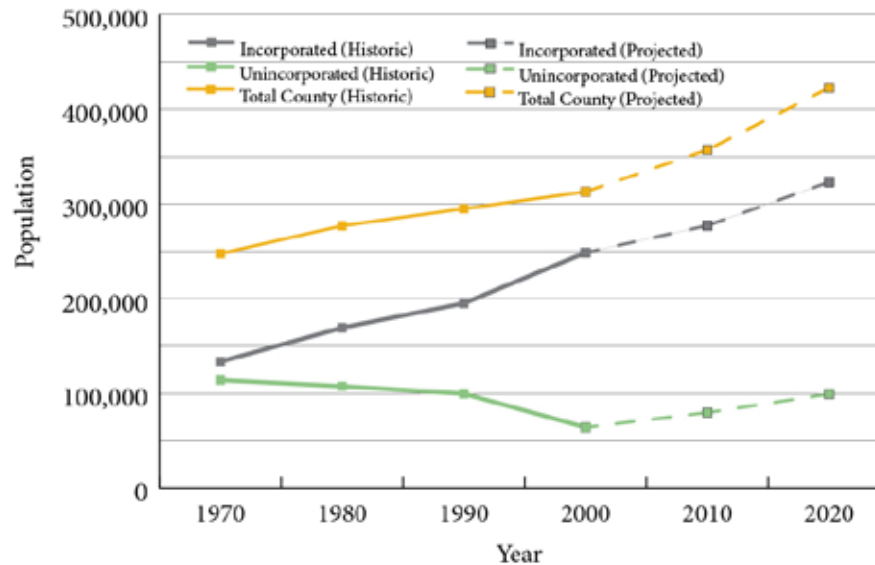
At the time of drafting of this Plan update, the 2000 U.S. Census was the most recent Census information available. According to the 2000 U.S. Census, Charleston County had a population of approximately 309,969 people, representing a 5.1 percent increase over the 1990 population. The U.S. Census Bureau estimated the Charleston County population to be 342,973 on July 1, 2007. The Demand Analysis completed as part of this Plan update estimated an annual population growth rate of 1.7 percent for Charleston County for 2007 through 2020. Based on that growth rate, it is estimated that the Charleston County population increased by approximately 9.5 percent between 2000 and 2007, with an estimated 2007 population of 339,516. The population forecast for 2010 shows an increase of fifteen-percent over the 2000 population, with a population forecast of 357,127. Charleston County can also reasonably expect 85,000 new residents during the span of this plan (2007

TABLE 3.5.1: COUNTYWIDE POPULATION TRENDS AND ESTIMATES (1970-2020)

	1970	1980	1990	2000	2007 (Estimated)	2010 (Forecast)	2020 (Forecast)
Total County Population	247,650	276,974	295,039	309,969	339,516	357,127	425,000
Net Change over Previous Decade	31,268	+29,324	+18,065	+14,930	+29,574 (over 2000 population)	+47,158 (over 2000 population)	+67,873 (over 2010 population)
Percent Change over Previous Decade	+14.5%	+11.8%	+6.5%	+5.1%	+9.5% (over 2000 population)	+15% (over 2000 population)	+19% (over 2010 population)

*2007 population estimated based on analysis of available recent population estimates  
2010 and 2020 population forecasts based on 1.7% annual growth rate  
Sources: U.S. Bureau of Census 1970, 1980, 1990, 2000, Miley, Gallo & Associates, LLC (2007)*

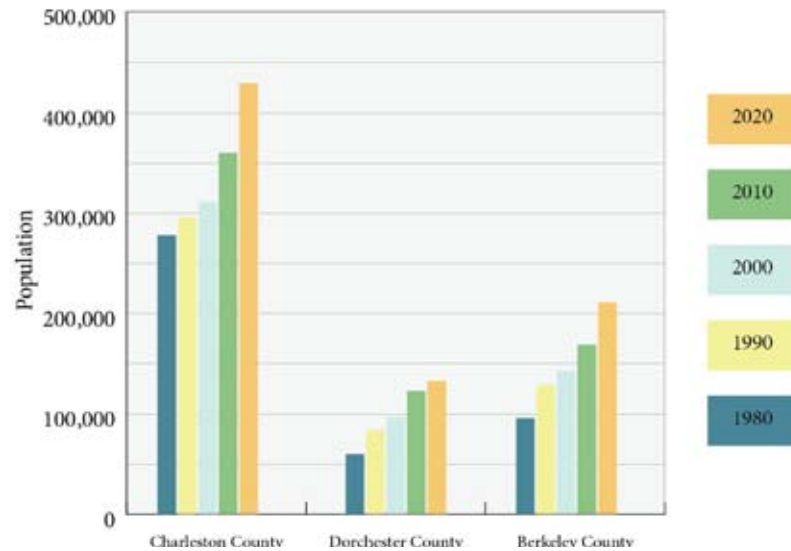
FIGURE 3.5.1: HISTORIC AND PROJECTED POPULATION GROWTH



Source: Table 3.5.1. above.

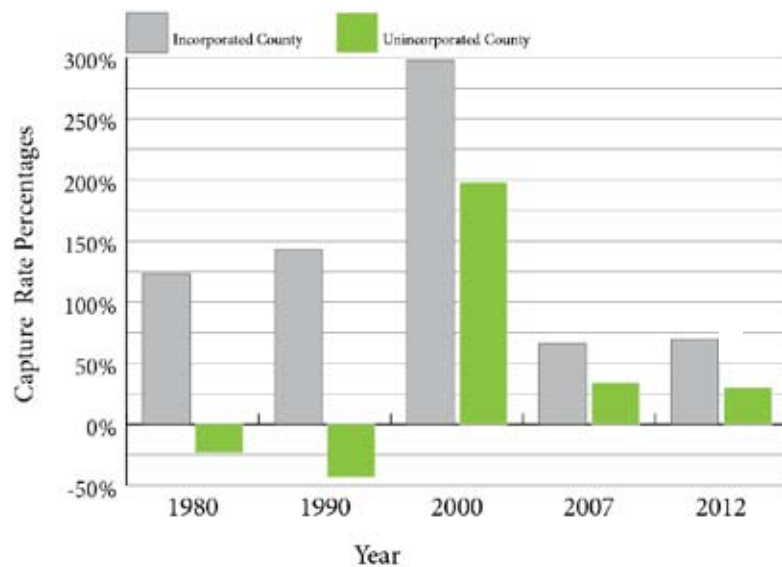
<sup>1</sup> The information in this chapter is taken from the Charleston County Demand Analysis.

FIGURE 3.5.2: TRI-COUNTY POPULATIONS 1980-2020



Source: U.S. Census Bureau, 1980, 1990, 2000. ESRI: 2010, 2020.

FIGURE 3.5.3: MUNICIPAL CAPTURE TRENDS



Source: Table 3.5.1.

through 2020), resulting in a 2020 population of 425,000. **Table 3.5.1: Countywide Population Trends and Estimates** illustrates the historical population trends as well as the estimated 2007 population and 2010 and 2020 population forecasts.

*Figure 3.5.1* illustrates the historic and projected population growth trends for both incorporated and unincorporated areas in Charleston County. Charleston County has a much higher population than the adjacent counties, as shown in *Figure 3.5.2*, accounting for its historically lower growth rate.

### Municipal Capture Rates

Since the 1970s, municipalities within Charleston County have experienced not only natural population growth but also substantial growth from the expansion of municipal boundaries by annexation. For example, in 1972 North Charleston had an area of 7 square miles. In 2007, North Charleston encompassed more than seventy-three square miles. Similarly, the physical size of the City of Charleston increased from 16.7 square miles in 1975 to almost 104 square miles in 2007. The Town of Mount Pleasant’s Planning Area, which includes both incorporated and unincorporated areas, increased from approximately 19.7 square miles in 1985 to approximately 51.7 square miles in 2007.

*Figure 3.5.3* reflects the remarkable population shifts created by annexation policies over the last 30 years. The historical data implies annexation activity peaked in the 1990s with incorporated/unincorporated capture ratios of 298 / - 198 percent (1990 - 2000). From 2000 to 2007, the capture ratio dramatically declined to 66/34 percent indicating population growth via annexation slowed considerably. Accordingly, net population gains resulted in the unincorporated areas of the County. It is important to note the ratio for 2000 through 2007 is based on the actual municipal boundaries in place during 2007, a distinct advantage of a spatial projection model. Based on the uploaded 2007 boundary files, the ESRI model predicts the capture ratio to settle at 70/30 percent during 2007 to 2012.

These trends fairly represent the growth patterns experienced in the County over the stated time frame. Furthermore, the seventy-percent/thirty-percent municipal capture ratio appears reasonable assuming relative stability in future annexation policies by the municipalities. However, more aggressive shifts in policy will materially affect future capture ratios.

Based on the municipal population capture analysis, seventy-percent, or 60,000 people, will live in the incorporated areas of the County in 2020, and thirty-percent, or 25,000 people, will live in the unincorporated areas. In terms of population growth rates, an annual rate of 1.54 percent is expected for the municipalities;

FIGURE 3.5.4: ESRI 2007 TO 2012 AGE PROFILE OF NEW POPULATION

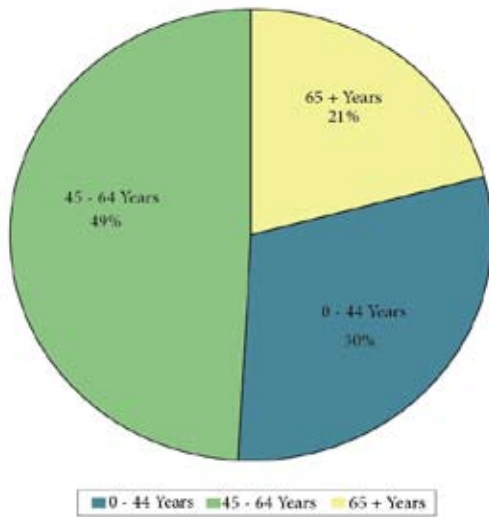


FIGURE 3.5.5: WOODS &amp; POOLE 2007 TO 2012 AGE PROFILE OF NEW POPULATION

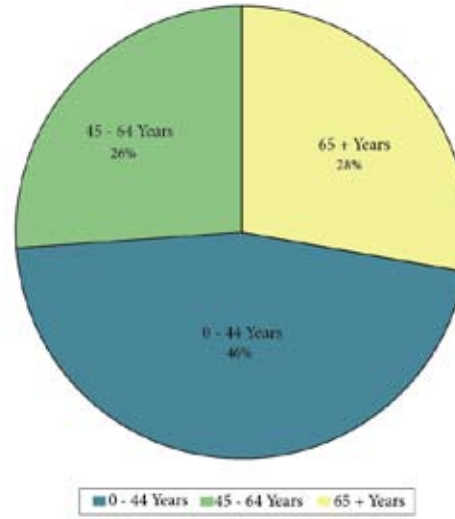
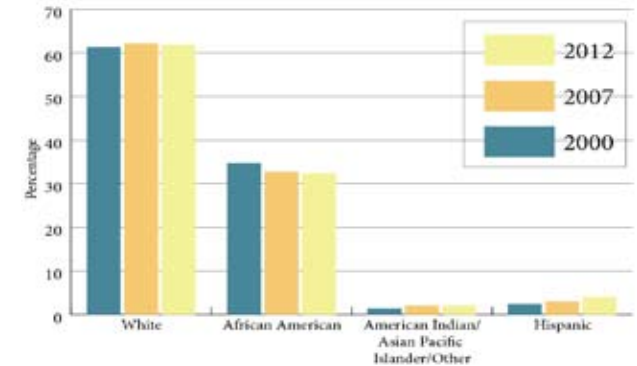


FIGURE 3.5.6: COUNTY POPULATION BY RACE



whereas, a relatively higher annual rate of 2.24 percent is projected for the unincorporated areas. Again, if annexation activity increases significantly, these estimates will shift accordingly.

## Population Composition

### Age Distribution

Population trends seen in recent decades regarding the aging population, declining numbers of school age children and young adults, and decreasing household size continued through 2007 and are expected to continue through 2020. [Figures 3.5.4](#) and [3.5.5](#) illustrate the aging population trend that is expected to continue through 2012 as predicted by the ESRI and W&P models. The ESRI model predicts a lower growth rate more heavily weighted in the middle-age segment; whereas, W&P assumes a higher growth rate more evenly distributed amongst all age segments.

### Racial Composition

Between 1970 and 2000, the total population in all race categories in Charleston County increased; however, the African American population and American Indian/Asian Pacific Islander/Other/Two or More Races populations comprised a

larger percentage of the population in 2000 than in 1970 while the White population comprised a smaller percentage. This trend is projected to continue through 2012, as depicted in [Figure 3.5.6](#) below. It is important to note that there is generally an under reporting of minorities and persons of Hispanic heritage in the Census numbers; however, local sources show this population is growing.

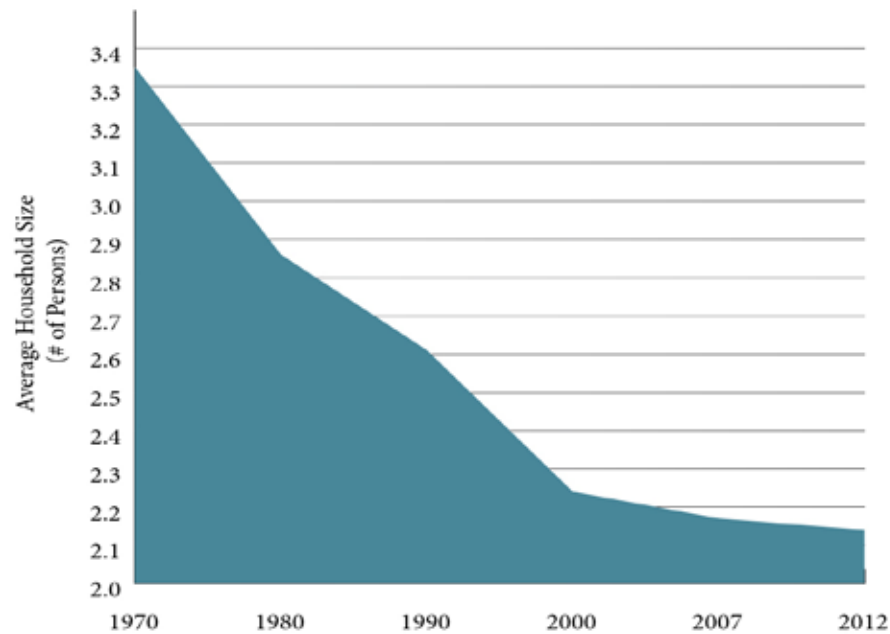
### Gender

Between 1970 and 1990, there was a 1.7 percent increase in the percentage of females who compose the total County population and a corresponding increase in the percentage of males. In 2000, females outnumbered males in the County, comprising 51.7 percent of the population.

### Education

The Charleston County population has generally achieved a higher level of education when compared to other counties in South Carolina. In 2000, only 18.5 percent of the population in the County over twenty-five years of age was not a high school graduate while approximately thirty-percent of the population in the County over twenty-five years of age held a Bachelor or Graduate Degree.

FIGURE 3.5.7: CHARLESTON COUNTY AVERAGE HOUSEHOLD SIZE (1970-2012)



### Household Size

Figure 3.5.7 illustrates the continued trend of decreasing household size in Charleston County. By 2012, the household size is predicted to be 2.14 persons per household.

### Income Levels

As illustrated in Table 3.5.2 below, the Median Household Income, Median Family Income, and Per Capita Personal Income continued to increase between the 1990 and 2000 Censuses. Between 1989 and 2000, the Median Household Income increased by almost forty-one percent, while the Median Family Income and Per Capita Personal Income increased by approximately forty-nine percent and sixty-three percent, respectively.

TABLE 3.5.2: INCOME CHARACTERISTICS (1970, 1979, 1989, 1993, 2000)

	1970	1979	1989	1990	2000
Median Household Income	NA	\$14,826	\$26,875	NA	\$37,810
Median Family Income	\$8,068	\$17,519	\$31,646	\$35,000	\$47,139
Total Personal Income	NA	NA	\$3,998,000	\$5,686,000	NA
Per Capita Personal Income	\$2,557	\$6,358	\$13,068	\$19,037	\$21,393

Household income includes the incomes of everyone in the household 15 years old and older.

Family income includes the income of all members of a family 15 years and older.

Source: U.S. Bureau of the Census 1970, 1980, 1990, 2000; SC Budget and Control Board 1996.

TABLE 3.5.3: COUNTYWIDE HOUSEHOLD BY INCOME RANGE (1979, 1993, 2000)

Income Range	1979		1993		2000	
	Households	%	Households	%	Households	%
\$0 to \$4,999	13,773	15.2	9,304	8.7	NA	NA
\$5,000 to \$9,999	16,269	18.0	9,651	9.0	15,396	12.5
\$10,000 to \$14,999	15,680	17.3	9,721	9.1	7,970	6.5
\$15,000 to \$24,999	23,130	25.6	21,025	19.7	17,028	13.9
\$25,000 to \$34,999	12,333	13.6	17,385	16.3	16,765	13.6
\$35,000 to \$49,999	6,322	7.0	18,446	17.3	19,279	15.6
\$50,000 to \$74,999	2,940	3.3	14,276	13.4	22,296	18.1
\$75,000 to \$100,000	NA	0	3,800	3.6	10,885	8.8
More than \$100,000	NA	0	3,250	3.0	13,591	11.0

Source: U.S. Bureau of the Census 1990, 2000.

### Poverty Levels

In 2000, approximately thirty-three percent of the County residents reported a household income of less than \$25,000. The majority of the poorest residents in Charleston County live in the unincorporated areas of the County. Table 3.5.3 to the right illustrates the income ranges of households in the County in 1979, 1990, and 2000.

### 3.5.3: POPULATION ELEMENT GOAL

*A socio-economically diverse and growing population will be accommodated by Charleston County in an environmentally and fiscally sustainable manner with particular attention to low to moderate income residents.*

#### Population Element Needs

Population Element needs include, but are not limited to, the following:

- Monitoring population and cultural shifts and national trends; and
- Developing policies to meet the needs of the County's population.

### 3.5.4: POPULATION ELEMENT STRATEGIES AND TIME FRAMES

The County should undertake the following strategic actions in support of the Vision and Goals of this Plan. These implementation strategies will be reviewed a minimum of every five years and updated every ten years from the date of adoption of this Plan.

- P 1. Monitor population growth trends and demographic shifts as indicators of population change and use this information to guide future updates to the Comprehensive Plan.
- P 2. Continue to monitor and update the Demand Analysis to identify how the County will accommodate growth in the future.
- P 3. Develop land use strategies and implementation measures that address the needs of the aging population.
- P 4. Support a diverse population through land development regulations which accommodate a range of housing and employment options.
- P 5. Continue to monitor and evaluate population and cultural shifts and national trends for their potential impacts on land use and development patterns.

