

Demographic Profile Report: City of Fayetteville, North Carolina

Current Characteristics, Population Growth Trends, and Population Projections

The purpose of this report is to provide a demographic profile about the City of Fayetteville for use in the City's 2040 Comprehensive Plan and other planning documents. A basic assumption underlying this report is that it is important to understand the characteristics of the population for whom plans are being prepared.

Most of the information is based on the U.S. Census Bureau's decennial census counts and estimates published in various American Community Survey (ACS) reports.

The Census Bureau's decennial census counts serve as the official benchmark of population for an area. They are based on a count of all individuals in an area; no sampling is involved. The major shortcomings are that these counts are collected only once every ten years, and only a few population and housing variables are measured, such as age, sex, race, Hispanic origin, and tenure.

The Census Bureau's ACS estimates provide a multitude of population and housing variables about the people and housing in an area. The main shortcoming is that ACS estimates are based on sampling. However, according to the Census Bureau, users can be 90-percent confident that the true value of an estimate lies within the margin of error range for the estimate. The Census Bureau provides margin of error information in the ACS reports.

Please note that even though margin of error information is available in the ACS reports, this information has not been included in this report, except for the sections on median household income and poverty. Also, please note that only a small number of possible ACS variables are included in this report.

Part 1: Current Characteristics¹

Total Population²

209,867 people

Population by Sex

104,721 (49.9 %) female and 105,146 (50.1 %) male

¹ Information in this Part 1 is based on decennial census counts from 1990, 2000, and 2010, numerous ACS reports, and a Narrative Profile based on the 2014-2018 ACS 5-Year Estimates Program.

² There are at least five estimates of current population for the City of Fayetteville; these estimates are described in Appendix A. This report uses the estimate of 209,867; this is from the 2014-2018 ACS 5-Year Estimates Program.

Population by Age

Age is an important factor in demography because it indicates major life-cycle events.³ It is also important because it can indicate the types of services that will be needed in an area.⁴

Change in Age Structure from 1990 to 2010

Chart A shows age groups as a percentage of the total population for 1990, 2000, and 2010.

Key points:

- The age groups cumulatively representing 20-29 (20 to 24 and 25 to 29) have the most people, reflecting the influence of the age of soldiers at Fort Bragg.
- Most of the older age groups have increased in percentage, suggesting an aging population; however, the median age was 30.9 in the year 1990, 31.9 in the year 2000, and 29.9 in the year 2010. It is assumed that the soldiers at Fort Bragg have kept the City's median age stable.

Chart A

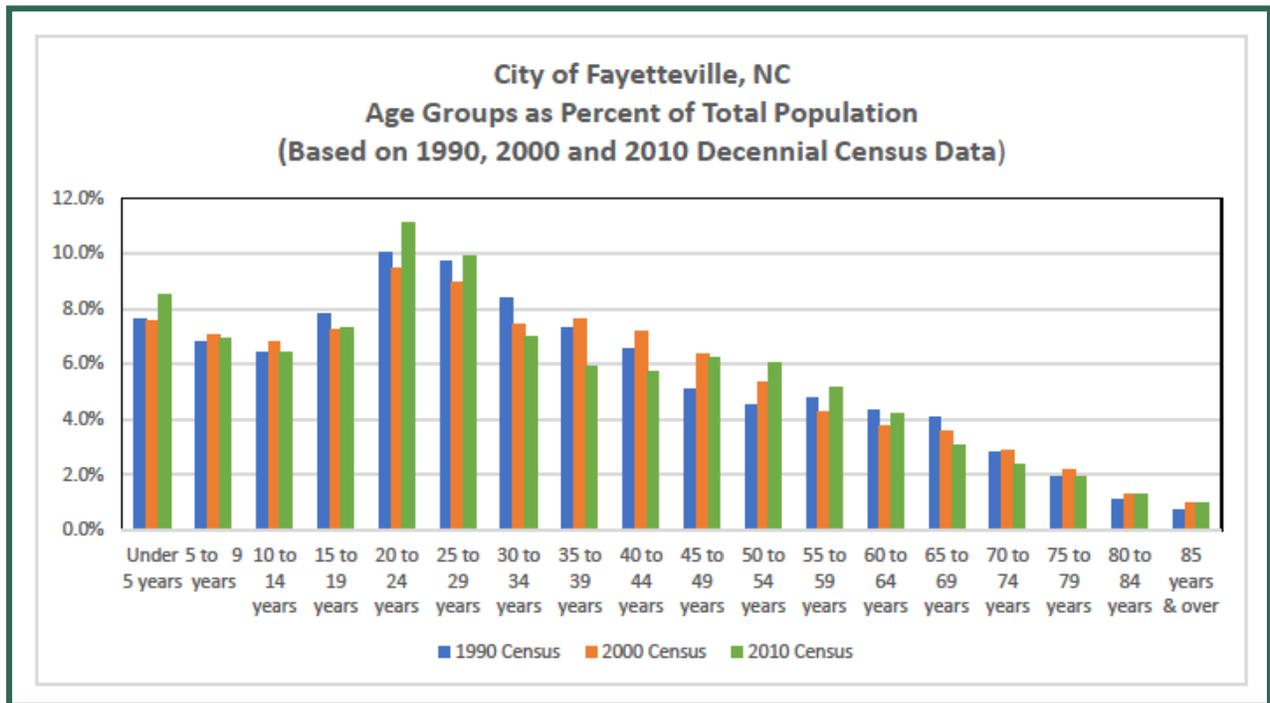


Chart B shows age groups as a percentage of the total population for eight years, 2010 through 2017, per the ACS 1-Year Estimates program.

Key points:

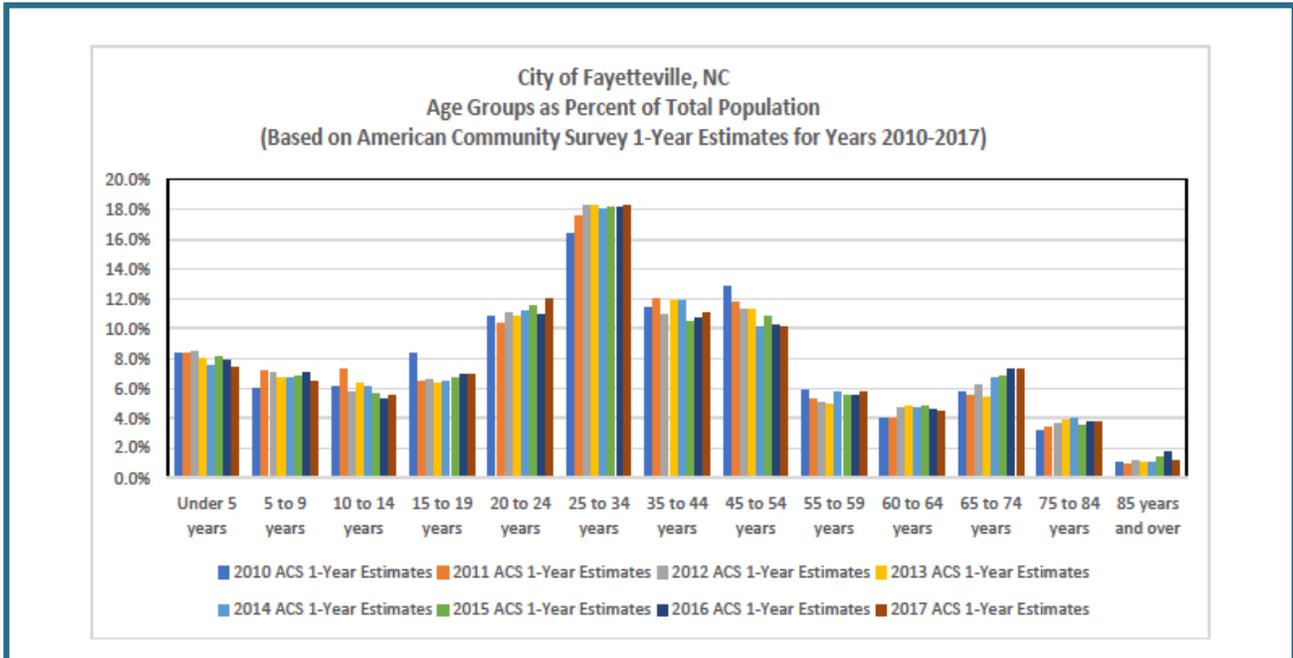
- The age group of 25 to 34 years group has the most people, again, reflecting the influence of Fort Bragg.

³ Myers, Dowell. 1992. Analysis of Local Census Data-Portraits of Change. Chapter 8.

⁴ Cline, Michael E. 2018. Email received on October 17, 2018 (Comments Re: Demographic Profile Report dated September 28, 2018).

- The older age groups generally increased in percentage, again, suggesting an aging population. The median age increased from 30.3 in 2010 to 30.4 in 2017. The percentage of the total population that was 65 years old and over increased from 9.9 % in 2010 to 12.2 % in 2017.

Chart B



Implications of an Aging Population on Future Population

According to one view, an aging population might predict a decrease of birth rates in the City.⁵ However, another view is that while this decrease might occur at the state level, it is not expected to occur in military counties such as Cumberland or Onslow.⁶

It is assumed that Fort Bragg will continue to bring in new residents in the child-bearing age groups, which will help offset the impacts of an aging population.

⁵ Tippet, Rebecca. 2017. "Declining Growth from Natural Increase: The Impact of Population Aging." Carolina Demography website. Posted February 21, 2017.

⁶ Cline, Michael E. 2018. Email received on October 17, 2018 (Comments Re: Demographic Profile Report dated September 28, 2018).

Current Age Structure

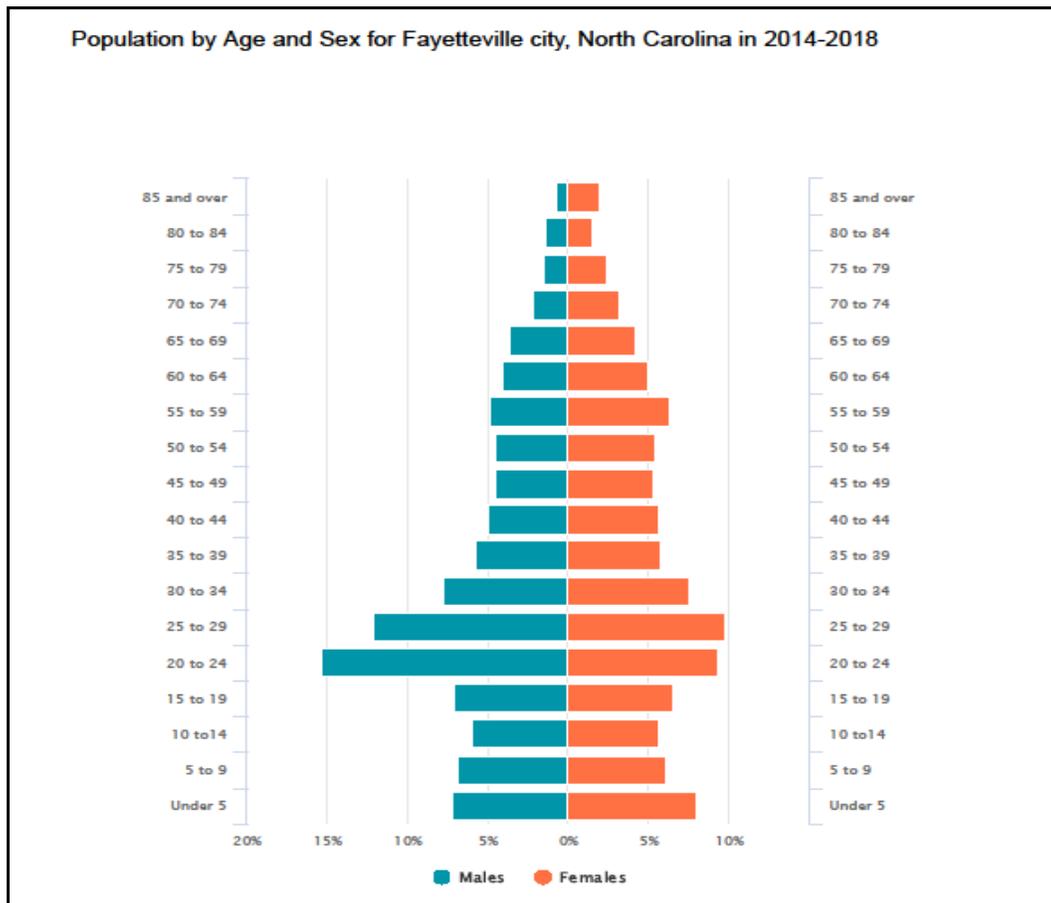
According to the 2014-2018 ACS 5-Year Estimates, the median age in Fayetteville was 30.0 years. In broad terms, an estimated 23.3 % of the population was under 18 years, 45.2 % was 18 to 44 years, 20.1 % was 45 to 64 years, and 11.4 % was 65 years and older.

Chart C is a population pyramid. Combining data on sex and age groups, it shows the percentage of the City's population in 5-year age groups, for both males and females.

Key points:

- The percentage of males in the 20 to 24 and 25 to 29 age groups reflects the presence of male soldiers at Fort Bragg.
- Starting with the 40 to 44 age group, the percentage of females is higher than males.

Chart C – Population Pyramid



Source: U.S. Census Bureau. 2014-2018 ACS 5-Year Narrative Profile for Fayetteville City, NC.

Geographic Pattern of Certain Age Groups

Maps 1, 2 and 3 show the pattern of certain age groups in Fayetteville and Cumberland County by census tract. This analysis focuses on Fayetteville.

Map 1 shows the percent of population that is less than 18 years old. The largest percentages (indicated by the dark green color) occur in census tracts located in the western part of the City, on Fort Bragg, and in Tract 2, located southeast of Downtown.

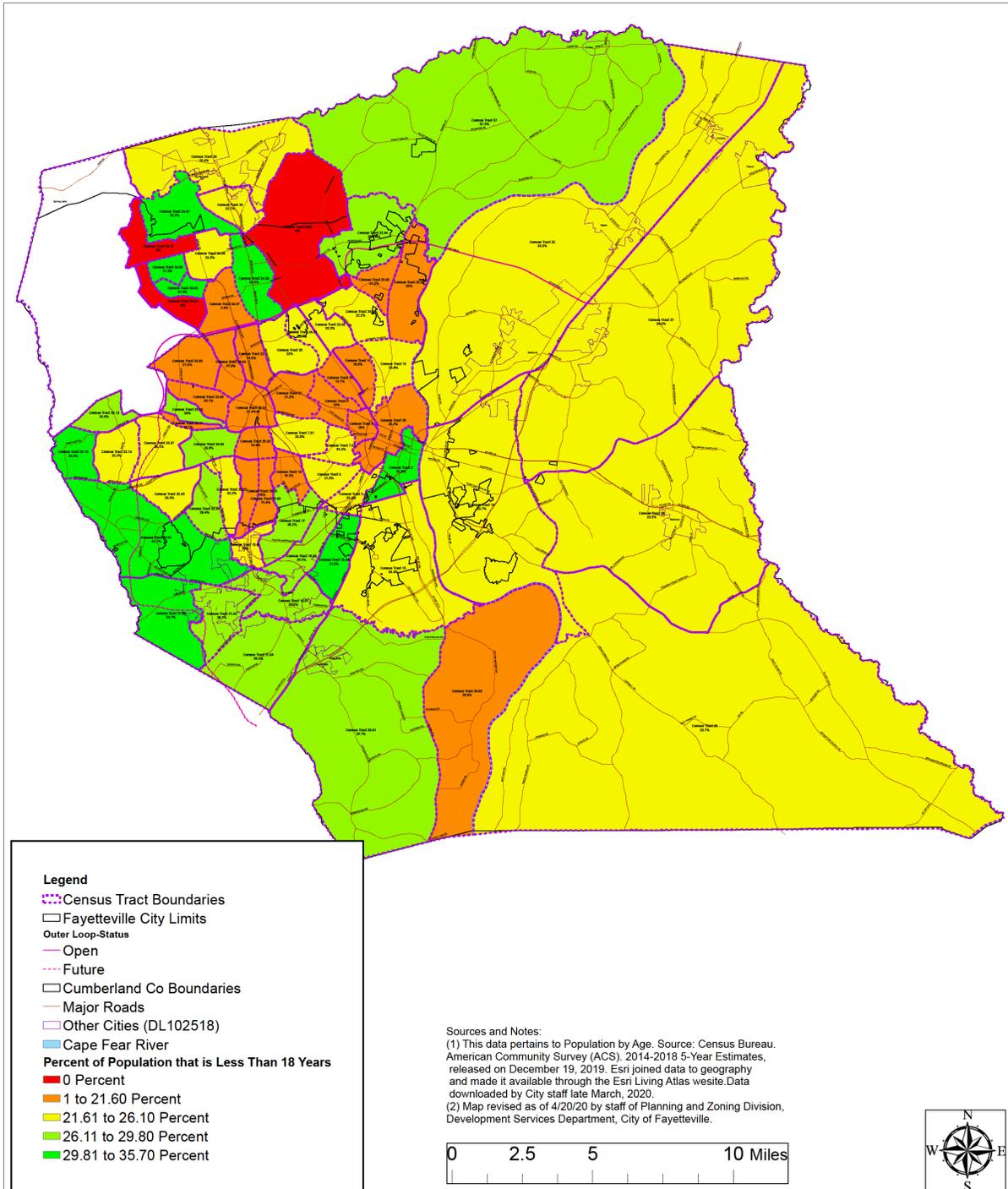
Map 2 shows the percent of population that is 65 years and over. The largest percentages (indicated by the dark green color) occur in two general areas of the City. One area is along both sides of Murchison Road, between Pamalee Drive on the north and the edge of Downtown on the south. The second area is south of Morganton Road, along McPherson Church Road and Owen Drive. This includes neighborhoods such as Vanstory Hills, Kingsford, Buckhead, Glendale Acres, and Briarwood-Clairway.

Map 3 shows the percent of population in *dependent age groups*, the under 18 group and the 65 and over group. The largest percentages (indicated by the dark green color) occur in Census Tract 2 (mentioned in the under 18 group above) and in the area south of Morganton Road (mentioned in the 65 and over group above).

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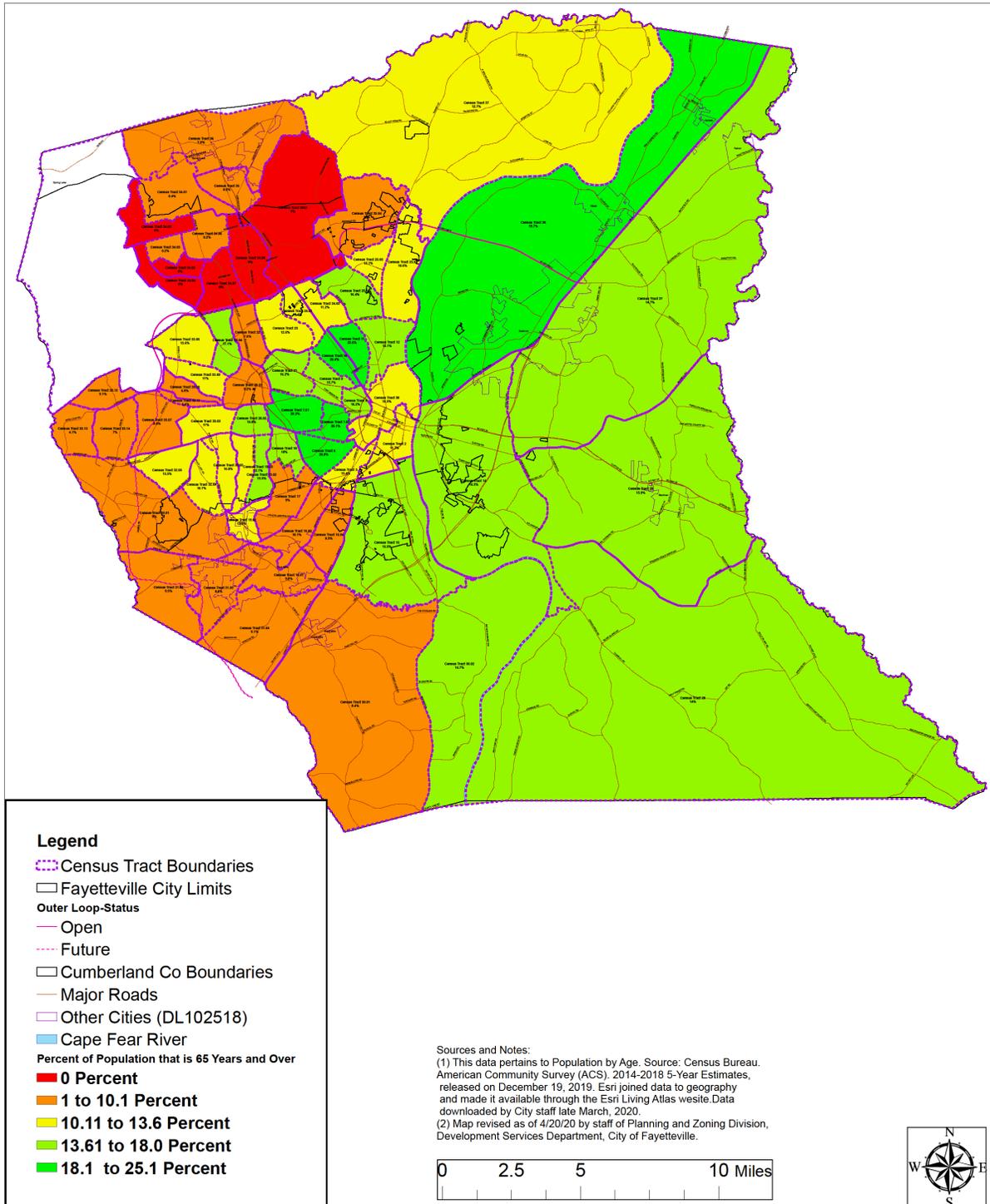
MAP 1

**Percent of Population That is Less Than 18 Years in Cumberland County by Census Tract, 2014 to 2018
(Based on 2014-2018 American Community Survey 5-Year Estimates)**



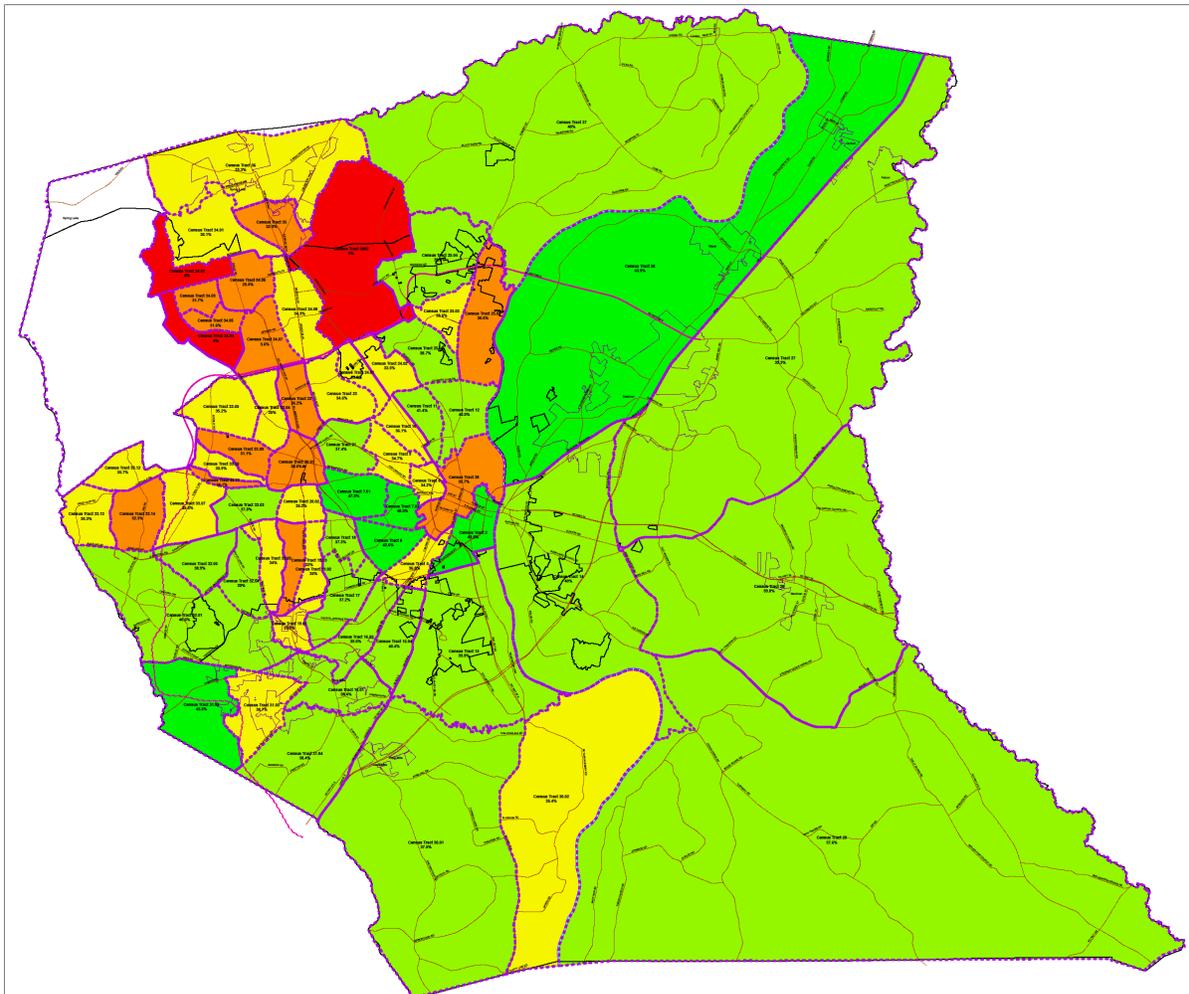
MAP 2

Percent of Population That Is 65 Years and Over in Cumberland County by Census Tract, 2014 to 2018
(Based on 2014-2018 American Community Survey 5-Year Estimates)



MAP 3

Percent of Population in Dependent Age Groups (Under 18 and 65+) in Cumberland County by Census Tract, 2014 to 2018 (Based on 2014-2018 American Community Survey 5-Year Estimates)



Legend

- Census Tract Boundaries
- Fayetteville City Limits
- Outer Loop-Status
 - Open
 - Future
- Cumberland Co Boundaries
- Major Roads
- Other Cities (DL102518)
- Cape Fear River
- Percent of Population in Dependent Age Groups (under 18 and 65+)**
 - 0 Percent
 - 1 to 32.3 Percent
 - 32.31 to 36.8 Percent
 - 36.81 to 41.4 Percent
 - 41.41 to 48.5 Percent

Sources and Notes:
 (1) This data pertains to Population by Age. Source: Census Bureau. American Community Survey (ACS), 2014-2018 5-Year Estimates, released on December 19, 2019. Esri joined data to geography and made it available through the Esri Living Atlas website. Data downloaded by City staff late March, 2020.
 (2) Map revised as of 4/20/20 by staff of Planning and Zoning Division, Development Services Department, City of Fayetteville.



Race

Racial composition is one of the most important characteristics of local populations. Race characterizes major subgroups, which differ markedly from one neighborhood to another.⁷

In Fayetteville, members of the City Council are elected by districts, which were originally established in 1986. *The district boundaries were originally established based on block-level decennial census data on race.* The districts have been revised numerous times, to take into account new decennial census counts and annexation areas.

Chart D shows racial groups as a percentage of the total population of the City for 1990, 2000, and 2010.⁸

Key points:

- The “White-One Race” group has declined from 1990 to 2010, while the “Black-One Race” and “Other Races” groups have increased. See Table 1.

Table 1-Summary of Change in Broad Racial Groups, 1990 to 2010

Source: Based on Chart D

	1990	2010
White-One Race	57.6%	45.7%
Black-One Race	38.3%	41.9%
Other Races	4.1%	12.4%

⁷ Myers, Dowell. 1992. Analysis of Local Census Data-Portraits of Change. Chapter 10.

⁸ The U.S. Census Bureau gives respondents many categories of race to identify with. In this report, race is only shown in three categories: White-One Race, Black-One Race, and All Other Races. This is consistent with the categories the City has used when election districts were originally created and when they have been revised.

Chart D

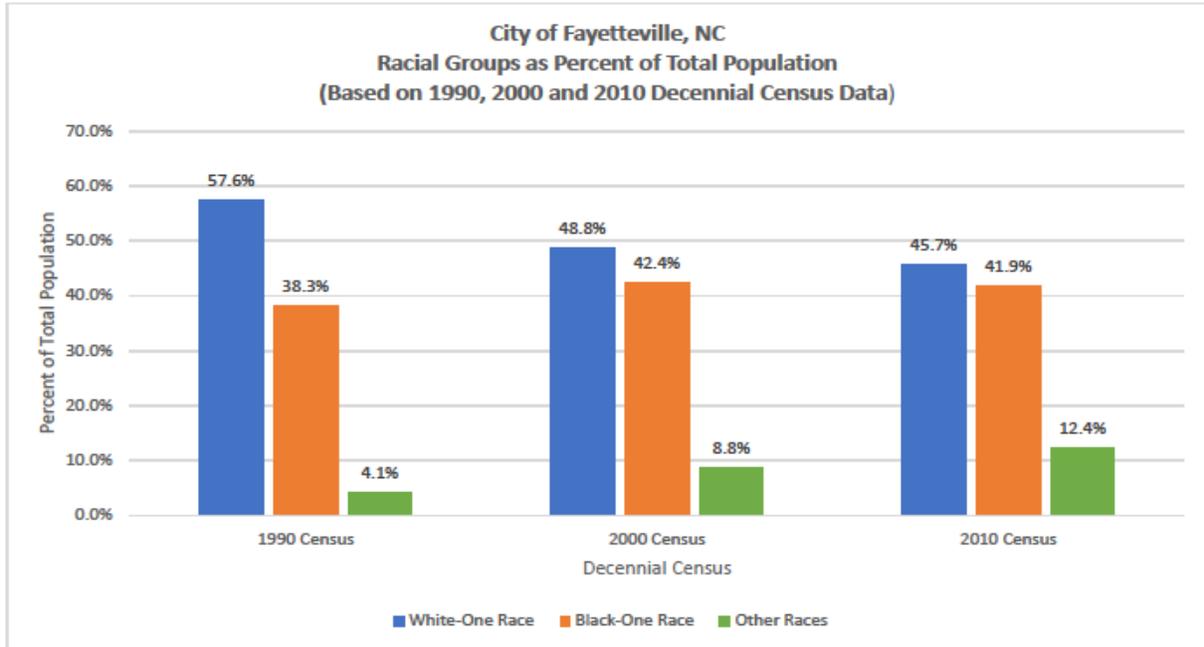
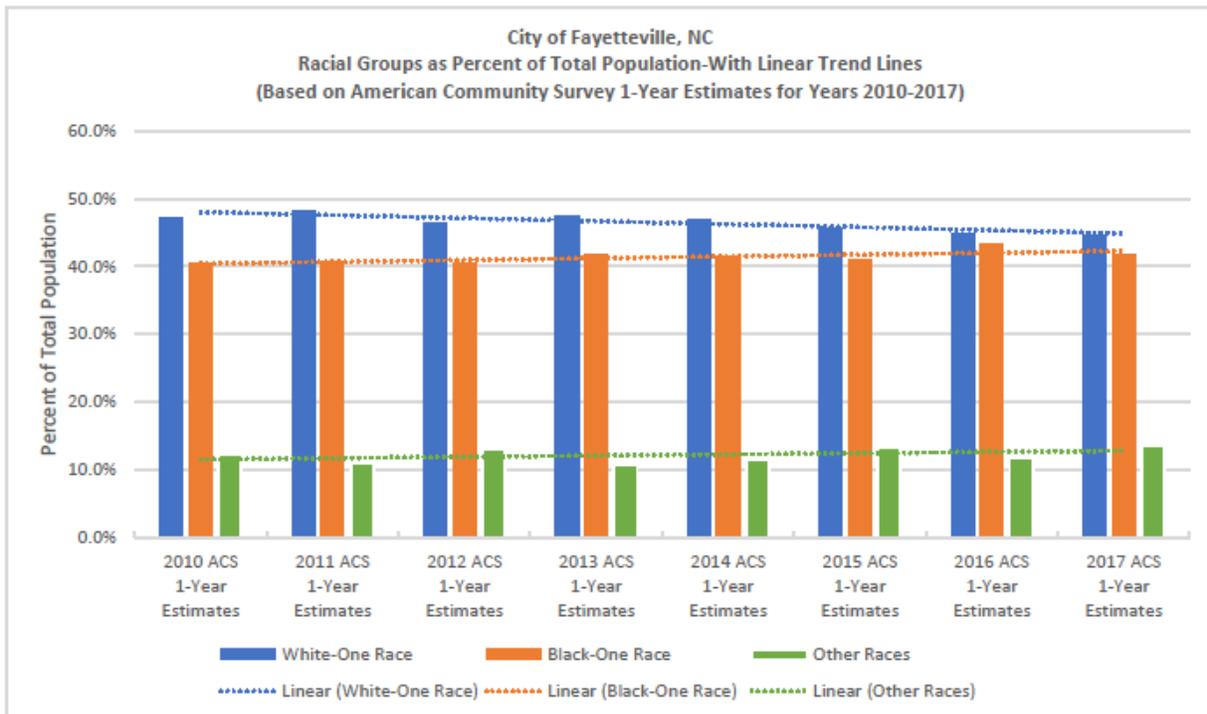


Chart E shows racial groups as a percentage of the total population for 2010 through 2017. The “White-One Race” group shows a downward trend, while the “Black-One Race” and “Other Races” groups show upward trend lines.

Chart E



Implications of a More Diverse Racial Make-Up

In terms of equity, one expert has noted that the nation and the state are becoming more diverse and this has many different challenges. Unfortunately, for a variety of reasons, socioeconomic characteristics in the US are correlated with race/ethnic characteristics. At the national and state level, minority populations tend to have lower levels of education, income and wealth; these conditions tend to have impacts on health outcomes. However, at the Fayetteville level, this expert notes that the local population tends to be relatively well-educated, in terms of people with high school diplomas and some college. The disparity between White, Black and Hispanic educational attainment is not as large as in other areas. But, this expert notes that incomes for Black and Hispanic households are only 72 percent of White households.⁹

In terms of the impacts on the future population of the City, this is difficult to assess without additional data, for example, on birth rates by race.

Geographic Pattern of Race

The maps below show the pattern of race in Fayetteville and Cumberland County. This analysis focuses on Fayetteville.

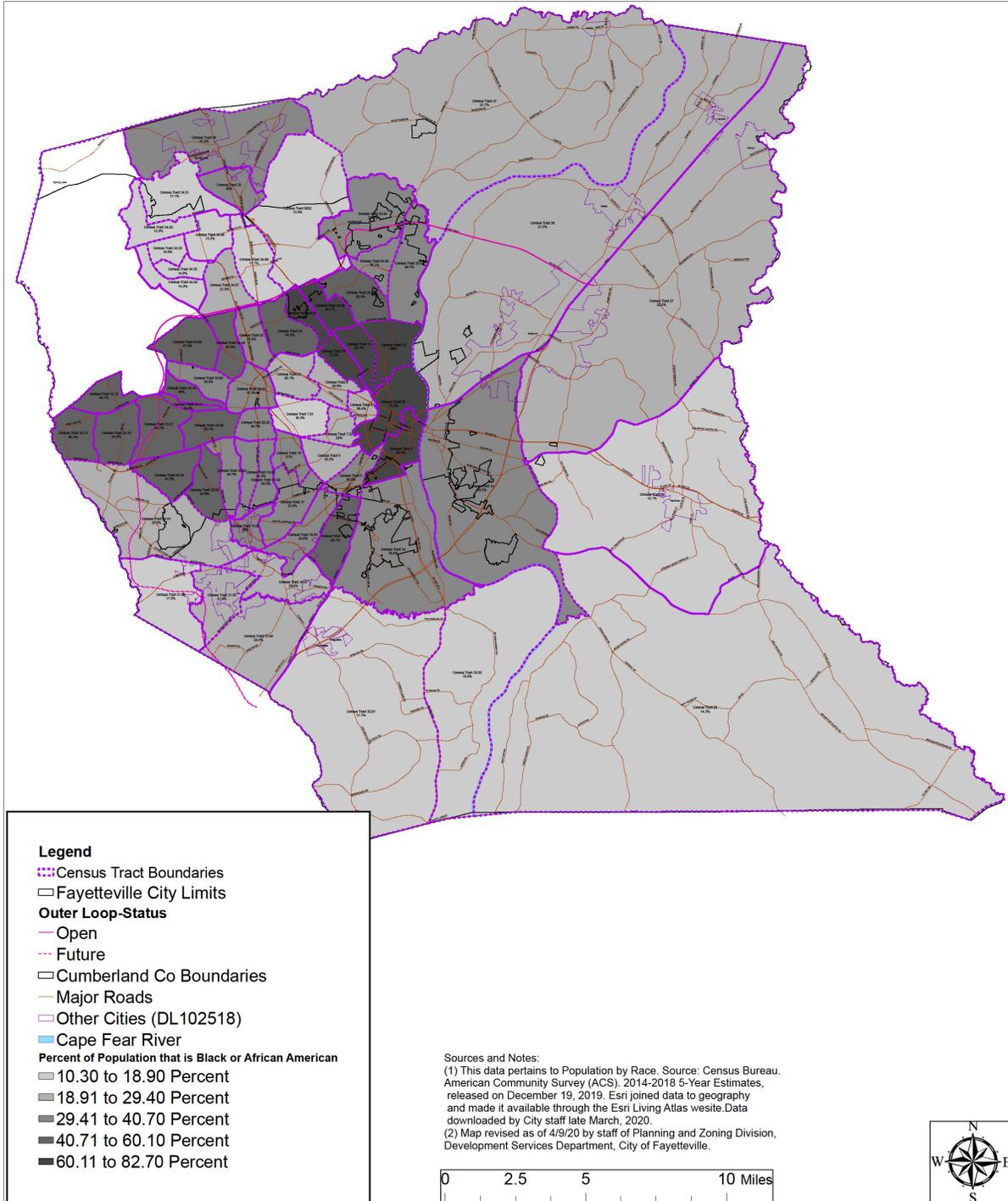
Map 4 is based on the percent of the population in a census tract that identified as Black or African-American in the 2014-2018 ACS surveys. The census tracts with the highest percent Black are located in the central core of Fayetteville, west of the Cape Fear River, and along Murchison Road, south of the Fort Bragg boundary.

Map 5 is based on the percent of the population in a census block that identified as Black or African-American in the 2010 decennial census. The blocks with the highest percent Black are located along Murchison Road.

⁹ Cline, Michael E. 2018. Email sent to David Nash on October 17, 2018 regarding the Demographic Profile Report dated September 28, 2018.

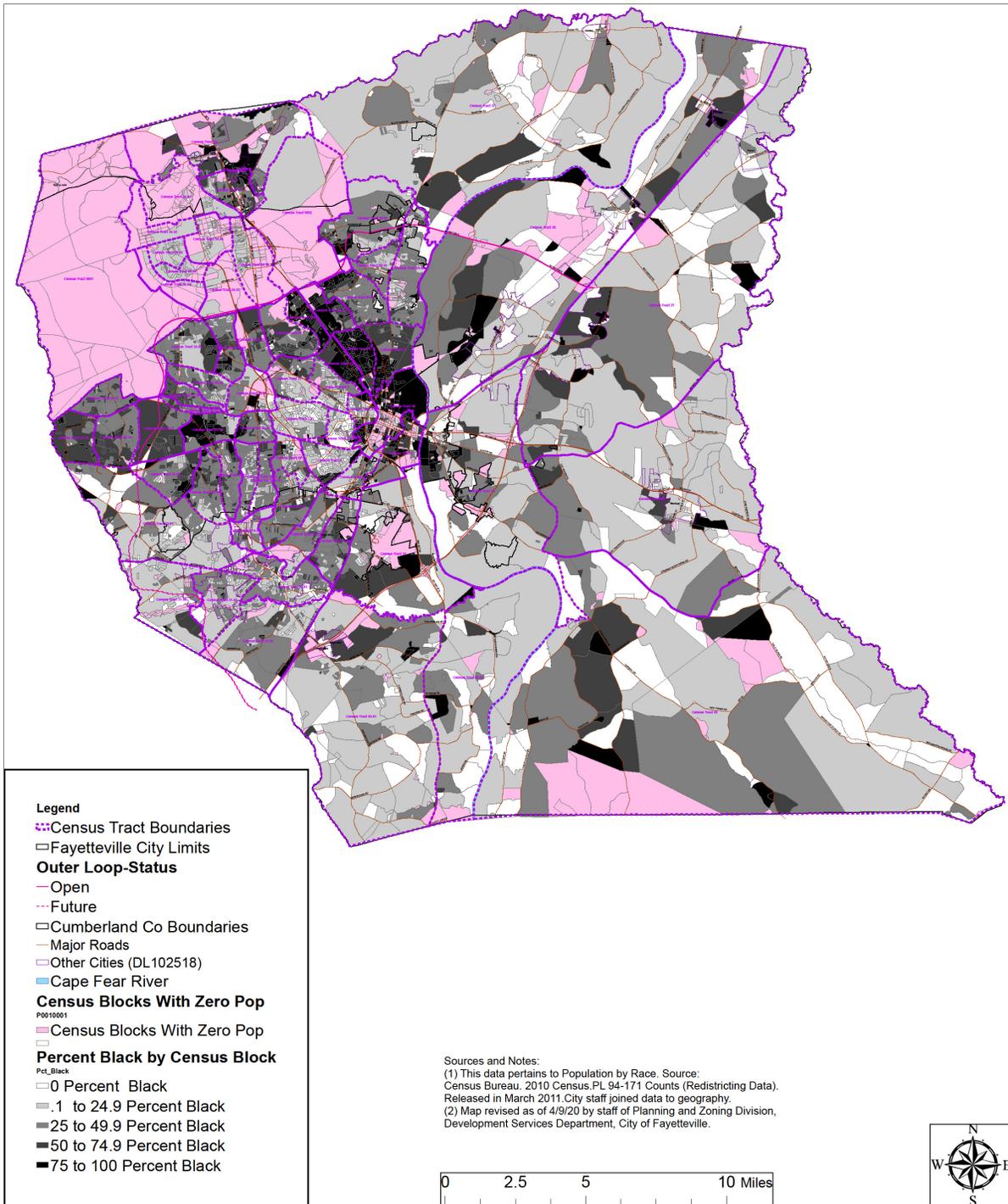
MAP 4

**Percent of Population That Is Black or African American
in Cumberland County by Census Tract, 2014-2018**
(Based on 2014-2018 American Community Survey 5-Year Estimates)



MAP 5

Percent of Population That Was Black or African American
in Cumberland County by Census Block, 2010
(Based on 2010 Census Block-Level Redistricting Data)



Hispanic Origin

People of Hispanic origin may be of any race. According to the 2014-2018 ACS, an estimated 12 % of the population in Fayetteville identified as Hispanic. An estimated 38.1 % identified as White non-Hispanic.

Households and Families

Chart F summarizes types of households. The most recent ACS reports that there were 80,598 households in Fayetteville in 2014-2018. The average household size was 2.43 people.

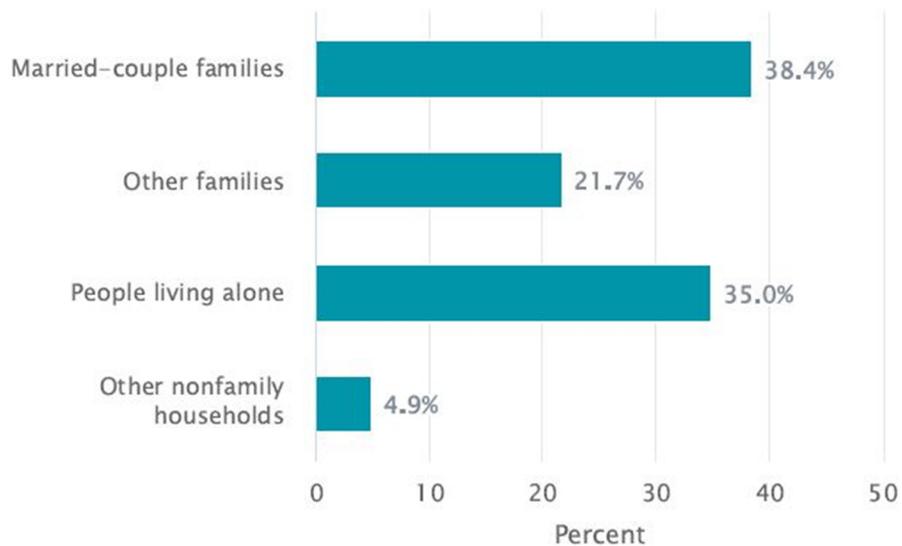
Family households made up 60.1 % of households in Fayetteville, which includes married-couple families (38.4 %) and other families (21.7 %).

Female-householder families with children under 18 years and no husband present made up 10.0 % of all households.

Nonfamily households made up 39.9 % of all households. People living alone represented a large segment of the nonfamily households.

Chart F

Types of Households in Fayetteville city, North Carolina in 2014-2018

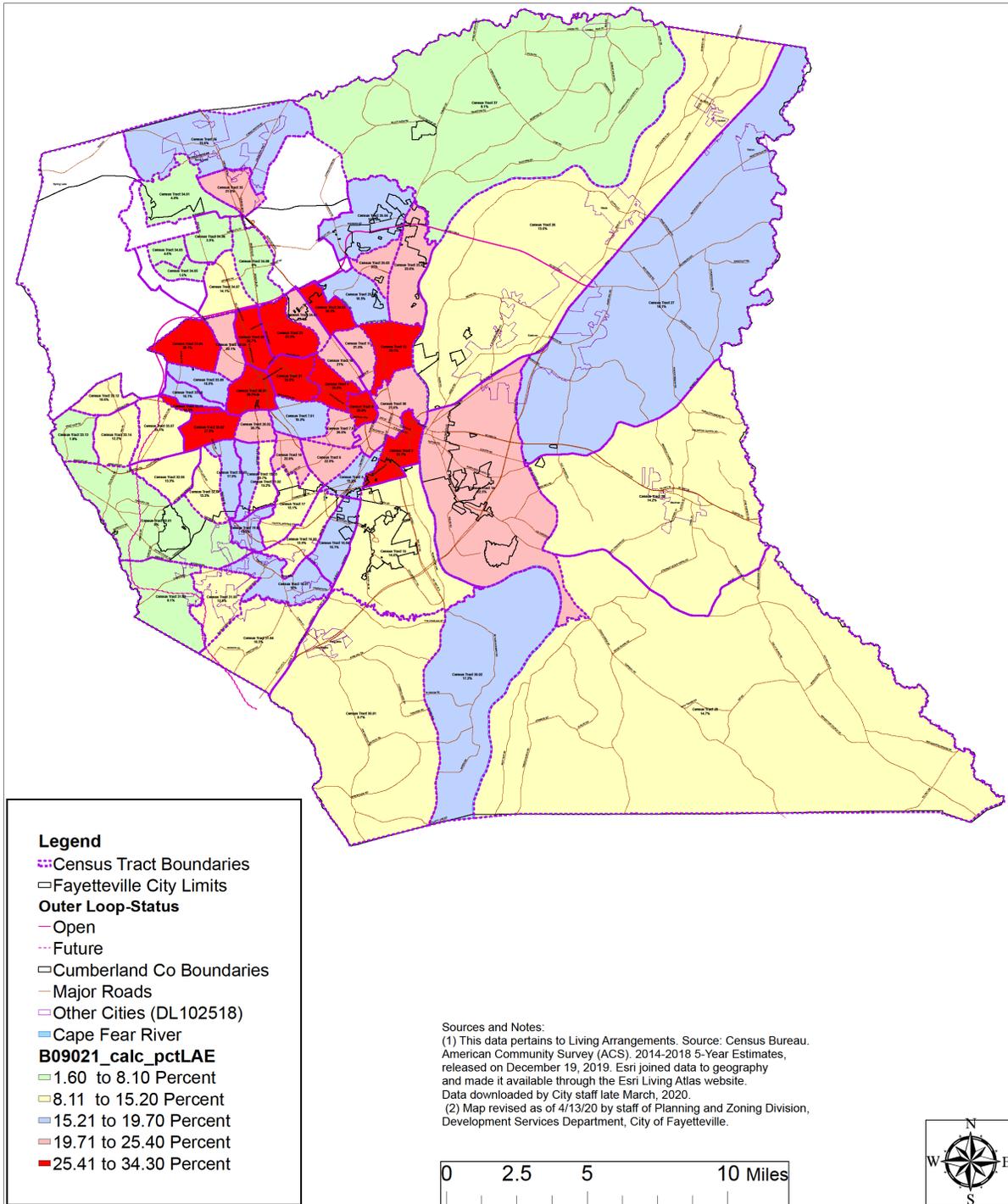


Geographic Pattern of “Living Alone” Households

Map 6 shows the percentage of people who reported that they were living alone, by census tract. (This refers to people who are 18 and over and living in households.) The highest percentages are along Bragg Boulevard, Santa Fe Drive, Morganton Road, Cliffdale Road, Bunce Road, Old Wilmington Road, Ramsey Street, and Rosehill Road. It is likely that the presence of apartment and condominium complexes in these areas contributes to this pattern.

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**Percent of Population Living Alone
in Cumberland County by Census Tract, 2014 to 2018 (Refers to Population 18 and Over in Households)
(Based on 2014-2018 American Community Survey 5-Year Estimates)**



Housing Inventory Characteristics

In 2014-2018, there were 95,129 total housing units in Fayetteville; 80,598 units were occupied, while 14,531 were vacant.

- **Type of housing:**
 - Single-family detached or attached: 66.2%. *Townhouses or row houses are common examples of "attached" units.*
 - Units located in multi-unit structures: 30.6%. *Apartments are a prime example of this type.*
 - Mobile homes: 3.1 %.
 - Other miscellaneous types (such as boats, RV's, vans, etc.) made up the remainder.

- **Age of housing:**
 - Units built since 2010: 6.2%
 - Units built in 1939 or earlier: 1.8%

- **Median number of rooms: 5.4**

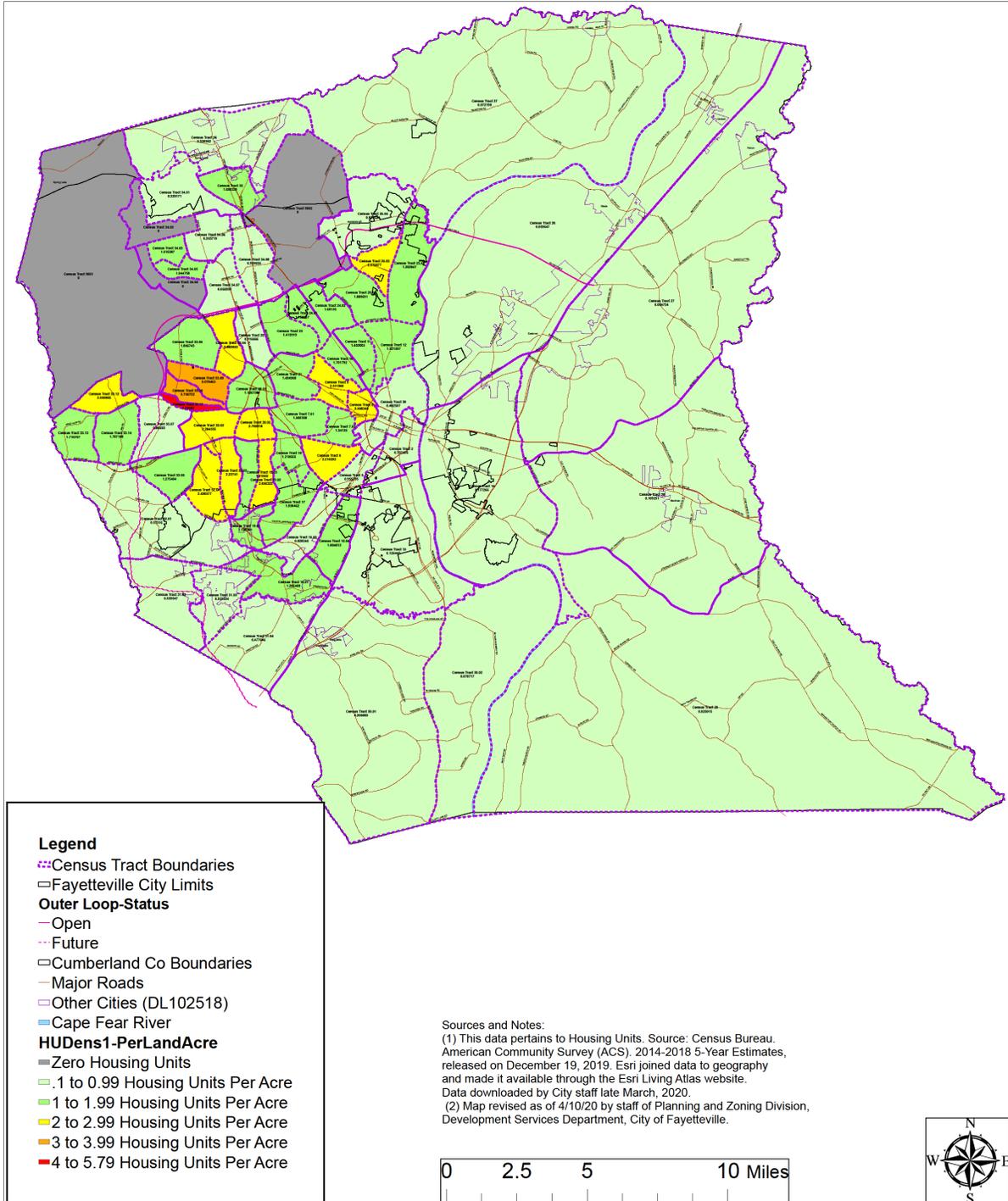
Geographic Pattern of Housing Unit Density

Map 7 shows housing unit density at the census tract level, in terms of number of units per acre of land. The highest density is in tract 33.11 (shaded in red), located on the western side of the City, between Cliffdale Road and the A&R Railroad. This high density is due to the increased construction of apartment and condominium units in this area over the past 20 years.

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MAP 7

**Housing Unit Density (In Terms of Housing Units per Acre of Land)
in Cumberland County by Census Tract, 2014 to 2018
(Based on 2014-2018 American Community Survey 5-Year Estimates)**



Occupied Housing Characteristics

Number of occupied housing units: 80,598, per 2014-2018 ACS

Tenure:

Renter-occupied: 55.6 %

Owner-occupied: 44.4% (also known as, *homeownership rate*)

Geographic Pattern of Homeownership

Map 8 shows the homeownership rates by census tract.

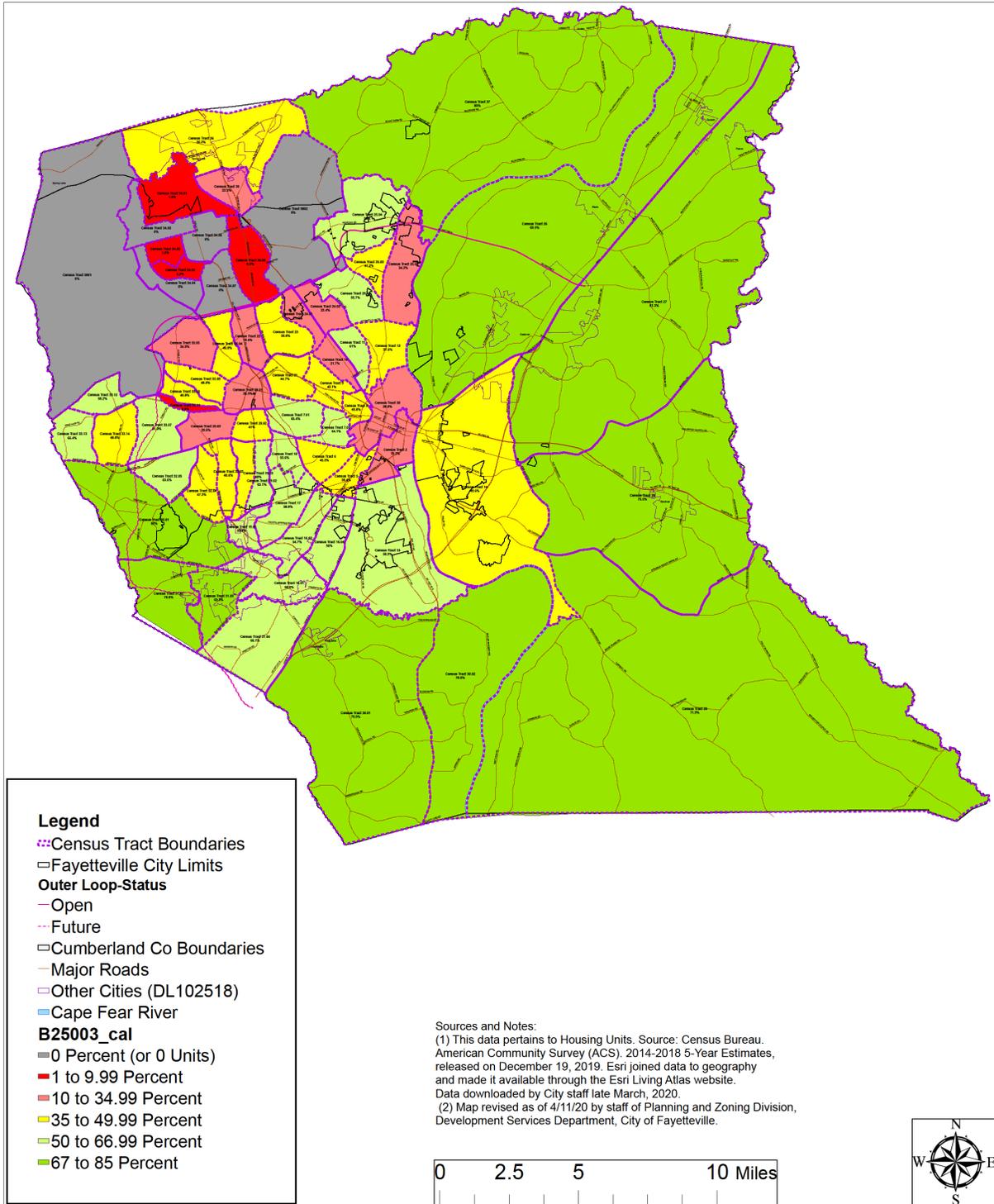
Key points:

- In general, homeownership is higher outside the City.
- Within the City, rates are highest in the west, between Raeford Road and King Road.
- The lowest rates in both the City and County are on Fort Bragg, as the units are presumably owned by the Army and not the individual occupants.
- Rates are relatively low in Census Tract 38, which includes Downtown Fayetteville where occupants are more likely to be renters than owners.

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MAP 8

**Homeownership Rates
in Cumberland County by Census Tract, 2014 to 2018
(Based on 2014-2018 American Community Survey 5-Year Estimates)**



Average Household Size

Renter-occupied units: 2.37 persons

Owner-occupied units: 2.51 persons

Vehicle Availability (for personal use)

Households with no vehicle: 7.4%

Households with three or more vehicles: 16.2%

Year Householder Moved into Their House

1989 or earlier: 12.3 %

2015 or later: 27.8%

Geographic Mobility

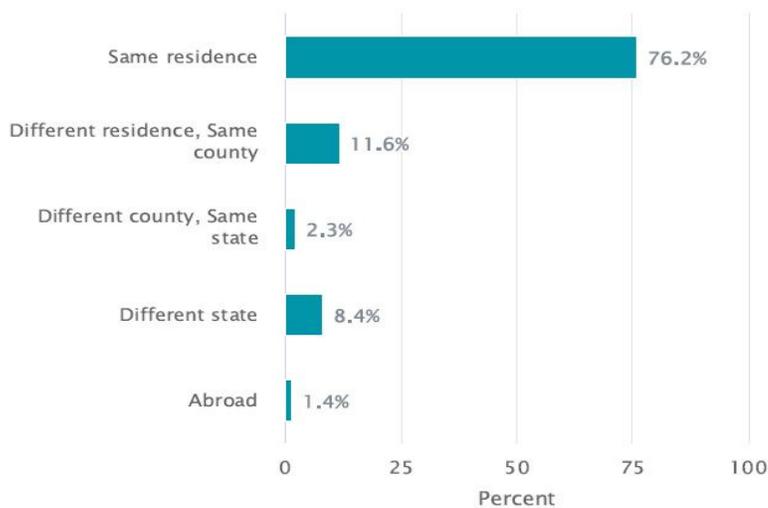
Occupants living in the same residence for at least one year: 76.2%.

Chart G summarizes geographic mobility.

Chart G

In 2014-2018, 76.2 percent of the people at least one year old living in Fayetteville city, North Carolina were living in the same residence one year earlier.

Geographic Mobility of Residents of Fayetteville city, North Carolina in 2014-2018



Geographic Pattern of People Who Lived in Same House One Year Ago

Map 9 shows this information by census tracts.

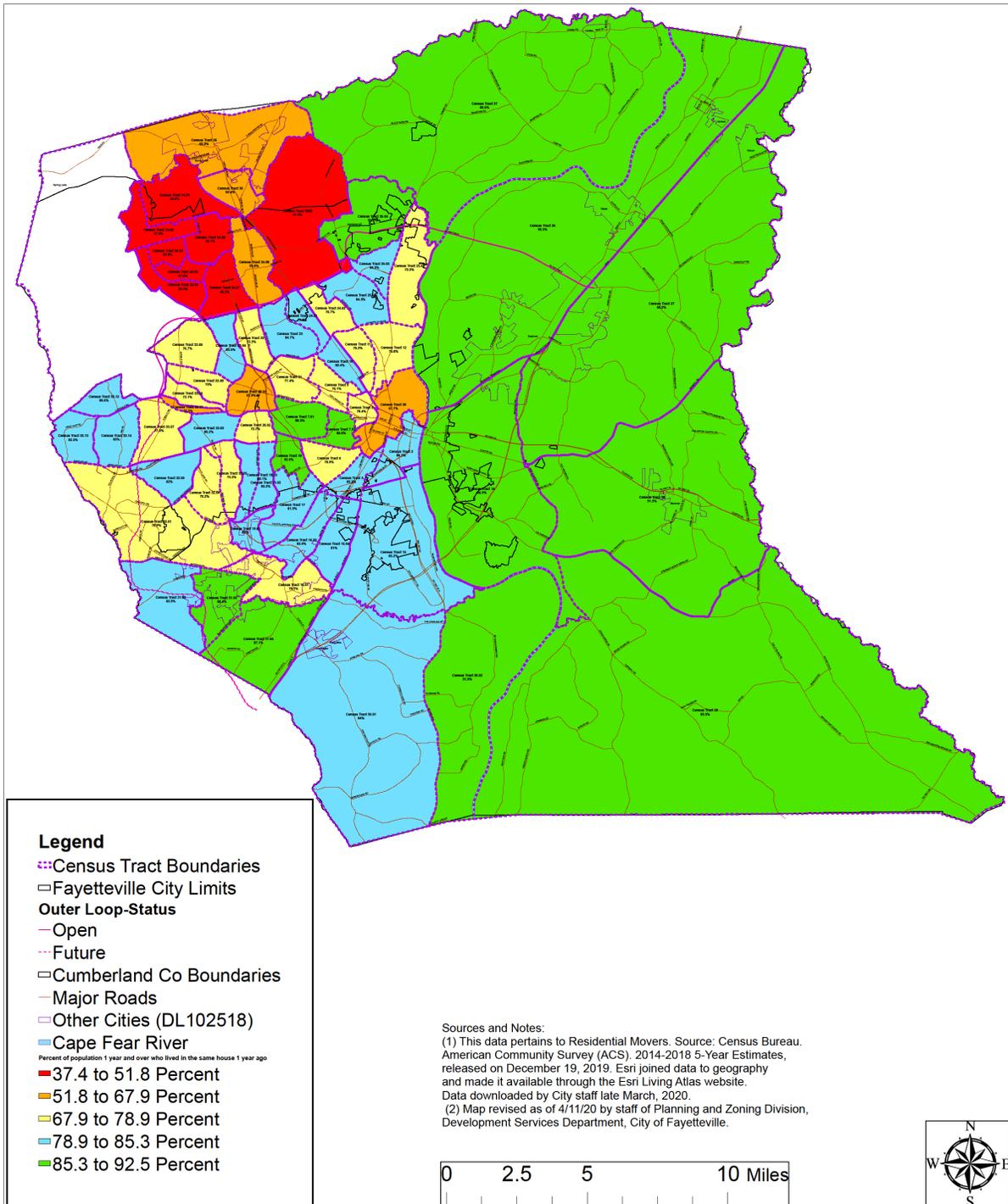
Key points:

- The census tracts with the lowest percentages are on Fort Bragg, in Spring Lake, around Cross Creek Mall, and around Downtown Fayetteville.
- The census tracts with the highest percentages are between Morganton Road and Cape Fear Valley Hospital.

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MAP 9

**Percent of Population Who Lived in the Same House 1 Year Ago
in Cumberland County by Census Tract, 2014 to 2018 (Refers to Population 1 Year and Over)
(Based on 2014-2018 American Community Survey 5-Year Estimates)**



Income

The ACS provides several measures of income, such as household income, family income, and per capita income. The information below features median household income. This can be used to assess how rich or poor an area is, in relation to other areas. The median household income for Fayetteville was \$44,057 in 2014-2018. **Table 2** shows how Fayetteville compares to the nation, North Carolina, and Cumberland County. The margin of error means that users can be 90 percent confident that the true value falls within the margin of error range for the estimate.

Table 2-Median Household Income Levels

Jurisdiction	Median Household Income	
	Estimate	Margin of Error
United States	\$60,293	+/- 140
North Carolina	\$52,413	+/- 224
Cumberland County	\$45,716	+/- 849
Fayetteville	\$44,057	+/- 1,024

Source: U.S. Census Bureau. 2014-2018 ACS 5-Year Estimates. Table S1901-Income in the Past 12 Months (In 2018 Inflation-Adjusted Dollars)

Chart H shows household income in Fayetteville, in terms of the percentage of households having income in various income brackets.

Chart H

Household Income in Fayetteville city, North Carolina in 2014-2018



Geographic Pattern of Median Household Income

Map 10 shows the median household income by census tract in Cumberland County.

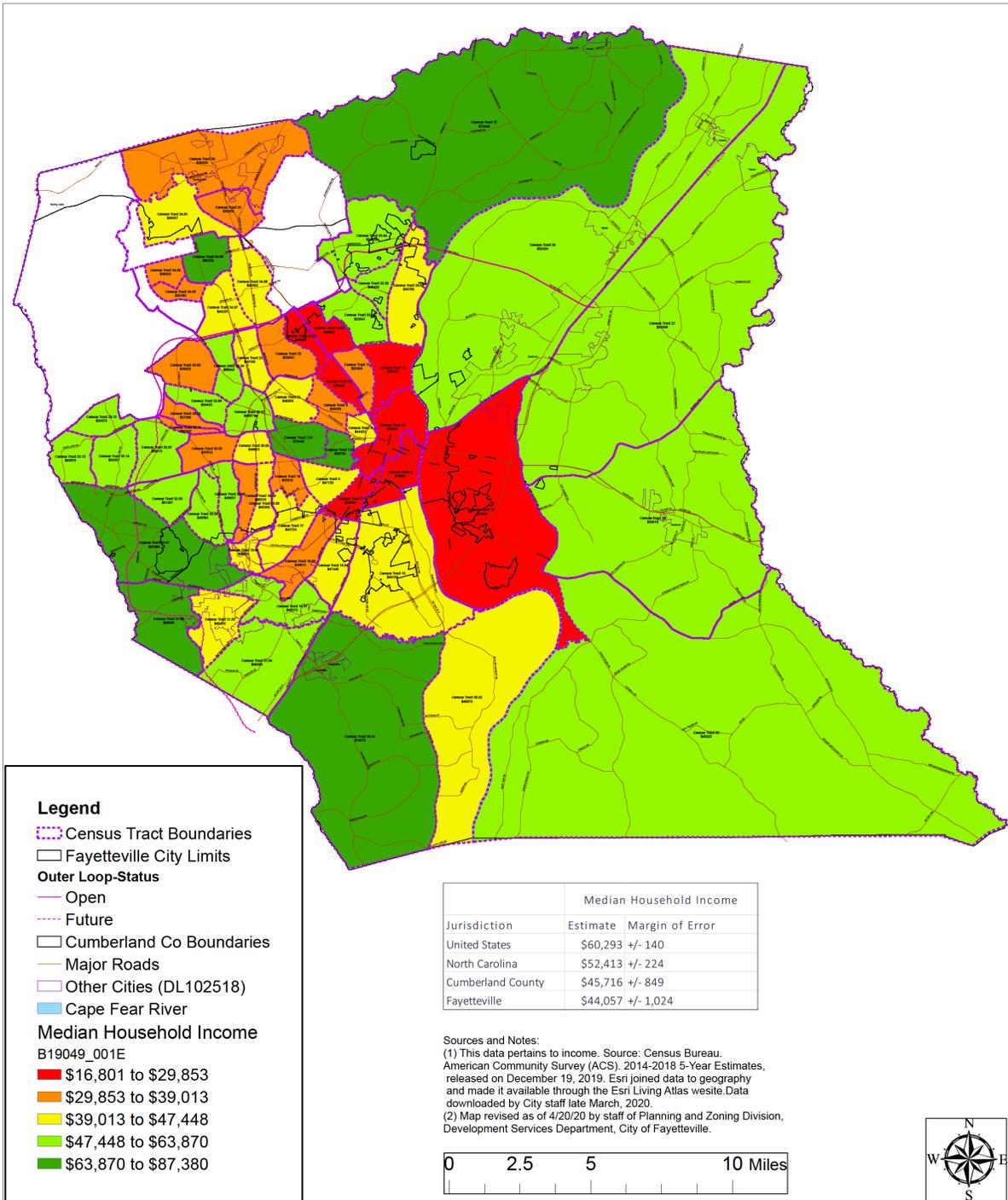
Key Points:

- Tracts with the lowest levels of income (shown in red on Map 10) are Tract 14 (East Fayetteville), Tract 2 (Old Wilmington Road), Tract 5 (Massey Hill), Tract 38 (Downtown and Savoy Heights), Tract 12 (Ramsey Street-north of Downtown), Tracts 10 and 24.01 (along the western side of Murchison Road) and Tract 24.02 (along the eastern side of Murchison Road).

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MAP 10

Median Household Income in Cumberland County by Census Tract, 2014 to 2018
 (Based on 2014-2018 American Community Survey 5-Year Estimates)



Poverty

The ACS calculates poverty rates, or percentages, for various areas. These rates are based on the percentage of people in an area who fall below a poverty threshold. (Thresholds are based on family size, number of children, and, for one- and two-person families, the age of the householder.)¹⁰

The overall poverty rate for Fayetteville in 2014-2018 was 19.2 percent.

Table 3 below shows how Fayetteville compares to the US, North Carolina, and Cumberland County.

Table 3-Poverty Rates

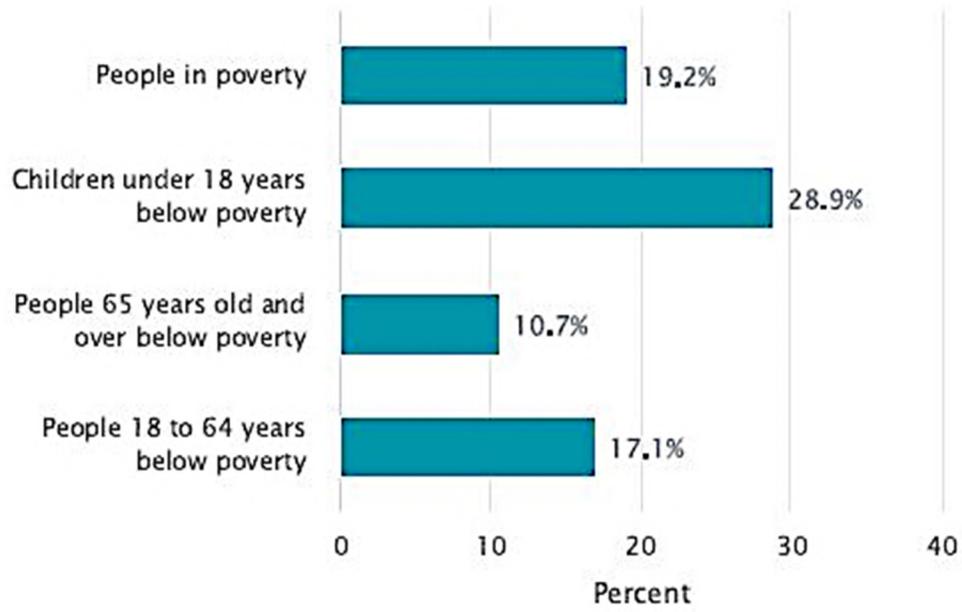
Jurisdiction	Percent of Population Below the Poverty Level	
	Estimate	Margin of Error
United States	14.10%	+/- 0.1
North Carolina	15.40%	+/- 0.2
Cumberland County	18.20%	+/- 0.7
Fayetteville	19.20%	+/- 1.1

¹⁰ American Community Survey and Puerto Rico Community Survey 2018 Subject Definitions.

Chart I shows poverty rates in Fayetteville by age.

Chart I

Poverty Rates in Fayetteville city, North Carolina in 2014-2018



Geographic Pattern of Poverty

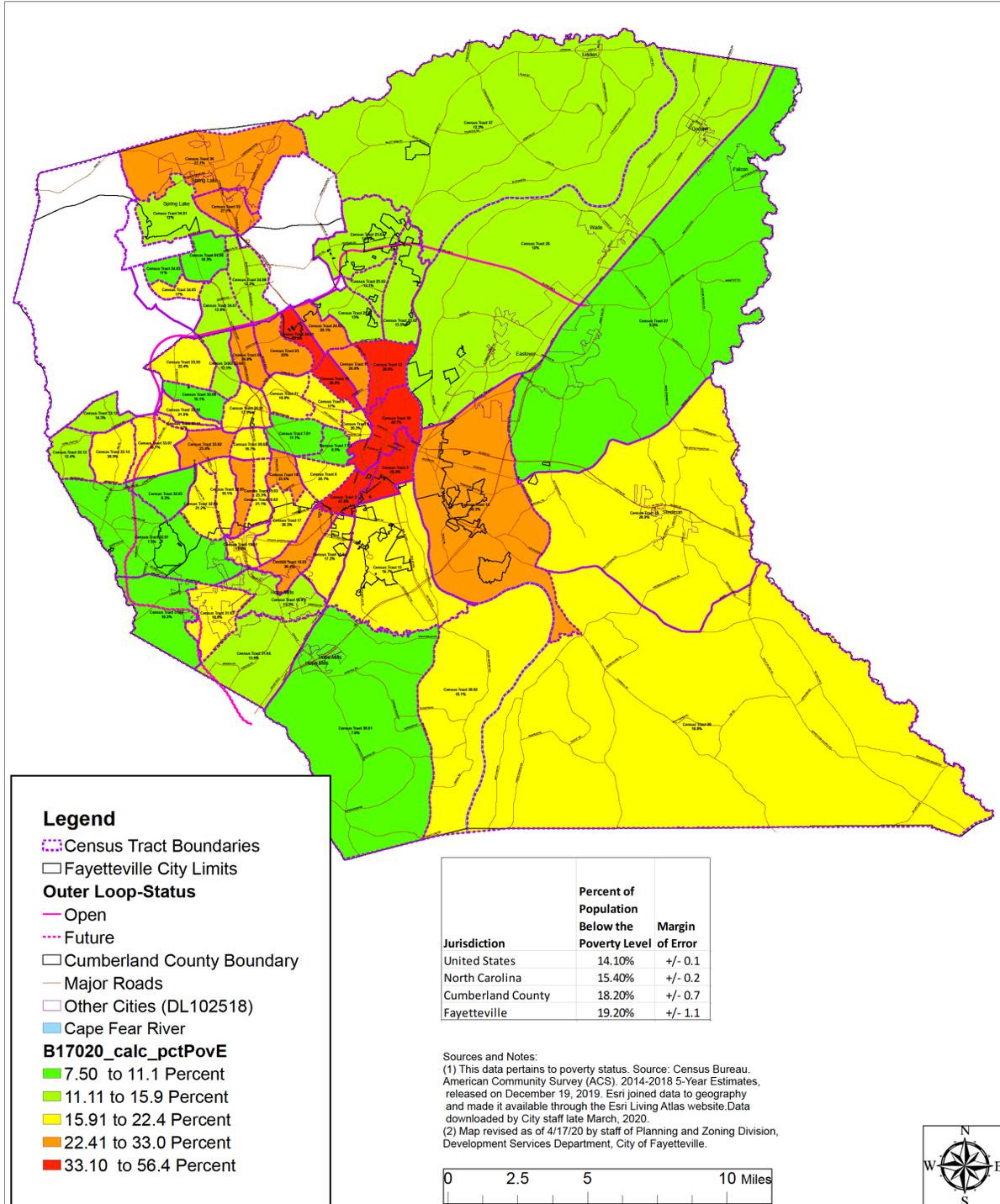
Map 11 shows the poverty percentages by census tract in Cumberland County.

Key Points:

- Tracts with the highest poverty percentages (shown in red on Map 11) mirror the pattern of low income shown on Map 10. However, Tract 14 (East Fayetteville) and Tract 24.02 (along the eastern side of Murchison Road) are two exceptions; these two tracts are not classified as having the highest poverty levels.

MAP 11

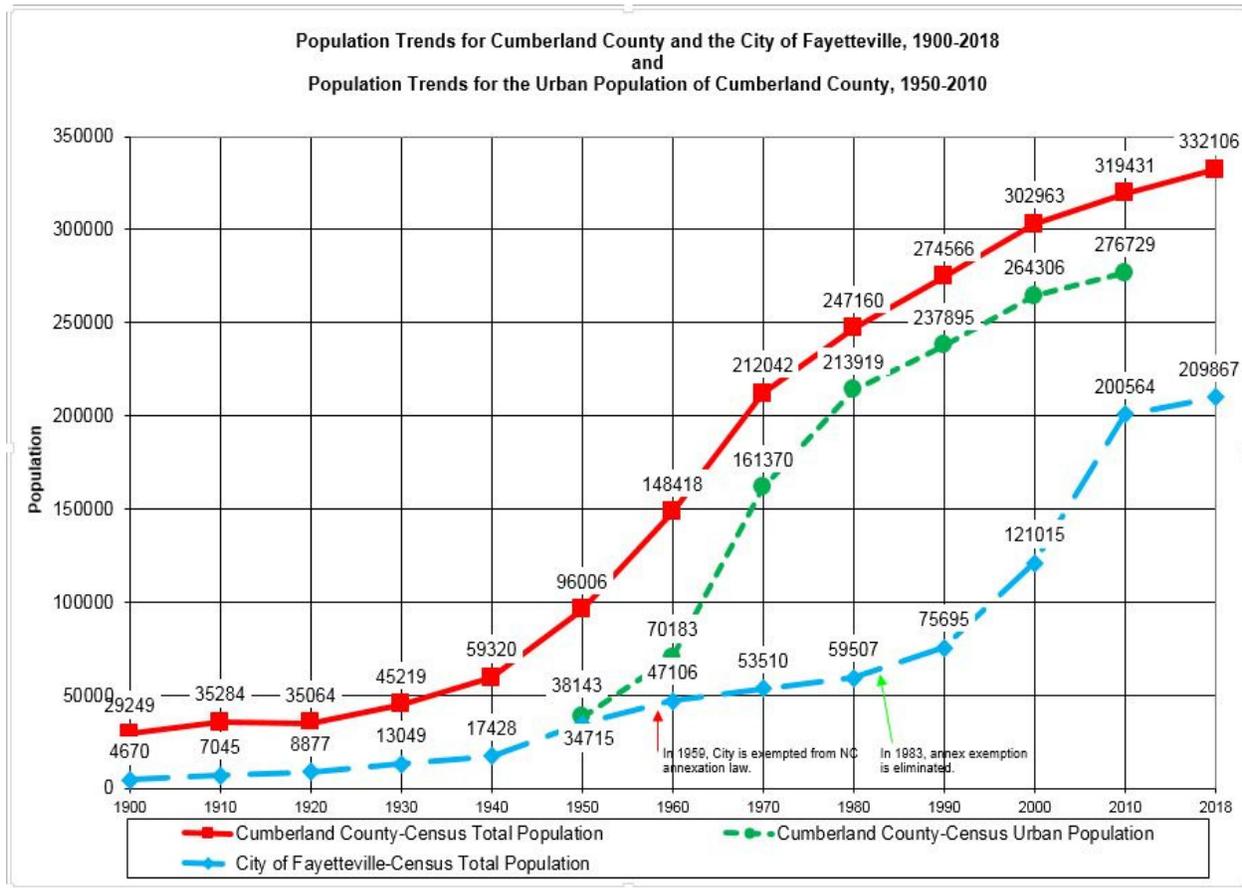
Percent of Population Below the Poverty Level in Cumberland County by Census Tract, 2014 to 2018
(Based on 2014-2018 American Community Survey 5-Year Estimates)



Part 2: Population Growth Trends

Chart J below shows the population growth trends for Cumberland County and the City of Fayetteville from 1900 to 2018. The chart also shows growth trends for the urban population of the County from 1950 to 2010.

Chart J



Population Growth from 1900 to 2010

1900 to 1940: the population of the County and the City grew gradually, probably due to a combination of natural growth (births minus deaths) and migration.

1940 to 1950: growth rate of 99%, the City's highest for any decade on record. During World War II, there was considerable growth at Fort Bragg, leading to in-migration and population growth.

1950: Fayetteville made up about 36% of the County's population and 91% of the County's urban population.¹¹

1950 to 1980: population growth in Fayetteville was modest, while the County and urban population surged. As a result, Fayetteville's share of the County and urban population decreased.

1980: the City's population made up only 24% of the County population, and only 28% of the urban population.

The decrease in Fayetteville's share of the County and urban population between 1950 and 1980 can be partially explained by the City's exclusion from using the North Carolina *city-initiated annexation law*. In 1959, North Carolina adopted a new law based on the principle that "what is urban should be municipal." This law allowed most cities to annex adjacent urban areas upon satisfaction of certain statutory standards. However, the State exempted the cities in Cumberland County, making it very difficult for Fayetteville to annex surrounding urban areas in need of City services.

1980 to 2010: In 1983, the General Assembly removed all exemptions from the North Carolina city-initiated annexation law. As a result, Fayetteville was able to annex like other cities in North Carolina between 1984 and 2010. In 2008, the General Assembly annexed part of Fort Bragg into Fayetteville.

2010: City population reached 200,564. The City's share of the County population increased to about 63%, and the City's share of the urban population increased to about 73%.

¹¹ 1950 is apparently the first year that the Census Bureau released urban population counts for Cumberland County.

Population Growth from 2010 to 2018

2010 to 2018: City's population increased from 200,564 to 209,867 people.¹²

Tables 4-6 below show the change in population for the City between 2010 and 2018, comparing the part of the City that contains Fort Bragg ("Fort Bragg Part") to the rest of the City ("Non-Fort Bragg Part"). The three data columns in each table show the Household Population, the Group Quarters Population, and the Total Population.

Table 4 shows that in the 2010 Census, the population of the Fort Bragg Part was 17,197, or about 8.6% of the City's total population.

The low number of Fort Bragg residents who were classified as living in *group quarters* (military barracks) is likely skewed because many soldiers living in barracks had been deployed at the time of the Census count.

Table 4 - Components of Fayetteville Population, per 2010 Census

	Household Population	Group Quarters Population	Total Population
City of Fayetteville Total^(a)	191,723	8,841	200,564
Fort Bragg Part of Fayetteville^(b)	12,081	5,116	17,197
Non-Fort Bragg Part of Fayetteville	179,642	3,725	183,367

Sources:

(a) US Census Bureau. 2010 Census. Table DP-1. Profile of General Population and Housing Characteristics.

(b) US Census Bureau. 2010 Census. Advanced Group Quarters Summary File. Also Summary File 1, Table 42.

Table 5 shows that by 2018, the total population of the City had increased to 209,867. Most of the increase in population in the Fort Bragg Part was due to an increase in the group quarters population.

Table 5 - Components of Fayetteville Population, per 2014-2018 ACS 5-Year Estimates

	Household Population	Group Quarters Population	Total Population
City of Fayetteville Total^(a)	196,082	13,785	209,867
Fort Bragg Part of Fayetteville^(a)	11,086	10,065	21,151
Non-Fort Bragg Part of Fayetteville	184,996	3,720	188,716

Source:

(a) US Census Bureau. 2014-2018 ACS 5-Year Estimates. Table B09019. Household Type (Including Living Alone) by Relationship¹³

Table 6 is based on the difference between the data shown in Table 4 and Table 5.

¹² Appendix A summarizes five estimates of population that are available for the City of Fayetteville.

¹³ Note: The Fort Bragg Part of Fayetteville is based on the sum of data from 7 census tracts on Fort Bragg that are located completely within Fayetteville: 34.02, 34.03, 34.04, 34.05, 34.06, 34.07, and 34.08. Parts of three other census tracts are partially located in Fayetteville (34.01, 98.01, and 98.02). However, staff does not believe that any people live in the Fayetteville parts of these census tracts.

Key points:

- The City’s total population grew by 9,303 people between 2010 and 2018. About 53% of the total growth came from an increase in group quarters population, while 47% came from an increase in household population.
- The Fort Bragg Part of Fayetteville grew by 3,954 people. Most of the growth was from an increase in the group quarters (barracks) population, reflecting the return of soldiers who had been deployed at the time of the 2010 Census. The household population on Fort Bragg declined by 995 people.
- The Non-Fort Bragg Part of Fayetteville grew by 5,349 people. Almost all of this growth was from an increase in the household population.

Table 6 - Change in Components of Fayetteville Population, 2010 to 2018 (per the 2010 Census and the 2018 ACS 5-Yr. Estimate)

	Change in Household Population	Change in Group Quarters Population	Change in Total Population
City of Fayetteville Total	4,359	4,944	9,303
Fort Bragg Part of Fayetteville	-995	4,949	3,954
Non-Fort Bragg Part of Fayetteville	5,354	-5	5,349

Summary

Between 2010 and 2018, the City’s population grew from 200,564 to 209,867, a gain of 9,303 people, or 4.6%. The City’s population remained about 63% of the County total population.

Factors:

- New residential development and natural growth (births minus deaths)
- Migration, although there is little information at the city level on this factor
- Return of deployed soldiers to Fort Bragg
- Annexation: In response to petitions, the City has annexed over two square miles of land between the 2010 Census and July 2018.¹⁴ Most of this land was vacant at the time of annexation, but developers have built new homes on this land, increasing the City’s population. (Note: Fayetteville has not used the city-initiated method of annexation since 2003.)

Map 12 shows the pattern of Cumberland County population change from 2010 to 2018, by census tract.

Key points:

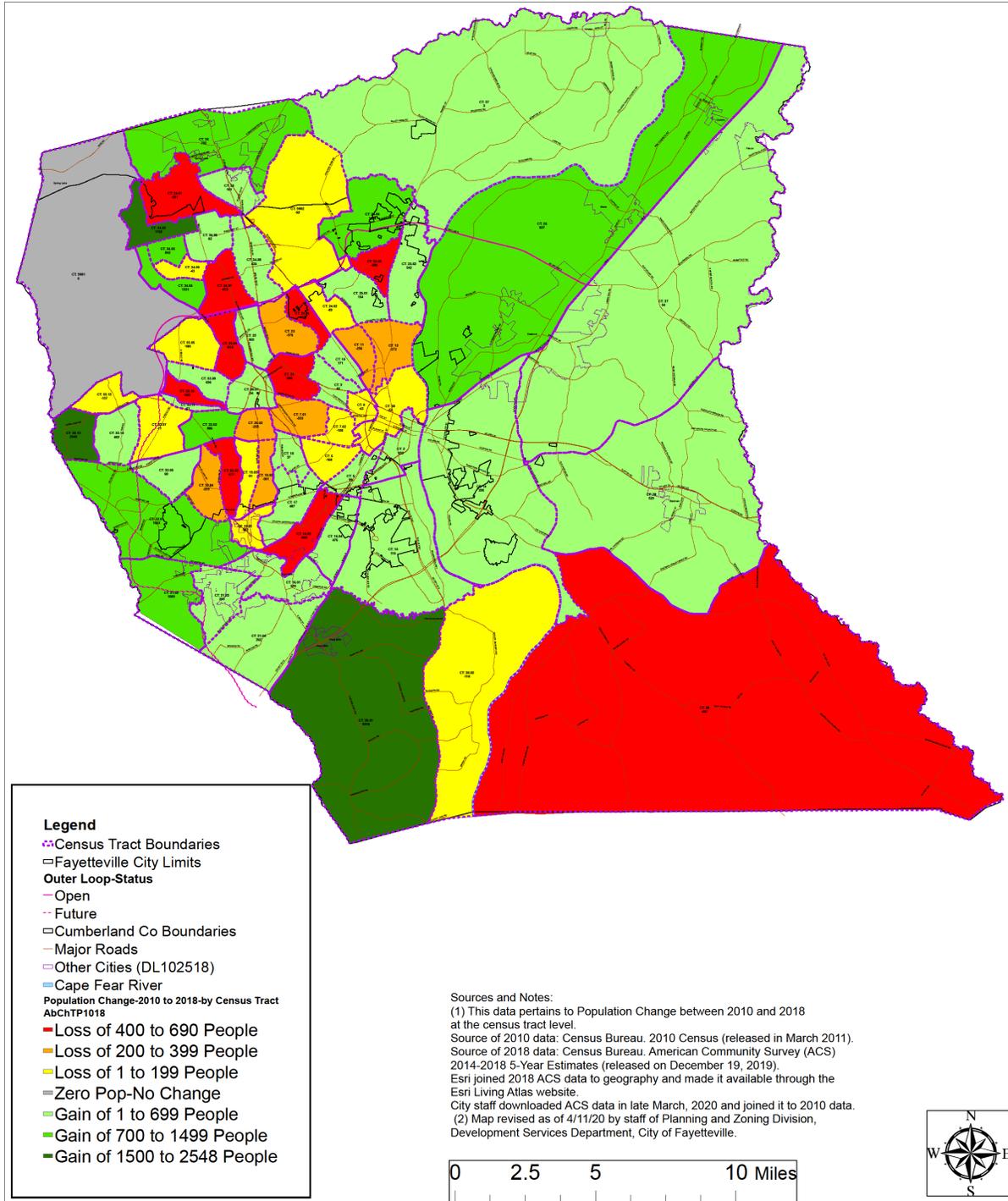
- Tract 33.13 had the most amount of growth in the City. (This tract is on the western side of the City, along Hoke Loop Road. It includes subdivisions such as James Creek, Scotts Mill, and Highcroft.) Tract 34.02 (on Fort Bragg) had the second largest amount of growth in the City. Most of this growth appears to have been in group quarters population.
- Numerous census tracts within the City decreased in population.¹⁵

¹⁴ Aspects of Municipal Population and Land Area Change, April 1, 2010 to July 1, 2018. North Carolina OSBM, Standard Population Estimates, Vintage 2018.

¹⁵ More analysis needs to be done to examine the reasons. For example, did the number of housing units remain the same, decrease, or increase? Did the average household size decrease? Did the vacancy rate rise? Did the percentage of householders living alone increase?

MAP 12

Population Change in Cumberland County by Census Tract, 2010 to 2018
(Based on 2010 Census and 2014-2018 American Community Survey 5-Year Estimates)



Part 3 Population Projections¹⁶

Based on previous research conducted by the City of Fayetteville, Department of Development Services, statewide growth trends are bypassing Cumberland County and Fayetteville.¹⁷

For population projections for the City, the Department of Development Services analyzed projections for the County and assumed the City's future share thereof. The Department first examined two sets of third-party County projections, and then turned to internally created, in-house projections.

The third-party sets are from reports by the North Carolina State Demographer¹⁸ and the Fayetteville Area Metropolitan Planning Organization (FAMPO) Population and Economics Study.¹⁹ **Table 7** summarizes these projections.

Table 7-Summary of State Demographer's Projections and FAMPO's Projections

Projection Dates	State Demographer's Projections	FAMPO P&E Study Projections
4/1/10 Census	319,431	319,431
July 2010	327,195	-
July 2015	329,046	335,229
July 2020	333,209	351,027
July 2025	334,770	366,825
July 2030	335,069	382,623
July 2035	335,128	398,421
July 2039	335,137	-
2040	-	414,219

¹⁶ The City of Fayetteville, Department of Development Services is not aware of any state or federal agency that prepare official population projections for cities.

¹⁷ Nash, David. (September 2018). *Demographic Profile Information About City of Fayetteville and Cumberland County*. Development Services Department, City of Fayetteville, NC.

¹⁸NC State Demographer. Office of State Budget and Management. County/State Population Projections Page. <https://www.osbm.nc.gov/demog/county-projections>.

¹⁹ FAMPO. Fayetteville Area Metropolitan Planning Organization. Population and Economics Study: 2010-2040. October 23, 2013. <http://fampo.org/galleries/origin/pande1040.pdf>.

Analysis of State Demographer’s projections: These projections are very flat after July 2025, with the population barely surpassing 335,000 people through July 2039. However, the US Census Bureau just released a new report estimating that the County populations was already 335,509 as of July 2019.²⁰ This large difference suggests that the State Demographer’s projections are too low.

Analysis of FAMPO projections: The information shown above is from a table on page 11 of the Population and Economy (P&E) Report. The FAMPO report noted that its projections did not include data from Fort Bragg. Staff has summarized data in the report by Cumberland County planning districts and found that the total projected population for Cumberland County in 2040 will be 434,061, which is not consistent with the information on page 11 of the report. In light of this discrepancy, staff was not sure which projections in the FAMPO report should be used.

Since these third-party projections have shortcomings, the Development Services staff relied on an *in-house method* for projecting the County population. This method is based on past growth trends. (Note that the in-house method could not be used to create accurate population projections for the City of Fayetteville, as the City’s past growth trends reflect a robust pattern of annexations unlikely to continue at the same rate. Any projections based on that pattern would result in projections skewed too high.)

The in-house method was used to create two sets of County population projections based on an extrapolation of past trends into the future. One set is based on the *arithmetic method* and the other set is based on the *geometric method*.

The two projections are shown in **Chart K** and **Chart L** below. Both charts show the historical growth trends over the past 70 years in Cumberland County from 1940 to 2010, as well as the projections for 2020, 2030, and 2040.

Arithmetic method: based on the *absolute change* in population over historical base periods. It assumes that the County will grow by the same absolute amount each year.

- **Chart K** shows this method.
- **Key points:**
 - By the year 2040, the County population ranges from 368,835 to 431,144.
 - The projections are clustered fairly close together.
 - The lower projections are more in line with the past growth trends.

Geometric method: based on the *rate of change* in population over historical base periods. It assumes that the County will grow by the same growth rate each year.

- **Chart L** shows this method.
- **Key points:**
 - By the year 2040, the County population ranges from 374,403 to 582,662.
 - These projections are not as clustered as those generated by the arithmetic method.
 - The highest projection of 582,662 is highly improbable as it deviates wildly from the curve of past growth from 1940 to 2010.
 - The lowest projection is most in line with past growth trends.

²⁰ The US Census Bureau’s Population Estimates Branch released the new report on March 26, 2020.

Chart K – Arithmetic Method

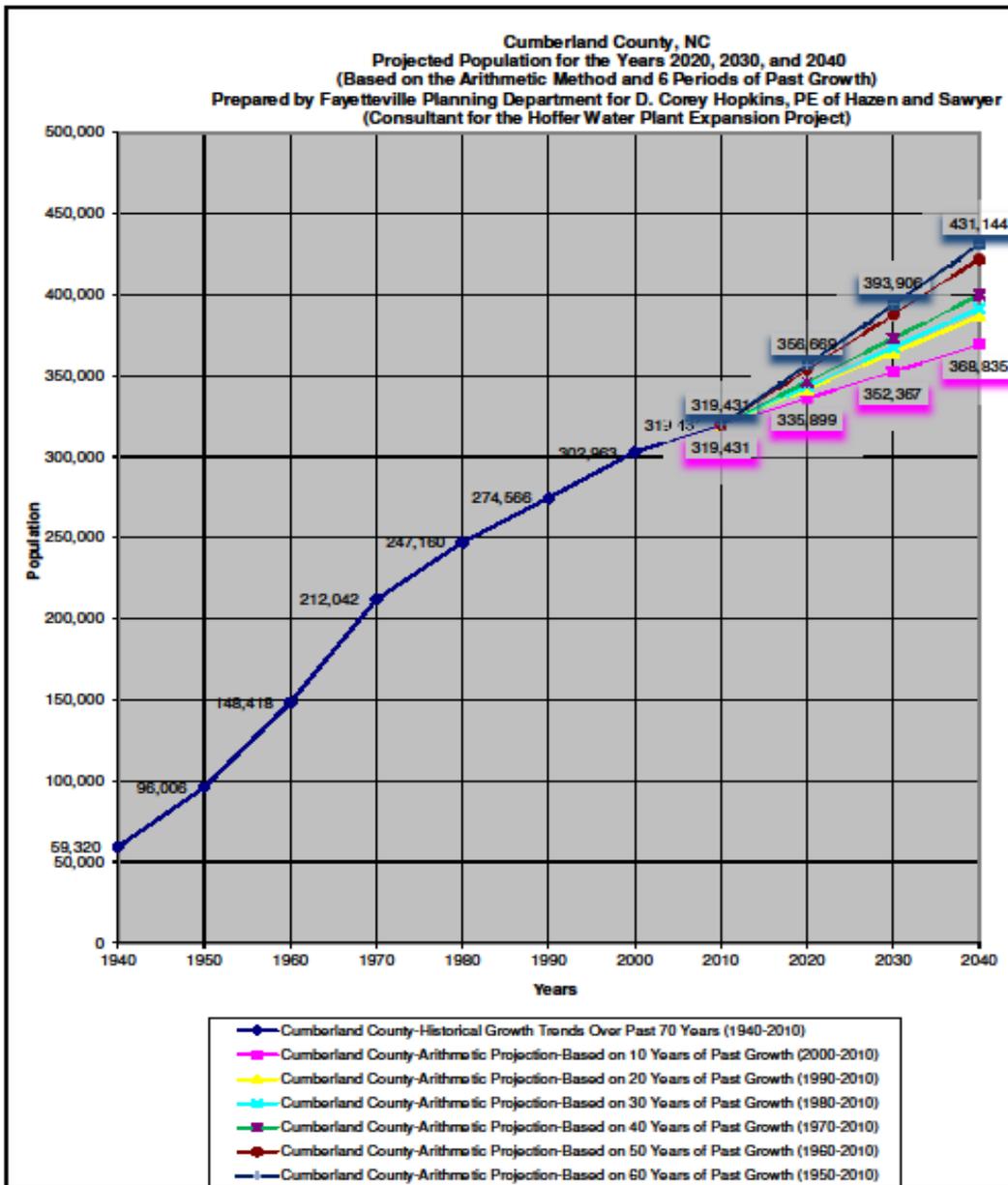
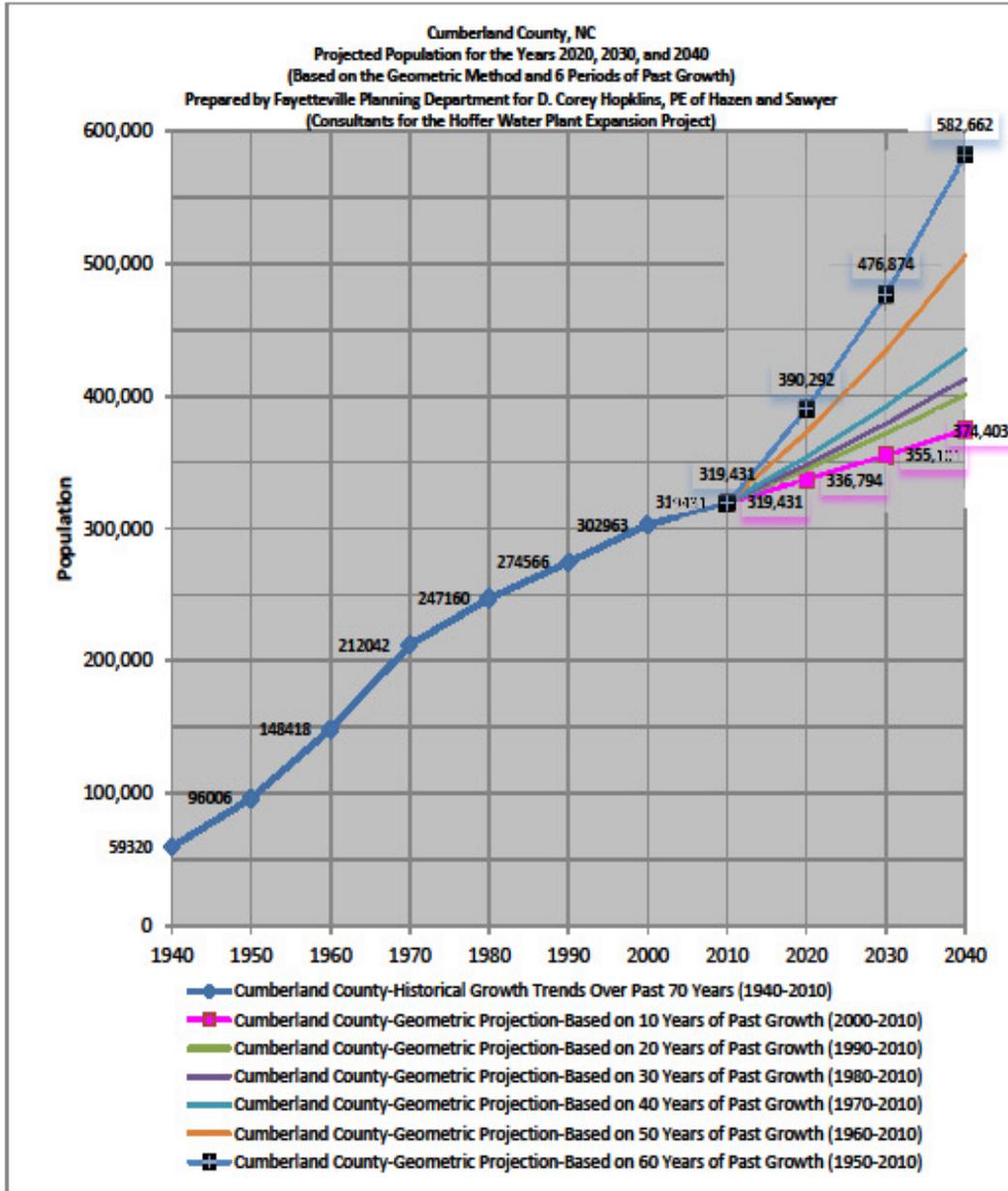


Chart L – Geometric Method



Summary of County Population Projection: A projected population of 368,835 in the Year 2040 for Cumberland County seems reasonable and conservative. This projection is based on the arithmetic method and 10 years of past growth (from 2000 to 2010.) This number is higher than the State Demographer’s projection, but less than the FAMPO projection.

For the final step in preparing the City population projection, staff made an assumption about the future relative size of the City’s share of the County’s population. Staff has assumed this share will continue to be 63% (subject to revision).

Table 8 shows the projected County population, the assumed City share, and the projected City population.

Table 8-Projected City Population

Reference Dates	Projected County Population (See Chart K)	Assumed City Share of County Population	Projected City Population
2010 Census	319,431	62.7869%=63%	200,564
2018 ACS	332,106	63.1928%=63%	209,867
2020	335,899	63%	211,616
2030	352,367	63%	221,991
2040	368,835	63%	232,366

Concluding Notes

The 2020 decennial Census is now underway, with updated City and County population counts anticipated by March of 2021. All projections could be reevaluated in light of the new 2020 decennial counts.

Considerations for Reevaluation:

- Past trends in population should be taken into account in preparing population projections. Any projections should be consistent with these past trends.
- Annexation will not be as important a factor in driving future City population growth as it was between 1980 and 2010. Instead, natural growth and migration will be more important in driving future City population growth.
- Since 2010, Cumberland County has experienced a healthy amount of natural increase in population, but also a large amount of negative net migration (the highest amount in the State), which has offset the natural increase. See Appendix B for more information about migration.
- The aging of the City’s population might suppress the natural growth rate in the City. However, due to the influence of Fort Bragg, the age groups most likely to produce new births will continue to dominate the City’s age structure.
- The percentage of people in the City who identify as White-One Race is declining, while the percentages of people who identify as either Black-One Race or Other is increasing. To assess the implications of racial changes on future population, additional information will probably be needed, including birth rates by race.

SOURCES

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Appendix A

Summary of Five Population Estimates for the City of Fayetteville

Estimate Prepared by:	Description of Estimate	Estimated Population	Estimated Population as of Date	City Boundary as of Date	Include Phase 5 and Fort Bragg Annex?	Most Recent Release Date	Date Next Release Is Expected
US Census Bureau- (Population Estimates Program)	Annual Subcounty Population Estimates (Vintage 2018)	209,468	7/1/18	1/1/18	Yes	5/23/19	5/23/20
NC State Demographer	Standard Estimate	209,028	7/1/18	7/1/18	Yes	8/27/19	8/27/20
NC State Demographer	Certified Estimate	209,028	7/1/18	7/1/19	Yes	8/27/19	8/27/20
US Census Bureau- (ACS Program)	2018 American Community Survey 1-Year Estimates	209,465	Year 2018	Assumed to be as of 1/1/18	Yes	9/26/19	9/26/20
US Census Bureau-(ACS Program)	2014-2018 American Community Survey 5-Year Estimates	209,867	Average of 5 Years (2014-2018)	Assumed to be as of 1/1/18	Yes	12/19/19	12/19/20

As shown above, all of the estimates are in the range of 209,000. This report relies on the estimate of 209,867 from the Census Bureau’s ACS 2014-2018 5-Year Estimates program because it reflects the most recent data available, and data from this program are available at the census tract level.

Appendix B

Information About the Census Bureau's Migration Data for Cumberland County*

Net total migration is the sum of *net international migration* and *net domestic migration*.

Net migration details for Cumberland County from 2010 to 2017:

Net International Migration	11,237
Net Domestic Migration	-22,507
Net Total Migration	-11,270

Net international migration

According to the Census Bureau, *net international migration* includes four parts: (a) the net international migration of the foreign born, (b) the net migration between the US and Puerto Rico, (c) the net migration of natives to and from the US, and (d) the net movement of the Armed Forces population between the US and overseas.

However, because of Fort Bragg, and in particular, perpetual deployments to and returns from overseas, it can be assumed that the net movement of the Armed Forces population between the US and overseas contributed to Cumberland County's *net international migration*.

Net domestic migration

According to the Census Bureau, *net domestic migration* is the difference between domestic in-migration into an area and domestic out-migration from the same area during a specified time period. Domestic in-and out-migration consists of moves where both the origin and the destination are within the United States (excluding Puerto Rico). However

- Impact of a Military Base on Net Domestic Migration. Military counties such as Cumberland tend to have large amounts of net domestic migration, which is likely explained by the in and out moving patterns of military families. According to this explanation, a military family arrives in a military county with no children; while stationed in this county, the family has additional children, and then, the family is transferred out of the county. The Census Bureau's methodology is based on IRS data, including reported number of dependents, to track changes in family size from one time period to another. This methodology tends to detect more people moving out of a county than people moving in.

In Cumberland County, the positive amount of natural increase (23,309) between 2010 and 2017 was large enough to offset the large amount of negative net total migration (-11,270).

*SOURCE: Nash, David. (September 28, 2018). *Demographic Profile Information About City of Fayetteville and Cumberland County*. Development Services Department, City of Fayetteville, NC.