

1.1 POPULATION GROWTH AND CHANGES IN LAND AREA [163.3191(2)(a)]

POPULATION GROWTH

Table 1.1A depicts the population for Volusia County and its 16 municipalities from 1980 to 2005. The United States Census Bureau calculates population estimates every ten years. The Bureau of Economic and Business Research (BEBR) at the University of Florida is the official state population center. The BEBR estimates population for all of Florida’s municipalities and 67 counties each year as of April 1st. The BEBR population projections for the future are calculated at the county level since city boundaries can change dramatically as a result of annexations.

The largest shift in population growth illustrated in Table 1.1A is for Deltona. Deltona grew from the fourth largest Census Designated Place (CDP) in 1980, to the most populous city in Volusia County by the year 2000. In addition, Port Orange, at its present rate of growth, may overcome Daytona Beach’s population within the next 10 years. Port Orange and Deltona had the most impressive population increases with Deltona increasing its population five-fold since 1980, while Port Orange almost tripled its population since 1980. Orange City, Ponce Inlet, Daytona Beach Shores and Edgewater tripled in population but started from a much lower population base. DeLand’s moderate growth over the time period was constrained by its relatively static city limits until the Victoria Park annexation/Development of Regional Impact (DRI).

Table 1.1A: Volusia County Population 1980-2005 (Including Municipalities)

Jurisdiction	1980	1985	1990	1995	2000	2005 (est.)
Volusia County	258,762	307,042	370,737	402,970	443,343	494,649
Daytona Beach	54,176	56,978	61,991	63,306	64,112	65,129
Daytona Beach Shores	1,324	1,634	2,197	2,680	4,299	4,661
DeBary CDP/City	4,980	NA	7,176*	11,336	15,559	18,222
DeLand	15,354	16,323	16,622	17,973	20,904	25,055
Deltona CDP/City	15,710	NA	50,857	55,461**	69,543	82,973
Edgewater	6,726	9,996	15,351	17,484	18,668	21,156
Flagler Beach-VC***	NA	NA	93	93	76	76
Holly Hill	9,953	10,995	11,141	11,539	12,119	12,620
Lake Helen	2,047	2,341	2,344	2,438	2,743	2,847
New Smyrna Beach	13,557	14,697	16,549	18,393	20,048	22,025
Oak Hill	938	1,073	917	1,070	1,378	1,922
Orange City	2,795	3,131	5,347	6,117	6,604	8,854
Ormond Beach	21,438	26,376	29,721	31,539	36,301	39,683
Pierson****	1,085	1,107	2,988	1,230	2,596	2,633
Ponce Inlet	1,003	1,328	1,704	2,120	2,513	3,247
Port Orange	18,756	26,566	35,399	39,750	45,823	54,630
South Daytona	11,252	12,140	12,488	12,889	13,177	13,955
Unincorporated	98,358	121,207	155,978	163,106	106,880	114,961

*DeBary incorporated in December 1993. **Deltona incorporated in December 1995.
 ***Condo units are located in Volusia County but are incorporated into the City of Flagler Beach.
 **** 1990, 2000 & 2005 Pierson population includes group quarters while 1995 excludes group quarters.

Source: U.S. Census, BEBR and Volusia County Planning Department.

In Table 1.1A, Flagler Beach-VC refers to the condo units located in Volusia County but have been incorporated into the City of Flagler Beach. DeBary was a CDP until

December 1993 when DeBary incorporated as a city by a voter referendum. Deltona was a CDP until December 1995 when it incorporated as a city by referendum. CDPs are defined by the Census Bureau as closely settled, named, unincorporated communities that generally contain a mixture of residential, commercial, and retail areas similar to those found in incorporated places of similar sizes. By defining CDPs, the Census Bureau can tabulate data for localities that otherwise would not be identified as places in the census.

CDPs in Volusia County include DeLeon Springs, North DeLand, Southwest DeLand (Spring Hill), West DeLand, Glencoe (New Smyrna Beach area), Ormond-by-the-Sea and Samsula/Spruce Creek. It should be noted there are other communities with identities, such as Barberville, Cassadaga, Enterprise, Osteen, Wilbur-by-the-Sea, etc., to which the Census Bureau has not given a CDP designation. Normally CDPs are large suburban areas outside city boundaries or larger rural communities.

Growth Rate in Volusia County at the Time of the 1990 Adoption of the Comprehensive Plan

In 1985, the State of Florida passed the State Growth Management Act that mandated every local government in Florida prepare a Comprehensive Plan to guide population growth. The Florida Department of Community Affairs and the Volusia County Growth Management Commission certified the adopted Volusia County Comprehensive Plan in May 1990. The population growth in Volusia County was averaging approximately 4 percent per year from 1980 through 1990.

At the time of the Plan's adoption in 1990, Deltona and DeBary were CDPs located in the unincorporated area that accounted for 42 percent of the County's population. Deltona led the way in population growth, since slightly less than one out of three new residents in Volusia County resided in Deltona. The City of Edgewater had a larger population increase than Daytona Beach in the decade (8,625 vs. 7,815 residents), but had a population base that is 8 times smaller than Daytona Beach. Port Orange's population nearly doubled during the 1980-90 decade as well. Deltona, Edgewater and Port Orange accounted for 54 percent (60,415 residents) of the County's population increase of 111,975 residents from 1980 to 1990 despite being 15.9 percent of the County's population in 1990. The County's growth rate was projected at 3.3 percent per year with 610,000 residents by 2010. As a result, the County had to plan for a significantly larger projected population growth than it did 7 years later when the County prepared its first Evaluation and Appraisal Report update.

Growth Rate in Volusia County at the time of the 1996 Evaluation and Appraisal Report

The population growth rate slowed considerably after adoption of the Volusia County Comprehensive Plan. Despite a larger population base, the County's population increased by 32,243 residents from 1990-95 versus 48,280 from 1980-85. The County's first Evaluation and Appraisal Report (EAR) included the population of Deltona in its analysis, but had already removed DeBary, which became a municipality in 1993.

The largest population growth from 1990 to 1995 occurred within cities with small base populations (Ponce Inlet or Daytona Beach Shores, City of Edgewater). DeBary's growth

was somewhat overstated since the boundaries of the CDP and the 1993 incorporation boundaries of DeBary were not the same. The 1993 incorporation boundaries included more land area and residents than the CDP boundaries. DeBary then added another 2,000 acres of land and 1,900+ residents the following year in an annexation referendum.

Population growth rate of 3.3 percent per year that was used for the preparation of the 1990 County Comprehensive Plan had shrunk to a rate of 1.7 percent per year when the first EAR report was completed. The Deltona area population was included in the population of unincorporated Volusia County at the time of the first EAR. However, due to the subsequent incorporation of Deltona, the population of this City is not included in the unincorporated population in this update of the Evaluation and Appraisal Report.

Population at the time of the 2006 EAR

The population estimates since the 2000 Census indicate that the County is beginning a gradual upward trend in the rate of population growth. The annual growth rate since the first EAR has been over 2.1 percent countywide and between 1.2 to 1.3 percent in the unincorporated area. The numbers from 2000 to 2005 show that Orange City and Port Orange have become the County's fastest growing cities ahead of Deltona. Orange City may continue to grow faster since its population base is smaller and is currently one of the few communities in the Southwest region of Volusia County attracting multi-family apartment buildings. The City's population increased by over 15 percent (6,800 to 7,900 people) in one year (2003 to 2004) largely from apartment complexes built along Enterprise Road and Saxon Boulevard. This past year alone, Orange City's population is estimated to have increased from 7,900 to 8,800 residents.

Port Orange is showing growth along its western edge. Deltona is showing solid population growth while DeLand's population is increasing from the Victoria Park DRI on the southeast portion of the City of DeLand. Lake Helen has continued to grow at a slow pace.

Daytona Beach has continued to grow at a slow pace although redevelopment along its beachfront area may increase the rate of growth. Population numbers indicate that Holly Hill and South Daytona are also growing slowly but anecdotal information from the media indicates a rising growth trend in those communities as land is redeveloped at higher densities. Population trends within Ponce Inlet and Daytona Beach Shores will likely be influenced by the increased demand for ocean and river front amenities resulting in denser development patterns. New Smyrna Beach will start showing population growth in areas west of Interstate 95 (I-95) from the Venetian Bay and other developments. Oak Hill's population increases have been due to municipal annexation rather than new growth. Edgewater's rate of growth is slowing down from the rapid pace of the 1980s, but the rate remains somewhat strong. Ormond Beach's population increases are coming from areas west of I-95 along State Road (SR) 40. When the 2006 population data becomes available, it is anticipated that cities that have historically averaged less than one percent growth per year could show increased population rates.

Population Methodology for the 2006 Evaluation and Appraisal Report

Volusia County will be using the Metropolitan Planning Organization's (VCMPO) population projections in order to spatially allocate populations within both unincorporated and incorporated areas. The VCMPO has done extensive intergovernmental coordination with all of the County jurisdictions, including municipalities, to arrive at these numbers and to break them down within geographical areas known as Traffic Analysis Zones (TAZ). Traffic Analysis Zones contain population and employment counts in each unit or zone that are used to measure traffic along the road network.

The VCMPO met extensively with all of the municipalities and with the County in producing these population numbers. The numbers went through a VCMPO Citizen Advisory Committee, a subcommittee for the 2025 Transportation Plan, a technical advisory committee, VCMPO board, and meetings with individual jurisdictions. The 2000 base population for the six planning regions use the 2000 Census Tract numbers for the unincorporated area; and TAZ data is used to analyze sub-areas below the Census Tract level. The VCMPO projections use the medium population projections of the Bureau of Economic and Business Research (BEBR) from 2004 as the control numbers for the County's 2025 population.

It should be noted that the current rates of population growth indicate these numbers could be on the low side if recent trends in growth beginning in 2003 continue through the planning period. The 2025 Volusia County population was projected to be 618,600 when BEBR revised its projections in February 2004. By February 2005, this 2025 population projection was raised to 641,000. In June, BEBR revised its Volusia County population forecast again to 657,376. The population projection the County has received from the VCMPO by TAZ for 2025 is 657,216. The County will use the VCMPO's projection of 657,216 as part of its Evaluation and Appraisal Report update, but with the recognition that current population trends, if continued, may require revision in the future.

The VCMPO numbers were officially approved in November 2005; these numbers allocated the population projections between the unincorporated area of the County and its 16 cities. However, as noted above, the BEBR and VCMPO population numbers use the 2025 BEBR population numbers as the control numbers. The 2025 population projection for the unincorporated area in 2025 is based on the growth rate of the unincorporated population from 2000 to 2005 (106,880 to 114,961) or a growth rate of slightly below 1.3 percent per year. The one caveat is that Volusia County cannot predict with certainty - municipal annexations. Most municipal annexations in Volusia County presently are vacant areas where existing densities are extremely low.

One key dynamic noted in the County EAR is that municipal annexations by some adjacent cities are occurring deep in the County's Natural Resource Management Areas (NRMA). Many of these proposed areas for annexation were not contemplated over the planning period by Volusia County for urban land uses. If density increases in the NRMA as a result of municipal annexation, beyond the existing urban boundaries, there will likely be greater population increases over the existing 2.9 percent that occurred last year. The Volusia County EAR warns of consequences this annexation related increase in land use density will have, including physical impacts on State and County transportation network and Volusia County's ability to protect natural resources.

VCMPPO Population Methodology and Limitations

Population projections are an art rather than a science. It is possible to make different reasonable assumptions to develop various distributions in populations. In addition, the longer the time period, the less accurate the projections, particularly in small geographic areas like TAZs. The population for the entire County will not vary as much over a long time period but the distribution in each smaller geographic area could fluctuate greatly. When projecting population, the smaller the geographical area, the greater percentage of error that may occur. In large populated geographical areas, errors over estimating or under estimating within smaller TAZ areas are more likely to cancel each other out and reduce the margin of error.

Historical Population Methodology-Volusia County

A common way to project population is to use the historical growth rate to project future population growth. Volusia County used this methodology in its previous EAR. In areas with slower and steadier rates of growth, this can be an accurate methodology for population projection. It is not as accurate in municipalities and counties where the rates of growth vary greatly due to the fact that boundaries can change by annexations and/or incorporations.

Shimberg Population Methodology

The Shimberg population methodology is a common projection methodology used by various cities within Volusia County. However, the Shimberg methodology exemplifies a flaw with regard to using historical rates of population growth. From 1990 to 2000, the Volusia County's unincorporated population declined because of the incorporation of DeBary and Deltona removed these newly created municipal areas from unincorporated County. When this decline was noted in the Shimberg population projections, it took the numerical decline as a long-term trend and reduced the County's unincorporated area to 68,747 in the year 2025. Presently, the county's unincorporated population is 114,961. While the municipalities are annexing large tracts of lands, most of the annexed areas are vacant lands that do not reduce the County's unincorporated population. The annexed lands are predominantly agricultural, natural resource and forestry lands that have Future Land Use densities from one unit to 10 acres to one unit per 25 acres. In the City of DeBary, Shimberg projections did not take into account that the DeBary CDP in 1990 was much smaller by land area than the incorporated boundaries in 1993. In 1994, the City of DeBary became larger as it annexed the three-mile buffer between itself and Orange City. This annexation added 2,000 residents, which Shimberg incorrectly assumed was part of a growth trend but was instead associated with a one-time annexation of an existing developed area. Basically, Shimberg projections do not account for the amount of available land remaining in a city and extrapolates the population growth based on the historical rate of growth.

St. Johns River Water Management District Population Methodology

The St. Johns River Water Management District (SJRWMD) GIS based model projects future residential population growth at the census block level and normalizes those projections at the county level based on mid-level BEBR county growth projections. The GIS model does this by calculating a weighted average of the historical growth rate of

each block and factoring in the influence of spatial features such as roads, water bodies, wetlands and existing residential and commercial areas. The SJRWMD analysis excludes non-developable lands including wetlands, conservation areas, inappropriate land uses, road rights-of-way, and areas that are “built” out. The remaining areas are allocated population growth by census block according to the block’s growth rate and spatial influences. These projections are made in five-year increments from 2001 through 2025, and are aggregated by Utility Service Area boundaries, TAZ boundaries, and other boundaries for comparison with government and utility water use projections.

The model is based on a raster data structure, which converts map features to a uniform grid (not unlike the pixels on a television or computer screen). This enables the use of modeling methods that are either impossible or impractical using vector data (where map features are represented by points, lines and polygons). The grid cell size chosen for this model is 30 X 30 meters. Based on past raster modeling experience, this grid cell size represents a reasonable compromise between precision and processing speed.

The model consists of two primary elements: one based on historical growth trends and one based on spatial features that influence growth. The historical element projects growth based on past growth trends and the spatial element guides where the growth will be distributed within a given area. The combination of the two is essential to accurately distribute population into small areas.

The base year of the model is the year 2000. Projections were made through the year 2025 in five-year increments.

Comparison of the SJRWMD Model and the VCMPO Model

The SJRWMD model is a more sophisticated population and spatial distribution model compared to the VCMPO model. Both models use the 2000 Census for their baseline data. However, the VCMPO is geographically linked to the TAZ level. In contrast the SJRWMD model is predicated on a more detailed Census block level. An interesting note is that the SJRWMD model did use the VCMPO’s TAZ population data as support material.

The VCMPO model was derived with the intent of determining the impact of population on the local road network. The SJRWMD model tracks population within utility service area boundaries to determine water use rates. The SJRWMD model measures density by persons per acre, while the VCMPO model measures density by persons per square mile. When the two models are overlaid, the two models are mostly consistent, but the VCMPO model allocates more population west of I-95.

Each model makes projections based on existing and future land uses. Large scale developments such as DRIs are also accounted. The developers of the SJRWMD and VCMPO model interviewed local planners to ascertain growth trends within respective local governments. As has been stated, the VCMPO model population numbers are spatially distributed at the TAZ level, while the SJRWMD model summarized its results on the Census block and tract level, TAZ level and utility service boundaries. Both models normalized their results to the mid-range population projections by BEBR for the year 2025. The year 2025 Volusia County population projection by the VCMPO model was 657,216. BEBR’s population projection for Volusia County in the year 2025 is

657,376. The SJRWMD model rounded the BEBR Volusia County population projection in 2025 to 657,400. The difference between the VCMPO, SJRWMD and BEBR 2025 population projections for Volusia County are negligible.

The SJRWMD and VCMPO models are different, but compatible population models. The VCMPO model spatially distributes population to calculate impacts on the transportation network. The SJRWMD model is spatially calibrated to track utility service boundaries for water supply planning purposes. Neither model is designed to track population growth within municipal city limits. However, the County's methodology (based on VCMPO TAZ information) is the only method, besides Shimberg (of which the flaws in this methodology have previously been identified), that attempts to distribute population between the 16 municipalities and the unincorporated area of Volusia County.

The Difference Between the County Distribution and the VCMPO Distribution

The VCMPO population distribution methodology makes little effort to separate incorporated and unincorporated population. While the overall numbers in the TAZs are consistent with a geographical area, VCMPO population numbers were weighted toward the municipalities. For example, VCMPO numbers show 4,621 residents in the greater Oak Hill area in the year 2000 even though the Census population was 1,378. Orange City's Census population is 6,604 whereas the VCMPO numbers are 11,173. Almost all the VCMPO municipal population projections include unincorporated populations in their year 2000 TAZ estimate. Consequently, the unincorporated population in the VCMPO numbers was 60,000 less than the Census. Since the transportation network will experience the same impact whether population is in a municipality or an unincorporated area, this difference has no effect on traffic network planning or the TAZ population. However, the distribution of the total population between the municipality and the unincorporated area does effect overall planning applications. With this in mind, the County's population distribution includes the following assumptions:

- Unless the TAZ was split with another city, it was assumed that populations in the year 2000 TAZs that are greater than the municipal Census total were in the unincorporated area. Population split between the cities were examined for both existing and future land use trends and split accordingly. A ratio was established between the City's population in the year 2000 and the extra population assumed to be in the unincorporated area. This was held constant through the year 2025. For example, the population of City A according to the 2000 Census is 900 residents. The TAZ numbers for City A in the year 2000 show a population of 1,000. It is assumed those additional people live in the County. If City A grows to 1,500 in 2025, 1,350 will be in the city and 150 in the unincorporated area. Adjustments can be made to this ratio if there are additional annexations or an area is built out.
- DeBary received most of the population in its split TAZs with Orange City since land uses in the Orange City area near/adjacent to DeBary are typically commercial properties along 17-92 and Enterprise Road.
- Port Orange and South Daytona have a TAZ that is equally divided by residential areas. Therefore, population was divided evenly.

- Most split TAZs between Daytona Beach, Holly Hill and Ormond Beach were assigned to Daytona Beach. In addition, a large TAZ located west of the greater Daytona area extending to SR 40 includes the Consolidated Tomoka annexation. That one TAZ alone is expected to increase in population from 26 in the year 2000 to 13,862 in the year 2025. For this reason, Daytona Beach, which has had low population growth rate in the past, shows substantial growth in the 2025 VCMPO projected population.

Table 1.1B is a geographically distributed estimate and projection for the unincorporated area and the 16 municipalities based on the year 2000 Census, year 2005 BEBR and the year 2025 VCMPO TAZ population projections.

Table 1.1B: Volusia County Population Distribution and Projections by Municipality and Unincorporated Area

Population distribution by Geographical Area	2000 Census	2005 BEBR Population estimate	2025 VCMPO TAZ Population
Daytona Beach	64,112	65,129	94,804
Daytona Beach Shores	4,299	4,661	5,292
DeBary	15,559	18,222	22,061
DeLand	20,904	25,055	31,774
Deltona	69,543	82,973	114,720
Edgewater	18,668	21,156	31,181
Holly Hill	12,119	12,620	13,200
Lake Helen	2,743	2,847	3,305
New Smyrna Beach	20,048	22,025	30,734
Oak Hill	1,378	1,922	2,765
Orange City	6,604	8,854	9,942
Ormond Beach	36,301	39,683	51,079
Pierson	2,596	2,633	4,541
Ponce Inlet	2,513	3,247	4,305
Port Orange	45,823	54,630	74,082
South Daytona	13,177	13,955	16,146
Unincorporated area	106,880	114,961	147,285
Volusia County Total	443,343	494,649	657,216

Source: Census, BEBR, VCMPO and Volusia County Planning Department

Critiquing the New Numbers and Best Available Data

There are several external factors that should be accounted for in future population projections including:

- Redevelopment, especially along the beach and riverfront areas. Redevelopment activities may cause substantial population increases in areas that traditionally have not recently experienced much growth. Municipalities affected by redevelopment within coastal Volusia include Daytona Beach, South Daytona, Port Orange and Holly Hill. Also, New Smyrna Beach is experiencing growth both on the beach side and in newly annexed areas located to the west. VCMPO TAZ numbers do not capture the redevelopment activity and tend to be too low and static for Holly Hill, South Daytona and Daytona Beach Shores. While Daytona

Beach Shores does not have a large land area, the density in the high rises being built (often on previously developed tracts) will likely cause population increases above the present VCMPO projections.

- The DeLand area may be underestimated as the growth from the Victoria Park DRI annexation and annexations of vacant property along its southern boundary will likely lead to population increases above the projected 2025 VCMPO numbers.
- Lake Helen may experience population growth beyond the projected numbers although it has a limited amount of land area for future growth.
- The population numbers for Pierson appear to be high for a municipality with a preponderance of agricultural, low-density land uses.
- Orange City may grow at a faster rate than expected due to the City approving multi-family apartment building and attached town home dwelling projects.
- DeBary does have some land remaining for development. However, unless existing vacant property is rezoned at higher densities, the City will likely grow at a much slower rate than it has historically.

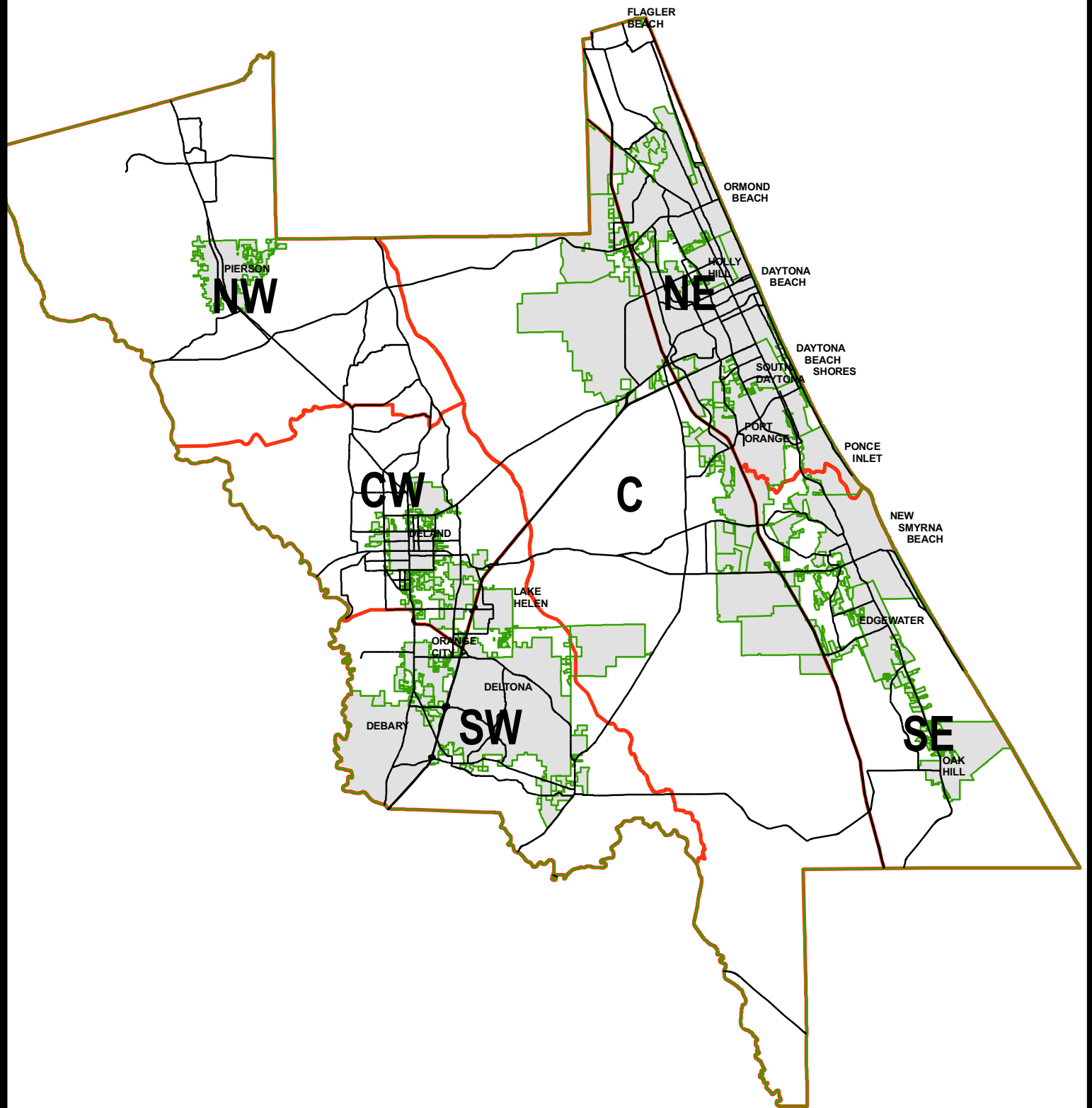
Population by Planning Region

Volusia County's unincorporated population in 2000 was divided into six planning regions. The six planning regions are the Northwest, Central West, Southwest, Central, Northeast and Southeast region. The planning regions are depicted on the following Map Figure 1.1. Population numbers in Table 1.1C are for the six planning regions and account for unincorporated area only. The 2025 population projections for the unincorporated area are based on the growth rate from the year 2000 Census to the 2005 BEBR estimates. The following overview describes the characteristics that make population projections for each planning region unique and suggests the future population trends for each of the 16 municipalities in the region.

Table 1.1C: 2025 Population Projections by Planning Region

Planning Region	2000 Census Population	Regional Percentage	2025 Population Projections by TAZ	Regional Percentage
Northeast	32,318	30.2%	44,536	30.2%
Southeast	13,515	12.7%	18,624	12.7%
Central	7,991	7.5%	11,012	7.5%
Northwest	5,992	5.6%	8,257	5.6%
Central West	31,671	29.6%	43,644	29.6%
Southwest	15,393	14.4%	21,212	14.4%
Total	106,880	100.0%	147,285	100.0%

Sources: Census, BEBR, VCMPO and Volusia County Planning Department



COMPREHENSIVE PLANNING REGIONS

SCALE: 1" = 7 MILE

FIGURE 1.1

02-May-06

Northwest Planning Region

Pierson is the only municipality in the Northwest Planning area of Volusia County. Pierson is a small town that contains a large amount of agricultural land but Pierson does have a small commercial and residential base. However, growth options for Pierson are limited due to the fact that the town has limited central water and no central sewer facilities. The Northwest Planning area is large and the character is mostly rural residential and agricultural. There is very little central water and sewer in the area, which limits its growth potential. Yet the large amount of acres means there will be some growth even though limited density options and lack of utilities will inhibit population growth throughout the planning time frame. Most future residential uses will be in the form of acreage oriented developments. There is an exception to the low density trend in the Northwest-farm worker living facilities. The County's Comprehensive Plan requires farm worker housing to be linked to a bona fide agricultural use and certified by the Volusia County Community Services Department. Farm worker housing is the only allowable high-density development in the rural area. New Hope Villas (109 units) is a good example of multi-family farm worker housing located in the Northwest Region.

According to the year 2000 Census there are a total of 5,992 unincorporated residents in this planning region. The City of Pierson and unincorporated Volusia County growth rate should be about the same. The unincorporated area will likely have the greater population increase in the region simply by having more rural acres to develop even though densities are not expected to increase in the region.

However, the unusual feature that makes Pierson and the rest of the northwest planning region difficult to predict is the group quarters/farm worker living facility population. Essentially, there is a population of migrant farm workers assigned as part of the northwest population. The true population of the northwest region may be higher than is reported due to the migrant population that undoubtedly consists of undocumented individuals.

The 2000 Census count includes 974 group quarter residents for Pierson among the 2,596 residents shown in Table 1.1A. This was a substantial decline from the 1,840 group quarter residents for the 2,988 residents in the 1990 Census. The number of residents in non-group quarters housing grew from 1,148 to 1,622 residents. This results in an interesting paradox. If the group quarters population from 1990 is accepted, Pierson is declining in population from 2,988 in 1990 to 2,596 in 2000. If the group quarters population in 1990 is rejected, then Pierson's non-group quarters population grew 41.3 percent for the decade. As a result, population projections for Pierson can vary significantly since the group quarters population cannot be estimated until the 2010 Census. The group quarters population should be held as a constant from the Census from which it was estimated.

Central West Planning Region

DeLand is the only municipality in the Central West Planning Region. Population projections for DeLand, based on historic growth rates, would be too conservative. Until recently, DeLand's growth has been limited since most of the available land in the city had been developed. Like the Northwest Region, most of the planning region's population at the time of the year 2000 Census was in the unincorporated area. Yet

future growth trends indicate that the City of DeLand will have a greater share of the region's population. The annexation of the Victoria Park DRI in Southeast DeLand has led to a substantial increase in developable land for the city (2,000 acres and 5,000± approved new housing units). In addition, annexation of adjacent vacant land near other DeLand subdivisions has resulted in the development of numerous smaller subdivisions in the Southeast area from Taylor Road to Orange Camp Road. Also, the City has annexed adjacent land, which is now developing, in the Northwest area of DeLand from Plymouth Avenue (Cross Creek) and SR 15A to International Speedway Boulevard (Glenwood Springs subdivision).

In analyzing the TAZs for the Central West Planning region, the growth projections may be somewhat modest for the new population growth that is occurring in the area. The historic growth rate is not indicative of the trend for greater growth in the area. The County's EAR notes that some of the population growth along the SR 15A corridor located northwest of DeLand is occurring in the unincorporated area that is not contiguous with the City of DeLand although it is in the City's water and service area. The water and sewer service area has been a factor in converting some rural unincorporated lands to low density urban subdivisions served by DeLand near the SR 15A/U.S. Highway 17 corridors. However, while some of this new development is occurring in unincorporated Volusia there is anticipation that the land will be annexed by the City of DeLand via water and sewer pre-annexation agreements. Therefore, adjusting the TAZ population by assigning DeLand a higher percentage of the future population of the City/County population ratio may be an appropriate way to accurately project future City of DeLand population growth.

Southwest Planning Region

Compared to the unincorporated area, the municipalities of DeBary, Deltona, Lake Helen and Orange City comprise the bulk of the population of this region. The southwest, unincorporated populations tend to live in scattered communities such as Cassadaga that adjoins Lake Helen and Enterprise that adjoins Deltona. Osteen is another unincorporated population concentration that is located mostly east of SR 415 in TAZs 719 and 760. There are undeveloped unincorporated areas south of DeLand to the Orange City limits (TAZ 495, 627, 629, 630, and 632) and to the west near the McGregor Road corridor (TAZs 618-626, 652, 671-674). Much of the area west of Orange City to the CSX railroad is developed but does not have water and sewer even though it is in Orange City's water/sewer service area.

Orange City is a difficult area to predict. The City is presently has a high amount of commercial development that serves the City of Deltona population. It has not experienced a similar rate of population growth as its neighbors in Deltona and DeBary. However, the City's willingness to approve apartment/multi-family developments such as Saxon Trace led to a 30 percent increase in population over the last two years. The lack of apartment/multi-family project approvals in DeBary and Deltona may have created an unmet demand that is being developed within Orange City. Although Orange City has had some single-family subdivision growth, multi-family apartments and town homes have driven most of the population increase. The year 2025 numbers will be too low if Orange City continues to attract apartment and town home developments.

DeBary is a municipality that is generally landlocked. The community has expressed a preference for low-density housing and has low density rural and agricultural land uses in its Comprehensive Plan. When its existing subdivisions are completed, DeBary will have few urban areas left in the City. DeBary's rapid rate of growth will likely slow down as the remaining amount of available urban land dwindles to support future population. The DeBary population growth is largely a result of the increase of land area due to incorporation. The municipal boundaries were greater than the original CDP boundaries. DeBary had a three-mile buffer between itself and Orange City, as required by state law, before DeBary's incorporation vote could take place. When DeBary's incorporation passed in 1993, this three-mile buffer of 2,462 acres was annexed in a referendum in May 1994 and added 1,935 residents to the permanent population of DeBary. Any population estimates that attempt to project growth for DeBary without taking incorporation, annexation and the dwindling supply of developable land into account will overstate DeBary's population. DeBary has some land that could transition from rural to urban along Highbanks Road, but the City has been reluctant to approve increases in land use density despite the proximity of water and sewer services from previously approved subdivisions.

Lake Helen has established a low-density development preference within its comprehensive plan but the attractiveness of this small town may lead to population growth beyond the 2025 projection. However, the lack of water and sewer facilities and the desire of Lake Helen residents to maintain a rural/low density lifestyle may prevent this growth from being realized.

Deltona's growth has resulted from a combination of new construction and a higher person per household (PPH) average - 2.79 versus the County's PPH average of 2.32. Using the County PPH rate of 2.32 versus the 2.79 Deltona rate, 6,025 additional housing units would be needed to serve the year 2005 Deltona population estimate of 82,973. For example:

Deltona Population 82,973/2.79 PPH = 29,739 housing units
Volusia County Pop. 82,973/2.32 PPH = 35,764 housing units

Despite substantial growth of Deltona's population from 2000 to 2005, the City's largest growth was from 1980 to 1990 when Deltona grew from 15,710 to 50,857. During this time period the demographics of the community changed from a retiree population to a family population. At a time when PPH averages have been declining in Volusia County, Deltona PPH average has run counter to this trend.

In addition, Deltona has annexed large land areas such as the D Ranch and Leffler properties that have not been considered in the TAZ population estimate. The annexation of the Leffler Property, located in TAZ 427 comprises about 5,000 acres. The Leffler annexation is also located within the County's Natural Resource Management Area and is earmarked for non-urban, low density land uses on the County Future Land Use Map. In addition, the Leffler annexation is being contested by Volusia County pursuant to Chapter 171 F.S. Currently, the population for this large TAZ is just under 600 for the year 2025. If the annexation is declared to be legal, this TAZ has the potential of adding an additional 12,000 to 15,000 residents to the City of Deltona outside the Southwest Planning region boundary within the Central region. This annexation could have a domino effect as other large properties have contiguity as a

result of the Leffler annexation. Another area that the County is monitoring is in TAZ 760 where a recent purchase of ± 3,000 acres (Carter Property) could have implications for future growth. This property is currently not contiguous to Deltona, but contiguity to the municipality may occur in the future with other annexations. This property, if developed at an urban scale, could add another 10,000 residents to the City of Deltona.

Central Planning Region

The Central Planning Region has historically been used for low intensity uses such as timber production and agriculture. In addition, large areas of the Central region are environmentally sensitive. Therefore, the bulk of the Central region is located within the County's Environmental Systems Corridor and Natural Resource Management Area. In addition, the County, through its Endangered Land Fund along with other governmental agencies, has bought a significant amount of land for conservation purposes. This is a vast area beginning west from the DeLand Ridge and continuing east to I-95. Flagler County is this planning region's north boundary while Brevard and Seminole County demarcate the region's southern border.

Notwithstanding the environmental sensitivity and historical low intensity use, this area may end up showing the largest growth among the planning regions. Most of the growth within the Central region will take place primarily within the east Volusia municipalities along I-95. This includes the cities of Ormond Beach, Daytona Beach, Port Orange, New Smyrna Beach and Edgewater. Preliminary numbers by the VCMPO show this region quadrupling its population. It is possible that Deltona may be the only West Volusia municipality that could add to the population growth of the Central Region if the Leffler annexation is upheld by the judiciary.

East Volusia County's cities will have major growth just west of I-95. For example, TAZ 405 along Tymber Creek Road did not have any residents for the year 2000. This property, owned by Consolidated Tomoka, is projected to have almost 14,000 residents in 2025. The same is true in New Smyrna Beach where the Venetian Bay development is projected to add over 7,700 residents in TAZ's 423-424 and 437-438 compared to the only 142 residents there in 2000. Ormond Beach will continue to have significant growth west of I-95 in TAZs 400-404 as a result of the Ormond Crossings CRA/DRI.

The County does not expect much growth in the unincorporated area beyond the expansion of a second jail (TAZ 407). Jail population is counted toward the County's overall population numbers by BEBR even though Volusia County does not receive revenue sharing for its jail population. The Spruce Creek Fly-in Community is the only Central planning region with urban style densities that is part of the unincorporated population. The Samsula/Spruce Creek CDP is the largest cluster of unincorporated population in the Central Planning Region. It includes the rural community of Samsula and the Spruce Creek residential fly-in community. It has a total of 4,877 residents according to the 2000 Census. In 2005 Volusia County adopted a rural protection plan for Samsula and is currently accepting citizen input from the Tomoka Farms area for a similar rural plan. Tomoka Farms Road is a rural residential community located north of Samsula and west of the city limits of Port Orange. The intent of these plans is to maintain the existing land use density and intensity in these communities.

However, the County's population will grow in this region given the large amount of available undeveloped land. Development will occur at low, non-urban densities. For example, the County approved 335 units on 7,079 acres on the Heart Island Equestrian estates located in TAZ 404. The property was zoned at one unit per 20 to 25 acres. In this case the developer clustered the density in the Planned Unit Development (PUD) on 3, 5 and 10-acre lots. More than 5,600 of the 7,079 acres were preserved as a conservation area with the housing units clustered on the remaining part of the property and the overall density was not increased.

The Miami Corporation owns over 40,000 acres in the Maytown-Osteen Road area, which is contained in TAZs 429-431 and 434. The TAZs in the Miami Corporation area currently contains zero population through 2025. This area has a potential for population growth even though Volusia County's Future Land Use Plan has non-urban, low intensity designations for this property. The Miami Corporation did receive approval by the Public Service Commission (PSC) for a private utility franchise. Representatives of the Miami Corporation have discussed the possibility of pursuing a Rural Stewardship Plan. The County will need to monitor events since development in this area could have a major impact on the County's planning and infrastructure programs.

Northeast Planning Region

Compared to other planning regions the Northeast is the planning region with the most unincorporated population even though a vast majority of the region's population is located in the municipalities. The largest unincorporated population is located in Ormond-by-the-Sea CDP. While not a large area, it is developed at a high density with 8,430 residents. The County also has urban pockets of growth near Holly Hilly, Ormond Beach and Daytona Beach. The County has approximately 2,000 people in a residential beach community named Wilbur-by-the-Sea. Unlike Ormond-by-the-Sea, it is a predominantly low-density single-family residential community located between the Cities of Daytona Beach Shores and Ponce Inlet. The County amended its Comprehensive Plan to add policies to assist Wilbur-by-the-Sea in maintaining its single-family character.

The Northeast region represents a mostly developed area. Therefore, growth in the Northeast region has not been as strong. In addition, most of the current growth in east Volusia is associated with the municipal annexation and development of land primarily west of I-95 in the Central Planning Region. Ormond Beach, Daytona Beach and Port Orange have the majority of their vacant lands west of I-95, and population growth will occur in these vacant areas.

The growth of Daytona Beach is a prime example of the problem of using historical information for future population projections. Based on historic growth rates, the 2025 population projection of 94,804 would seem very low for a city that has an annual population growth rate of 0.5%. Daytona Beach has vacant land resources to support a larger population resulting from future growth especially within TAZ 405. TAZ 405 comprises over half of the projected population growth for Daytona Beach over the next 20 years and is located in the Central planning region.

In spite of the developed nature of the Northeast planning region there has been a significant redevelopment trend in this region that has been discussed elsewhere in this report. The redevelopment activities occurring within certain east side cities are not well

represented within the VCMPO TAZ projections. The numbers do not show enough growth for the Northeast region over 20 years even for areas with historic low growth rates such as Holly Hill and South Daytona. The numbers in 2000 for South Daytona appear too high for the Census year 2000 but more reasonable despite the low growth rate through 2025. Port Orange's numbers appear reasonable and even a bit conservative given its past rate of growth. The Daytona Beach Shores TAZ numbers for the year 2000 are too low, which may create a projection that is too low for 2025. Daytona Beach Shores does not have a large amount of land for development but the concentration of high rises gives the area plenty of potential for residential population growth. The same situation exists in Ponce Inlet.

Southeast Planning Region

The Southeast planning region is dominated by the cities of New Smyrna Beach and Edgewater, which account for most of the population in this region. Oak Hill is a small municipality without water and sewer infrastructure. Most of the unincorporated population lives between Edgewater and Oak Hill (TAZs 336 through 340) where the County has a utility system. The other unincorporated area is the Glencoe CDP, which includes Sugar Mill Plantation. The Glencoe CDP had 2,485 residents at the time of the year 2000 Census. The Glencoe CDP is an unincorporated area located east of I-95 and includes lands north and south of SR 44. The Glencoe area north of SR 44 is adjacent to Port Orange's city limit, while the Glencoe area south of SR 44 adjoins Edgewater. Similar to the cities in the Northeast Region, New Smyrna Beach and Edgewater have annexed large vacant land tracts west of I-95, which are located within the Central Planning Region.

New Smyrna Beach has the lowest persons per household (PPH) and one of the highest vacancy rates of most beach communities in Volusia County. New Smyrna Beach has its future growth located in the TAZs for the Venetian Bay development. The TAZs for the Venetian Bay area (423-425 and 437-439) show a population increase from 142 to 7,751. This TAZ population estimate may be conservative as 5,800 housing units are planned for this area.

Edgewater does not indicate any growth in its recently annexed areas located west of I-95 (TAZ 429 and 440 – Central planning region). However, the annexation and the availability of City's utilities suggests those TAZs may include a significant population increase in the future.

The population growth within Oak Hill's VCMPO TAZs is less than a third of the total Southeast region population. Annexations that occurred after the Census of mobile home parks trying to avoid County sewer services have been responsible for a large portion of Oak Hill's population increase. Most of the future urban growth in the Oak Hill area will occur where connection to Volusia County's Southeast water and sewer system is available.

Finally, as has been reported for the Northeast region redevelopment activities taking advantage of a waterfront amenity will also occur in the New Smyrna Beach and Edgewater areas.

Problems in Estimating Population of Beachside Municipalities

Many beach side residents live either out of state or outside Volusia County for a significant amount of time. This is true in the municipalities of Daytona Beach Shores and Ponce Inlet. Larger and more populated beach side communities such as the cities of Ormond Beach, Daytona Beach, Port Orange and New Smyrna Beach are similarly affected, but their larger population base makes this trend less noticeable.

The cause of this anomaly is due to the method in which permanent population is calculated by the BEBR. Unless the housing market is strong at the time of the Census, the vacancy rate among condos and beach rental units is likely to be high and over estimated. This vacancy rate remains constant over the decade until the next Census is conducted. This anomaly was discovered when the Volusia County Supervisor of Elections noted there were 700 more registered voters in Daytona Beach Shores than BEBR's estimate of the City's population. An adjustment by the 2000 Census finally put the number of registered voters in Daytona Beach Shores below the City's official population count. This tendency to overestimate the number of vacant housing units occurs primarily on the beach side where permanent multi-family housing units are mixed with part time dwelling units. When BEBR prepares its population estimates, it does not count seasonal or vacant units in a municipality or unincorporated area toward the permanent city or county population. In addition, vacancy rates are not static. In a strong real estate market, these vacancy rates shrink among rental units and create an increase in existing population regardless of whether there is an increase in the number of housing units built.

From 1999 to 2000, the large increase in the population of Daytona Beach Shores from 2,955 to 4,299 did not come from new building permits or electrical connections but, rather, a lower 2000 Census vacancy rate for existing housing than the 1990 Census. With more existing units occupied full time, population increases occur even though the number of housing units does not increase. It is not uncommon for people who are permanent residents to rent their houses during high demand special events where significant income can be made. Beach side residents may also rent their homes to lower the costs of their second home. This may overstate the seasonal population factor on the beachside. BEBR attempts to adjust for seasonal population shifts by using the electrical hookup data from April and average it with the building permit data. By using April 1 as the date for its population estimates, BEBR is picking a month where the maximum numbers of residents are here before they migrate back to other states or even other countries. (Volusia County has a significant number of Canadian residents.) Until the early 1970s, BEBR population estimates were completed as of July 1, to coincide with the State of Florida's fiscal year.

The only area not on the beach side with a double-digit vacancy rate in housing is Orange City. Unincorporated beach side communities such as the Ormond-by-the-Sea CDP, which has a 24.5 percent housing unit vacancy rate, also influence the County population projections. However, it is very likely, given the strength of the real estate market in Florida that these housing unit vacancy rates are too high but the vacancy rates will not be adjusted until the 2010 Census. Table 1.1D illustrates the Housing unit vacancy rates in Volusia County.

Table 1.1D: Vacancy Rates for Housing in Volusia County and its Municipalities

Municipalities	Occupied	Vacant	Total	Vacancy Rate
Daytona Beach	28,605	4,740	33,345	14.22%
Daytona Beach Shores	2,423	1,962	4,385	44.74%
DeBary	6,538	463	7,001	6.61%
DeLand	8,375	897	9,272	9.67%
Deltona	24,896	1,521	26,417	5.76%
Edgewater	7,579	656	8,235	7.97%
Holly Hill	5,583	565	6,148	9.19%
Lake Helen	1,124	80	1,204	6.64%
New Smyrna Beach	9,839	3,779	13,618	27.75%
Oak Hill	549	146	695	21.01%
Orange City	3,062	623	3,685	16.91%
Ormond Beach	15,629	1,629	17,258	9.44%
Pierson	484	30	514	5.84%
Ponce Inlet	1,206	837	2,043	40.97%
Port Orange	19,574	1,528	21,102	7.24%
South Daytona	5,851	606	6,457	9.39%
Municipalities Totals	141,317	20,062	161,379	12.43%
Unincorporated Area	43,406	7,153	50,559	14.15%
Volusia County Total	184,723	27,215	211,938	12.84%

Source: U.S. Census 2000

Population Conclusions

The unincorporated area population growth in Volusia County should be slow and steady through the planning time horizon of 2025. The unincorporated area will average a 1.2 to 1.3 percent rate of growth per year based on the rate of growth from 2000 to 2005. The areas that will grow the most will be unincorporated areas connected to urban services such as the Central West, Southwest, Northeast and Southeast Planning regions. The Unincorporated Northwest and Central Planning region population will grow primarily due to the large acreage of available land, even though densities will be rural and agricultural in nature. In addition, population will increase within the unincorporated Central region from institutional population with the building of an additional jail. (Note: BEBR population estimates include inmates in its population counts.)

There is no one correct method to estimate population. However, it is important to understand the limits of any method chosen. The Shimberg method of using BEBR for overall population is an acceptable methodology for use in counties where unincorporated boundaries are static. The problem is that the Shimburg mathematical formula is calculated without regard to annexations, incorporation or an evaluation of remaining vacant land resources and is a poor way to distribute population among the municipalities and unincorporated area. It is clear that the one-time events of DeBary

and Deltona incorporating created the anomaly of the unincorporated area with declining population. Without knowledge of the local area, other than the yearly BEBR estimates and projections by County, Shimberg cannot forecast whether an area's population growth is the result of new building activity or annexations. The Shimberg projection of 68,000 for the County unincorporated area in 2025 seems highly inaccurate given the County's present population of 114,961 in 2005. Future annexations of unincorporated land that contain few if any residents cannot decrease Volusia County's unincorporated population.

The SJRWMD and VCMPO models are different, but compatible population models. The VCMPO model is spatially distributed to calculate impacts in the transportation network. The SJRWMD model is spatially calibrated to project population within utility service boundaries to confirm water supply. Neither model is designed to track population within municipal city limits.

The VCMPO projections have the advantage of reflecting recent local conditions. VCMPO projections used the year 2000 Census to estimate the population within planning regions. While the method did not spatially distribute population among the 16 cities and the unincorporated areas, it was accurate to determine growth for planning regions. In addition the VCMPO numbers are controlled by the BEBR mid-range 2025 projections for Volusia County.

A ratio was established between the year 2000 municipal population and unincorporated population. This ratio was held constant through 2025. Unless the TAZ was split with another city, it was assumed that population in the 2000 TAZs above the municipal total was in the unincorporated area. Population splits between cities were examined for land uses and split accordingly. The advantage of this ratio method is that it is flexible and can be adjusted for unusual situations.

Nonetheless, the biggest issue that faces Volusia County is unplanned population growth in areas that have little or no infrastructure. Municipal annexations are beginning to occur deep in the County's NRMA. Many of these areas proposed for annexation were never contemplated by the Volusia County Comprehensive Plan for urban land uses. Unincorporated communities such as Enterprise, Samsula and Tomoka Farms have sought assistance from the County to protect their rural lifestyle. The Wilbur-by-the-Sea community sought protection to remain as a low profile, single-family residential community along the beachside. In some areas the large tracts of undeveloped land annexed are not served by adequate transportation, water and sewer infrastructure. Finally, a Rural Land Stewardship program is being explored for a large tract of undeveloped land that is not associated with significant traffic or any central water and sewer service.

The areas annexed and proposed to be annexed by Deltona and Edgewater are not accounted for by Volusia County, or the VCMPO's TAZ population projections for urban land use densities. If the annexed areas are changed to urban land uses through the comprehensive plan or DRI then there will be greater population increases beyond the existing population projections. The resulting consequences of an increase in land use density for areas that the County currently has planned for non-urban uses (NMRA areas) will have major physical impacts on the State and County transportation network and inhibit Volusia County's ability to protect natural resources.

CHANGES IN LAND AREA

Changes in land area within Volusia County typically occur because of municipal annexation, by which municipal land area increases and unincorporated county land area decreases. Since 1999, unincorporated Volusia County land area has decreased approximately 27,848 acres as a result of municipal annexation. In 1999, the year the previous EAR-based amendments were adopted, the land area of unincorporated Volusia County was approximately 628,459 acres. By December 2004, unincorporated Volusia County land area had decreased to approximately 608,431 acres. Currently, the land area of unincorporated Volusia County is approximately 600,615 acres. Table 1.1E shows the number of acres annexed by each city within Volusia County since 1999.

Table 1.1E: Acres Annexed by City (1999 - Present)

City	Acres
Daytona Beach	3,681
Daytona Beach Shores	11
DeLand	826
Deltona	6,267
Edgewater	7,419
Holly Hill	41
Lake Helen	125
New Smyrna Beach	3,558
Oak Hill	206
Orange City	508
Ormond Beach	4,147
Pierson	10
Port Orange	937
South Daytona	111
Total Acres Annexed	27,848

Source: Volusia County GIS (Acreage figures are rounded to the nearest whole number).

Some of the changes in land area that have occurred were anticipated and others were not. Examples of unanticipated changes in land area include various annexation activities that have occurred within the City of Deltona, the City of Edgewater and the City of New Smyrna Beach.

The City of Deltona incorporated on December 31, 1995 and is the County's newest city. Deltona started out in the 1960's as a large residential subdivision that was marketed as an affordable retirement destination. The demographic of Deltona eventually changed from a retirement community when working families discovered the City. Deltona provided affordable housing, was situated near Interstate 4 (I-4), and was in reasonable commuting distance to the Orlando job market. The original size of Deltona at the time of incorporation was approximately 36 square miles - most of it developed or platted as part of the Deltona Lakes Subdivision. Notwithstanding the developed and platted nature of the City, there are still enough vacant lands available within the City to support more population.

The eastern border of the original city limits of Deltona is approximately located along the eastern escarpment of the DeLand Ridge. Further to the east, the land descends to a physiographic area of the County known as the Talbot Terrace. The Talbot Terrace can be described as an area that features flat topography, poorly drained soils,

significant flood plain areas, and abundant interconnected and isolated wetland acreage. Uses on the Talbot Terrace have historically been, and are currently, agricultural and silvicultural in nature. Other uses include residential development at very low densities - one unit per 10 acres or less and recreational endeavors (e.g. hunting, fishing, etc.). To recognize the development constraints, agricultural productivity and natural resource values of the Talbot Terrace area located east of Deltona, the County designated the Talbot Terrace area with low intensity land uses such as Agricultural Resource (AR, one unit per 10 acres), Forestry Resource (FR, one unit per 20 acres) and Environmental Systems Corridor (ESC, one unit per 25 acres). The intent of the County was to direct urban growth away from the Talbot Terrace area. In 2003, to further direct growth away from the area, the County removed a section of a planned Thoroughfare Road from the Thoroughfare System that was planned to extend east of Deltona to SR 415. The thought was that the road would encourage intensive development in an area the County had not planned for urban growth.

Some of the land located east of Deltona is owned in large holdings (500 plus acres) and there was an approximately 5000-acre tract located east of Deltona in unified ownership. In February of 2004 Deltona annexed the 5000-acre tract along with some smaller parcels. The intent of annexing the smaller parcels was to establish "contiguity" with the 5000-acre property. The 5000-acres was annexed with an annexation agreement that the property would be developed at an urban capacity, probably through the DRI process. However, pursuant to Chapter 171 F.S. the County challenged the annexation. The County won the case in appeal to the 5th District Court of Appeal. The 5th District Court of Appeal agreed with the County that the property was not sufficiently contiguous and that the annexation agreement may have constituted contract zoning. The case was remanded back to the trial court with instructions to issue a decision consistent with the district court opinion.

The Deltona annexation of the 5000-acre parcel was unexpected based on the constrained nature of the property located east of Deltona, the lack of public services such as traffic capacity on SR 415, and the lack of other roads. In addition, the City's ability to serve the newly annexed area with central water and sewer is also questionable.

Another Deltona annexation that the County did not expect was the annexation of an approximately 600-acre area in the community of Osteen. The 600 acres is located along the SR 415 corridor. The 600-acre annexation in Osteen included land that is designated as Agricultural Resource and has been in agricultural use for many years. There are also abundant natural resources on the property. The same service deficiencies described for the 5000-acre annexation are also applicable to the 600-acre property in Osteen.

The City of Edgewater is a municipality that is located along the Indian River Lagoon system. In the early to mid 1990's the City began annexing westward along the SR 442 corridor toward the SR 442/I-95 interchange. The early/mid 1990's annexations included a 900-acre property situated on the southwest side of the interstate interchange. While the City did annex the property at the interchange, the City did not immediately amend its Future Land Use Map (FLUM) to include the newly annexed land. The City did finally amend its FLUM in 2000/2001.

While Edgewater annexed west to the SR 442/I-95 interchange in the early and mid 1990's, the City seemed to have adequate vacant land resources and did not appear interested in extending further. However, in 2004 the City was approached by an entity that represented the owners of a large tract of property that totaled over 6000 acres. The 6000-acre property was generally located west of I-95. The City annexed the land in the spring of 2005. The environmental character of the 6000-acre annexation can be described as a poorly drained area with significant wetland acreage. The 6000-acre property has been, and is currently used for timber production and hunting. While the 6000-acre Edgewater annexation was a large expansion, the annexation was similar to past annexation activity located just to the north by the City of New Smyrna Beach.

In 1997 during the County's first EAR process, the County was approached with a land use map amendment for a 1500-acre rural tract located in the Samsula area. The intent was to change the Agricultural Resource (AR) designation to an urban category. The request was to facilitate urban development in a rural area. Not only was the site located in a non-urban area, the property was constrained with poorly drained soils, flood plain areas and wetland acreage. The project, known locally as Spruce Creek Ranch, was ultimately annexed into the City of New Smyrna Beach and a plan amendment for the property was processed under the jurisdiction of the City of New Smyrna Beach. After much negotiation between the City and the Florida Department of Community Affairs (FDCA), an amendment for the project to allow urban type development was approved. When the Spruce Creek Ranch property was converted to urban uses, the County conceded that there was going to be urban activity in the area and entered into the Interlocal Agreement for the New Smyrna Western Growth Area to manage future urban growth in the area west of I-95 and east of Samsula.

Some of the above-mentioned unanticipated annexation activity has affected adjacent unincorporated rural communities and neighboring cities. Since 2001, the County has received several requests to develop local protection plans from unincorporated communities of special interest to protect their community lifestyle from increasing growth pressure and encroaching annexation. Thus far, the County has adopted local plans for the following communities of special interest: Enterprise, Wilbur-by-the-Sea and Samsula.

Municipal annexation activities did result in a more intense public interest in planning that permeated from the grass roots to the policymaker level. The above-mentioned Spruce Creek Ranch annexation and conversion to urban uses seemed to galvanize the debate over growth management, urban sprawl, community protection and environmental protection within the County. The renewed discussion over growth management led to a proposal by the County to establish an Urban Growth Boundary (UGB) in an attempt to reign in municipal annexation and urban sprawl. For more information on the County's UGB experience see Section 2.2 of the EAR.

As was previously mentioned, as part of the unexpected Deltona annexation activity, in 2004 the County did challenge the City annexation of 5000 acres pursuant to Chapter 171 F.S. This case is still under judicial review. The Deltona annexation was not the first annexation challenge the County initiated since the last EAR. In May/June of 2003 the City of Port Orange attempted to annex approximately 5000 acres located west of the existing city limits that would have extended the municipal boundary to I-4. The 5000 acres was, and still is, owed by the City and has been used for wellfield development

and agricultural uses. Pursuant to Chapter 171 the County challenged the annexation on grounds of lack of contiguity; the annexation was not compact; and the annexation would foster urban sprawl. The case did not go to court, but the City of Port Orange did repeal the annexation of the property with the understanding that there would be an interlocal agreement for the 5000 acres. The interlocal agreement gives the City law and firefighting jurisdiction over the area, and establishes a unique set of uses that could occur on the property. As part of the interlocal agreement, the County has changed 440 acres on its Future Land Use Map to the Public-Semi Public Land Use category to facilitate a use of public oriented endeavors. The balance of the property would be used only for low intensity uses and remain in a mostly natural state. The agreement with the City of Port Orange represents a satisfactory conclusion to an annexation issue that could have resulted in a protracted legal battle over land use jurisdiction.

The latest dynamic concerning annexation and a change of County land area relates to the annexation activities of the City of Lake Helen. This past spring, the City of Lake Helen received requests from 31 property owners, who live in a rural area of the County, wanting to voluntarily annex into the City in order to protect their rural lifestyle. This paradoxical annexation request stemmed from the community's fear of the encroaching urban development occurring to the south in the City of Deltona. The residents did not want to be absorbed into the City of Deltona and saw annexing into the City of Lake Helen as a way to keep their rural lifestyle. The City of Lake Helen encouraged the annexation, establishing a vision that the City of Lake Helen is going to remain small and rural in character.