

*a report on*

# FLORIDA TRANSPORTATION TRENDS AND CONDITIONS



## TRAVEL DEMAND

### Population Growth and Characteristics



*June 2014*



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[www.dot.state.fl.us/planning/trends](http://www.dot.state.fl.us/planning/trends)

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# Travel Demand: Population Growth and Characteristics

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## Introduction

People create travel demand. People travel for social interaction, commerce, employment and entertainment. The products they produce and consume are transported. Thus, understanding the number of people and their future residential and activity locations is fundamental to planning to meet travel needs. This report provides an overview of population growth in Florida. Other reports in the Trends and Conditions series explore the contribution of population to the total growth in transportation demand. Information regarding various traits of the population that have historically been relevant to understanding travel demand and behavior are presented in this report. These include characteristics such as density, income, age, ethnicity and home ownership status. Florida's history of rapid population growth has directly contributed to rapid growth in travel. Looking ahead, the pace, source and location of that growth within Florida will impact travel and the subsequent transportation service and infrastructure needs.

Historically, economic growth fueled per capita vehicle miles of travel. However, per capita travel growth has slowed significantly in the past decade and has been declining for the past few years. Per capita travel may not grow in future years unless there is meaningful economic growth. Thus, travel demand growth may be solely or at least more highly dependent on population growth. During the recession, Florida saw slower population growth relative to historical trends and the nation. Understanding future population growth will be critical to forecasting future travel demand and transportation needs for Florida<sup>1</sup>. This report presents the most current available data on Florida's population estimates and forecasts.

## Population Growth

Florida, now the fourth most populous state, has grown steadily throughout the past several decades. However, the rate of growth has slowed down in the past few years. The Bureau of Economic and Business Research (BEBR) at the University of Florida estimated a pause in population growth during the recession. Alternatively, the U.S. Census Bureau showed slower growth earlier in the decade but continued modest growth in 2008 and 2009. The 2010 Census results provide a 2010 count rather than the estimates for interim decennial census years. More information on the various estimates of growth is provided in Appendix A.

Throughout the 1990's, Florida's population grew at an annual average rate of 2.2%. From 2000 to 2012, the growth rate averaged 1.5%. National population growth was 0.9% in the 1980's, 1.2% in the 1990's and 0.9% between 2000 and 2011. Florida averaged 315,000 new residents annually through the 1990's, the equivalent of adding a new city the size of Tampa each year –

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<sup>1</sup> Florida Statutes require the Office of Economic and Demographic Research (EDR) to produce annual demographic data for official Florida financial allocation purposes. The Bureau for Economic and Demographic Research (BEBR) at the University of Florida provides the data to the EDR. FDOT, designated a US Census Bureau State Data Center Affiliate, also uses BEBR as the source since its estimates are the state standard.

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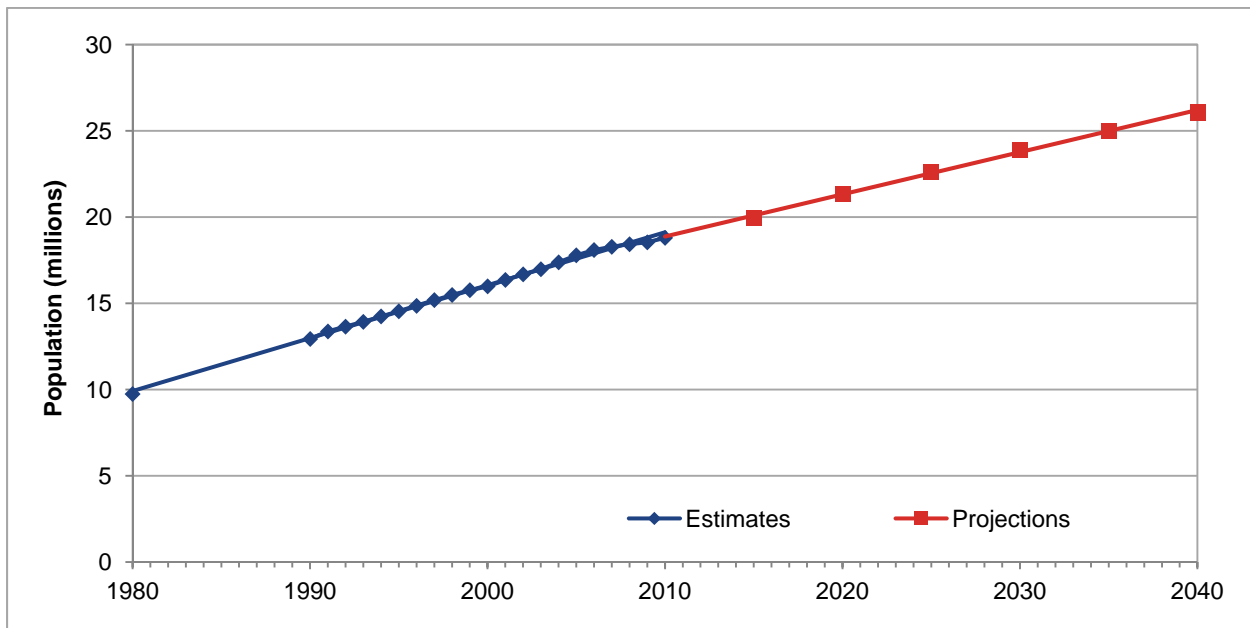
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a significant source of new transportation demand. The trend continued in the 2000's. From 2000 to 2012, Florida added an annual average of 259,600 residents.

Florida's historic and projected growth trends sustain the pattern of growth as shown in Figure 1. Forecasts of population from BEBR indicate that Florida is expected to reach 26,081,800 persons by 2040, an increase of 37% percent from 2012. While the current economic conditions depress migration, the fundamental appeal of Florida appears to remain strong and resumption of growth, even if more modest, is anticipated.

**Figure 1 – Florida Population 1980 - 2040**

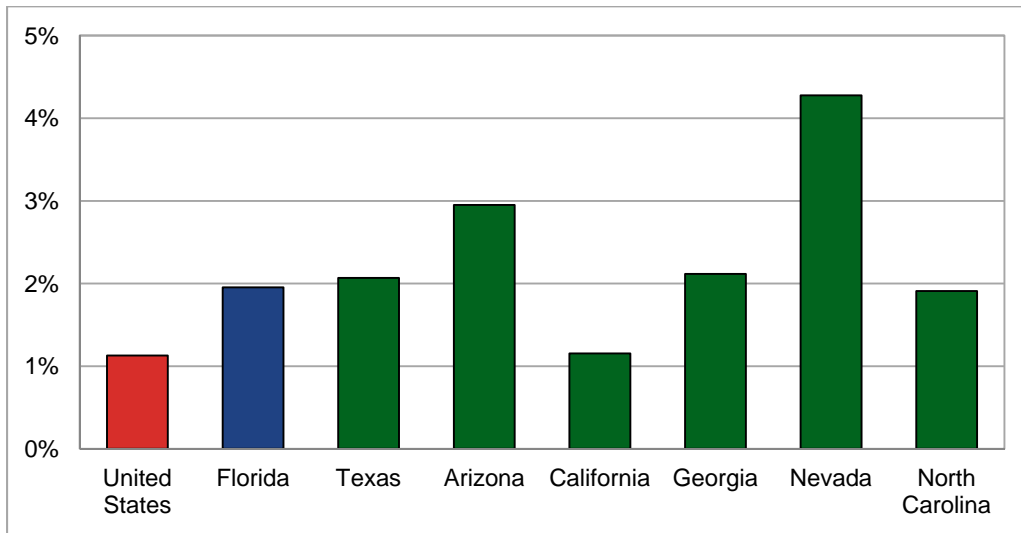


Sources: U.S. Census Bureau; University of Florida - Bureau of Economic and Business Research, *Projections of Florida Population by County, 2012-2040*, 2013.

Figure 2 on the following page compares Florida's population growth rate for the past two decades with that of several other rapidly growing states. Florida's rate of population growth since 1990 nearly doubled the national average. However, the recent slowing of growth in Florida's population has changed the picture dramatically.

Florida's population growth is affected by two critical factors – domestic migration and immigration. Both of these historical trends have been impacted by the severe economic conditions and may result in different trends going forward. It may take economic and real estate stabilization before a "new normal," as it relates to immigration and migration, emerges.

**Figure 2 – Comparative Annual Growth Rate, 1990 – 2012**

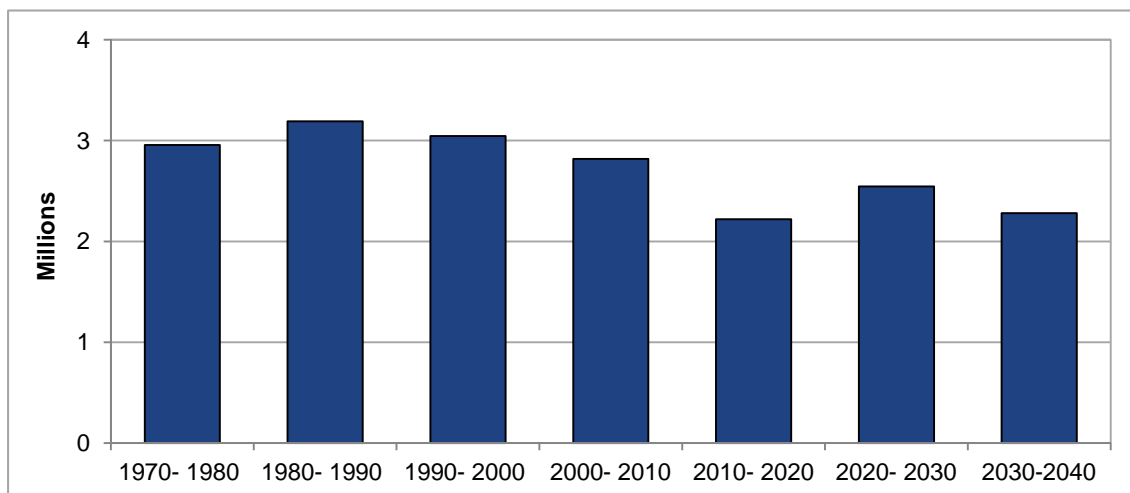


Source: U.S. Census Bureau, *U.S. Census, 1990* and *American Community Survey 2012*.

Figure 3 and Figure 4 show the changes in the rate of growth in both absolute terms (number of people), and relative terms (percent change) for the past several decades and as projected for the future.

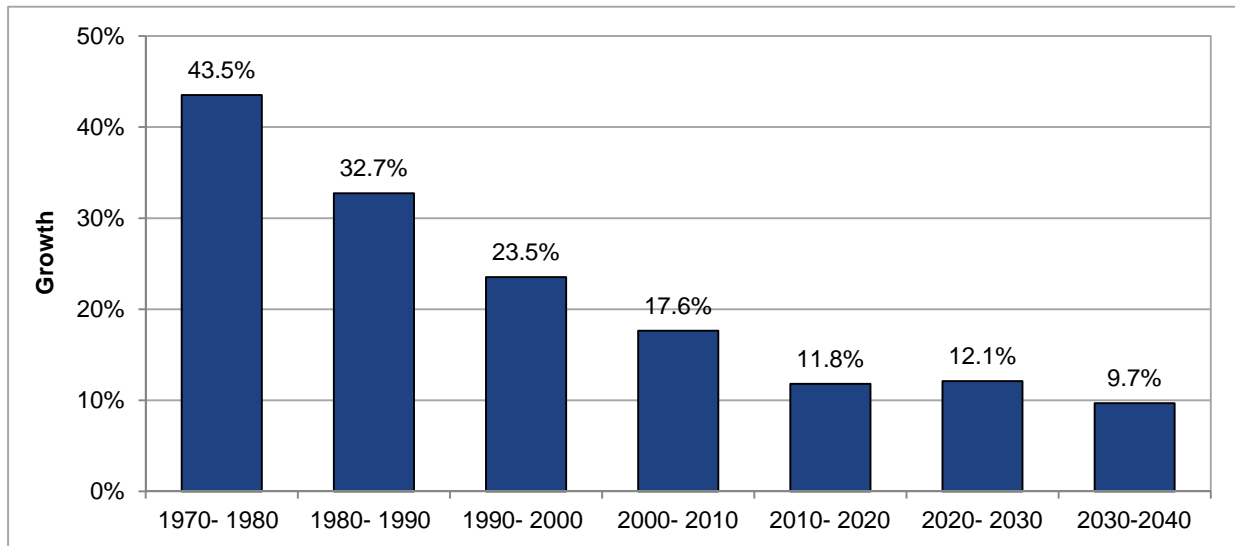
Each subsequent decade's percentage increase in population in Florida has steadily declined. Perhaps surprising to some, the absolute level of growth has also declined in the past decade. However, faster growth occurred in the first several years of the 2000-2010 decade. Florida's growth has been predominately driven by in-migration rates that are influenced by the overall economy and the relative attractiveness of Florida to both individuals and businesses.

**Figure 3 – Florida Population: Absolute Growth by Decade, 1970 - 2040**



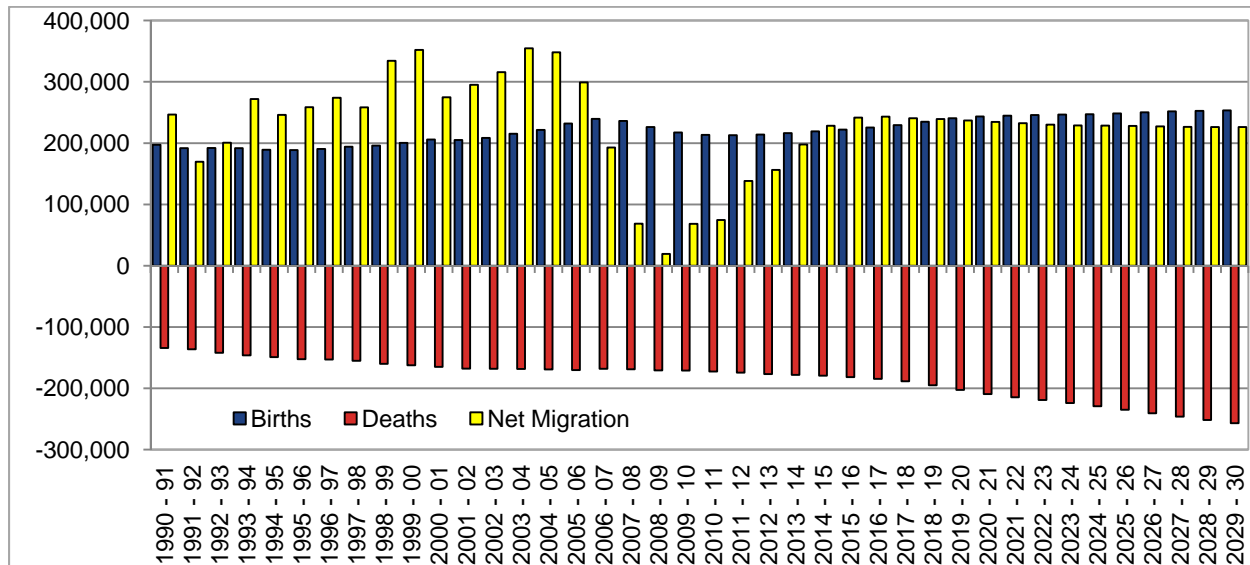
Source: U.S. Census Bureau, *U.S. Census, 2010*; University of Florida – Bureau of Economic and Business Research, *Florida Statistical Abstract, 2009* and *Projections of Florida Population by County, 2012-2040, 2013*

**Figure 4 – Florida Population: Percent Growth by Decade, 1970 – 2040**



Source: U.S. Census Bureau, *U.S. Census*, 2010; University of Florida – Bureau of Economic and Business Research, *Florida Statistical Abstract*, 2009 and *Projections of Florida Population by County, 2012-2040*, 2013.

**Figure 5 – Components of Florida Population Growth, 1990 – 2030**



Source: Florida Demographic Estimating Conference, February 10, 2014.

Two main components determine population growth: natural growth and net migration (domestically and internationally). Figure 5 takes a closer look at these components. The historic years show the dynamics in net migration as economic conditions and other factors influence migration patterns. Future estimates suggest a resumption of net migration to levels similar to previous trends. Interestingly, births also fluctuate more subtly in response to



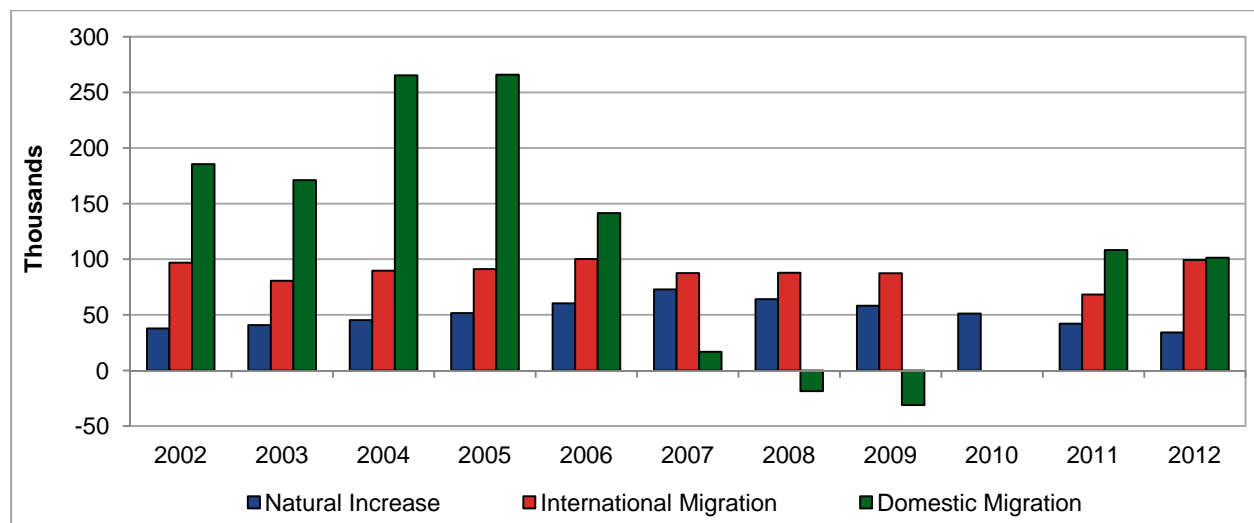
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economic conditions. Deaths, on the other hand, change more slowly in response to the age profile of population.

As Figure 5 indicates, immigration is approximately identical to births in the forecast years – suggesting approximately half of population growth is dependent on migration. Economic conditions both within Florida, within the US, and internationally as well as other quality-of-life factors and immigration policy will ultimately influence immigration levels.

Figure 6 explores historic immigration in more detail by breaking out domestic and international immigration. Net migration has fluctuated from year to year. The dramatic decline in net migration in 2007-2009, with some estimates indicating out-migration in 2008-2009, reflect the economic recession, the drying up of jobs to attract persons, and the inability of persons from other places to sell homes and migrate.

**Figure 6 – Components of Florida Population Growth 2002 – 2012\***



\* Note: 2010 data not currently available.

Source: University of Florida – Bureau of Economic and Business Research, *Florida Statistical Abstract*, 2011; Florida Department of Health, *Florida Vital Statistics*, 2012.

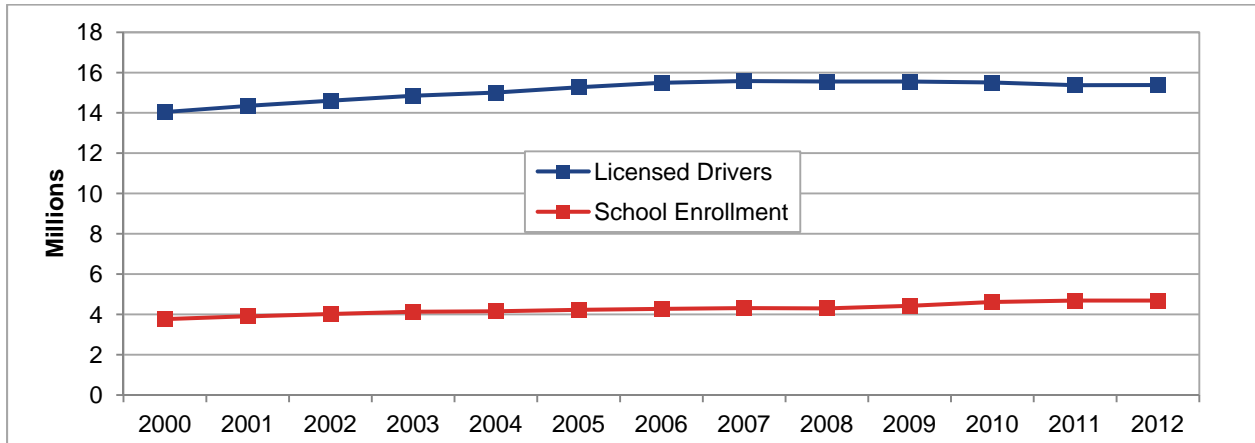
There are other indicators of future travel demands such as growth in school enrollment and growth in the number of licensed drivers. Enrollment in Florida schools was growing by an average of 2 percent through 2007, and then there was a drop in 2008 followed by an average 2 percent yearly increase from 2009 through 2012. Home schooling was estimated to have approximately 72,000 enrollees (less than 2 percent of the total student population) as of 2012 and to be growing by about 5 percent per year. The size and growth rate

*Housing market and economic uncertainties are altering historic migration and immigration trends in Florida.*

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of home schooling would not appear to be large enough to impact broader trends of modest growth in enrollment. The number of licensed drivers in Florida grew by 9.5 percent between 2000 and 2012 as shown in Figure 7.

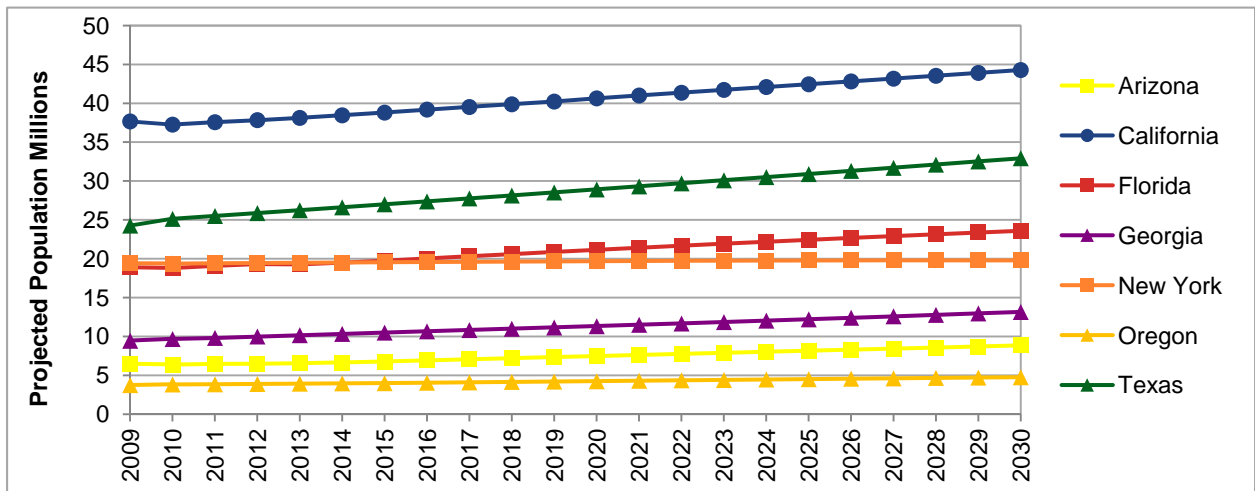
**Figure 7 – Florida School Enrollment and Licensed Drivers, 2000 – 2012**



Source: U.S. Census Bureau, *American Community Survey*, 2000-2012; Federal Highway Safety and Motor Vehicles, *Driver Demographics*, 2000-2012.

*From 2000 to 2012, Florida total school enrollment grew 24.7% and the number of licensed drivers increased by 9.5%.*

**Figure 8 – Comparative Growth of Annual Projected Population, 2009 – 2030**



Source: U.S. Census Bureau, *Population Change*, 2009-2030 and *U.S. Census*, and state produced data population projections.

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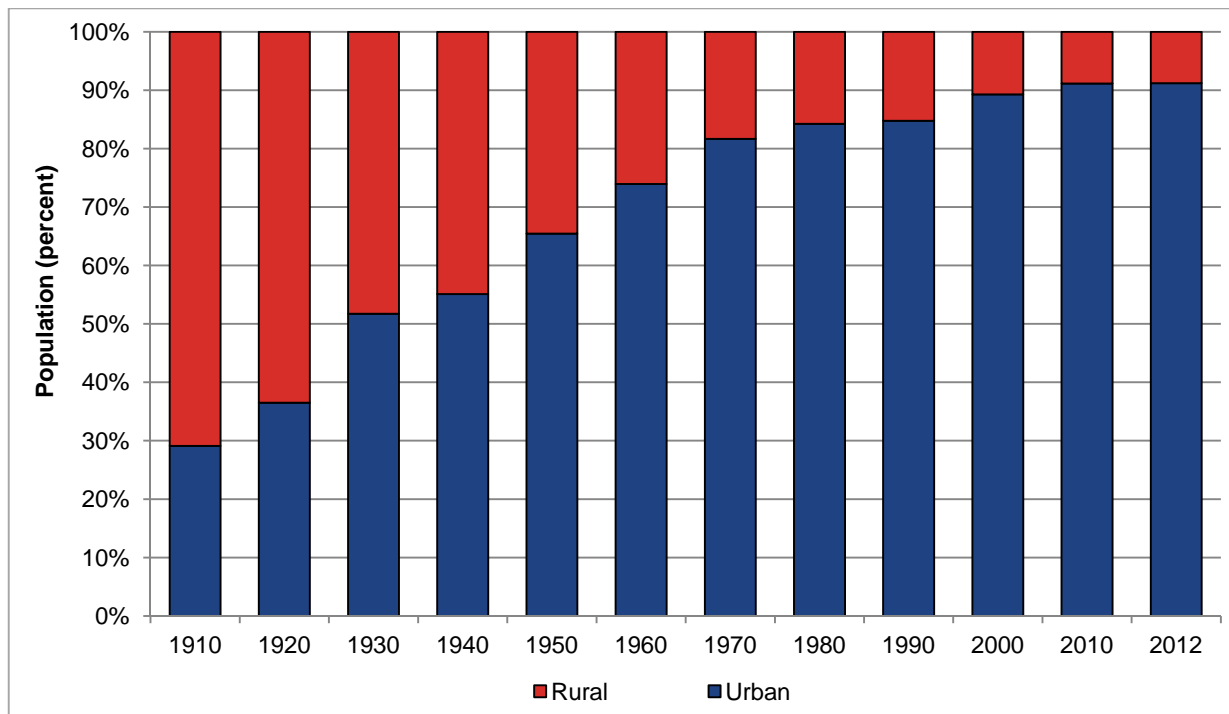
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As shown in Figure 8, the U.S. Census Bureau had projected that Florida population would surpass New York State by 2015. Based on 2009 Census estimates, Florida remained approximately one million persons smaller than New York. As per the 2012 Census estimates, the population gap has narrowed between New York and Florida to about 253,000 persons.

Thus, Florida is on track to exceed New York's population but uncertainties exist that could influence the relative growth trends. Though the initial estimate of the 2009 population indicated a drop due to out-migration, evidence suggests net in-migration is resuming. A review of the projections in Appendix A presents information on the uncertainty associated with population projections. External factors such as migration and the condition of the economy can influence population growth and are hard to predict.

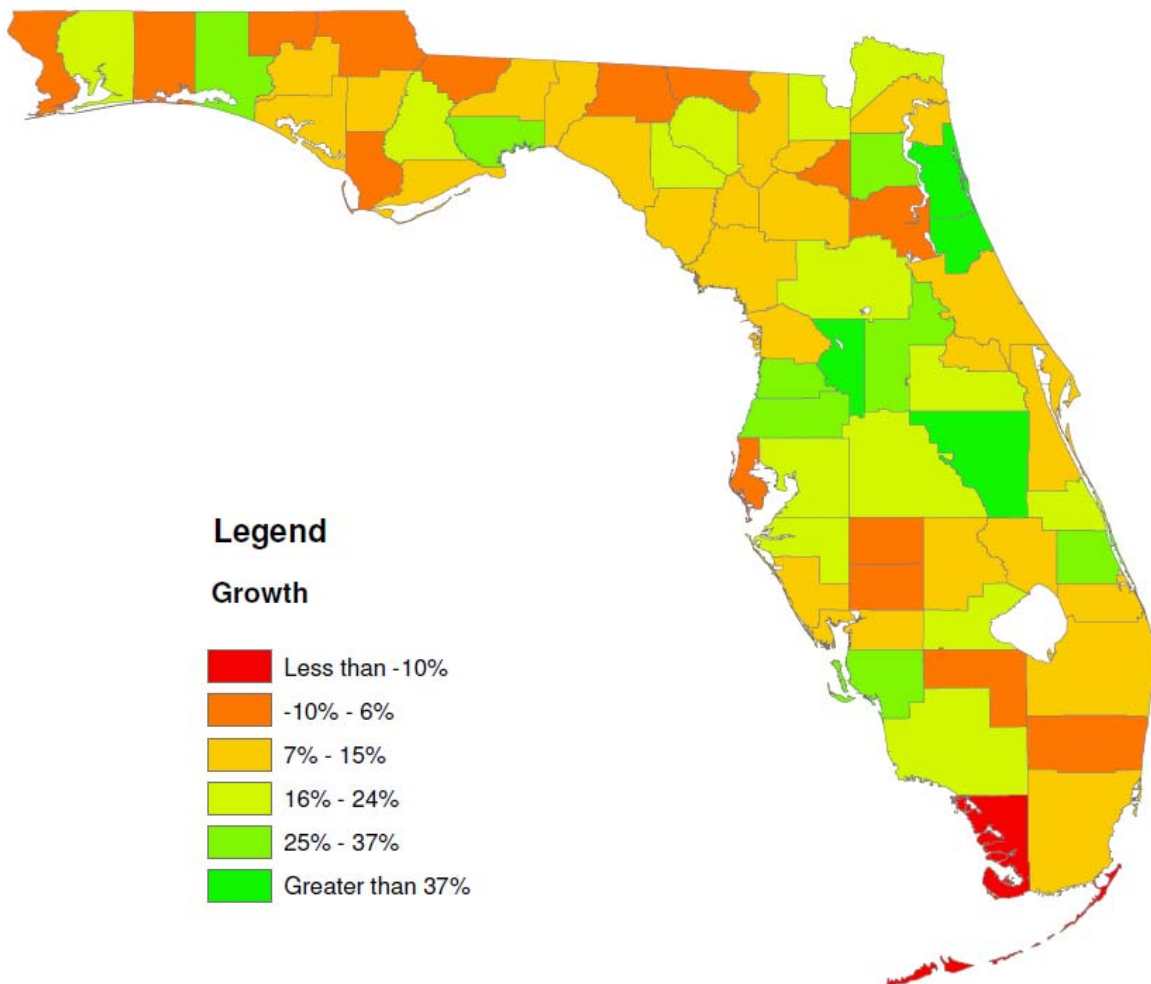
Figure 9 portrays the share of Florida's population residing in urban areas over the past several decades. With the urban share now dominant, its growth in share continues but is more modest than during earlier decades (1910-1960). Florida's population growth varies by county and ranges from -10% to over 37% during the 2002-2012 period (Figure 10).

**Figure 9 – Florida Population Urban/Rural Shares, 1910-2012**



Source: U.S. Census Bureau; Florida Department of Transportation.

**Figure 10 – Percentage Growth by County, 2002-2012**

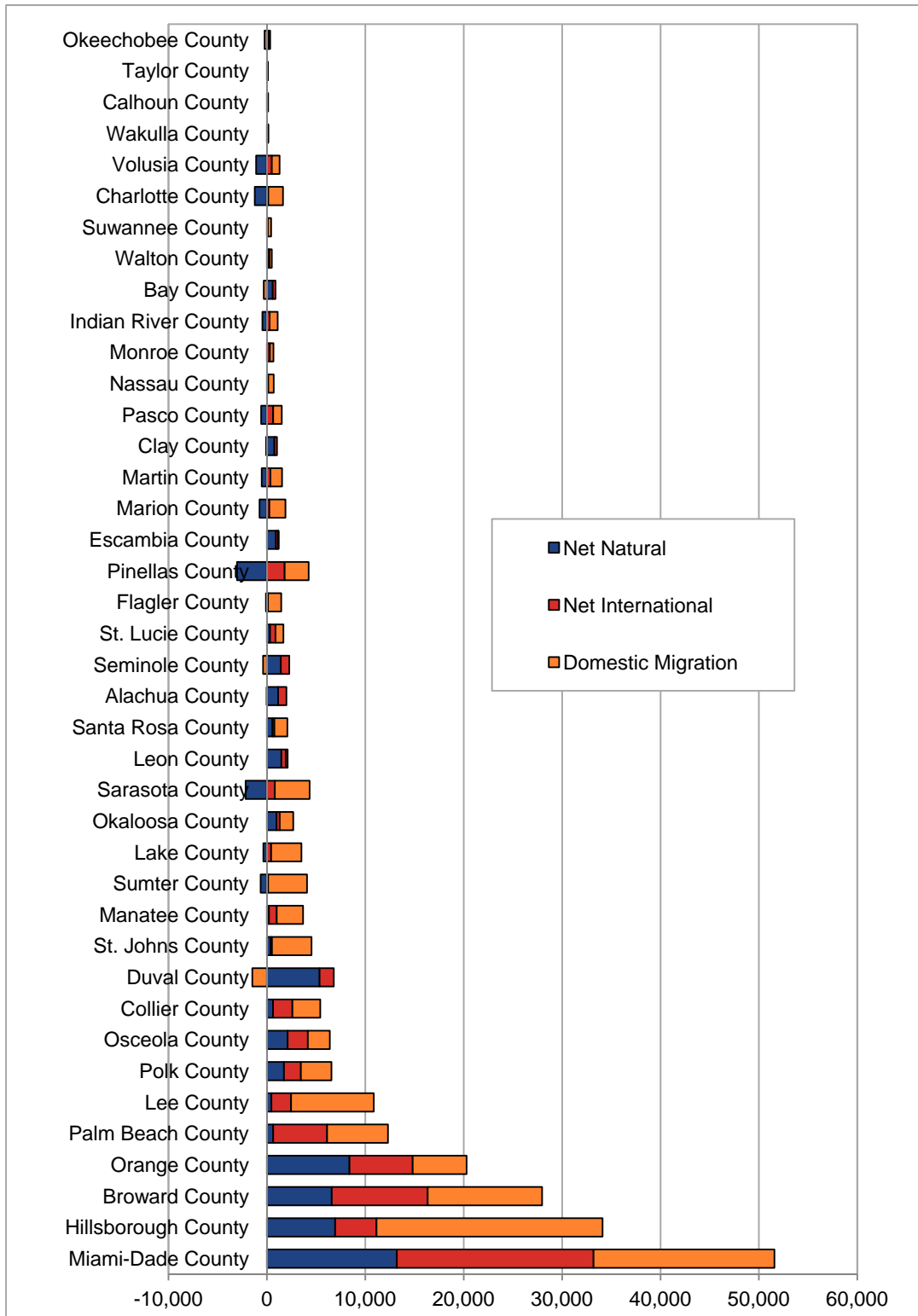


Source: University of Florida – Bureau of Economic and Business Research, *Estimates of Population by County, 2002 - 2012*

Figure 11 presents recent growth by population components for the 40 fastest growing counties in ascending order. The counties with the highest growth include Hillsborough and Miami-Dade, while Okeechobee, Taylor and Calhoun have the lowest growth. During 2010-2011, Miami Dade had the highest international immigration (19,996) and the highest natural growth (13,200). Hillsborough had the highest net increase in domestic migrants (22,963).

*Around 305,000 people left Miami-Dade County between 2000 and 2009 and settled elsewhere domestically, but during the same period nearly 329,000 people immigrated from all over the world. As the economy started to recover between 2010 and 2011, Miami-Dade saw a net increase in domestic migration.*

**Figure 11 – Components of Population Change by County, 2010 – 2011**



Source: U.S. Census Bureau, *American Community Survey 2011*.

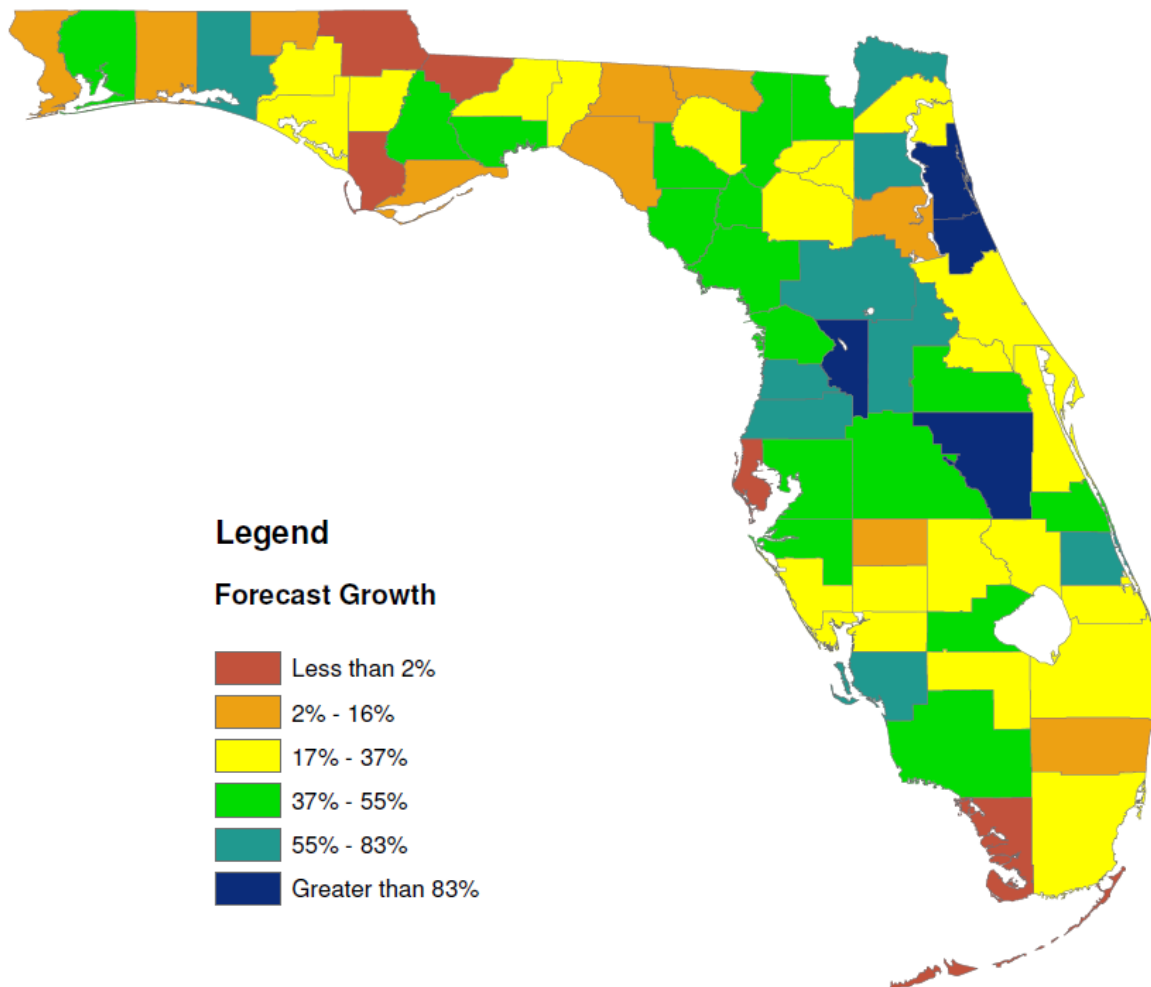
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The forecasted growth by county from 2012 through 2040 is presented in Figure 12. Counties along the I-4 corridor are projected to grow faster (54% and above) from 2012 to 2040 relative to the growth experienced in 2002-2012. The forecasts suggest that many counties in North Florida will have lower rates of growth as compared to the 2002-2012 rates. Pinellas and Monroe counties are anticipated to witness a drop in their future population continuing with the trend witnessed from 2002 to 2012.

**Figure 12 – Forecast Growth by County, 2012 – 2040**

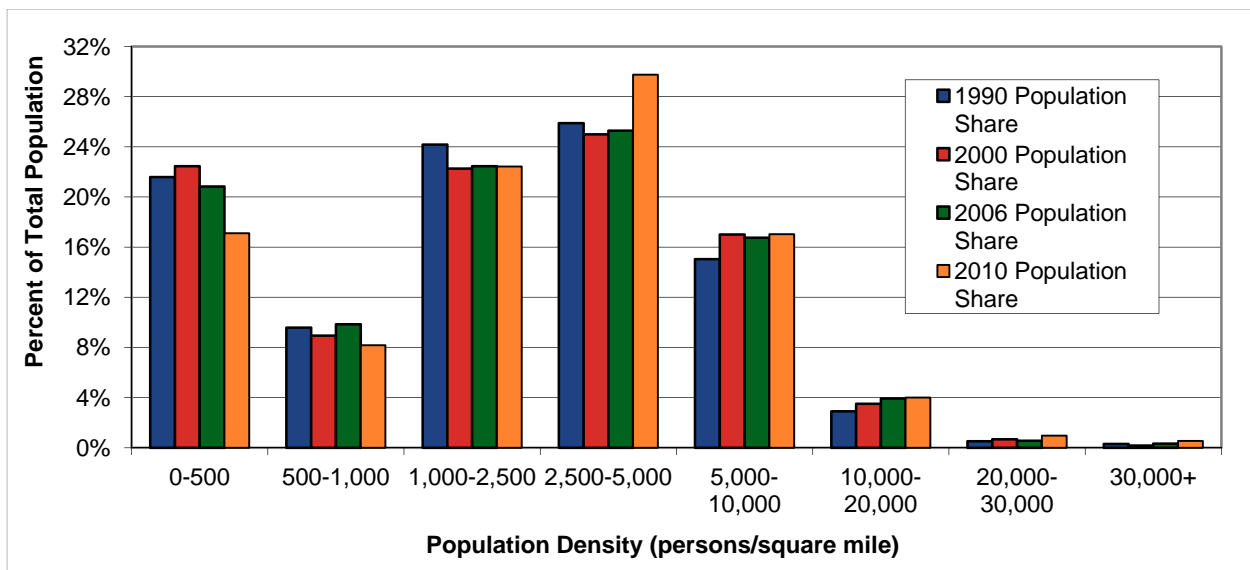


Source: U.S. Census Bureau, *U.S. Census, 2010*; University of Florida – Bureau of Economic and Business Research, *Projections of Florida Population by County, 2012-2040*.

## Density

The share of population residing in specified population density ranges varies over time (Figure 13). The percent of people living in higher density ranges is increasing. The population residing in tracts with 10,000-20,000 persons per square mile density levels increased from approximately 3 percent to 4 percent from 1990 to 2006. At the same time, the share of population residing in tracts with 2,500 – 5,000 persons per square mile increased significantly from around 25% to 30%. On the other hand, more than 20% of Florida's population resided in tracts with a density of 0 - 500 persons per square mile up to 2006, but this share declined to around 17 percent in 2010.

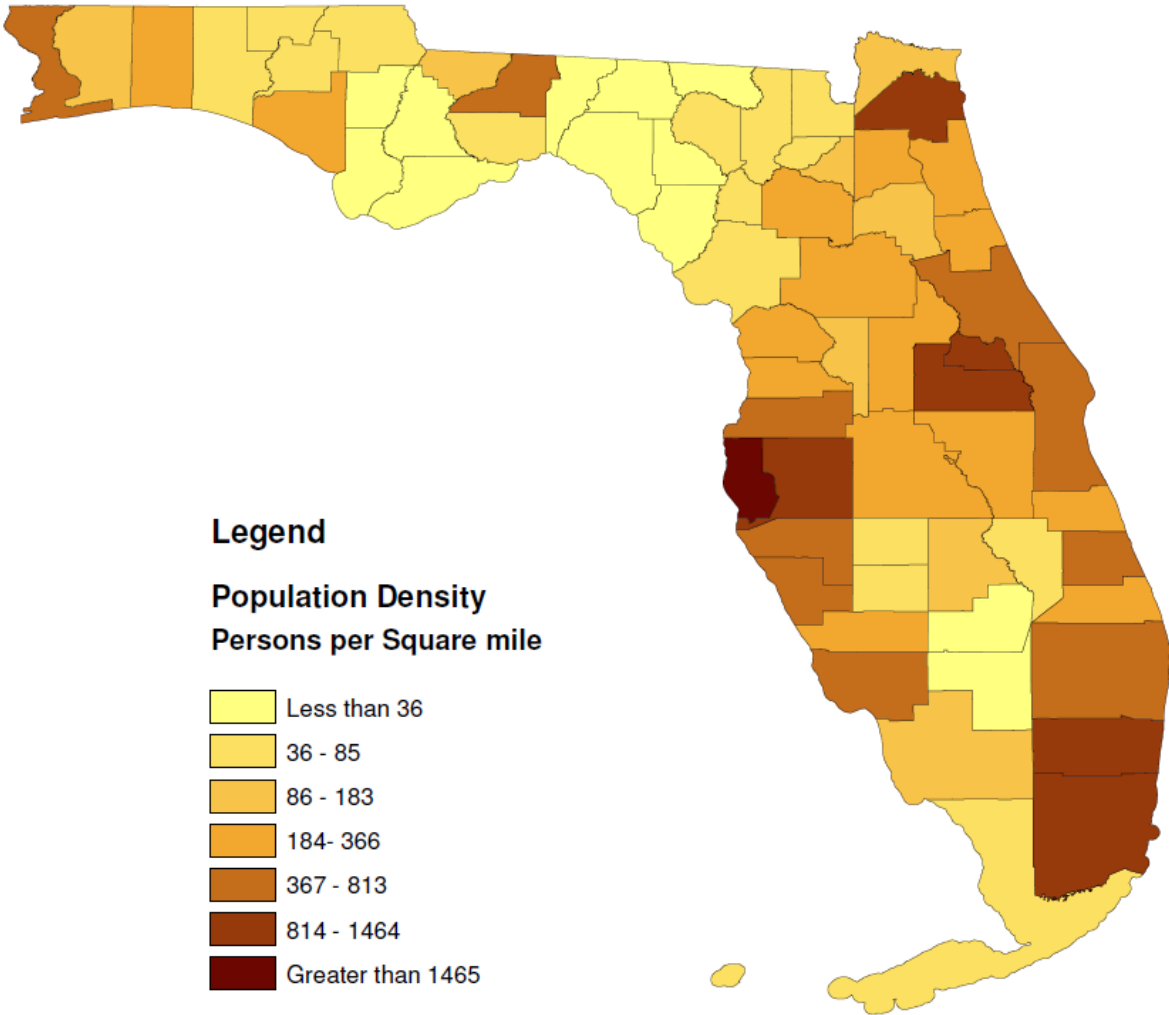
**Figure 13 – Share of Population Residing in Specified Density, 1990 – 2010**



Source: U.S. Census Bureau, *U.S. Census*, 1990, 2000 and 2010; CUTR Census Tract Analysis of ESRI 2006 Census Tract Population Estimates.

The population density across Florida's counties also varies dramatically from over 3,300 persons per square mile in Pinellas County to 10 in Liberty County (Figures 14 and 15). Florida's average population density in 2012 was 351 residents per square mile.

Figure 14 – Population Density by County Map, 2012

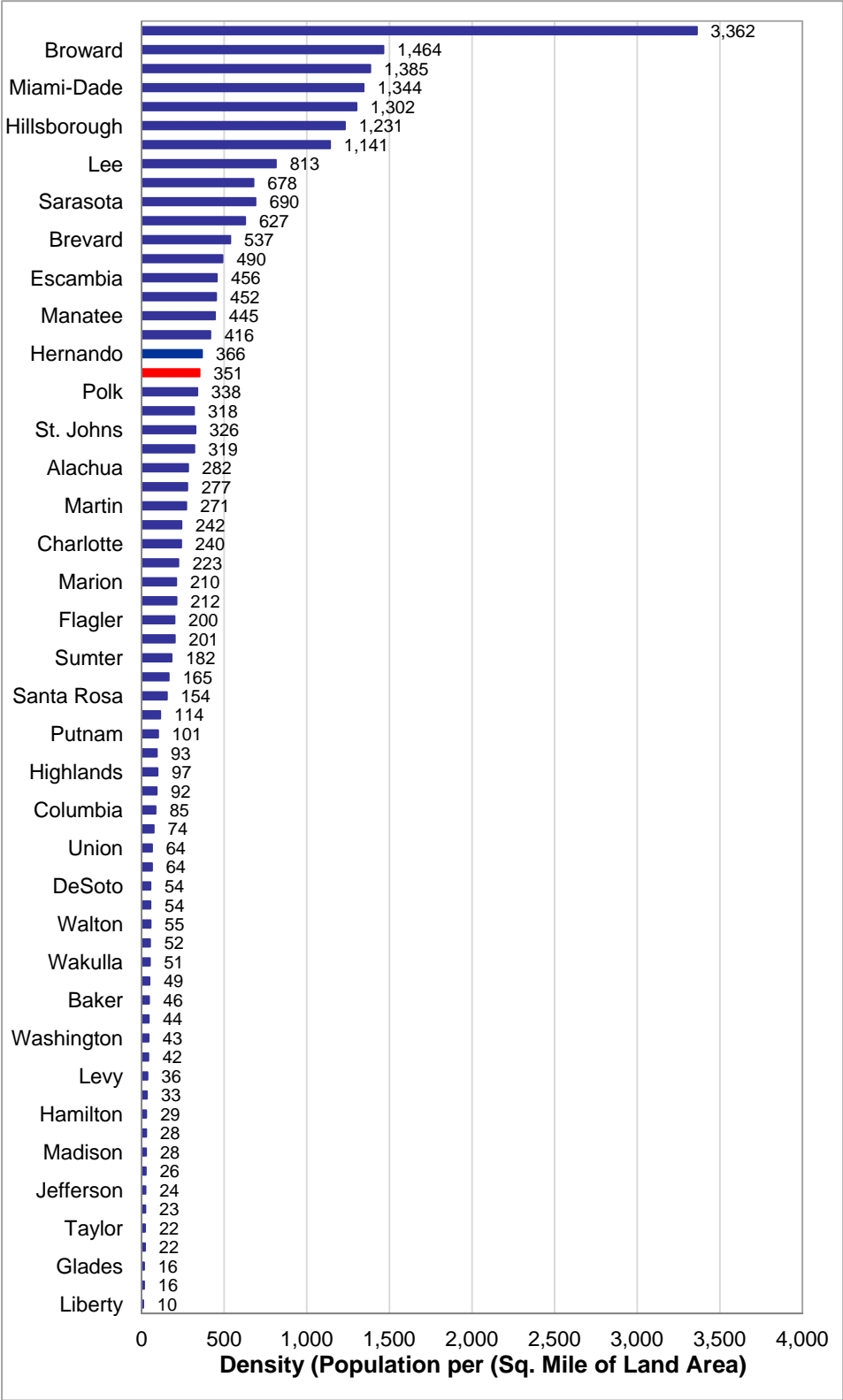


Note: Boundaries for counties include water area as well.

Source: U.S. Census Bureau, *U.S. Census Block and TIGER Data*, 2012; CUTR Analysis.



Figure 15 – Population Density by County, 2012

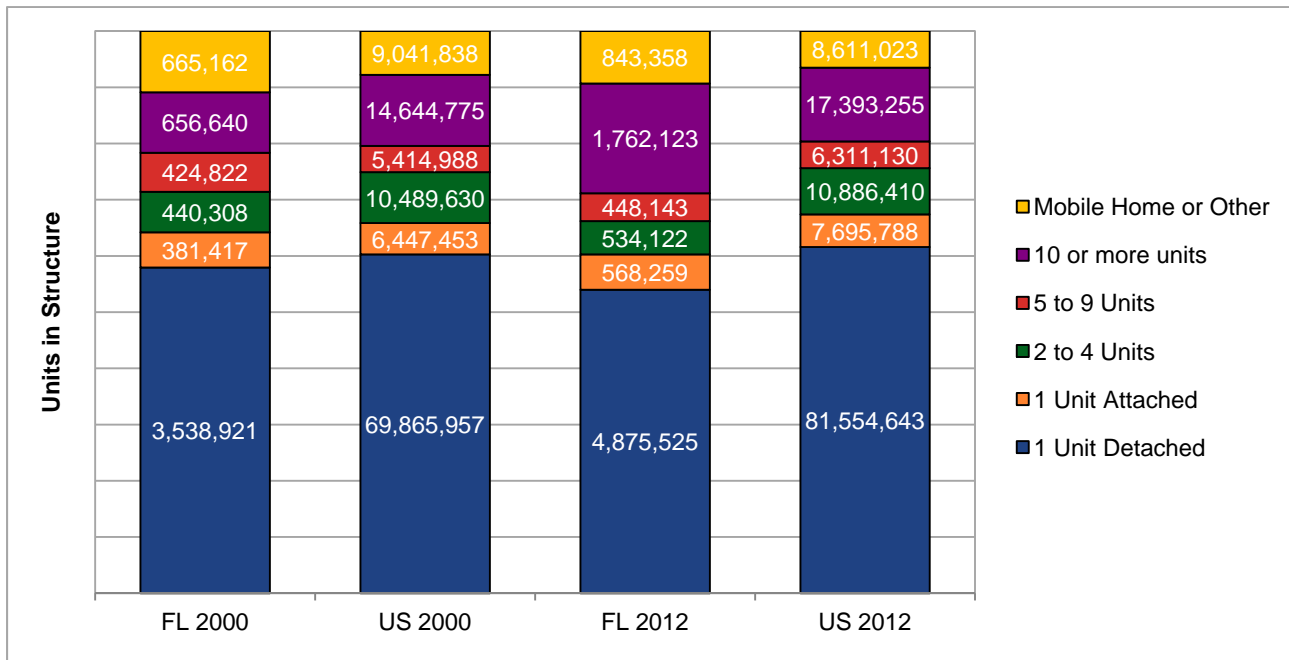


Source: U.S. Census Bureau, American Community Survey 2012.

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The type of housing also influences travel. Housing is highly correlated with incomes and is influenced by population density and other characteristics. While the type of housing itself does not cause travel, it remains highly correlated to conditions that influence travel demand. Historically, higher density housing types have produced lower travel demand per unit and the propensity to use transit and walk modes is higher. As shown in Figure 16, Florida has a lower share of single-unit detached housing and a higher share of multi-unit housing than the U.S. In addition, the share of multi-family housing units has increased by over 80% as compared to single-unit housing which increased around 39% in Florida from 2000 to 2012. In comparison, the U.S. as a nation witnessed almost a 13% increase in multi-family units and almost a 17% increase in single-unit housing structures. Higher density units tend to generate fewer and shorter trips and residents are more likely to use public transportation. In addition, Florida continues to have larger shares of mobile homes and large multi-family units than the country as a whole.

**Figure 16 – Florida and U.S. Units in Housing Structure, 2000 and 2012**



Source: U.S. Census Bureau, *U.S. Census, 2000* and *American Community Survey, 2012*.

## Demographic Characteristics

Understanding demographic trends gives insight into the present and future needs of the population for transportation since demographic characteristics influence the demand for transportation. Table 1 summarizes several demographic characteristics of Florida and provides a profile of Florida’s population over the past few years based on the U.S. Census Bureau’s American Community Survey results.

# Travel Demand: Population Growth and Characteristics

**Table 1 - Selected Florida General Demographics Statistics, ACS**

Estimate Year	2006	2007	2008	2009	2010	2011	2012
<b>Total population</b>	18,089,889	18,251,243	18,328,340	18,537,969	18,801,310	19,057,542	19,317,568
<b>SEX AND AGE</b>							
Male	49.1%	49.1%	49.1%	49.2%	48.9%	48.9%	48.9%
Female	50.9%	50.9%	50.9%	50.8%	51.1%	51.1%	51.1%
Median age (years)	39.8	40.0	40.3	41.7	42.1	41.1	41.1
18 years and over	77.8%	77.8%	78.2%	78.1%	78.7%	79.0%	79.3%
21 years and over	74.0%	73.9%	74.2%	74.1%	74.6%	74.8%	75.3%
62 years and over	19.8%	20.1%	20.4%	20.6%	20.9%	21.3%	21.8%
65 years and over	16.8%	17.0%	17.4%	17.3%	17.3%	17.6%	18.2%
<b>ORIGIN AND RACE</b>							
Hispanic or Latino (of any race)	20.1%	20.6%	21.0%	21.5%	22.6%	22.9%	23.2%
Not Hispanic or Latino	79.9%	79.4%	79.0%	78.5%	77.4%	77.1%	76.8%
White alone	61.0%	60.6%	60.1%	59.3%	57.8%	57.3%	56.8%
Black or African American alone	14.9%	14.8%	14.8%	15.0%	15.3%	15.3%	15.3%
American Indian or Alaska Native alone	0.2%	0.2%	0.2%	0.2%	0.2%	0.0%	0.2%
Asian alone	2.1%	2.2%	2.2%	2.3%	2.4%	2.4%	2.5%
Some other race	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%
Two or more races	1.1%	1.2%	1.3%	1.3%	1.5%	1.6%	1.7%
<b>AVERAGE HOUSEHOLD SIZE</b>							
	2.5	2.5	2.6	2.6	2.5	2.6	2.6
<b>HOUSING TENURE</b>							
Owner-occupied	70.3%	70.1%	69.7%	70.1%	67.4%	66.7%	65.6%
Renter-occupied	29.7%	29.4%	30.3%	29.9%	32.6%	33.3%	34.4%

# Travel Demand: Population Growth and Characteristics

**Table 1 - Selected Florida General Demographics Statistics, ACS (Continued)**

Estimate Year	2006	2007	2008	2009	2010	2011	2012
<b>RESIDENCE 1 YEAR AGO</b>							
Same house	81.8%	83.2%	83.6%	83.4%	83.4%	83.5%	83.9%
Different house in U.S.	17.3%	16.0%	15.6%	15.9%	15.8%	15.7%	15.3%
Same county	10.5%	10.0%	9.8%	10.2%	10.3%	10.0%	9.5%
Different county	6.8%	6.0%	5.8%	5.7%	5.5%	5.6%	5.8%
Same state	3.5%	3.3%	3.1%	3.2%	2.9%	3.0%	3.0%
Different state	3.3%	2.7%	2.7%	2.5%	2.6%	2.6%	2.8%
Abroad	0.9%	0.8%	0.9%	0.7%	0.8%	0.9%	0.9%
<b>PLACE OF BIRTH, CITIZENSHIP, AND YEAR OF ENTRY</b>							
Native	81.5%	81.1%	81.1%	81.5%	81.2%	80.6%	80.6%
Born in U.S.	78.8%	78.2%	78.1%	78.5%	78.1%	77.4%	77.4%
State of residence	33.3%	33.6%	34.0%	34.4%	35.3%	35.5%	35.7%
Different state	45.4%	44.6%	44.1%	44.1%	42.8%	41.8%	41.7%
Born in Puerto Rico, U.S. Island areas, or born abroad to American parent(s)	2.8%	2.8%	3.0%	3.0%	3.1%	3.2%	3.2%
Foreign born	18.5%	18.9%	18.8%	18.5%	18.8%	19.4%	19.4%
Naturalized citizen	45.2%	45.2%	45.6%	47.1%	48.5%	49.7%	51.6%
Not a citizen	54.8%	54.8%	54.4%	52.9%	51.5%	50.3%	48.4%
Entered 2000 or later	16.4%	26.1%	24.0%	25.9%	27.4%	36.1%	37.6%
Entered pre 2000	83.6%	73.9%	76.0%	74.1%	72.6%	63.9%	62.4%
<b>COMMUTING TO WORK</b>							
<b>Workers 16 years and over</b>	7,700,885	8,146,041	8,173,299	8,277,340	8,062,375	7,991,880	8,161,313
Car, truck, or van --drove alone	80.0%	79.3%	79.6%	79.5%	79.3%	79.7%	79.3%
Car, truck, or van --carpooled	11.1%	10.9%	10.5%	10.3%	10.4%	9.9%	9.7%
Public transportation (excluding taxicab)	1.8%	2.0%	1.9%	2.0%	1.9%	2.1%	2.2%
Walked	1.6%	1.7%	1.6%	1.5%	1.5%	1.5%	1.6%
Other means	2.0%	2.2%	2.1%	2.3%	2.2%	2.1%	2.3%
Worked at home	3.6%	4.0%	4.2%	4.5%	4.8%	4.6%	5.0%
Mean travel time to work (minutes)	26.0	25.9	25.9	25.9	25.4	25.8	26.2

# Travel Demand: Population Growth and Characteristics

**Table 1 - Selected Florida General Demographics Statistics, ACS (Continued)**

Estimate Year	2006	2007	2008	2009	2010	2011	2012
<b>INCOME</b>							
Median household income (dollars)	\$42,433	\$45,495	\$47,804	\$47,778	\$47,450	\$44,299	\$45,040
Mean household income (dollars)	\$62,637	\$66,414	\$66,493	\$65,961	\$61,877	\$63,006	\$64,229
<b>VEHICLES AVAILABLE</b>							
No vehicles available	6.5%	6.2%	6.6%	6.6%	7.0%	7.3%	7.4%
1	39.4%	39.7%	40.5%	41.3%	41.5%	41.7%	42.2%
2	39.0%	38.8%	38.5%	38.3%	37.8%	37.8%	37.4%
3 or more	15.1%	15.4%	14.4%	14.0%	13.7%	13.1%	13.0%
<b>NO PHONE SERVICE AVAILABLE</b>							
	7.6%	6.6%	2.1%	2.4%	2.8%	3.4%	3.5%

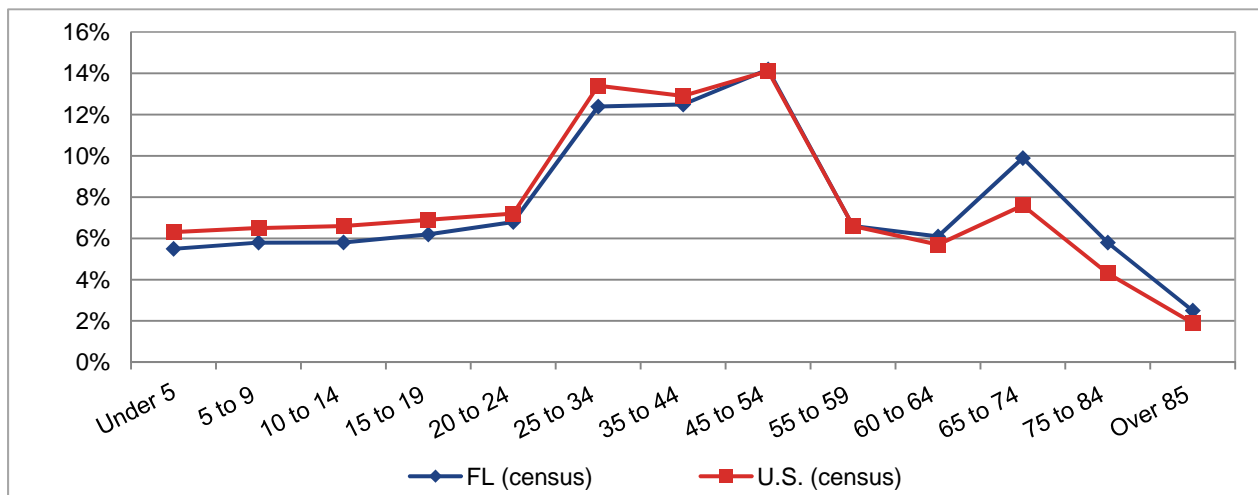
Note: The profile universe is limited to the household population and excludes the population living in institutes, college, dormitories, and other group quarters. Data are based on a sample and are subject to sampling variability.

Source: U.S. Census Bureau, U.S. Census, 2000 and American Community Survey, 2006- 2012.

## Age and Gender

Florida's population is acknowledged as significantly older than the national average with a median age of 41.1 years old as opposed to the nation's 37.4 in 2012. In 1990, Florida's median age was 36.2. Overall, Florida has a higher representation of people at 65 and older. Over 18.2% of Florida's population was 65 and older in 2012 versus less than 13.3% for the nation (Figure 17).

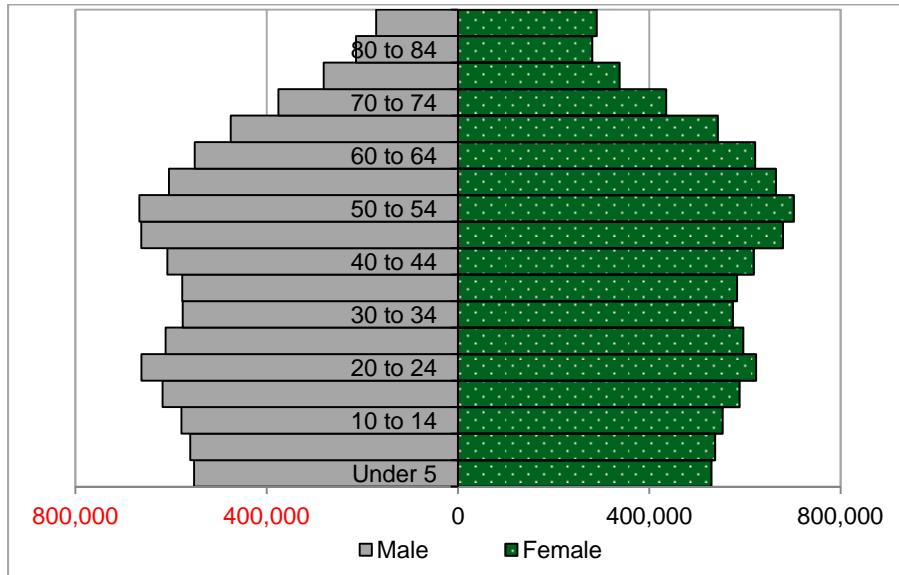
**Figure 17 – Florida and U.S. Age Distribution, 2012**



Source: U.S. Census Bureau, American Community Survey, 2012.

# Travel Demand: Population Growth and Characteristics

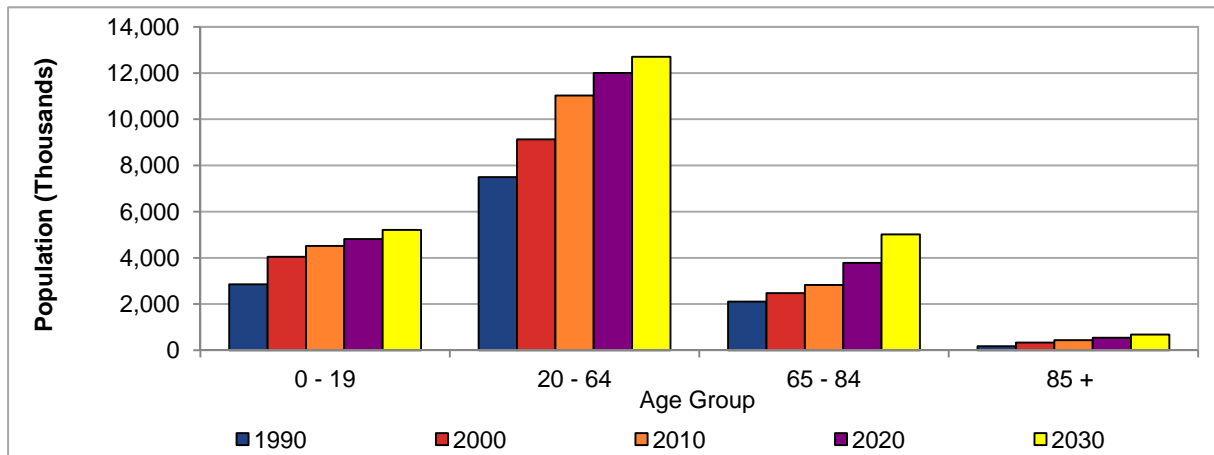
**Figure 18 – Florida Population by Age and Gender, 2012**



Source: University of Florida – Bureau of Economic and Business Research, *Estimates of Population by Age and Gender, 2012*

Florida’s residents by age and gender are distributed evenly until the age brackets of 65 and older where there were more females than males due to higher life expectancies for females (Figure 18). Another interesting fact is that all age segments of the population have grown over the past few decades (Figure 19). The growth in working age population has been the fastest, growing from about 7.5 million in 1990 to 11 million in 2010. If one looks at narrow age ranges, population over 85 has the highest growth rate of about 5% annually from 1990 to 2010.

**Figure 19 – Florida Age Distribution, 1990 - 2030**



Source: U.S. Census Bureau, *U.S. Census, 1990-2010*; University of Florida – Bureau of Economic and Business Research, *Population Projections by Age*.

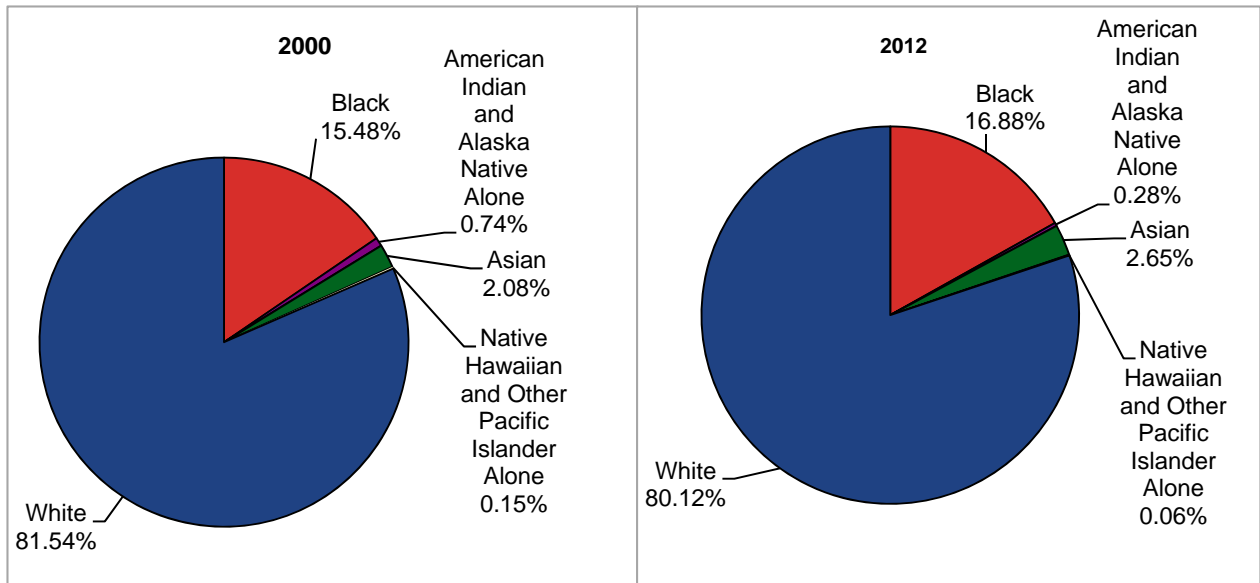
*In 20-30 years, the country’s age distribution will be similar to today’s distribution in Florida.*

# Travel Demand: Population Growth and Characteristics

## Race and Origin

The race distribution of Florida population has exhibited dynamic changes over the years (Figure 20). Black and Asian shares of the population have been increasing, but White and other shares have decreased.

**Figure 20 – Florida Race Distribution**

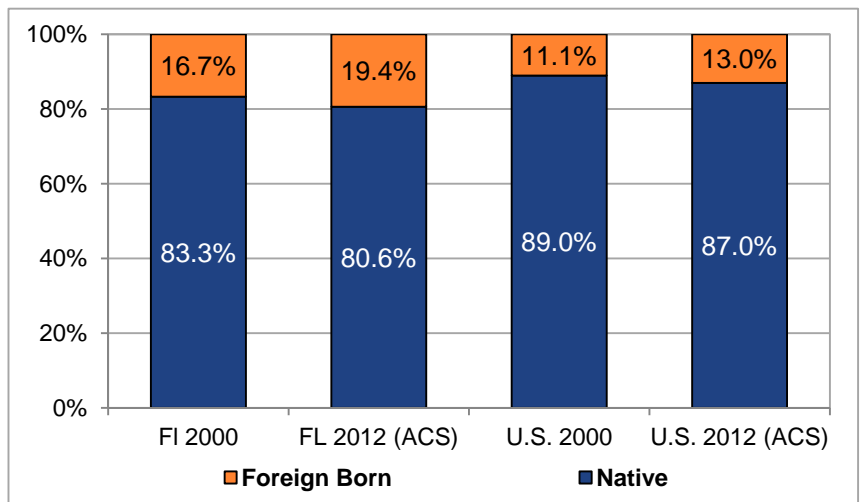


Source: U.S. Census Bureau, *U.S. Census, 2000, American Community Survey, 2012*

In 2000, census data allowed a richer classification of race and ethnicity. The Hispanic share of the population continues to grow rapidly and has increased from 12.2% in 1990 to 22.9% in 2012. The U.S. Census Bureau classifies Hispanic as an ethnicity and hence, it is not shown as a distinct race.

**Figure 21 – Nativity and Place of Birth, 2000 and 2012**

Historically, mobility has been highly correlated with race and ethnicity. Typically, the non-white population is shown as having lower levels of mobility and greater dependence on alternatives to auto travel. This situation has been changing over time with other groups moving toward national average levels of travel, especially when age, income, residential location and household size are considered.



Source: U.S. Census Bureau, *U.S. Census, 2000 and American Community Survey, 2012.*

## Travel Demand: Population Growth and Characteristics

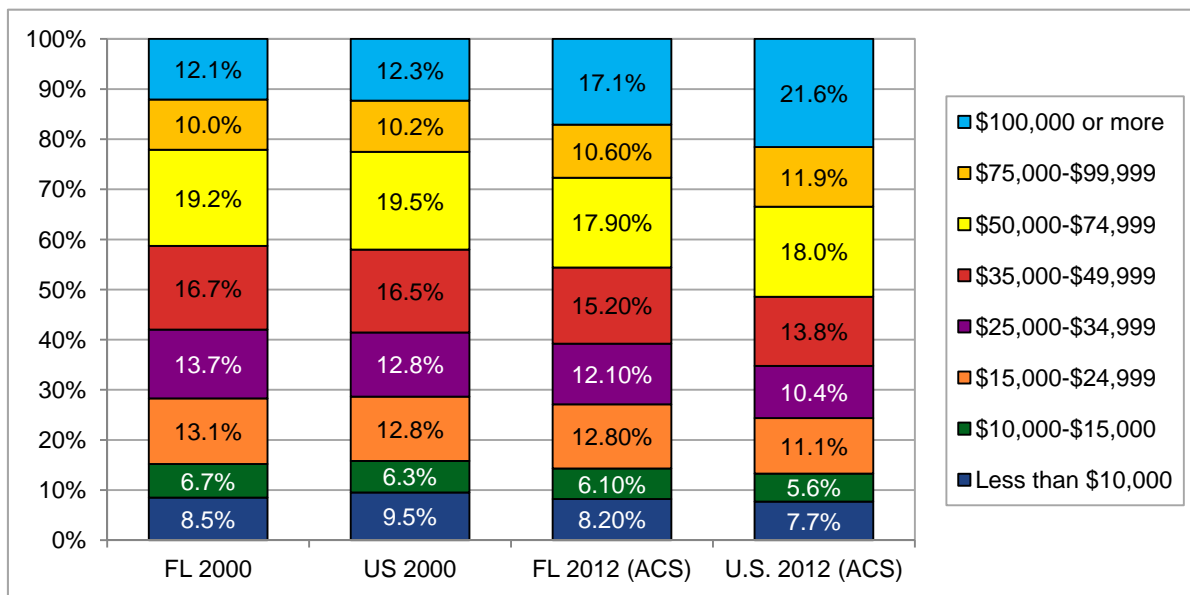
However, even with adjustments, some travel behaviors appear to be culturally related. For example, the Black population is more inclined to use transit even when adjusted for other factors and the Asian population is more inclined to walk (Polzin, Chu, and Rey 2001). Work commuting by public transit is more common for low income, less educated and young working age persons between 25 to 44 years old. Approximately 1.7% of all workers walked to work in 2012 in Florida according to the American Community Survey.

Immigrants often have different travel behavior reflecting their economic situation and the culture and experiences they bring with them. Florida has a higher share of foreign-born population than the U.S. (Figure 21). Florida's share of foreign-born population has been increasing since 1990. The travel demand of immigrants tends to grow over time as they assimilate into the economy and obtain vehicle ownership and licensed driver status more similar to the domestic population.

### Household Income and Education Attainment

Household income and education attainment are also factors impacting travel demand. As Figure 22 indicates, Florida was similar to the rest of the country in household income distribution in 2000, but with somewhat higher shares of the population in the middle income brackets. Additional adjustments to reflect differential buying power based on cost of living differences between Florida and the rest of the country might narrow the differences further.

**Figure 22 – Florida and U.S. Household Income Distribution, 2000 and 2012**



Source: U.S. Census Bureau, *U.S. Census, 2000 and American Community Survey, 2012*.

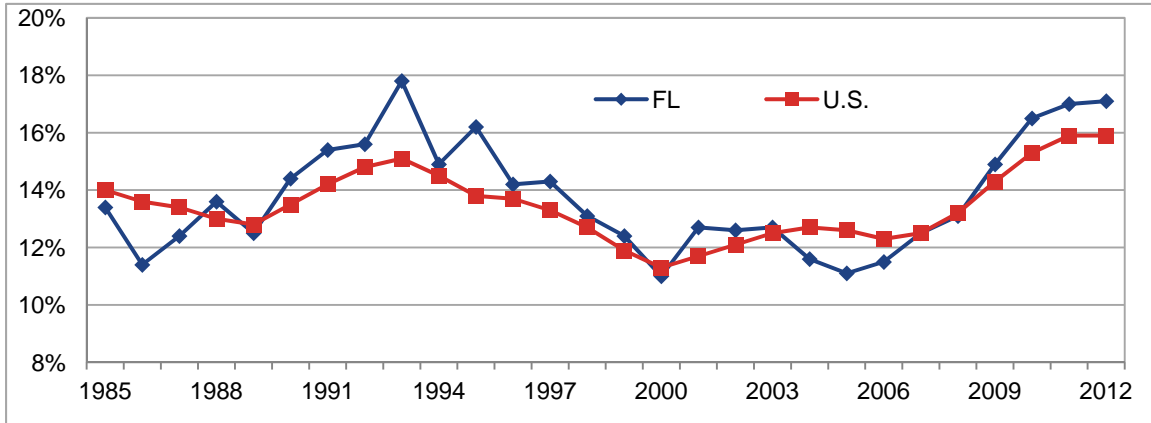
Another measure of income that influences travel levels and the means to use various modes is the poverty level of the population. Figure 23 compares the poverty level of Florida with the



# Travel Demand: Population Growth and Characteristics

national level over the past several years. The poverty rate is defined as the percentage of people or families who are living on incomes below a level established as the poverty level.

**Figure 23 – Florida and U.S. Poverty Rate, 1985 – 2012**

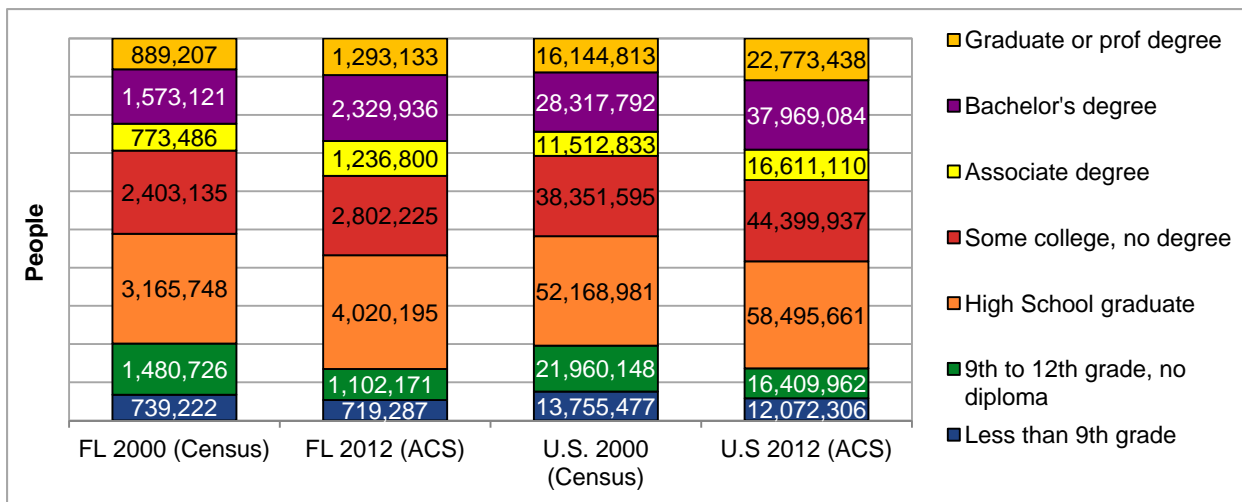


Source: U.S. Census Bureau, *Historical Poverty Tables*, 2012.

*Income levels and personal wealth continue to be among the most important factors influencing travel demand. Higher income levels and greater wealth create higher travel demands.*

In most of the 1990's, Florida had a higher poverty rate than the nation. Toward the late 1990's, Florida made progress in reducing poverty levels, dropping both in absolute terms and relative to the remainder of the country. By 2004, Florida poverty levels dropped well below the national average to 11.6%. As the economy deteriorated, Florida's economy was more severely impacted and its poverty level has again surpassed the national average from 2009 onward.

**Figure 24 – Florida and U.S. Educational Attainment (Over 25 Years), 2000 and 2012**



Source: U.S. Census Bureau, *U.S. Census*, 2000 and *American Community Survey*, 2012.

# Travel Demand: Population Growth and Characteristics

Education levels are highly correlated with income and household vehicle travel levels. Educational attainment levels, shown in Figure 24, are factors that influence travel demand as better educated and more affluent individuals have greater travel demand.

## Employment and Housing

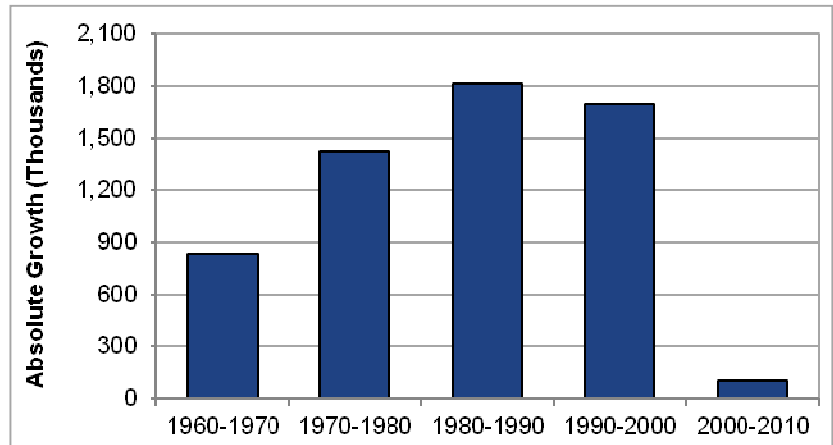
One important indicator of travel demand growth is the growth in the labor force. The labor force size has a significant influence on travel demand and transportation needs. As shown in Figure 25, the pace of labor force growth slowed markedly between 2000 and 2010.

This reflects several factors including the fact that the baby boom generation is in the work force, and total population growth has slowed since the 1960s and 1970s. Additionally, the upward trend in female labor force participation appears to have stabilized at far higher rates than a generation ago. The decline in labor force growth in this decade could primarily be attributed to lack of job opportunities especially with the downturn in the economy witnessed at the end of the last decade. Demographers believe the declining rate of labor force growth will have significant impacts in future years. This may include impacts in the growth rate of travel demand.

Another characteristic of the population influencing travel demand is housing. Figure 26 shows the housing tenure for Florida's population.

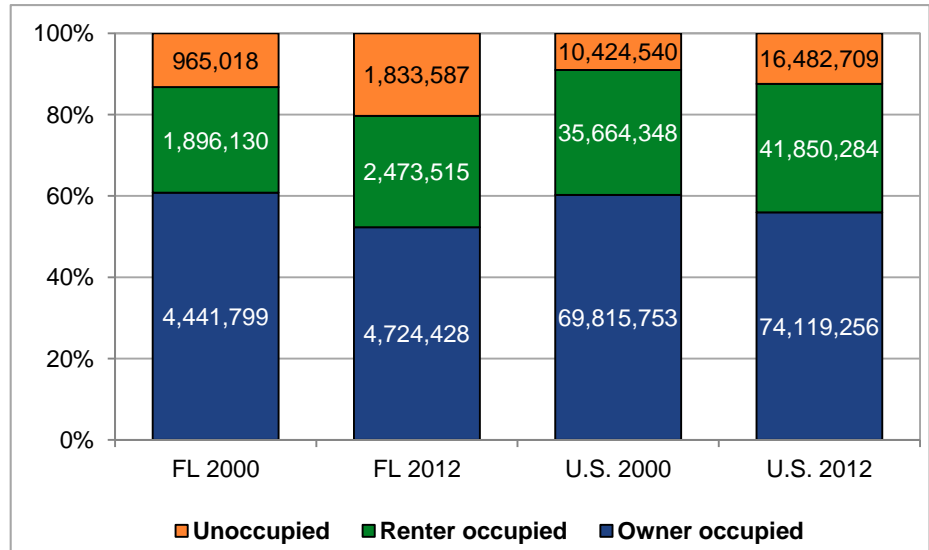
In 2012, Florida had 52.5% of owner-occupied homes, slightly less than the national level of 56.1%. From 2000 to 2012, the shares of unoccupied houses have increased by about 7.0% and 3.4% in Florida and the U.S., respectively.

**Figure 25 – Florida Labor Force (Non-Agricultural) Employment Growth, 1960-2010**



Source: U.S. Census Bureau, *U.S. Census, 2000* and *American Community Survey 2012*.

**Figure 26 – Housing Tenure, 2000 and 2012**

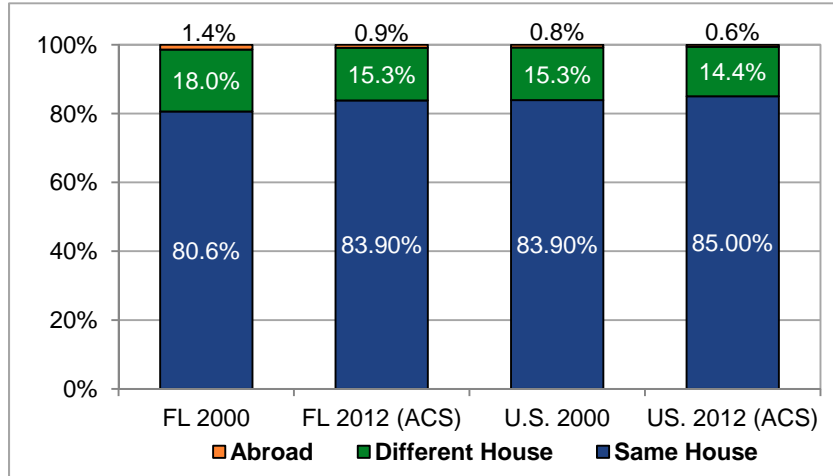


Source: University of Florida – Bureau of Economic and Business Research, *Non Agricultural Employment, 2000-2012*.

# Travel Demand: Population Growth and Characteristics

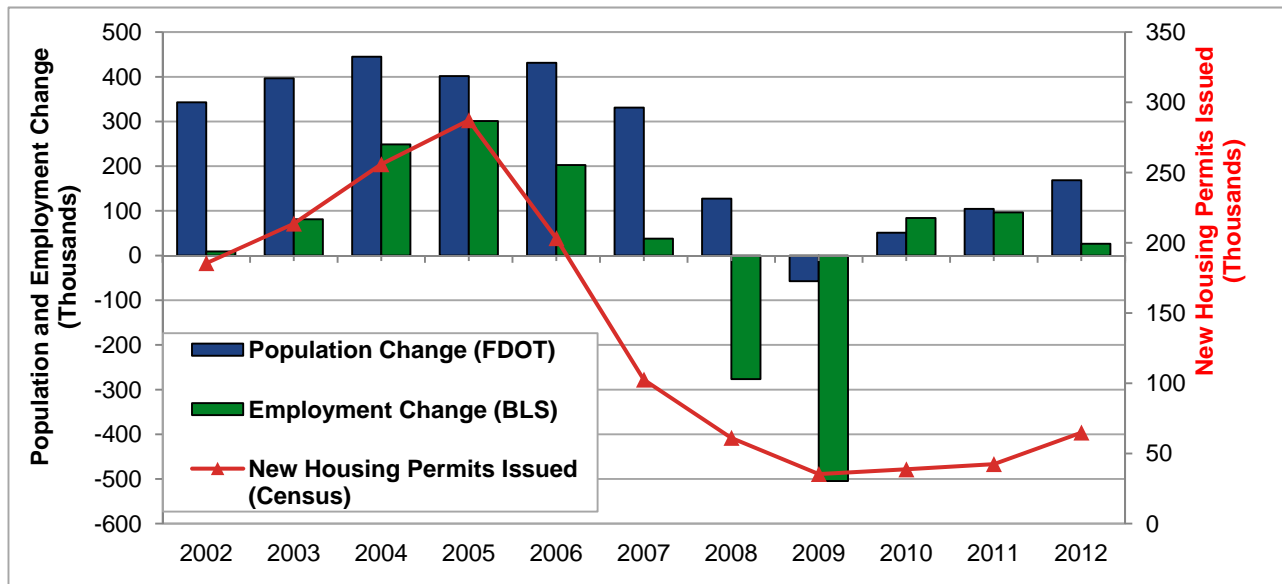
The National Household Travel Survey (NHTS) data indicate that rental households tend to have fewer occupants. Those occupants are more inclined to use transit and generally travel less than do owner-occupied households. Figure 27 shows the residential tenure of the population. Compared to the national average, Florida had a slightly lower percentage of the population who remained in the same residence for the last year, in both 2000 and 2012.

**Figure 27 – Residence Location One Year Ago 2000 and 2012**



Source: U.S. Census Bureau, *U.S. Census*, 2000, and *American Community Survey*, 2012.

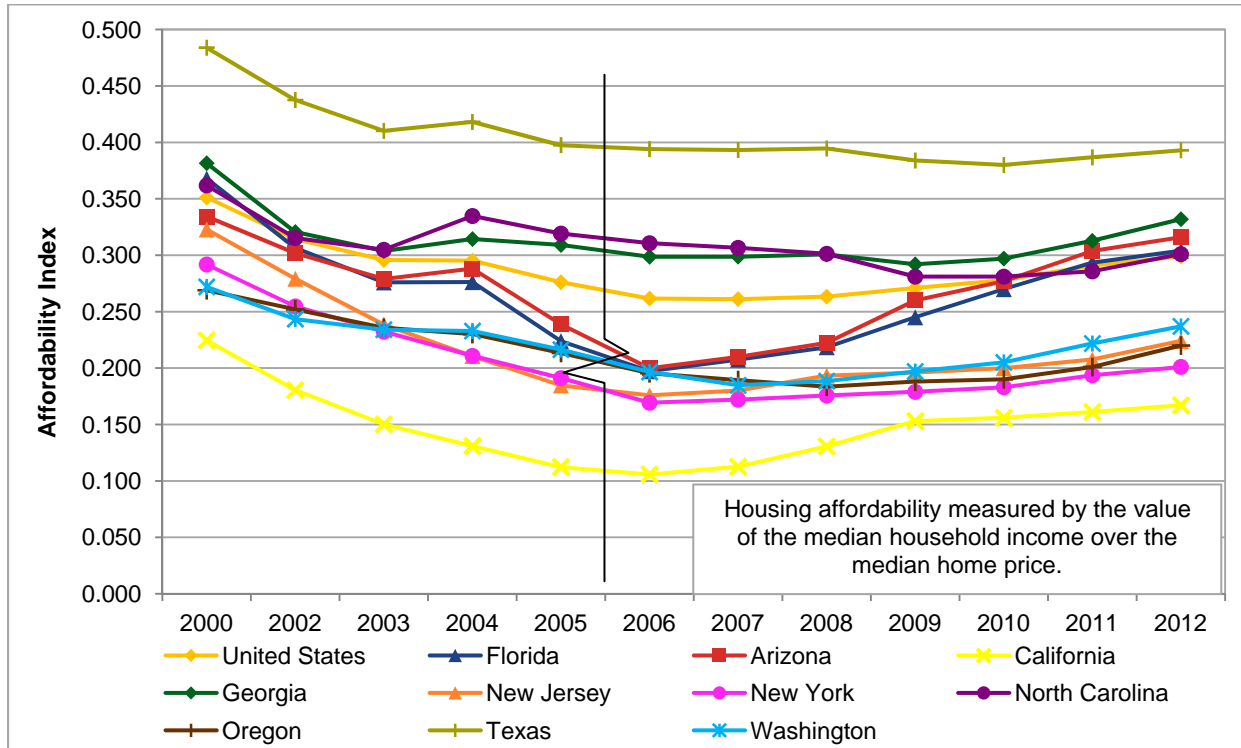
**Figure 28 – Trend in Population, Employment, and New Housing Permits Issued per Year**



Source: Bureau of Labor Statistics (BLS); U.S. Census Bureau; Florida Department of Transportation.

The trend in population and employment growth, and new housing permits issued per year can be seen in Figure 28. In 2009, Florida new housing permits continued their decline from the peak building boom era. Subsequently, permit activity leveled off and started to increase in 2012. The decrease in employment change from 2005 through 2009 reflects the lower population growth and a slowing economy during that period. However, the 2010 data started to show a reversal of that trend.

**Figure 29 – Housing Affordability Trend**



Source: U.S. Census Bureau, *American Community Survey*, 2012

Housing affordability will be a critical factor in future population growth as it affects the ability of persons to move or remain in Florida. Higher housing costs may also pressure household budgets. Those costs impact the ability of people and families to afford travel or activities that require travel.

Housing affordability is expressed by the ratio of the value of the median household income over the median home price. From 2000 to 2006, Florida's affordability deteriorated from being better than the national average to being worse, but has improved since 2006 (Figure 29). In 2011, housing affordability in Florida improved to a level above the national average as it was in 2000. The index presented does not account for changes in homeowner insurance costs, property taxes and utilities.

## Conclusion

Florida continues to offer an attractive physical climate and environment. Historically, that has spurred growth, which in turn has created jobs and economic activity. While Florida has a net positive natural growth rate (the ratio of births to deaths), robust growth is very dependent on continued net in-migration of both domestic and international individuals. This migration is influenced by conditions in Florida as well as conditions in the originating locations. Quality-of-life considerations including the transportation system performance are among the influences in

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## Travel Demand: Population Growth and Characteristics

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these trends. The quality of Florida's transportation infrastructure and services is one factor influencing both individual and business choices to relocate to Florida.

All sources continue to forecast population growth for Florida<sup>2</sup>. National and international relations, economic conditions, immigration policy, quality of life, and various other factors in Florida will influence the pace of population growth. This will also influence the attraction and generation of new jobs in Florida compared to the rest of the nation.

During the housing bubble, there was a growing awareness of Florida's cost of living increases and their impacts compared with other locations. Hurricane risk, taxes, quality of government services and other factors are also recognized as influencing Florida's attractiveness. However, a 2009 Pew Research Center report on Americans' location preferences (*For Nearly Half of America, Grass Is Greener Somewhere Else*) concluded that all three Florida metro areas included in its survey were among the more preferred locations. Tampa and Orlando tied for fourth with 34% of the respondents saying they would like to live there and Miami was ranked twelfth with 28% of respondents indicating a desire to live there. More recent employment improvements outpacing the nation further the evidence of a rebound and strong appeal.

However, the term "new normal" is increasingly being used by economists and demographers to recognize that the recent changes in the economy and demographic trends may not revert back to historical trends – at least not as quickly as many had at first presumed. A host of quality-of-life factors have come into play and a decade or more of unwinding debt levels may be required to establish a new normal pace of economic activity and migration patterns. Slower growth appears more likely for the foreseeable future. Nevertheless, Florida is likely to see continued growth. This growth is expected to play a major role in determining the pace of increasing travel demand in Florida as per capita travel levels are not showing the growth of prior decades.

***Planners, by definition, are tasked with ensuring that the needs and wishes of future generations are represented in current decisions and actions. Thus, transportation planning in Florida has a responsibility to address the inevitable needs of a population that will be larger and have expectations for high levels of mobility.***

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<sup>2</sup> Post 2010 Census updates to projections will provide additional insight into post housing bubble, post-recession trends. BEBR projections referenced here were produced in June 2011. These projections are shown in the appendix.

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## Appendix A: Source Comparison – BEBR vs. Census Bureau

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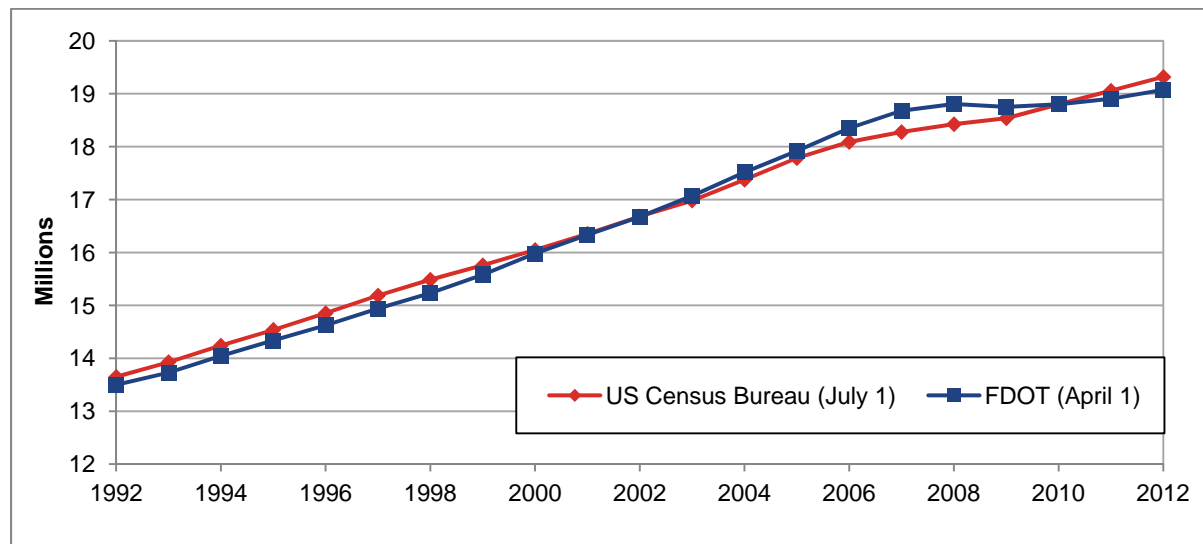
In this and other Trends and Conditions reports, decennial population data are provided by the U.S. Census Bureau. The Bureau of Economic and Business Research, University of Florida (BEBR) is the source for more detailed and interim annual estimates of Florida population, which are released April 1<sup>st</sup> of every year, and the resource used in determining FDOT population data. The source for analyzing interstate demographics is the U.S. Census Bureau, which releases its annual estimates on July 1<sup>st</sup> of every year. FDOT is one of the designated affiliates of the Census Data Center for Florida. It uses BEBR estimates as their official population numbers. BEBR, at the University of Florida, is established in the state and required by Florida Statutes to produce annual state demographic estimates. Data on their demographic estimates methodology are available at:

[http://edr.state.fl.us/Content/population-demographics/data/Methodology\\_Estimates.pdf](http://edr.state.fl.us/Content/population-demographics/data/Methodology_Estimates.pdf) and <http://www.bibr.ufl.edu/population/methodology>.

The above two sources are somewhat different in their population estimates and forecasts. For Trends and Conditions documents, FDOT/BEBR data are used as the primary source but census estimates and forecasts are also used to compare the results or to do peer state analyses for demographic or other characteristics. BEBR uses census decennial figures as a foundation for its population estimates and forecasts. Prior year BEBR estimates were revised post Census.

The table and figure below compare population figures for the two sources since 1992:

**Figure A-1 – Florida Population Estimate, 1992 – 2012**



Sources: U.S. Census Bureau, *U.S. Census*, 1990-2010; University of Florida – Bureau of Economic and Business Research, 1992-2012.

## Appendix A: Source Comparison – BEBR vs. Census Bureau

**Table A-1 – Florida Population Estimates**

Year	FDOT (April 1)	BEBR	U.S. Census Bureau (July 1)	BEBR Changes	Census Changes	BEBR Percent Changes	BEBR Population Growth per Day	U.S. Total Census	Census U.S. Changes	Census U.S. Percent Changes
2013	19,260,200	19,259,543	19,552,860	185,109	232,111	0.97%	507	316,128,839	2,255,154	0.72%
2012	19,074,400	19,074,434	19,320,749	169,386	237,267	0.90%	464	313,873,685	2,291,121	0.74%
2011	18,905,600	18,905,048	19,083,482	103,738	237,428	0.55%	284	311,582,564	2,256,269	0.73%
2010	18,801,310	18,801,310	18,846,054 <sup>3</sup>	50,827	308,085	0.27%	139	309,326,295 <sup>3</sup>	2,319,745	0.76%
2009	18,750,200	18,687,425	18,537,969	-56,736	114,091	-0.30%	201	307,006,550	2,946,826	0.97%
2008	18,807,600	18,613,905	18,423,878	126,852	145,990	0.68%	348	304,059,724	2,769,392	0.92%
2007	18,680,300	18,446,768	18,277,888	331,067	189,383	1.80%	907	301,290,332	2,927,359	0.98%
2006	18,349,300	18,154,475	18,088,505	431,200	304,637	2.41%	1,181	298,362,973	2,802,424	0.95%
2005	17,918,100	17,778,156	17,783,868	401,600	408,609	2.29%	1,100	295,560,549	2,668,422	0.91%
2004	17,516,500	17,374,824	17,375,259	445,100	394,076	2.61%	1,219	292,892,127	2,681,213	0.92%
2003	17,071,400	16,979,706	16,981,183	396,500	300,874	2.38%	1,086	290,210,914	2,484,267	0.86%
2002	16,674,900	16,634,256	16,680,309	343,000	326,440	2.10%	940	287,726,647	2,686,844	0.94%
2001	16,331,900	16,305,100	16,353,869	349,522	371,491	2.19%	958	285,039,803	2,867,867	1.02%
2000	15,982,378	15,982,824	15,982,378 <sup>3</sup>	401,378	222,957	2.58%	1,100	282,171,936 <sup>3</sup>		
1999	15,581,000	15,580,590	15,759,421	350,000	272,862	2.30%	959			
1998	15,231,000	15,230,728	15,486,559	292,000	300,255	1.95%	800			
1997	14,939,000	14,938,576	15,186,304	315,000	332,944	2.15%	863			
1996	14,624,000	14,623,650	14,853,360	288,000	315,485	2.01%	789			
1995	14,336,000	14,336,174	14,537,875	292,000	298,431	2.08%	800			
1994	14,044,000	14,043,896	14,239,444	314,000	312,259	2.29%	860			
1993	13,730,000	13,730,216	13,927,185	232,000	276,632	1.72%	636			
1992	13,498,000	13,497,604	13,650,553	239,000	280,755	1.80%	655			
1991	13,259,000	13,258,764	13,369,798	321,074	336,491	2.48%	880			
1990	12,937,926	12,938,071	12,937,926 <sup>3</sup>							

Sources: U.S. Census Bureau; FDOT; University of Florida – Bureau of Economic and Business Research, *Florida Population*.

<sup>3</sup>Decennial census estimate is for April 1, of census year.