



**POPULATION
ALLOCATION
MODEL**

ACKNOWLEDGEMENTS

**This report was produced by the
Intergovernmental Section of the
Planning Division**
Planning, Zoning & Building Department
Palm Beach County, Florida

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TABLE OF CONTENTS

I.	Introduction.....	1
II.	Historical Population Growth.....	2
III.	Historical Unincorporated County Population Growth.....	8
IV.	Projected Population.....	9
V.	Population Allocation Model Methodology.....	10
VI.	Future Updated of the Model.....	17
VII.	Description of Data Sources.....	18
VIII.	Appendix.....	18

Table 1. Countywide Population by TAZ, 2020-2045

Table 2. Unincorporated Population by TAZ, 2020-2045

Table 3. Countywide Population by Jurisdiction, 2020-2045

I. Introduction

The County prepares the Population Allocation Model every other year as a tool for long-range service delivery planning in Palm Beach County. Ch. 163.3177(1)(f)3, F.S., requires that each comprehensive plan be based upon population projections published by the Office of Economic and Demographic Research (OEDR) or generated by the local government based upon professionally acceptable methodology. The OEDR publishes the projections prepared by the University of Florida's Bureau of Economic and Business Research (BEER). Palm Beach County utilizes the OEDR/BEER medium range projections for the County's Population Allocation Model.

Each year, OEDR /BEER issues population projections in five-year increments for every Florida County. Since these projections are countywide figures, each municipality within the County is responsible for devising an allocation strategy to describe its own future growth. Technically, therefore, the County is only responsible for unincorporated lands. However, since many County agencies provide services beyond the unincorporated boundaries, Palm Beach County has developed a Population Allocation Model to allocate the countywide figures to smaller geographies called Traffic Analysis Zones (TAZs) throughout the County for localized planning efforts, providing population projections for these TAZs through 2045.

The Population Allocation Model incorporates:

- 2010 Census populations and related information (Summary File 1, released in August 2011) such as persons per household, group quartered populations, vacancy and seasonal rates by TAZs. Henceforth the baseline for future population models will be the year 2010.
- OEDR projections, released in 2020. These projections are based on the 2010 Census released in late March of 2011, and the OEDR population estimates released in 2020.
- Land use densities changes, approved or expired residential projects, annexations, and Municipal population estimates.
- 2010 MPO Traffic Analysis Zones, adding over 500 zones in the urban area and enabling a finer breakdown of geography and calibration of population estimates.

II. Historical Population Growth

The 2010 Census indicates that the County population grew 16.7% from 2000, averaging 1.7% or 18,895 people each year for the last ten years. Unincorporated County grew 12.7%, averaging 1.3% or 6,600 people each year. As shown in Table 1 below, both Countywide and Unincorporated growth rates have declined since 1980.

Table 1: Growth Rates

Census Yr.	Palm Beach County		Unincorporated County	
	Population	% Annual Growth	Population	% Annual Growth
1980	576,863	6.5%	212,399	12.4%
1990	863,527	5.0%	406,363	9.1%
2000	1,131,184	3.1%	521,447	2.8%
2010	1,320,134	1.7%	587,844	1.3%

Source: U.S. Census Bureau

Table 2: Population Estimates & Growth

Year	Palm Beach County	Annual Growth	Avg. Annual % Growth	State of Florida	Annual Growth	Avg. Annual % Growth
1930	51,781	3,313		1,468,211	49,974	
1940	79,989	2,821	5.45%	1,897,414	42,920	2.92%
1950	114,688	3,470	4.34%	2,771,305	87,389	4.61%
1960	228,106	11,342	9.89%	4,951,560	218,026	7.87%
1970	348,993	12,089	5.30%	6,791,418	183,986	3.72%
1980	576,863	22,787	6.53%	9,746,324	295,491	4.35%
1981	618,400	41,537	7.20%	10,138,200	391,876	4.02%
1982	647,800	29,400	4.75%	10,430,200	292,000	2.88%
1983	667,200	19,400	2.99%	10,678,700	248,500	2.38%
1984	695,200	28,000	4.20%	10,982,500	303,800	2.84%
1985	723,300	28,100	4.04%	11,322,300	339,800	3.09%
1986	753,700	30,400	4.20%	11,654,100	331,800	2.93%
1987	784,800	31,100	4.13%	12,000,200	346,100	2.97%
1988	817,500	32,700	4.17%	12,327,600	327,400	2.73%
1989	841,500	24,000	2.94%	12,650,900	323,300	2.62%
1990	863,518	22,018	2.62%	12,938,071	287,000	2.27%
1991	887,893	19,526	2.26%	13,258,764	258,100	1.99%
1992	907,389	13,426	1.52%	13,497,604	238,840	1.80%
1993	932,538	21,753	2.43%	13,730,216	232,612	1.72%
1994	960,498	18,967	2.07%	14,043,896	313,680	2.28%
1995	988,743	28,245	2.94%	14,336,174	292,278	2.08%
1996	1,013,515	24,772	2.51%	14,623,650	287,476	2.01%
1997	1,044,459	30,944	3.05%	14,938,576	314,926	2.15%

Table 2: Population Estimates & Growth

Year	Palm Beach County	Annual Growth	Avg. Annual % Growth	State of Florida	Annual Growth	Avg. Annual % Growth
1998	1,071,005	26,546	2.54%	15,230,728	292,152	1.96%
1999	1,098,859	27,854	2.60%	15,580,590	349,862	2.30%
2000	1,131,191	32,325	2.94%	15,982,824	401,788	2.58%
2001	1,156,550	23,280	2.06%	16,305,100	322,276	2.02%
2002	1,184,549	27,999	2.42%	16,634,256	329,156	2.02%
2003	1,215,286	30,737	2.59%	16,979,706	345,450	2.08%
2004	1,248,466	33,180	2.73%	17,374,824	395,118	2.33%
2005	1,273,752	25,286	2.03%	17,778,156	403,332	2.38%
2006	1,291,426	17,674	1.39%	18,154,475	376,319	2.17%
2007	1,302,451	11,025	0.85%	18,446,768	292,293	1.64%
2008	1,307,784	5,333	0.41%	18,613,905	167,137	0.92%
2009	1,312,016	4,232	0.32%	18,687,425	73,520	0.40%
2010	1,320,134	8,118	0.62%	18,801,310	113,885	0.61%
2011	1,325,758	5,624	0.43%	18,905,048	103,738	0.56%
2012	1,335,415	9,657	0.73%	19,074,434	169,386	0.90%
2013	1,345,652	10,237	0.77%	19,259,543	185,109	0.98%
2014	1,360,238	14,586	1.08%	19,507,369	247,826	1.30%
2015	1,378,417	18,179	1.34%	19,815,183	307,814	1.58%
2016	1,391,741	13,324	0.97%	20,148,654	333,471	1.68%
2017	1,414,144	22,403	1.61%	20,484,142	335,488	1.67%
2018	1,433,417	19,273	1.36%	20,840,568	356,426	1.74%
2019	1,447,857	14,440	1.01%	21,208,589	368,021	1.77%
2020	1,466,494	18,637	1.29%	21,596,068	387,479	1.83%

Source: University of Florida, Bureau of Economic & Business Research

Table 2 shows the County's annual growth as it is compared to that of the State of Florida. The County grew rapidly in the 80's and 90's, with a net growth of 20,000-30,000 people per year, and annual growth rate surpassing the rest of Florida. The surge continued in the early 2000's, until 2007 when annual growth rate fell behind Florida, with only 5,000-10,000 people annually. In 2008-2012 when the County was so negatively affected by the slump of construction activities, population almost came to a standstill. 2013-2014 saw its comeback, with annual growth bouncing beyond the 10,000 level, though not at a rate as before the recession.

Components of Population Change

As of July 1 of each year, the Bureau of Census also publishes population estimates for the nation's counties. The methodology differs from BEBR, however, as it employs sources such as vital statistics, tax records, school enrollment and other administrative records.

In addition, the Bureau provides a breakdown of components of population changes. For this County, in-migration has always been the strongest component of population growth. After two decades of rapid growth, however, net in-migration (both domestic and international) declined from an annual average of 25,000 people during 2000-2005 to an average of only 2,700 between

2006 and 2008. In particular, domestic migration has even dwindled to a net loss of population of 11,364 people to other counties in Florida or other states. The County subsequently is experiencing a healthy resurgence of in-migration averaging a net migration of around 16,000 residents per year in the last few years.

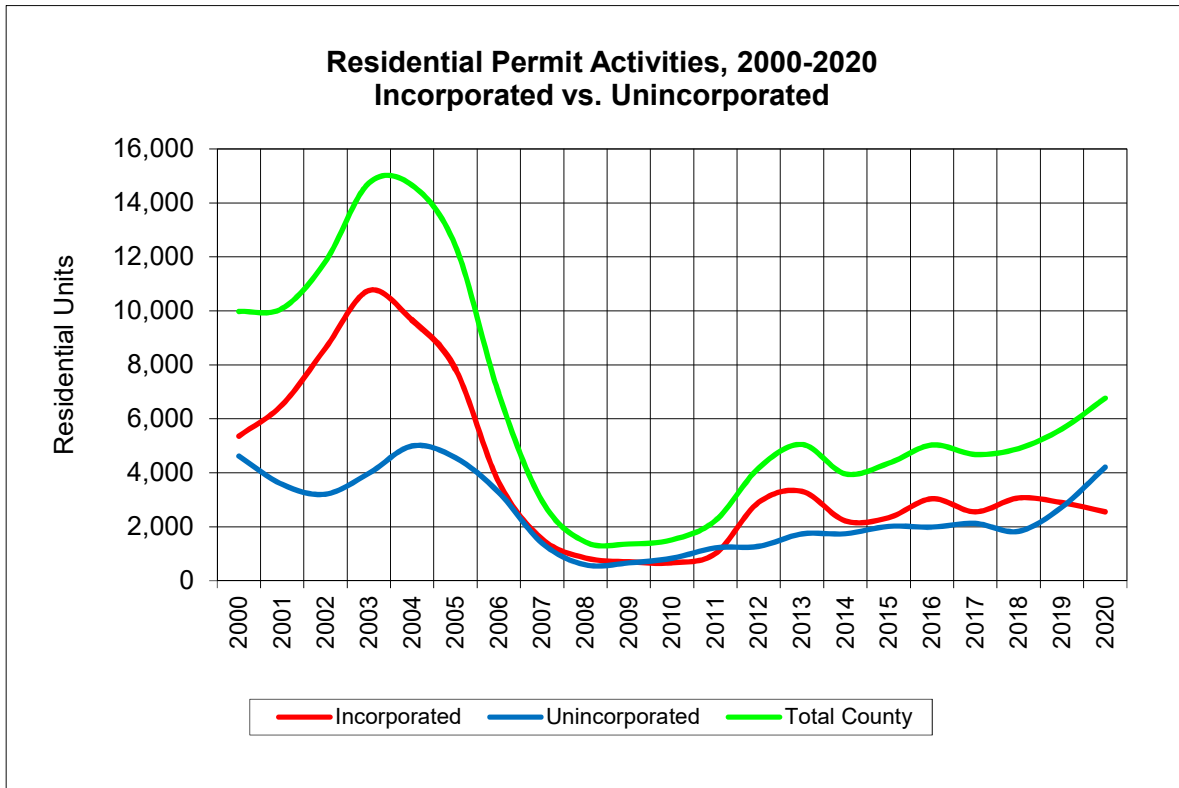
Table 3: Palm Beach County Population Component Changes

Year	Population Growth	Births	Deaths	Natural Increase	International Net Migration	Domestic Net Migration	Total Net Migration
2000-2001	22,761	13,576	13,283	293	9,081	14,063	23,144
2001-2002	28,638	13,835	13,389	446	9,065	19,556	28,621
2002-2003	23,623	14,242	13,671	571	7,954	15,456	23,410
2003-2004	31,002	14,817	13,475	1,342	7,234	23,636	30,870
2004-2005	23,110	15,337	13,641	1,696	7,656	14,571	22,227
2005-2006	9,057	16,109	14,047	2,062	7,669	-829	6,840
2006-2007	99	15,774	13,515	2,259	6,938	-9,414	-2,476
2007-2008	4,907	15,117	14,348	769	5,868	-1,950	3,918
2008-2009	10,205	15,222	13,797	1425	6,454	2,391	8,845
2009-2010	NA	NA	NA	NA	NA	NA	NA
2010-2011	12,263	13,733	13,089	644	5,467	6,193	11,660
2011-2012	19,033	13,579	13,575	4	7,192	11,820	19,012
2012-2013	16,412	14,135	13,796	339	6,969	7,893	14,862
2013-2014	21,511	14,144	14,180	-36	8,035	12,277	20,312
2014-2015	24,271	14,637	14,434	203	9,037	14,047	23,084
2015-2016	21,967	14,696	15,207	-511	8,443	12,473	20,916
2016-2017	17,382	15,013	15,169	-156	11,038	6,552	17,590
2017-2018	15,603	14,776	15,455	-679	12,706	3,661	16,367
2019-2018	13,894	14,947	15,460	-513	7,748	6,712	14,460

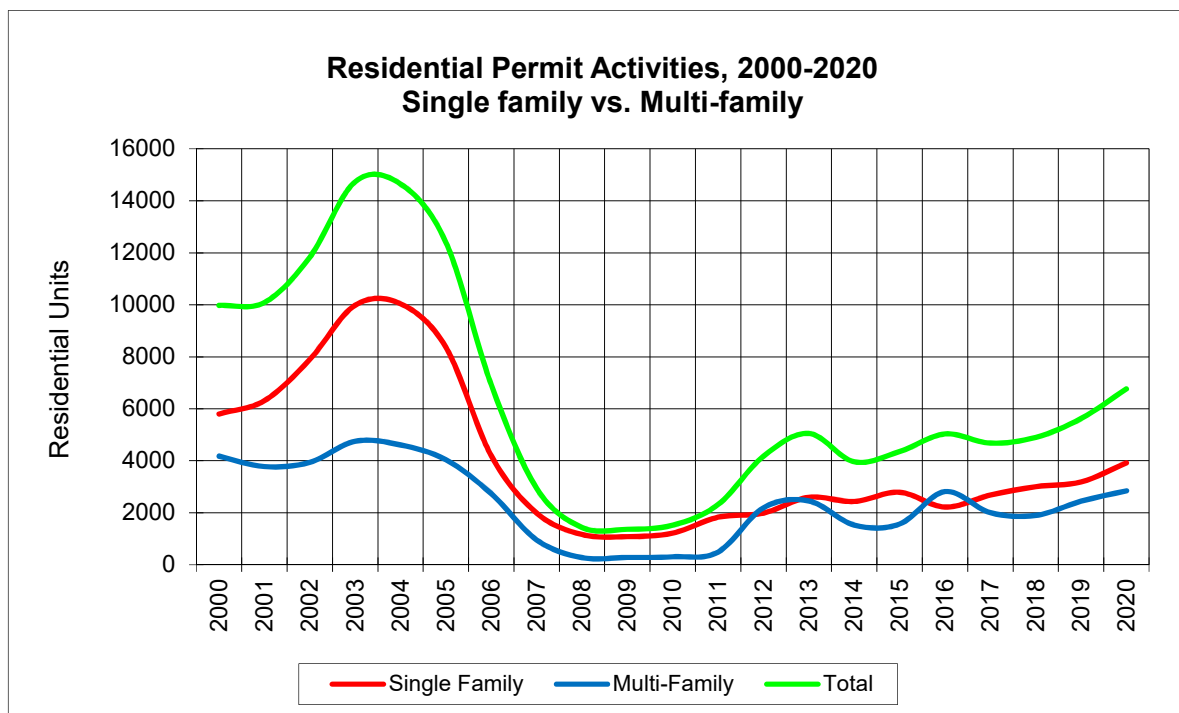
Source: U.S. Census Bureau. The Census Bureau also publishes population estimates, as of July 1 of each year. The methodology differs from BEBR, employing sources such as vital statistics, tax records, school enrollments and other administrative records.

Building Permit Activities

Historically in the County, there has been a direct correlation between building activity and population growth. Building permits continue to hold steady, and growth in the cities exceeds the county's growth. The last five years witness an average growth of 5,400 units per year.



Source: PBC PZ&B - Building Division 2020



Source: PBC PZ&B - Building Division 2020

BEBR Palm Beach County Population Projections

Chapter 163.3177(1)(f)3, F.S., stipulates that local government comprehensive plans shall be based upon permanent and seasonal population estimates and projections, which shall either be those provided by the Office of Economic and Demographic Research (ODER) or generated by the local government based upon a professionally acceptable methodology. The ODER issues the projections generated by the Bureau of Economic and Business Research (BEBR).

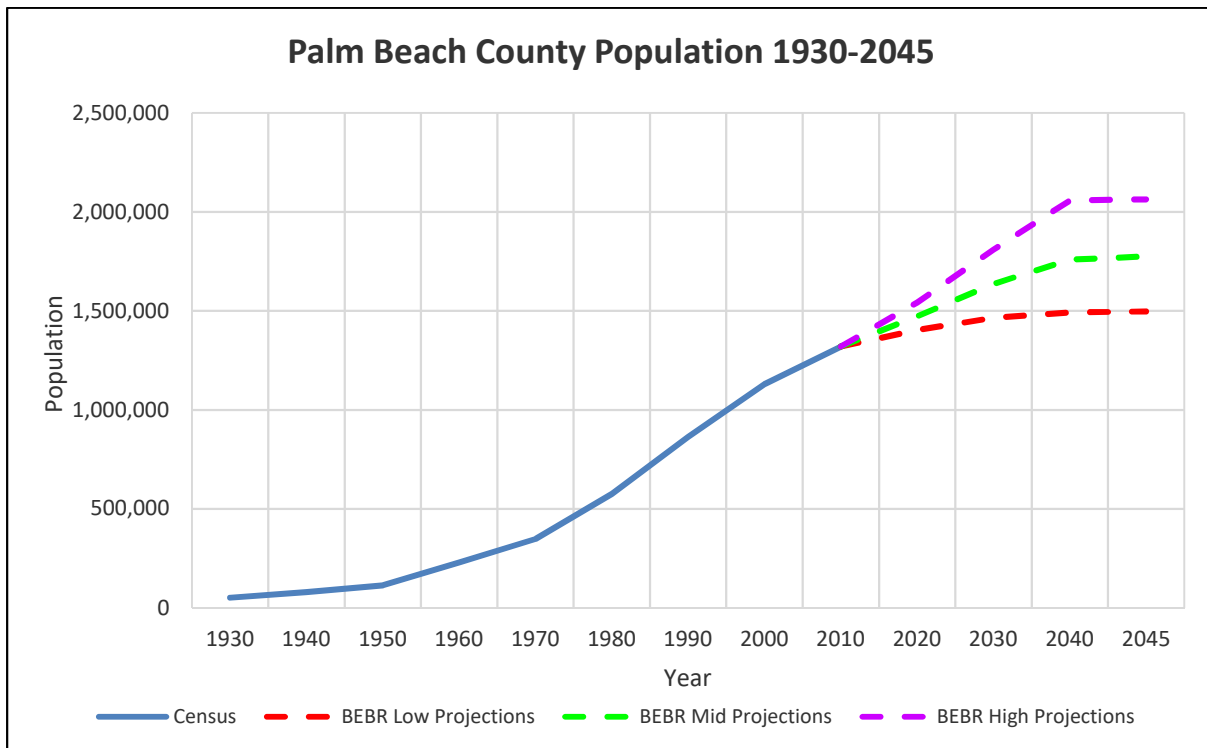
Since 1973, BEBR has developed, and published annually, population projections (low, medium, and high) in five-year increments for all Florida counties. The BEBR mid-range projections are derived from the average of ten projections using four techniques (linear, exponential, share-of-growth, and shift-share) and three different historical base periods, which essentially mitigates the effects of rapid or slow growth, and are considered the most reliable of the three sets of figures.

Table 4: Population Projections, ODER/BEBR 2020

	2010 Census	2020	2025	2030	2035	2040	2045
Low	1,320,134	1,406,300	1,441,300	1,465,900	1,483,700	1,494,900	1,497,500
Medium		1,465,800	1,547,200	1,616,500	1,676,600	1,729,500	1,775,200
High		1,523,500	1,645,400	1,794,200	1,870,700	1,971,800	2,063,600

Source: University of Florida, Bureau of Economic & Business Research, population study, Volume 53, Bulletin 186, January 2020

The graph below clearly shows County population growth between 2010 and 2015. Census decennial data is recorded on the blue line with BEBR projections forecasting potential future growth.



Source: U.S. Census Bureau; Projections from University of Florida, Bureau of Economic & Business Research

Projections issued by ODER/BEBR for Palm Beach County have historically varied significantly from year to year, as shown in Table 5. Following the release of the 2000 Census figures in 2001, BEBR's projection levels for the County sharply increased. For example, the 2000's projection of 2030 population was over 1.6 million, yet 2001's projection of the same year had climbed by 236,300 to 1.873 million and 2005's reached an all-time high of nearly 1.9 million. However, subsequent projections have now fallen, and now have returned to the levels anticipated in 2000.

Table 5: BEBR Countywide Projections by Publication Date

Publication	2010	Change	2020	Change	2030	Change	2040	Change	2045	Change
2000	1,253,000		1,449,500		1,636,100					
2001	1,375,200	122,200	1,630,100	180,600	1,872,400	236,300				
2002	1,371,200	-4,000	1,622,400	-7,700	1,859,200	-13,200				
2003	1,378,300	7,100	1,619,900	-2,500	1,845,300	-13,900				
2004	1,402,300	24,000	1,666,100	46,200	1,908,500	63,200				
2005	1,412,400	10,100	1,673,000	6,900	1,916,200	7,700				
2006	1,417,300	4,900	1,686,200	13,200	1,912,400	-3,800				
2007	1,404,900	-12,400	1,663,700	-22,500	1,879,400	-33,000				
2008	1,335,500	-69,400	1,543,800	-119,900	1,729,500	-149,900				
2009	1,285,700	-49,800	1,420,400	-123,400	1,556,800	-172,700				
2010	1,286,800	1,100	1,415,700	-4,700	1,549,400	-7,400				
2011	1,320,134	33,334	1,482,900	67,200	1,648,000	98,600	1,786,000			
2012			1,461,200	-21,700	1,625,700	-22,300	1,769,500	-16,500		
2013			1,465,300	4,100	1,616,900	-8,800	1,733,300	-36,200		
2014			1,459,500	-5,800	1,605,700	-11,200	1,715,300	-18,000		
2015			1,463,900	4,400	1,615,100	9,400	1,736,500	21,200		
2016			1,472,600	9,700	1,624,000	8,900	1,738,100	1,600	1,789,000	
2017			1,465,900	-6,700	1,619,100	-4,900	1,735,100	-3,000	1,786,600	-2,400
2018			1,473,000	7,100	1,636,400	17,300	1,760,000	24,900	1,809,800	23,200
2019			1,473,700	700	1,641,000	4,600	1,763,200	3,200	1,811,000	1,200
2020			1,465,800	-7,900	1,616,500	-24,500	1,729,500	-33,700	1,775,200	-35,800

Source: University of Florida, Bureau of Economic & Business Research

III. Historical Unincorporated County Population Growth

Historical Population Growth

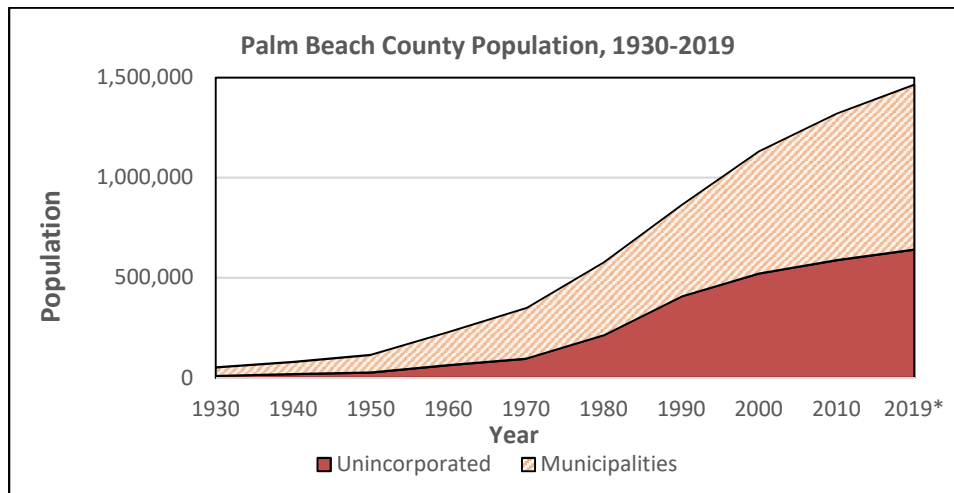
Since the incorporation of the County in 1909, the municipalities, which developed much earlier along the eastern coast, have held the bulk of the County’s population. Starting in the 1960’s, population growth began to move westward into the unincorporated land. Consequently, the municipal population share began to drop steadily through the 1990’s, at which time it reached a plateau of approximately 53%.

Over the past 20 years, municipal population growth has begun to increase. Through active annexations and downtown development or redevelopment, together with the incorporation of the Village of Wellington in 1995, the Village of Loxahatchee Groves in 2006, and the City of Westlake in 2016, the municipal share of the population has crept up to 56%, an increase in over 2 percentage points over the 2000’s share.

Table 6: Census Population Estimates for Unincorporated vs. Incorporated County

Year	Unincorporated		Incorporated		Total
	Population	Share	Population	Share	
1930	9,817	19.0%	41,964	81.0%	51,781
1940	18,905	23.6%	61,084	76.4%	79,989
1950	26,163	22.8%	88,525	77.2%	114,688
1960	63,817	28.0%	164,289	72.0%	228,106
1970	94,935	27.2%	253,818	72.8%	348,753
1980	212,399	36.8%	364,464	63.2%	576,863
1990	406,363	47.1%	457,164	52.9%	863,527
2000	521,447	46.1%	609,744	53.9%	1,131,191
2010	587,844	44.5%	732,290	55.5%	1,320,134
2019*	640,248	43.7%	824,779	56.3%	1,465,027

Source: U. S. Census Bureau, through 2010, *U.S. Census ACS 2019 5-yr estimate



Source: U.S. Census Bureau, through 2010, *U.S. Census ACS 2019 5-yr estimate

IV. Projected Population

Based on the ODER/BEBR projections for the County, the current distribution of existing housing developments and availability of developable residential lands, the 2020 Population Allocation Model shows the projected Unincorporated County populations as follows:

Table 7: Projected County Populations, 2020-2045

	2020	2025	2030	2035	2040	2045
Unincorporated	638,552 43.0%	667,670 42.6%	691,997 42.4%	713,652 42.3%	734,207 42.3%	751,909 42.3%
Incorporated	827,942 57.0%	879,530 57.4%	924,503 57.6%	962,948 57.7%	995,293 57.7%	1,023,291 57.7%
County Total	1,466,494	1,547,200	1,616,500	1,676,600	1,729,500	1,775,200

	2020	2025	2030	2035	2040	2045
East County	1,431,473 97.6%	1,511,239 97.6%	1,578,069 97.7%	1,635,264 97.6%	1,684,882 97.5%	1,725,534 97.4%
West County	35,021 2.4%	35,961 2.4%	38,431 2.3%	41,336 2.4%	44,618 2.5%	49,666 2.6%
County Total	1,466,494	1,547,200	1,616,500	1,676,600	1,729,500	1,775,200

Source: County Total figures BEBR Medium 2020; PBC PZ&B - Planning Division 2020 Allocation Model

V. Population Allocation Model Methodology

Local governments and service providers require small area projections for the planning of future service needs. In particular, the BEBR Countywide total is inadequate for planning public services (parks, libraries, schools), emergency services (Fire-Rescue, Sheriff), and infrastructure (transportation, water and wastewater, solid waste). To this end, the Planning Division developed the Population Allocation Model to distribute BEBR's projections to smaller geographies, namely, the traffic analysis zones (TAZ). Using TAZs, population growth can be summarized into areas such as census tracts, zip codes, or neighborhoods. By modeling projected population in local areas, the Planning Division provides insight into the direction and location of future growth within the County.

In keeping with the methodology used in previous years, the Model incorporates significant land use changes over the past two years, including the following:

- Newly built residential developments
- Land use amendments
- Environmental land purchases
- Adopted neighborhood or redevelopment plans
- New development approvals
- Municipal annexations

The methodology used for the Allocation Model is a housing unit method in which population growth is assumed to occur where houses are being built. Changes in population will be reflected by changes in occupied housing units. (The US Census Bureau has conducted surveys showing that a majority of local government agencies make local population estimates utilizing some form of housing unit method.) Therefore, the assignment of population growth to a locality would depend on the locality's present housing, past growth history, and the capacity for new housing units based on land use policies which either deter or encourage residential development.

The building blocks of the Allocation Model are the 1,447 Traffic Analysis Zones in which residential units are built and/or potentially available. For TAZs with units available, the units are allocated across the years according to the project's projected build-out date. The individual TAZs are then aggregated to arrive at a total County housing stock totals for each year to 2045.

Potential capacity is determined by the amount of developable residential land and the specified density in each jurisdictions' Comprehensive Plans. Considerations for density designations are described in the Housing Supply Section.

The methodology steps for the Population Allocation Model are as follows:

Step One: Converting Population to Occupied Residential Units

The first step in the allocation process is to convert the County's BEBR population estimates/projections to occupied housing units, or the number of households. This is done by subtracting the "group quarters" population from the population totals, and dividing the results by the 2010 Census average person per household (PPH) rate of 2.39. For projections, the PPH is expected to steadily increase to 2.50 by 2035. This constitutes the demand for permanent housing based on BEBR's medium projections.

Person Per Household Rate

The Person Per Household (PPH) rate for the County has been steadily increasing, from 2.32 in 1990, to 2.34 in 2000 and 2.39 in 2010. The population model assumes this trend to continue, so that by 2035, the PPH in Palm Beach County will be 2.50. For individual TAZs, the PPH continues to rely on the 2010 Census; they will, however, adjust themselves during the normalization process.

The Census 2010 average household size nationwide is 2.58, and for Florida it is 2.48. While one may purport smaller household size in South Florida in the future because of the influx of retirees, such conjecture could be countered by a steady influx of immigrants (with historically larger households) and younger families in recent years. Therefore, it is reasonable to expect that the County's PPH, which is well below the state and national average, will rise in the future. As an urban County approaching build-out, our neighboring Broward County's PPH was 2.45 in 2000, which increased to 2.52 in 2010.

Group-Quartered Population

According to the 2010 Census, Countywide group-quartered population (institutionalized and non-institutionalized population) has remained around the same percentage as the reported in Census 2000. The 19,972, group population constitutes 1.51% of the total population in the County.

As South Floridians age, demand for group homes will increase. The 2020 publication of "*Population Projections by Age, Sex and Race and Hispanic Origin for Florida and Its Counties, 2020-2045*" indicates that the 65+ age group will increase by 35% by 2035. Census 2010 showed that of this age group, only 1.9% live in assisted living facilities or other group quarters. Table 8 below shows the projected share of Group Population to the total population.

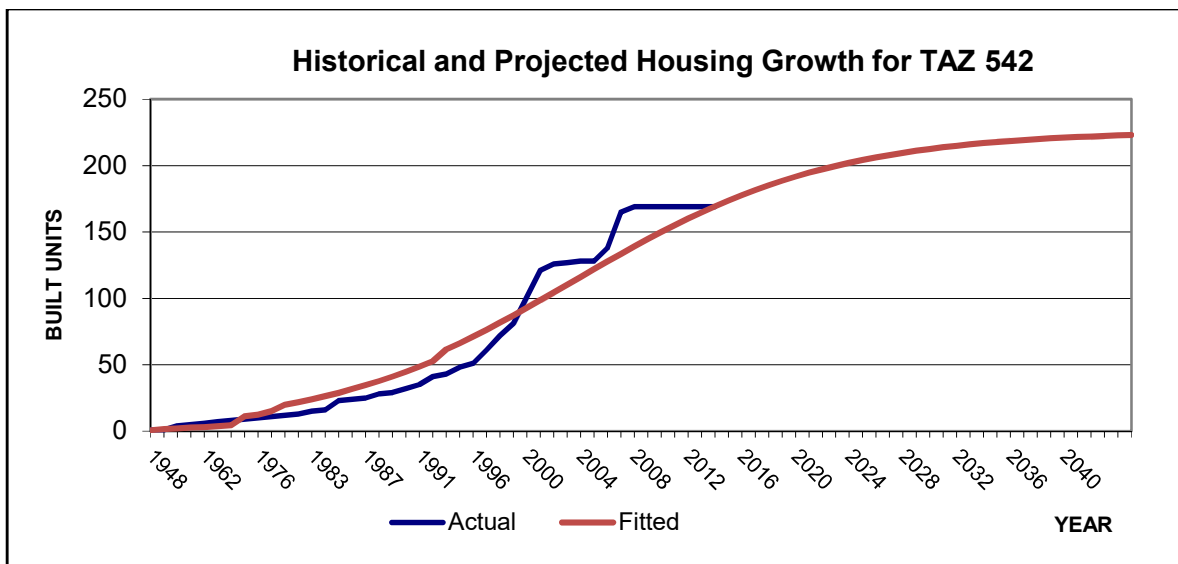
Table 8: Group Population as % of Total Permanent Population

	2010 Census	2020	2025	2030	2035	2040	2045
2020 BEBR projected Population	1,320,134	1,465,835	1,547,210	1,616,487	1,676,582	1,729,472	1,775,242
2020 BEBR projections of 65+	285,155	350,002	399,372	447,102	477,633	493,340	496,948
Seniors in Group Quarters (1.9% of all 65+)	5,434	6,650	7,588	8,495	9,075	9,373	9,442
Others in Group Quarters (1.1% of total pop.)	14,538	16,124	17,019	17,781	18,442	19,024	19,528
Total Group Population	19,972	22,774	24,607	26,276	27,517	28,397	28,970
Group Population as % of Total Pop	1.51%	1.55%	1.59%	1.63%	1.64%	1.64%	1.63%

Source: University of Florida, Bureau of Economic & Business Research

Step Two: Building Growth Models for Individual TAZs

As the County matures, many small areas have established distinct growth patterns. Some are already built out, while many areas have approved projects with projected completion dates. The current methodology examines the growth trend of each individual TAZ, extrapolating it into the future either linearly or logistically (if the TAZ is near build-out). The model also considers project completion dates to depict realistic growth spurts. In all cases, the build-out capacity must be determined, and the historical trends of total built units by year established from the Property Appraiser Data Base. An example of a TAZ’s development trend follows.



Source: PBC PZ&B - Planning Division 2015 Allocation Model

Step Three: Determining Total Countywide Housing Stock, 2020-2045

The sum total of the extrapolated, year by year, built residential developments of these TAZs constitutes the County housing stock to 2045. This constitutes the total supply of housing units for the County for the period.

Step Four: Determining Seasonal Housing Units for TAZs

For the estimation of seasonal housing units for the TAZs, the model again relies on the 2010 Census estimates. The growth of this sector has been surprisingly minimal, from 51,875 units Countywide in 1990, to 53,124 in 2000, to 59,440 in 2010. Its share of housing units has declined from 9.5% in 2000 to 9.05% in 2010. The bulk (over 60%) of seasonal housing is located in the municipalities in the coastal areas. In the unincorporated County, seasonal housing only constitutes about 7.4% of the total housing units.

Growth of seasonal housing has slowed from a 13% share of new housing units in 1990-2000 to 10% in 2000-2010. Maintaining this current share, the Model shows a total 65,000 seasonal units in the County by 2035. As the County's land supply decreases, it is likely that seasonal units will be absorbed by permanent population growth.

Step Five: Determining Market Vacancy Rates for the County and Individual TAZs

Market vacancies for the years through 2045 are determined by taking the difference between total housing units, total seasonal units, and occupied housing units in Step One. They are apportioned to the individual TAZ according to the 2010 Census vacancy rate. Because of the aggressive development activities in the last decade, market vacancies were very high in 2010 (9% countywide), with some zones having a vacancy rate over 20-30%. Information from the annual American Community Survey and the USPS Vacant Address Data provided by the U.S. Department of Housing and Urban Development are used to update and modify these vacancy rates.

Step Six: Conversion Back to Population Estimates

Once the dwelling units have been distributed to the TAZs, they are converted back to population estimates. This is done by subtracting seasonal units and market vacancies from the total built units and multiplying the remaining units (i.e. occupied units) by the TAZ-specific PPH rate. Finally, "group quarters" population is added to reflect the total permanent population for each TAZ. These TAZ specific populations are normalized to add up to the total Unincorporated County and Municipal population estimates for the current year and the BEBR total County projections to 2045.

VI. Housing Supply Assumptions

The Allocation Model, with an individual growth curve for each TAZ, is a realistic way of portraying future housing trends in the County. The Model closely follows the BEBR methodology of using housing units (for which detailed records are available) rather than population as the object of projection. More importantly, the Model takes on local characteristics such as availability of vacant land, approved projects and project completion date, and adopted Comprehensive Plans, etc.

The projections of housing supply year by year differ from forecasts. The former are mere extrapolations (linear or nonlinear) of what went on before. The latter utilize various exogenous economic variables to produce a probable picture of the housing market. In effect the model utilizes housing units as “weights” to allocate BEBR’s Countywide population projections to small geographies. Using these “weights,” the final normalization process forces the individually derived TAZ populations to sum up to the independent BEBR medium County totals. The current and potential housing supply utilizes the following inputs:

1. 2020 Existing Residential Units Calibration

a. Property Appraiser Public Access (PAPA) Parcel Data, with the following corrections:

- i. PAPA often identifies an accessory unit as a unit, even when it is obviously a garage or guest house. These are not included in the population model. Only when the accessory unit has separate entrance and driveway or identified as a grandparent unit (additional tax exemption), it is included in the model.
- ii. Obvious dilapidated (not inhabitable) houses are treated as vacant.
- iii. Housing units in agricultural production or nursery parcels are considered only when there is a homestead associated with the parcel. Otherwise, they are counted as storage.
- iv. Ortho-digital aerials (Source: PBC MyGeoNav), or pictometry are utilized to clarify existing conditions whenever necessary.

b. The 2010 Census PL94-171

During 2009-2010, the Bureau of Census expended much effort to ascertain local addresses and promote residents’ response (overall County response rate was 74%). Besides population, it provided valuable housing tenure (occupied, vacant, seasonal, etc.) information by census blocks, which in turn were aggregated into TAZs. These are the base data for all future allocation models until the next census in 2020. Attempts are made to update market vacancies by the 2009-2013 American Community Survey (available by census block groups) and the HUD_US Postal Service Quarterly Vacancy Data (available by census tracts).

2. Developable and Underutilized lands

All developable unsubdivided parcels of land will be built out to the maximum dwelling unit potential according to each parcel's future land use designation. A parcel is considered developable according to the following criteria:

- a. Some vacant parcels are not developable even with a residential Future Land Use (FLU) designation, because they are buffers, golf courses, or water.
- b. Parcels owned by tax exempt organizations (such as religious organizations) are not given any residential potential when the parcel is exempted from property tax (This indicates that the organization has initiated development process on the parcel.)
- c. All vacant school board properties are not given any residential potential.
- d. All publicly owned lands outside the Urban Service Area (USA) are not given any residential potential. Neither are the urban lands owned by the South Florida Water Management District.
- e. Municipal EARs and Comprehensive Plans are consulted

Potential units yielded by vacant, developable parcels:

- a. Potential units are calculated as max density multiplied by legal parcel acres.
- b. For parcels that may have split FLU designations, potential units are calculated accordingly.
- c. For parcels with a nonresidential/underlying residential FLU, no potential units are assigned, except in the Westgate CRA (where FLU is generally CH/8). Even in this area, parcels along major roads such as Okeechobee Blvd, and Westgate Blvd are considered commercial.
- d. Urban Redevelopment Area (URA) and County Community Revitalization Team Area (CCRT) - Since most of the vacant land in these areas are small parcels, to encourage development in the URA and CCRT areas, maximum permitted Planned Unit Development (PUD) density is applied even if the size of the parcels does not meet the PUD threshold. Impacts on total capacity due to this change are minimal.
- e. The Acreage's future land use designation is Rural Residential, 1 unit per 2.5 acres (RR-2.5). However, the Acreage is composed nearly entirely of 1-1/4 acre or less single-family lots, and development is permitted on each platted parcel. Hence, the potential units assigned to the Acreage are consistent with the number of platted lots in addition to the density pursuant to the RR-2.5 designation for larger unplatted tracts.

Potential units yielded by underutilized parcels:

- a. Un-subdivided Parcels which are built under the maximum residential density are given additional capacity according to their FLU density.
- b. Surrounding parcels' existing density is also considered to maintain consistency and compatibility with surrounding neighborhoods. For example, if the entire area is built under its max potential, no additional unit is assigned.
- c. Some developed equestrian parcels with residential FLUs are not given any residential potential, especially those in Wellington within their equestrian protection boundary, and those owned by equestrian companies. Some equestrian parcels are developable if they are amidst single family neighborhoods.
- d. A few nonconforming nonresidential developments with residential FLU designations are not given residential potential.
- e. Nurseries within the urban service area only are given residential potential according to their designated FLUs.

Transfer of Development Rights (TDR) potentials for Unincorporated vacant and underutilized parcels:

The balance in the TDR bank is apportioned to each vacant and underutilized parcel according to:

- a. 4 du/acre if in CCRT or
- b. 3 du/acre if east of turnpike, within USA
- c. 2 du/acre if west of turnpike, within USA

Agricultural Reserve Development Potential:

- a. Consistent with the Comprehensive Plan, the Model primarily assumes a 1 unit per acre development potential to establish the total development potential within the Agricultural Reserve.
- b. For isolated pockets of low-density residential development, such as areas with single-family homes built on 5-acre tracts, a development potential of 1 unit per 5 acres is assumed.
- c. Pursuant to the Ag Reserve Master Plan, and planned purchases by the South Florida Water Management District (SFWMD), the model shifts future units away from the Loxahatchee National Wildlife Refuge and concentrates the bulk of the future growth between the Florida Turnpike and State Road 7.
- d. The Model does not assign development potential to the properties currently owned by SFWMD or by the County.

Land Owned by Districts, State and Local Governments

The Florida Department of Environmental Protection, SFWMD, Lake Worth Drainage District, Indian Trail Improvement District, and various local government entities have acquired land in the County with residential development rights. The Model retains their residential potential only if these tracts of land lie inside the Urban Service Area, east of the 20 Mile Bend and/or have not received a Conservation future land use designation.

Other Additional Development Capacities

These are added at the TAZ level whenever the provision for potential development is not parcel specific. These are:

- a. Approved Unbuilt and unplatted residential projects. Expired projects are taken out, and regular potential units according to the land's FLUs are included.
- b. Adopted Redevelopment plans, Boca Raton DRI, Municipal TCEAs, URA (Congress, Military and Lake Worth Corridors).

Inland Port in the Glades

Population growth in the West County has been essentially flat for decades. This is despite thousands of acres designated for urban residential uses. The approval of the Inland Logistics Center in the Unincorporated County, between Belle Glade and South Bay, has added 850 acres of industrial land to the West County, having amended the land use from LR-3 to IND. The Center, however, will be a major source of employment, which will in turn encourage residential developments in the proximity areas.

VII. Future Updates of the Model

The Model is kept dynamic by updates **every other year**, accounting for density changes, newly approved development or redevelopment projects, annual BEBR population estimates, and any demographic shifts depicted by the annual American Community Survey. The County's Model is based on BEBR medium projections and the supply of housing as specified from the County's currently adopted land use policies.

VIII. Description of Data Sources

The following data sources are utilized for the development of the model:

Bureau of Economic and Business Research, University of Florida - 2020 Population Estimate
https://www.bebr.ufl.edu/sites/default/files/Research%20Reports/estimates_2020.pdf

Bureau of Economic and Business Research, University of Florida - 2020 Population Projection
https://www.bebr.ufl.edu/sites/default/files/Research%20Reports/projections_2020.pdf

Property Appraiser's Data Files, Palm Beach County – 2020 Parcel-based data giving current built conditions.

Planning Division, PZ&B - Residential Projects Database
http://www.pbcgov.com/pzb/planning/residential_projects/index.htm

Planning Divisions, most major municipalities – Municipal Residential Projects approvals

Building Division, PZ&B – Certificate of Occupancy Data base - provides data check to the Property Appraiser data, as there may be a lag time of up to one year for a newly built home to be put on the tax roll.

Building Division, PZ&B – Building Permit Summary Reports
<http://www.pbcgov.com/pzb/Planning/permitreports/>

U.S. Census Bureau, Washington D.C. - 2010 U.S. Census PL 94-171 and Summary File 1: The decennial Census provides data regarding seasonal units, vacant units, occupancy rates, persons per household rates, group quartered population, by Census Tracts and Block Groups and Blocks.

U.S. Census Bureau, Washington D.C – 2018-2019 Population Estimates and component changes, developed as of July 1, for federal funding allocations by the Bureau's Population Estimate Program

U.S. Census Bureau, Washington D.C. - 2015-2019 American Community Survey

HUD_U. S. Postal Service - HUD Aggregated USPS Administrative Data on Address Vacancies, available from <http://www.huduser.org/portal/datasets/usps.html>

IX. Appendix

This section provides the actual data generated by the Model. The data are available electronically on the County's Planning Division web page at this link:

<http://www.pbcgov.com/pzb/Planning/population/index.htm>

Table 1. Countywide Population by TAZ

Table 2. Unincorporated County Population by TAZ

Table 3. Countywide Population by Jurisdiction

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