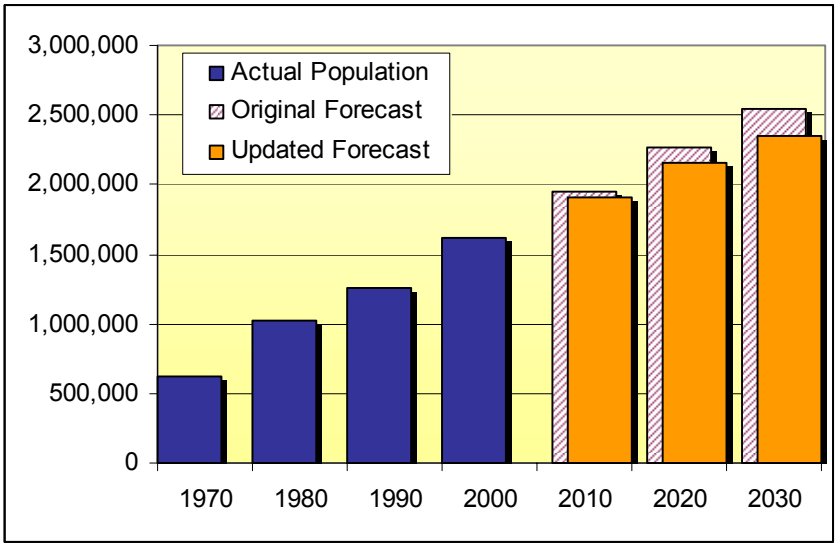
Broward County Population Forecasting Model Annual Update, 2005

1. Introduction

In 2002, the Broward County Planning Services Division published a thirty year population forecast, based on Census 2000.[1.] The Broward County Population Forecasting Model (BCPFM) showed an increase in population from 1.6 million in 2000 to 2.5 million in 2030 - a 1.9 percent annual growth rate. Subsequently, in 2004, the projections were incorporated into the Broward County Comprehensive Plan Evaluation and Appraisal Report (EAR). Concurrently, county staff worked with municipal staff, though the Broward County Population Roundtable, to allocate projected growth between the 892 Traffic Analysis Zones and 30 municipalities in the county. [2]

In 2005, the model was recalibrated using newly released data for 2000 through 2004 (including births, school enrolment, and net migration) resulting in updated forecasts, shown in Figure 1. A comparison between the 2002 and 2005 forecasts, shows similar short-term population growth, but slightly lower rate of long-term growth (beyond 2015). Updated projections show total population increase of 725,534, between 2000 and 2030; whereas the earlier model showed 925,285. The difference (0.4 percent annually over 30 years) is not significant, as shown in Figure 2. The projected growth of the county remains substantial: exceeding 2.3 million residents by 2030.

Fig. 1 - Past and Projected Future Population, 1970 to 2030



Sources: U.S. Bureau of the Census, 1970-2000; BCPFM, 2000-2030

1 Broward County Population Forecasting Model - Countywide Projections 2002 - http://gis.broward.org/psd/poppro.pdf
2 Municipal and Traffic Analysis Zone Allocations, 2004 - http://www.broward.org/urbanplanning/population_forcasting.pdf

Fig. 2 - Past and Projected Future Population Growth Rates, 1970 to 2030

Date	County Population		Average Annual Growth Rate
Actual Growth:			
1970	620,100		8.6%
1980	1,018,257		6.4%
1990	1,255,488		2.3%
2000	1,623,018		2.9%
Projections:	**Original (2002):**	**Updated (2005):**	
2005	1,789,916	1,765,855	1.8%
2010	1,954,572	1,905,271	1.6%
2015	2,117,038	2,038,381	1.4%
2020	2,273,251	2,159,926	1.2%
2025	2,418,641	2,264,855	1.0%
2030	2,548,303	2,348,552	0.7%
30 Year Growth:			
1970-2000	1,002,918		5.4%
2000-2030	925,285	725,534	1.5%

Sources: U.S. Bureau of the Census, 1970-2000; BCPFM, 2000-2030

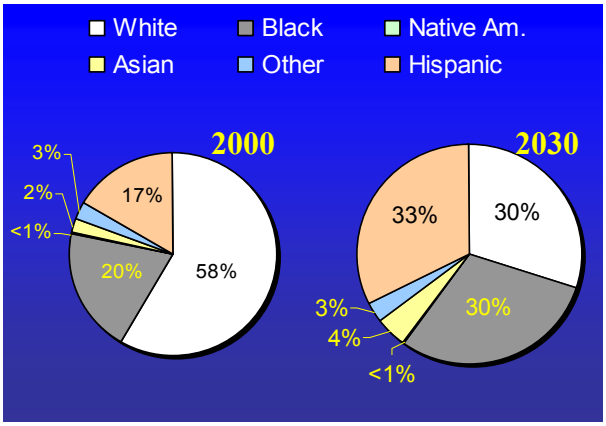
In 2000, 1.6 million people lived in Broward County; currently the population is 1.7 million. The 2005 Update of the BCPFM shows that Broward County's population will grow by more than 700,000 between 2000 and 2030. Over the next 25 years, the population is projected to grow at an average rate of 1.3 percent per year, reaching 2.35 million by 2030. Although this rate of growth is less than that of earlier decades, the number of new residents – more than 700,000 - will be significant, especially since the County will reach build out in 2010. Redevelopment will be necessary to accommodate the anticipated growth.

2 Countywide Population Trends

Population projections extrapolate trends from the past into the future; small changes in early years have a magnified impact in later years. In the process of updating the model, several trends contributed to the adjusted population totals: greater growth in the Black Non-Hispanic population; lower levels of in-migration; and slightly lower births. These changes predominantly impact the population growth beyond 2015.

Broward County will become increasingly diverse: Hispanic and Black/African American populations will grow significantly by 2030. By 2030, it is projected that only 30 percent of the population will be White Non-Hispanic, down from 58 percent in 2000. The Hispanic population will see the largest increase (from 17 percent in 2000 to 33 percent by 2030). Also the Black/African-American population will increase to 30 percent by 2030.

Fig. 3 – Population by Major Racial Groups, 2000 and 2030

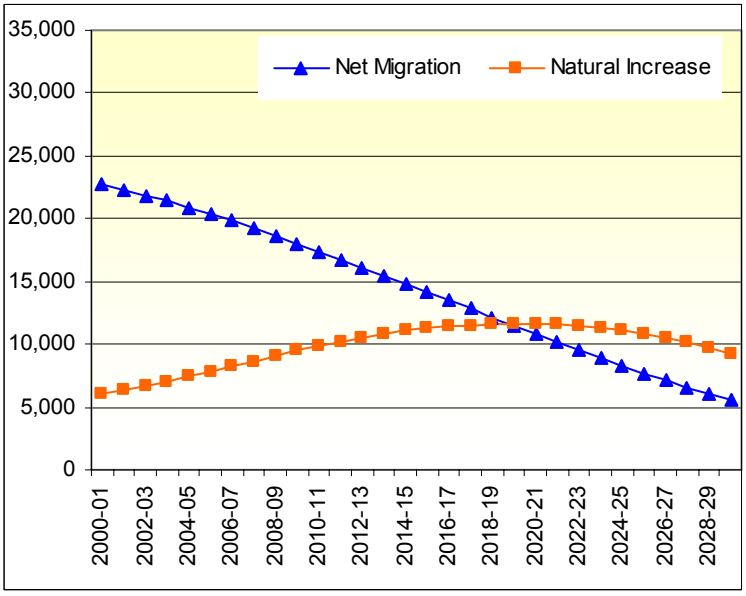


Year	Hispanic	Non-Hispanic: White	Black	Other Races
2000	271,652	941,674	325,305	84,387
2010	462,281	840,216	475,770	127,004
2020	642,075	751,186	604,674	161,991
2030	764,315	706,993	695,048	182,196

Sources: U.S. Bureau of the Census, 2000; BCPFM Update, 2005

Historically, Broward County's growth has been driven by net migration. During the 1980s, the natural increase was negative (deaths exceeded births). However, it is expected that by 2019, natural increase will become the predominant growth factor in Broward County. By 2030, out-migration will largely off set in-migration, births will stabilize and life expectancy will increase. By 2019, natural increase will exceed net migration for the first time. Natural increase is the difference between the number of births and the number of deaths each year. Net migration equals the number of people moving into the County minus the number of people moving out of the County. It includes domestic and international migrants.

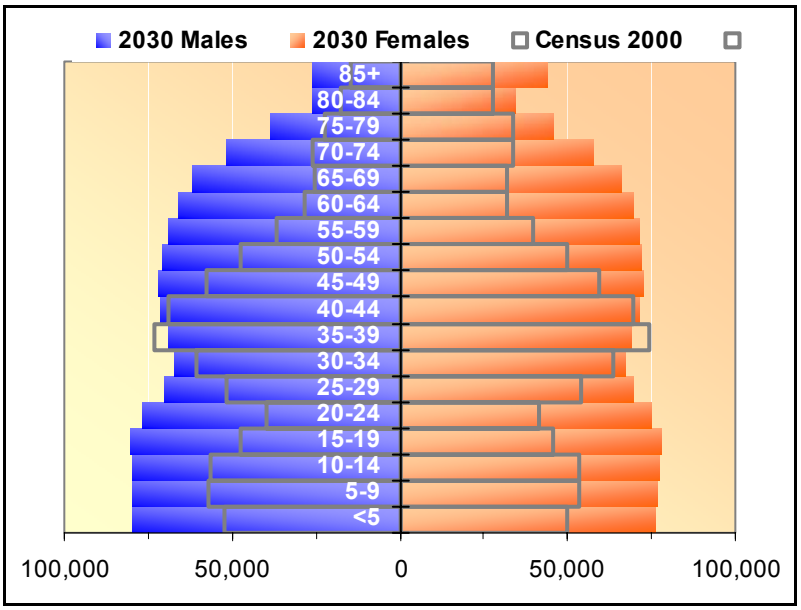
Fig. 4 – Projected Net Migration and Natural Increase, 2000 and 2030



Source: BCPFM Update, 2005

By 2030, the "baby boomers" will be seniors. The distribution of the population by age will change between 2000 and 2030. In 2000, the largest population group was the "baby boom" – 31 percent of the population was aged 35 to 54 in 2000. By 2030, this generation will have aged to the 65 to 84 age group. However, the impact of the baby boom will diminish, as they will represent only 18 percent of the total population in 2030.

Fig. 5 – Projected Population by Age Cohort, 2030



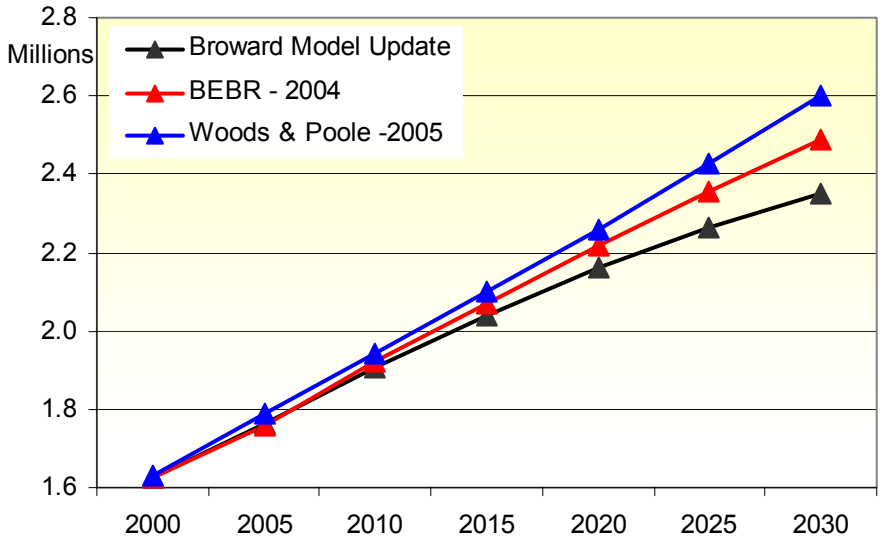
	Preschool Age < 5	School Aged 5 to 17	Adults 18 to 64	Seniors 65+
2000	103,041	279,888	978,980	261,109
2010	135,287	335,513	1,178,054	256,417
2020	151,771	388,955	1,293,935	325,265
2030	156,162	407,676	1,333,919	450,795

Sources: U.S. Bureau of the Census, 2000; BCPFM Update, 2005

3. Comparison with other population forecasts

The Broward Model Update population projections were compared with two other models. The State of Florida's Bureau of Economic and Business Research (BEBR) and Woods & Poole, a private company specializing in demographic and economic information both calculate projections for Broward County. Compared to these two sources, the Broward Model projections are slightly lower than the other two series. This difference is primarily due to the Broward Model's use of local data and trends to compile the projections, rather than pro-rating a statewide or national forecast.

Fig. 6 – Comparison of Population Projections, 2000 to 2030



Sources: Broward County Population Forecasting Model Update, 2005; University of Florida., Bureau of Economic and Business Research,2004; and Woods & Poole Economics, Inc., 2005.

4. Distribution of Population Growth in the County

With the assistance of municipal partners in the Broward County Population Forecasting Roundtable, these projections will be assigned to Broward County's 31 municipalities and 902 new traffic analysis zones. The resulting update to the distribution of growth is expected to be published in August 2005.

For additional information about the Broward County Population Forecasting Model please visit our web site at www.broward.org/planningservices

APPENDIX

TABLE 1 – Projected Population by Race and Ethnicity.

Year	Hispanic	Non-Hispanic: White	Black	Native Am.	Asian	Other	Total
2000	271,652	941,674	325,305	2,934	36,816	44,637	**1,623,018**
2001	289,489	933,191	340,548	3,096	39,430	46,137	**1,651,891**
2002	307,730	924,051	355,827	3,262	42,147	47,542	**1,680,559**
2003	326,337	914,410	371,107	3,416	44,890	48,923	**1,709,083**
2004	345,260	904,345	386,371	3,581	47,693	50,294	**1,737,544**
2005	364,458	893,937	401,589	3,737	50,517	51,617	**1,765,855**
2006	383,851	883,288	416,684	3,907	53,360	52,908	**1,793,998**
2007	403,392	872,488	431,684	4,104	56,203	54,161	**1,822,032**
2008	423,020	861,655	446,544	4,306	59,065	55,361	**1,849,951**
2009	442,679	850,871	461,254	4,501	61,913	56,522	**1,877,740**
2010	462,281	840,216	475,770	4,675	64,705	57,624	**1,905,271**
2011	481,781	829,699	490,051	4,859	67,482	58,673	**1,932,545**
2012	501,097	819,417	504,075	5,036	70,242	59,664	**1,959,531**
2013	520,152	809,443	517,832	5,219	72,937	60,603	**1,986,186**
2014	538,903	799,826	531,288	5,403	75,576	61,495	**2,012,491**
2015	557,284	790,608	544,413	5,578	78,157	62,341	**2,038,381**
2016	575,244	781,819	557,209	5,753	80,676	63,120	**2,063,821**
2017	592,744	773,456	569,637	5,927	83,103	63,850	**2,088,717**
2018	609,745	765,548	581,704	6,092	85,462	64,536	**2,113,087**
2019	626,193	758,102	593,380	6,246	87,710	65,178	**2,136,809**
2020	642,075	751,186	604,674	6,388	89,860	65,743	**2,159,926**
2021	657,339	744,748	615,603	6,524	91,905	66,265	**2,182,384**
2022	671,981	738,792	626,152	6,652	93,851	66,745	**2,204,173**
2023	685,977	733,307	636,270	6,776	95,677	67,171	**2,225,178**
2024	699,309	728,266	645,976	6,899	97,399	67,581	**2,245,430**
2025	711,936	723,685	655,268	7,012	99,002	67,952	**2,264,855**
2026	723,851	719,538	664,121	7,114	100,492	68,296	**2,283,412**
2027	735,051	715,822	672,539	7,206	101,890	68,624	**2,301,132**
2028	745,534	712,502	680,487	7,293	103,135	68,926	**2,317,877**
2029	755,293	709,556	688,004	7,378	104,274	69,198	**2,333,703**
2030	764,315	706,993	695,048	7,454	105,294	69,448	**2,348,552**

Source: Broward County Population Forecasting Model Update 2005

TABLE 2 - Projected Population Growth due to Natural Increase and Net Migration.

Year	Births	Deaths	Net natural increase	In migration	Out migration	Net Migration	Population change
2000-01	21,888	15,810	6,078	122,218	99,423	22,795	28,873
2001-02	22,233	15,910	6,323	123,100	100,755	22,345	28,668
2002-03	22,647	15,988	6,659	123,916	102,051	21,865	28,524
2003-04	23,075	16,033	7,042	124,776	103,357	21,419	28,461
2004-05	23,498	16,066	7,432	125,492	104,613	20,879	28,311
2005-06	23,879	16,098	7,781	126,185	105,823	20,362	28,143
2006-07	24,326	16,127	8,199	126,876	107,041	19,835	28,034
2007-08	24,801	16,145	8,656	127,494	108,231	19,263	27,919
2008-09	25,286	16,174	9,112	128,034	109,357	18,677	27,789
2009-10	25,745	16,222	9,523	128,509	110,501	18,008	27,531
2010-11	26,145	16,255	9,890	128,985	111,601	17,384	27,274
2011-12	26,526	16,304	10,222	129,414	112,650	16,764	26,986
2012-13	26,894	16,338	10,556	129,777	113,678	16,099	26,655
2013-14	27,238	16,408	10,830	130,125	114,650	15,475	26,305
2014-15	27,562	16,487	11,075	130,418	115,603	14,815	25,890
2015-16	27,847	16,580	11,267	130,685	116,512	14,173	25,440
2016-17	28,107	16,689	11,418	130,899	117,421	13,478	24,896
2017-18	28,349	16,816	11,533	131,090	118,253	12,837	24,370
2018-19	28,572	16,971	11,601	131,215	119,094	12,121	23,722
2019-20	28,785	17,125	11,660	131,314	119,857	11,457	23,117
2020-21	28,991	17,312	11,679	131,367	120,588	10,779	22,458
2021-22	29,172	17,541	11,631	131,431	121,273	10,158	21,789
2022-23	29,320	17,807	11,513	131,425	121,933	9,492	21,005
2023-24	29,439	18,088	11,351	131,418	122,517	8,901	20,252
2024-25	29,528	18,380	11,148	131,381	123,104	8,277	19,425
2025-26	29,594	18,717	10,877	131,326	123,646	7,680	18,557
2026-27	29,631	19,059	10,572	131,297	124,149	7,148	17,720
2027-28	29,649	19,464	10,185	131,187	124,627	6,560	16,745
2028-29	29,637	19,870	9,767	131,103	125,044	6,059	15,826
2029-30	29,600	20,325	9,275	131,017	125,443	5,574	14,849

Source: Broward County Population Forecasting Model Update 2005

TABLE 3 – Projected Population by Age Group.

Year	Preschool Age <5 years		School Age 5 to 17 years		Working Age Adults 18 to 64 years		Senior Adults 65+ years		Total Population
2000	103,041	6.3%	279,888	17.2%	978,980	60.3%	261,109	16.1%	1,623,018
2001	107,297	6.5%	285,838	17.3%	1,000,786	60.6%	257,970	15.6%	1,651,891
2002	111,925	6.7%	291,058	17.3%	1,022,445	60.8%	255,131	15.2%	1,680,559
2003	116,517	6.8%	295,866	17.3%	1,043,733	61.1%	252,967	14.8%	1,709,083
2004	121,154	7.0%	300,392	17.3%	1,064,974	61.3%	251,024	14.4%	1,737,544
2005	124,310	7.0%	306,224	17.3%	1,085,211	61.5%	250,110	14.2%	1,765,855
2006	126,435	7.0%	312,593	17.4%	1,105,483	61.6%	249,487	13.9%	1,793,998
2007	128,601	7.1%	318,609	17.5%	1,125,232	61.8%	249,590	13.7%	1,822,032
2008	130,800	7.1%	323,792	17.5%	1,143,594	61.8%	251,765	13.6%	1,849,951
2009	133,042	7.1%	329,543	17.5%	1,161,277	61.8%	253,878	13.5%	1,877,740
2010	135,287	7.1%	335,513	17.6%	1,178,054	61.8%	256,417	13.5%	1,905,271
2011	137,503	7.1%	341,351	17.7%	1,194,676	61.8%	259,015	13.4%	1,932,545
2012	139,629	7.1%	347,154	17.7%	1,208,525	61.7%	264,223	13.5%	1,959,531
2013	141,637	7.1%	353,127	17.8%	1,221,187	61.5%	270,235	13.6%	1,986,186
2014	143,497	7.1%	359,051	17.8%	1,233,786	61.3%	276,157	13.7%	2,012,491
2015	145,197	7.1%	365,047	17.9%	1,245,135	61.1%	283,002	13.9%	2,038,381
2016	146,785	7.1%	370,878	18.0%	1,256,170	60.9%	289,988	14.1%	2,063,821
2017	148,231	7.1%	376,535	18.0%	1,266,352	60.6%	297,599	14.2%	2,088,717
2018	149,538	7.1%	381,308	18.0%	1,276,213	60.4%	306,028	14.5%	2,113,087
2019	150,715	7.1%	385,314	18.0%	1,285,810	60.2%	314,970	14.7%	2,136,809
2020	151,771	7.0%	388,955	18.0%	1,293,935	59.9%	325,265	15.1%	2,159,926
2021	152,732	7.0%	392,273	18.0%	1,301,937	59.7%	335,442	15.4%	2,182,384
2022	153,615	7.0%	395,272	17.9%	1,309,024	59.4%	346,262	15.7%	2,204,173
2023	154,386	6.9%	397,939	17.9%	1,315,003	59.1%	357,850	16.1%	2,225,178
2024	155,051	6.9%	400,306	17.8%	1,320,271	58.8%	369,802	16.5%	2,245,430
2025	155,575	6.9%	402,361	17.8%	1,324,000	58.5%	382,919	16.9%	2,264,855
2026	155,966	6.8%	404,091	17.7%	1,327,361	58.1%	395,994	17.3%	2,283,412
2027	156,217	6.8%	405,492	17.6%	1,330,107	57.8%	409,316	17.8%	2,301,132
2028	156,329	6.7%	406,540	17.5%	1,332,196	57.5%	422,812	18.2%	2,317,877
2029	156,305	6.7%	407,269	17.5%	1,333,482	57.1%	436,647	18.7%	2,333,703
2030	156,162	6.6%	407,676	17.4%	1,333,919	56.8%	450,795	19.2%	2,348,552

Source: Broward County Population Forecasting Model Update 2005

TABLE 4 - Comparison with Population Projections by Others.

Projection series and publication date	2005	2010	2015	2020	2025	2030
Broward County Population Forecasting Model (Update, April 2005)	1,765,855	1,905,271	2,038,381	2,159,926	2,264,855	2,348,552
University of Florida BEBR (July 2004)	1,755,900	1,919,300	2,068,100	2,215,600	2,357,000	2,488,300
Woods & Poole (Jan 2005)	1,791,180	1,942,740	2,099,700	2,260,630	2,427,080	2,602,610