

**Joint Center for Housing Studies
Harvard University**

**Household Projections in Retrospect and Prospect:
Lessons Learned and Applied to New 2005-2025 Projections**

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Introduction

This release of household projections is the tenth set that the Joint Center for Housing Studies has issued over the past three decades. Each prior set of projections were produced to either take advantage of recent information—such as new decennial census data or new Census Bureau population projections, to introduce refinements into the projection methodology, to correct for assumptions that were proven by history to be incorrect, or to broaden the geographic, race/ Hispanic origin, or family status detail in the projections. This release is no exception.

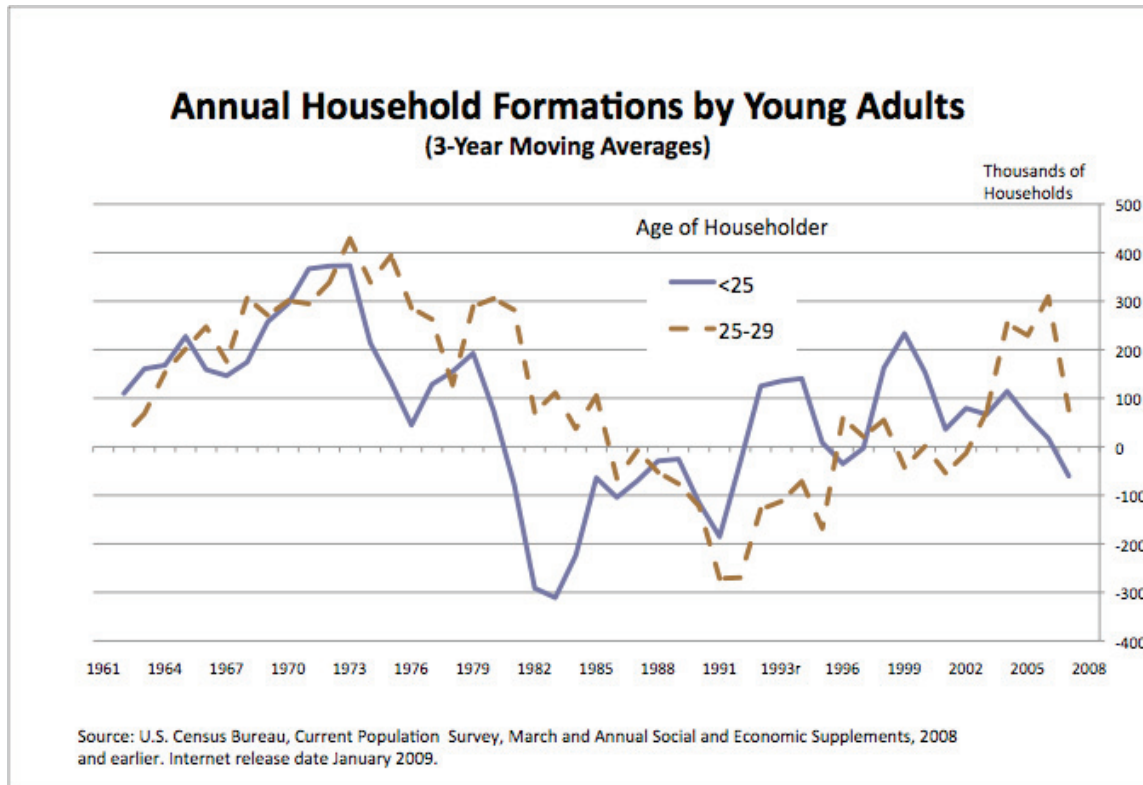
While the main impetus for revised household projections was the long-awaited 2008 release of revised Census Bureau national population projections, we have also taken the opportunity to shift the methodology to one that focuses on the split between partner and non-partner household formation, first considered experimentally in our 2006 releases. This shift from the previous focus on family and non-family household formation is to better accommodate the growing number of mixed and same-sex couples who are cohabiting without being married but behaving in many ways like previous generations of married couples, including sharing joint banking accounts, buying houses together, and having or adopting children outside of marriage. The new methodology also shifts single parents without a partner into a category that contains other non-partnered adults, whereas formerly they were included with married couples in the broad family household category. We further distinguish between single parents without another adult present and ones where there are at least one other non-partner adult. Analysis reveals that these two-types of single-parent households have different average characteristics.

The constantly shifting demographic and economic context over the past 30 years has demanded that our attention focus on how, sequentially and cumulatively, the post-World War II baby boom, the baby bust, and now the echo boom generations contribute to total household growth as they pass through the household formation age groups under very different historical conditions. Each new generation not only differs in size, but has entered the peak household formation ages during periods of either sweeping social trends or shifting economic conditions. The baby boom first formed households in the 1960s and 1970s during fundamental changes in marriage and divorce, and during a period that also saw great gains in female labor force participation, and during the stagflation and oil crisis of the 1970s. The baby bust came of age during a period that began with the 1980s recession and ended during the 1990s with the longest economic expansion in American history. This was also a period when a sharp rise in

immigration had begun to fundamentally change the face of post-World War II America. The echo boom is now poised to form households and enter the housing market during a period that has begun with perhaps the worst economic times since the Great Depression, but also during a time when the housing stock has never been more plentiful or in better condition. After 2010, the baby boom generation will begin to increasingly turn the housing it now occupies over to younger cohorts. At the same time, generations older than the baby boom are at advanced ages when mortality rates turn sharply higher. These older generations, concentrated mostly in cities and inner-ring suburbs, have been and will continue to turn their houses over to the younger generations as well.

The oldest baby boomers born between 1946 and 1955 began entering young adulthood in the mid-1960s during a very favorable economy, when unemployment rates and interest rates were quite low. Parental homes were crowded with younger siblings, motivating these older boomers to strike out on their own; the new freedoms being sought by young adults during the cultural and sexual revolutions of this period could best be discovered out from under the parental roof. Household formations of young baby boomers in their teens and 20s were at record levels during the early 1970s (Figure 1).

Figure 1 – Young Baby Boomers Formed Households in Record Numbers in the Late 1960s and Early 1970s



The younger (and larger) part of the baby boom generation born between 1956 and 1965 didn't reach young adulthood until the late 1970s and early 1980s, when record mortgage interest rates and high unemployment set a context where new household formations by the younger baby boomers did not reach its full potential given its continued delays in marriage, and high divorce rates among those who did marry. Larger than the leading edge of the baby boom, younger boomers failed to produce as many households as they passed through their 20s as had the leading edge ten years earlier. Parental homes occupied by these younger boomers had begun to empty out after older brothers and sisters had fledged the nest, perhaps making it easier for them to continue to live in the parental home later in their young adult lives. Also, parents of these younger boomers might have become less "controlling" around the house as mothers of older children began (re)entering the labor force in record numbers. Stiff competition for good entry-level jobs in the 1980s already held by the oldest boomers meant that additional higher education might serve the younger boomers to good advantage, further postponing independent household formation.

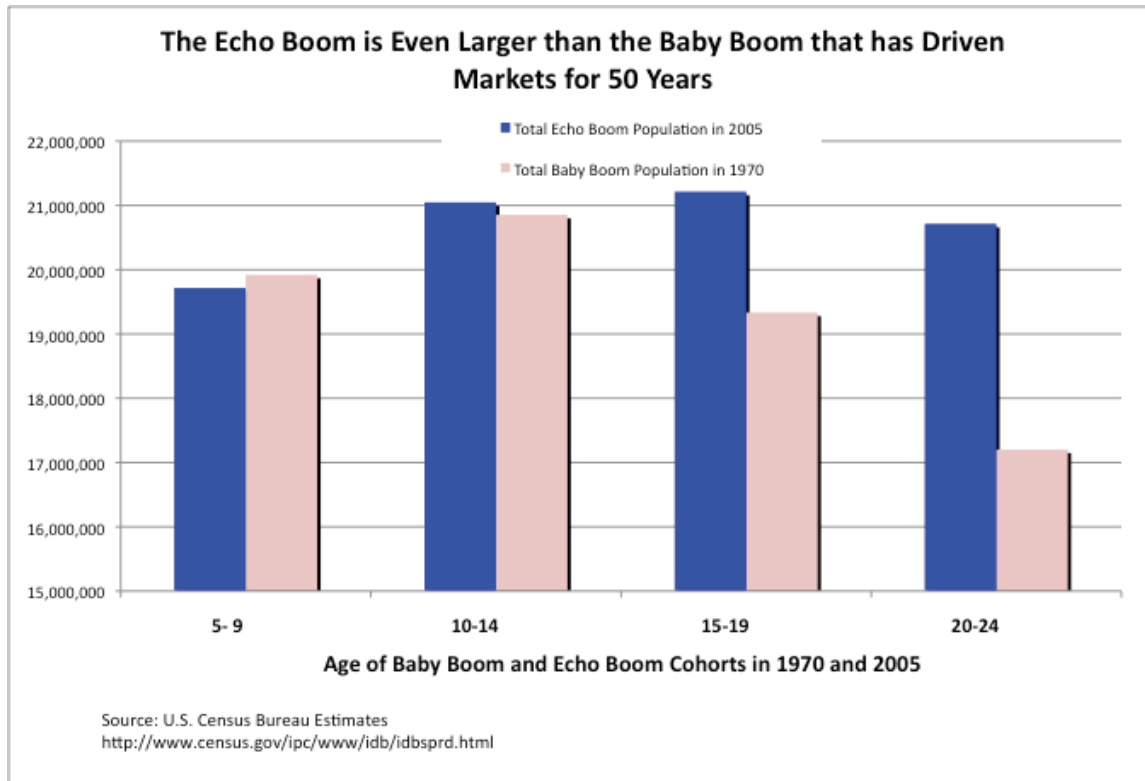
As the baby bust born 1966-1980 began entering young adulthood in the late 1980s and early 1990s, they did so during a period when the economy was restructuring around high technology, so economic conditions steadily brightened as they aged. Their smaller number was the decisive factor leading to low numbers of new household formations by young adults during this period. This decline was not as steep as it might have been because of two counterbalancing factors. First, the improving economy during the late 1980s and throughout most of the 1990s meant that younger baby boomers eventually did leave the parental nest and continued to form new households while well into their 30s adding to baby bust household formation. Second, immigration levels began to turn sharply upward by the end of the 1990s. Given the concentration of newly arriving immigrants in the 25-35 age group, they backfilled the baby bust generation and inflated its size.

Today, the echo boom generation, comprising the largest young adult cohorts ever to reside in the United States, is entering the prime household formation ages. The leading edge of echo boomers born between 1981 and 1990 began to turn 25 in 2005. In that year the size of the 15-24 age group was over 5 million larger than the leading edge of the baby boom (in the same age group) was in 1970 (Figure 2). But these echo boomers age 15-24 in 2005 were still only about 10.8 percent foreign born. By contrast, in 2005 the leading edge of the baby bust generation had already reached 20.4 percent foreign born when they were age 30-39 because immigration added so many persons to this age cohort once they reached their 20s and 30s. The oldest cohort of baby boomers at age 50-59 had reached only 11.9 percent foreign born—up from merely 2.3 percent foreign born when they were age 15-24 in 1970. We expect future immigration to further swell the ranks of echo boomers when they too reach middle age. If future levels of immigration were to boost the number of echo boomers to the same degree that immigration boosted the size of the baby bust generation between 1990 and 2005, then future levels of annual new household formation by young adults could very well set new records over the next 20 years.

Net annual total household formations across all age groups, however, will not be as large as it was in the 1970s because of the dissolution of households of the aging, but enormous, baby boom cohorts. If future immigration levels are instead in the lower range that inflated the size of baby boom cohorts in the 1970s and 1980s, new household formation by the echo boomers would be significantly lower, but still high enough to make net household formations across all

age groups as high as the period between 1995 and 2005. Just how much immigration has changed and will change cohort size and composition is critical to the number and type of households ultimately formed by each generation.

Figure 2 – The Changing Age Structure Will Boost Levels of Household Growth Over the Next Two Decades and Beyond



Each decade’s set of household projections released since 1980 has focused on the size, composition and household formation behavior of successive generations. The narrative of why and how each set of projections was produced, and what they showed, is generally instructive about many of the details of both assumptions and results in the present set of household projections. Therefore, our discussion will begin with the lessons learned from our early forecasts of changing U.S. household growth and composition.

The 1980s Projections – Cohort Trends Matter and Immigration Becomes Increasingly Important

In the late 1970s Harvard's Joint Center for Urban Studies¹ received a grant from the U.S. Department of Housing and Urban Development Office of Policy Development and Research to produce projections of future housing demand.² By the late 1970s it was generally understood by housing analysts that the baby boom generation was forming households and consuming housing unlike any generation that came before. Previous models that were used to forecast behavior relied on assumptions that, as cohorts aged, they would more or less follow in the footsteps of the generation that came before them. But baby boomers were spending more and more of their adult years outside of marriage, having fewer children of their own, and consuming more and more housing per capita of different types than was true of their parents' generation.

A key element of these first Joint Center housing consumption projections was breaking down households by detailed categories of age and sex of head, marital status, and presence of children. Sixteen separate "family nuclei" groups were projected and their expected household formation and housing consumption behavior predicted based upon a model that followed the behavior of cohorts as they aged between 1960 and 1975.³ When multiplied by the 18 five-year age groups the model tracked (15-19, 20-24... 85+), this resulted in 288 demographic categories that needed to be followed over time in order to track cohort behavior. It was shown that:

Among never married and previously married individuals and heads of families there was a strong, consistent trend toward higher headship rates (proportion heading own household) among later cohorts at each age. Also, among the same groups, the within-cohort net transitions to headship at each age tended to be slightly more rapid toward the end of the 15-year period. As a result of these complimentary shifts, the cohort model implies a continuation of the increases in headship at all ages (p.33).

¹ The name of the Center was changed to the Joint Center for Housing Studies in 1985 to reflect the more specialized research agenda the Center had committed itself to when H. James Brown took over as Director.

² That research was published in John Pitkin and George Masnick, "Projections of Housing Consumption in the U.S., 1980-2000, by a Cohort Method," *Annual Housing Survey Studies No. 9*, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, June 1980.

³ The list includes four categories of married couples with different numbers of children present, three categories of unmarried male heads by marital status and presence of children, and nine categories of unmarried female heads by marital status and presence of children.

The driving force for having such extreme demographic detail was not an *a priori* argument that this was necessary to track headship rates or produce the household projections, but that the fine demographic detail was necessary to translate the household growth into the demand for housing of different types and sizes for the different family nuclei types. The cohort models used in this initial set of Joint Center projections, in addition to showing higher household headship, forecast higher rates of homeownership, a movement to larger units, a decline in small single-family houses, an increase in apartment units, and the emergence of mobile homes as an important segment of housing consumption. Condominium conversions and new construction did not emerge as an important phenomenon until after 1975, so were not considered in this initial research.

This inaugural set of projections argued that patterns of change were shaped by three forces: established differences across cohorts, normal cohort rates of net transition as cohorts age, and period effects that are peculiar to one time span. The period effects for 1960-1975 data used to create these early projections were highly positive. Growth in real income was especially rapid during the 1960s when the mean income of men increased at an annual rate of 2.5 percent and of families at a rate of 3.3 percent. The boost in family income growth was due to increasing labor force participation of women. The 1970-1975 period saw a slowdown in this income growth, but it was still positive. The projections produced six household growth scenarios, three in Series A based upon the higher growth in headship of the early 1970s paired with a low (1), medium (2) and a high (3) future fertility assumption, and three in Series B based on the lower growth in headship of the 1960s. The different fertility assumptions produced household projections of family nuclei with different numbers of children present, important for housing consumption. While the exercise was meant to demonstrate the importance of alternative assumptions on housing demand and not strictly meant to be a forecast, at the time of publication we suggested that Series 2A, the medium fertility in conjunction with 1970-1975 cohort household formation trends, was probably the more likely scenario for the future.

As we moved into the 1980s, it became clear that period forces were slowing the cohort headship rate increases of older cohorts and also delaying the household formation of cohorts just entering adulthood (Figure 3). The average growth in the number of households observed in the first half of the 1980s, 1.31 million per year, was below the long-term trend indicated by the actual 1975-1980 trends and the projected Series 2A 1980-1985 growth. This slowdown

occurred in spite of continued rapid increases in the adult population (the youngest and largest cohort of baby boomers were age 15-24 in 1980), and therefore must have been attributed to the prevailing economic and housing market conditions including rising unemployment, low growth in real income per capita, and historically high mortgage interest rates (Figure 4). Later analysis, discussed below, revealed that the downward pressure on headship rates created a drag of an annual average of 237,000 on household growth 1980-1985. Even during the boom of the 1985-1990 period, declining headship rates created an annual average drag of about 50,000 which was reversed in the 1990-1995 period despite the 1991 recession.

A follow-up grant was arranged with HUD in the mid-1980s to model the effects of different future income growth scenarios and different marriage trends on projected household growth and housing consumption⁴. By this time the results of the 1980 census were available to serve as a jump-off point for the projections, and the release of the 1985 Current Population Survey would provide information about the nature of the slowdown in actual household growth in the early 1980s. The 1985 data would allow us to examine 5-year cohort adjustments to headship rates 1980-85. We also experimented with an additional regional metropolitan area focus in these projections in order to identify parts of the country most hard hit by the recession. The report on this research presented four household growth scenarios—a high and a low-income scenario and a high and a low-marriage scenario—with no preference stated as to which was more likely, except that an average of the four series might be thought of as a Middle Series. Table 1 summarizes both the 1980 “preferred” household projections and the four projections from the 1986 report. Also included in Table 1 is a 1989 projection that incorporated higher immigration assumptions than Census Bureau population projections⁵. This projection and the middle series 1986 projections represented the best thinking about where 1990-2000 formations would likely end up. One assumed that the weaker than expected household formations in the early 1980s would revert back to a higher trend because they were heavily influenced by very negative period economic conditions. The other assumed that higher levels of immigration in tandem with a reversion to higher headship rates would lift household growth.

⁴ John R. Pitkin and George Masnick, Households and Housing Consumption in the United States, 1985 to 2000, Projections by a Cohort Method: report prepared for Office of Policy Development and Research, U.S. Department of Housing and Urban Development, May 1986.

⁵ George S. Masnick, New Projections of Population and Households for States and Regions, Joint Center for Housing Studies Working Paper W89-9; George S. Masnick, New State Population Projections by Age, Joint Center for Housing Studies Working Paper W89-10.

Figure 3 – Poor Economic Conditions of the Early 1980s Reversed Headship Gains among Young Adults

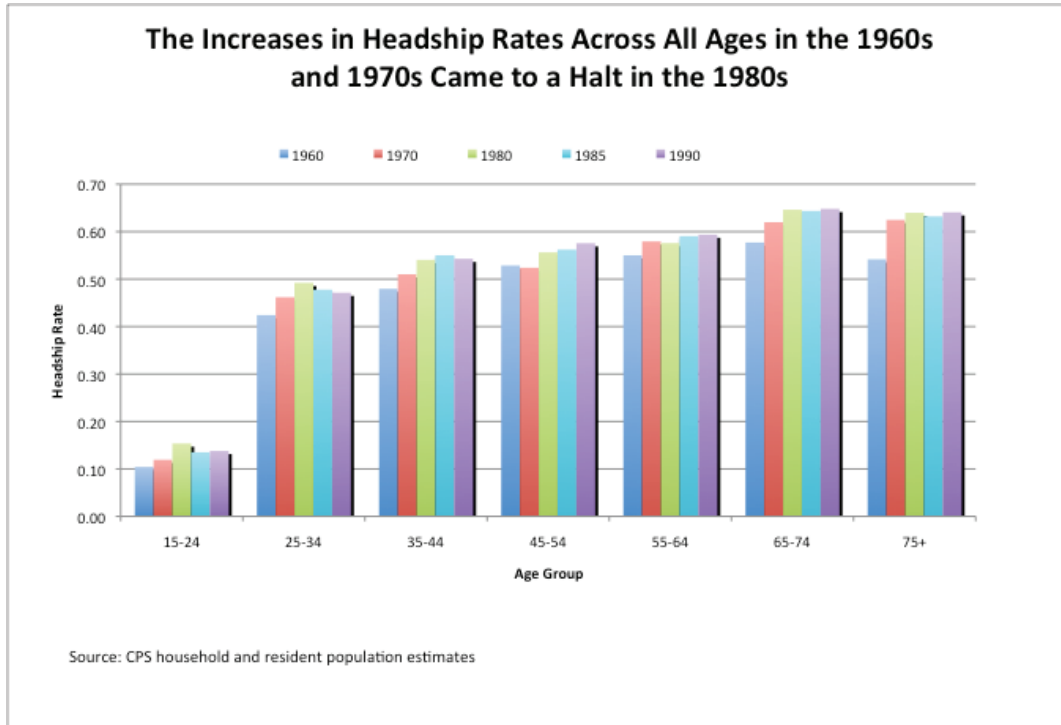


Figure 4 – Economic Conditions in the Early 1980s Strongly Affected Household Formations

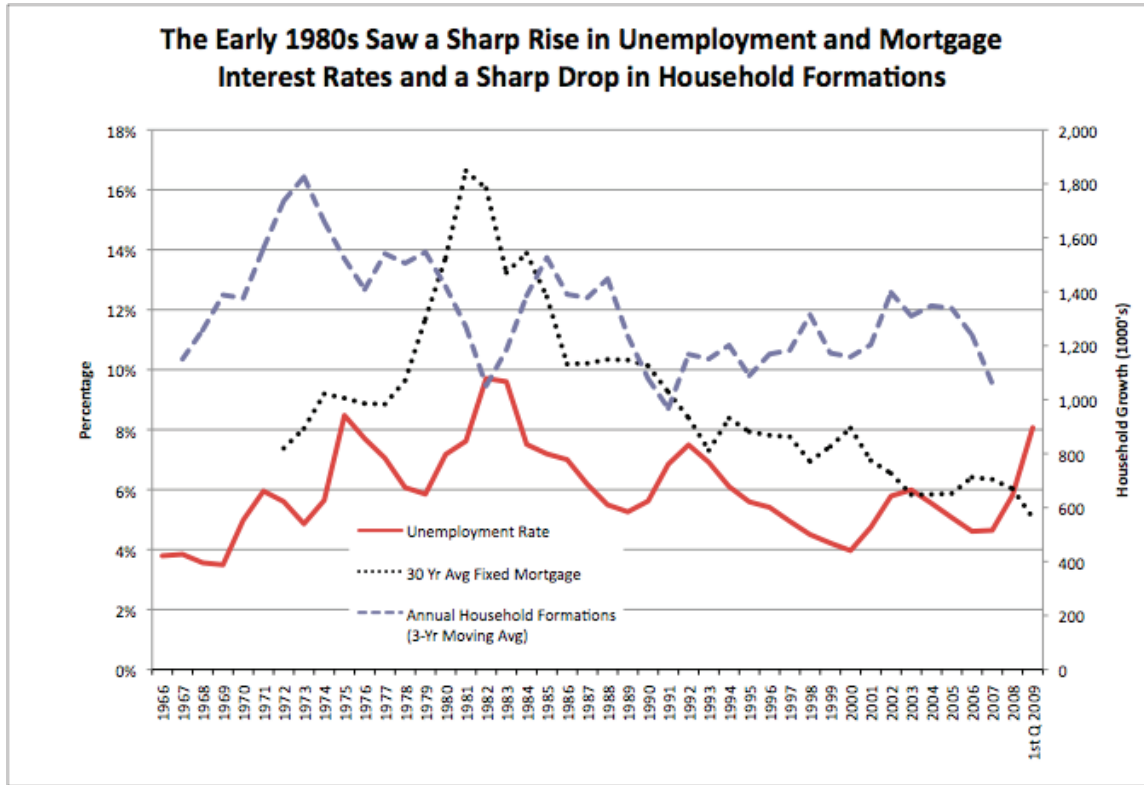


Table 1 – Annual Growth in Number of Households: Observed and Projected in the Three 1980s Joint Center Household Projections

(Numbers in 1000s)

Period	Actual	Projected 1980 Series	Projected 1986 Series PREFERRED SERIES 1	Projected 1986 Series	Projected 1986 Series	Projected 1986 Series	Projected 1986 Series	Projected 1986 Series PREFERRED SERIES 2
		Series 2A	Middle (Avg. of the 4)	Low Income ¹	High Income ¹	Low Marriage ²	High Marriage ²	
1975- 1980	<i>1,622</i>	1,622						
1980- 1995	<i>1,248</i>	1,845						
1985- 1990	<i>1,312</i>	1,559	<i>1,452</i>	1,338	1,581	1,481	1,440	<i>1,347</i>
1990- 1995	<i>1,152</i>	1,119	<i>1,207</i>	1,108	1,315	1,242	1,159	<i>1,233</i>
1995- 2000	<i>1,147</i>	952	<i>1,082</i>	989	1,184	1,152	1,004	<i>1,090</i>

1. Combined with Middle Marriage assumption

2. Combined with Middle Income assumption

The sharp fall-off in observed household growth 1980-1985, both below the previous period and well below the 1980 and 1986 projections, is evident in Table 1. Also to be noted is the fact that within any given period, the range of households projected with different economic/demographic assumptions only differed by 100,000 to 200,000, less than the size of the 300,000 to 500,000 projected declines in households from the late 1980s to the late 1990s, which was being driven primarily by changing cohort size.

The 1986 household projections incorporated 1975-1980 cohort headship trends, not the latest available 1980-1985 trends. The selection of the 1975-1980 cohort trends in household formation for a middle assumption followed a judgment that the sluggish household formation of the early 1980s was a temporary aberration from longer-term trends rather than the start of a new long-term trend. The conjuncture of a deep recession and inflation stopping interest rates was

judged to be an unusual event that was not likely to be continued or repeated. But even if economic conditions for household formation were to remain unfavorable for a longer period, long-term cohort trends were expected to move above those of the early 1980s because of pent-up demand created during that period when the youngest baby boomers continued to reside in parental households or double-up as non-heads. It was this longer-term focus that drove the assumptions in the projection model, and we were prepared to be off trend in the immediate short run. By the 1990s, the middle projection in the 1986 series was indeed quite close to actual trends.

Toward the end of the 1980s it became apparent that Census Bureau population projections included assumptions about future immigration that were running well below actual trends. The 1986 household projections used Census Bureau middle series population projections issued in 1982 that assumed net immigration would be about 450,000 per year when actual levels in the 1980s were about 700,000 annually. The Census Bureau revised their population projections in 1988 to include higher levels of immigration, but the assumption of 600,000 immigrants annually in the late 1980s falling to 500,000 in the late 1990s was still below actual trends of the 1980s and as it turned out, wildly below actual trends of the 1990s.

During the late 1980s the Joint Center undertook an analysis of migration trends and job growth for states and regions that showed that the demand for workers would rise in the future at exactly the same time that the smaller baby bust cohorts would enter young adulthood⁶. This suggested that foreign immigration would likely not fall in the 1990s as the Census Bureau projected. We therefore decided to break with the practice of using exclusively Census Bureau population projections to drive our household forecasts and produce our own population projections. These population and household projections, released in 1989, assumed that net foreign immigration held constant at 700,000 through 2000. Having also produced state population projections that incorporated this figure, we were able to release both national and state household projections for the first time, although the state projections did not use the full family nucleus cohort methodology.

⁶ George S. Masnick, *Assessing Population Projections for States and Regions: A Mid Decade Review*, Working Paper W86-2, Joint Center for Housing Studies, Revised June 1986; George S. Masnick, *Migration Projections for States and Regions: 1985 to 2000*, Joint center for Housing Studies Working Paper W89-7.

In 1991 the Joint Center released a major report that summarized our analyses of housing trends and projections undertaken during the 1980s – *Housing in America: 1970-2000*⁷. In the chapter on household projections we presented a table that decomposed the historical trends and 1989 projections of household growth into its three components: (1) growth due to population aging; (2) growth due to immigration and; (3) growth due to changes in headship rates (reproduced as Table 2 below). This table was the key analysis that helped us better understand how important immigration trends had become for projections, and how the earlier importance of trends in cohort headship rates had greatly diminished.

To derive these three projected components of household growth it was necessary to have a zero immigration population projection, which we were able to produce for the 1989 series. The aging factor is calculated using the zero immigration population projection with headship rates held constant. The component due to immigration is simply the difference between the zero immigration series with headship held constant and the actual population projection with headship held constant. The component due to headship changes is the residual from the actual household projection with changing immigration and headship and the sum of the change from the first two factors. The headship rate factor thus incorporates all other demographic changes that affect headship rates besides aging and immigration numbers including shifts in family composition, racial composition, and any changing propensity of cohorts within individual race/Hispanic origin and family nucleus groups to form households as they age. Later, when we began to produce household projections broken down by race/Hispanic origin, the changing ethnic mix could be isolated from changing headship rates within race/Hispanic origin categories.

Note that the decline in annual household formation in the early 1980s was due to the strong swing in the headship component, from positive in the 1970s to negative 1980-1985. Were it not for the increase in household growth from the aging factor as the younger baby boomers entered adulthood during 1980-1985, overall household growth would have declined even more sharply. For the projections in Table 2, as with the previous projections, the entry of the baby bust into the household formation ages after 1990 causes a sharp drop in overall household growth from the aging factor, even as growth from migration holds more or less steady, and headship related growth turns from negative to slightly positive.

⁷ William C. Apgar, Jr., George S. Masnick and Nancy McArdle, *Housing in America: 1970-2000*, Joint Center for Housing Studies, 1991.

Overall, the most important factor driving the household projections (by a multiple of 4) was the aging of the population, with immigration second and headship trends a distant third. As we shall see below, over the next two decades immigration has become even more important and headship trends less so, while aging has maintained its role as the paramount factor in household growth.

Table 2 – Estimates and Projections of Annual Household Growth by Components: 1970-2000

(Numbers in 1000s)

Years	Total Growth	Annual Growth Due to...		
		Aging	Migration	Headship
Estimates				
1970-1980	1,680	1,055	281	344
1980-1985	1,248	1,243	242	-237
Projections				
1985-1990	1,347	1,164	236	-52
1990-1995	1,233	964	202	57
1995-2000	1,090	843	213	34

Estimates from Joint Center decomposition of Current Population Survey estimates.

Projections from George S. Masnick, New Projections of Population and Households for States and Regions, Joint Center for Housing Studies Working Paper W89-9.

Just as the share of total household growth from the aging factor was projected to drop during the 1990s, the share of total growth from immigration was projected to begin to increase. Thus, by the end of the 1980s we were beginning to better understand that the accuracy of our household projections was dependent on our ability to forecast immigration levels with accuracy and on developing a better understanding of the household formation behavior of the groups most represented in the new immigration numbers, particularly Hispanics and Asians. The intense focus we had placed on headship rates by detailed family nuclei for the total population, so important in the late 1970s, had become less relevant by the end of the 1980s.

The model we were using to analyze and forecast household trends did not lend itself to a race/Hispanic origin breakdown in the projections because small cell size in many of the 288

separate demographic categories for each race/Hispanic origin group (age x gender x marital status x number of children) precluded the ability to accurately measure cohort trends. In addition, changes in racial definitions in the 1990 and 2000 censuses also made establishing very detailed cohort trends in headship unreliable. We began to realize that an alternative methodology for household projections that would allow for greater attention to sub-national populations was called for.

With this discussion of household projections carried out in the 1980s as background, we shall now review the projections of the 1990s to explain how and why the projection methodology was streamlined by reducing the marital status/presence of children detail and adding detail on race/Hispanic origin. The 1990s projections also included a greater focus on immigration and on the accuracy of immigration estimates in the Census Bureau's population projections.

The 1990s Projections – The Potential Housing Demand Projection Model

In the early 1990s we became aware of a PC application developed by the Canada Mortgage and Housing Corporation (CMHC) that consisted of a streamlined version of our cohort family nucleus household projection methodology. Called the Potential Housing Demand Projection Model, or PHD Model for short, it was developed at CMHC by researchers who had carefully followed the household projections produced by the Joint Center and appreciated the importance we ascribed to the cohort method. The PHD model had a population projection module, a cohort driven household projection module, and a housing projection module, each integrated into a single framework that was very user friendly. The model they developed was geared to take advantage of the Canadian Census that takes place every five years. Therefore, in Canada it was possible to calculate 5-year cohort transitions in headship rates for metropolitan areas, regions and large cities in Canada for which census data are routinely available. To adapt to PHD Model to the U.S. it was necessary to use Current Population Survey or American Housing Survey data to develop headship rates spaced 5 years apart in order to calculate cohort trended headship rates for 5-year age groups as required by the model.

When the U.S. Census Bureau released a new set of population projections in 1993 that projected higher levels of future immigration than used in the previous Joint Center population projections, we experimented with the PHD model to produce new household projections and

were pleased with the results⁸. The PHD model calls for inputs of family and non-family headship rates and a population projection for thirteen 5-year age groups (15-19, 20-24..., 75+), and produces projections of family and non-family households which can then be further split into more detailed family and non-family types, including married couples with or without children, other family households (which would mostly include single parents with a smattering of households headed by siblings), single person households, and other non-family households. The household module provided for inputs of up to five sets of headship rates spaced five years apart, and allowed for cohort trending of the headship rates from the two most recent data sets or from any period covered by two consecutive sets of headship rates. We used 1990 census headship rates as our benchmark year and adjusted them according to cohort transitions between 1985 and 1990 as measured by the 1985 and 1990 Current Population Surveys and 1985 and 1990 American Housing Surveys. For these 1993 household projections we averaged the CPS and AHS cohort adjustments together before applying them to the 1990 census benchmark family and non-family headship rates. We used the average because we were uncertain as to whether the CPS or the AHS best measured the headship rate cohort adjustments. Now, instead of sixteen family types we had only five family types, and we only needed two family types (family and non-family) in order to produce the household projections themselves. This streamlining lent itself nicely to projections for sub-populations where population cell size issues made developing cohort headship trends impossible with the old family nucleus model.

The 1993 Census Bureau population projections assumed an annual level of net immigration of 880,000, well above the 500,000-575,000 between 1990 and 2000 assumed in the previous Census Bureau population projections released in 1988, and above the 700,000 assumed in the 1989 Joint Center projections. At the time we released the 1993 household projections, we suggested that actual immigration levels that fully accounted for illegal immigrants might be running closer to 1 million per year, so the household projections should be considered conservative. As it turned out, 880,000 net immigrants were indeed below actual trends in the 1990s and early 2000s as estimated by the Census Bureau. We will discuss this further below.

⁸U.S. Census Bureau, Current Population Reports, P25-1104, Population Projections of the United States, by Age, Sex, Race and Hispanic Origin: 1993-2050 (October 1993).

Table 3 summarizes the results of the 1993 Joint Center household projections that used the PHD model for the first time⁹. In 1994 we released a companion publication that presented state household projections driven by Census Bureau state population projections released the same year¹⁰. Projections for the 1990s show household growth higher than previous projections, mostly because of higher growth from the migration component. However, the household growth is in line with previous projections once adjusted for differences in the immigration assumptions.

In 1996 the Census Bureau released a new set of population projections, reducing assumed annual net immigration to 820,000 from 880,000, but more importantly re-benchmarking the projections to 1990 census data and including more up-to-date assumptions about fertility and mortality¹¹. The slight lowering of the immigration assumption did not follow from research that showed that immigration was declining, but from technical adjustments to the way that undocumented immigration estimates were included in the overall immigration assumption. The 1996 Census Bureau population projections did not contain a zero immigration series that would have allowed us to break the household projections—on which they were based—into component factors. Table 3 also includes a summary of annual projected household growth using these updated population projections. As expected, this slight reduction in the immigration assumption helped contribute to a corresponding decline in projected household formation.

⁹ George S. Masnick and Nancy McArdle, Revised U.S. Household Projections: New Methods and New Assumptions, Joint Center for Housing Studies Working Paper W93-2.

¹⁰ George S. Masnick and Nancy McArdle, State Household Projections Based Upon Census Bureau P25-1111 Population Projections, Joint Center for Housing Studies Working Paper W94-4 (December 1994, Revised February 1995); U.S. Census Bureau, Current Population Reports, P25-1111, Population Projections for States, by Age, Sex, Race and Hispanic Origin: 1992-2020 (March 1994).

¹¹ U.S. Census Bureau, Current Population Reports, P25-1130, Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995-2050 (February 1996).

Table 3 - Estimates and Projections of Annual Household Growth by Components: 1970-2005

(Numbers in 1000s)

Years	Annual Growth	Annual Growth Due to...		
		Aging	Migration	Headship
Estimates				
1970-1980	1,680	1,055	281	344
1980-1985	1,248	1,243	242	-237
1985-1990	1,267	NA	NA	NA
1993 Projections				
1993-1995	1,308	980	262	66
1995-2000	1,241	862	310	70
2000-2005	1,222	779	360	83

Source of estimates: 1970-1985 from Current Population Survey, 1985-2005 from Housing Vacancy Survey.

Table 3 (continued)

Years	Annual Growth	1993 Projections ¹	1996 Projections ²	2000 Projections ³
1993-1995	1,202	1,308	NA	NA
1995-2000	1,147	1,241	1,107	NA
2000-2005	1,373	1,222	1,131	1,145
2005-2010	NA	NA	1,191	1,201
2010-2015	NA	NA	NA	1,257
2015-2020	NA	NA	NA	1,243

1. George S. Masnick and Nancy McArdle, Revised U.S. Household Projections: New Methods and New Assumptions, Joint Center for Housing Studies Working Paper W93-2.

2. George S. Masnick, Nancy McArdle and William C. Apgar, Jr., U.S. Household Trends: the 1990s and Beyond, Joint Center for Housing Studies, W96-2 (July 1996).

3. George S. Masnick and Zhu Xiao Di, Updating and Extending the Joint Center Household Projections Using New Census Bureau Population Projections, Joint Center for Housing Studies, N00-1 (October 2000).

Also included in Table 3 is a summary of household projections using the last series of Census Bureau population projections based on the 1990 Census benchmark released in 2000.¹² Their acknowledgement about uncertainty surrounding future levels of immigration resulted in the release of three immigration scenarios, a low, middle, and high. In addition, a zero immigration scenario was released in this 2000 series. The low series assumed steadily declining immigration to 120,000 by 2020 and the high series assumed rising immigration to 1,800,000 by 2020. The wide range from low to high is indicative of how uncertain future immigration levels were thought to be. Neither the high nor low series seemed like a realistic alternative to drive household projections. The middle series assumed that the projected pattern of net annual immigration started out at the level of the late 1990s estimates, about 950,000, and held this level until 2004 when it began to decline to just over 700,000 by 2010. It then was slowly allowed to rise to 750,000 per year by 2020. The household projections we released in 2000 use this middle series population projection. While it was possible because of the existence of a 2000 zero-immigration series to break projected household growth into its component factors, we did not do so.

The stated reasoning behind the peculiar choice of middle-series immigration assumptions was that anti-immigrant sentiments and public policies would exert downward pressure on immigration levels until it became gradually apparent to everyone that the large retired baby boom cohorts could not be supported by Social Security and Medicare taxes derived from the smaller cohorts of baby bust workers, and the demand for additional workers will make it more politically expedient to liberalize immigration policy. While it is hard to disagree with the logic of such an argument, it is perhaps harder to place much credence in the exact trajectory of immigration that is predicted. In any case, the issuing of a low and high series and the movement down and then up again in the middle immigration series was indicative of a high degree of uncertainty about where immigration was likely headed.

The fact that immigration levels were so unpredictable and were in fact consistently underestimated in Census Bureau population projections was made even clearer in 2002 by an in-house Census Bureau review of more than a dozen of their previous population projections

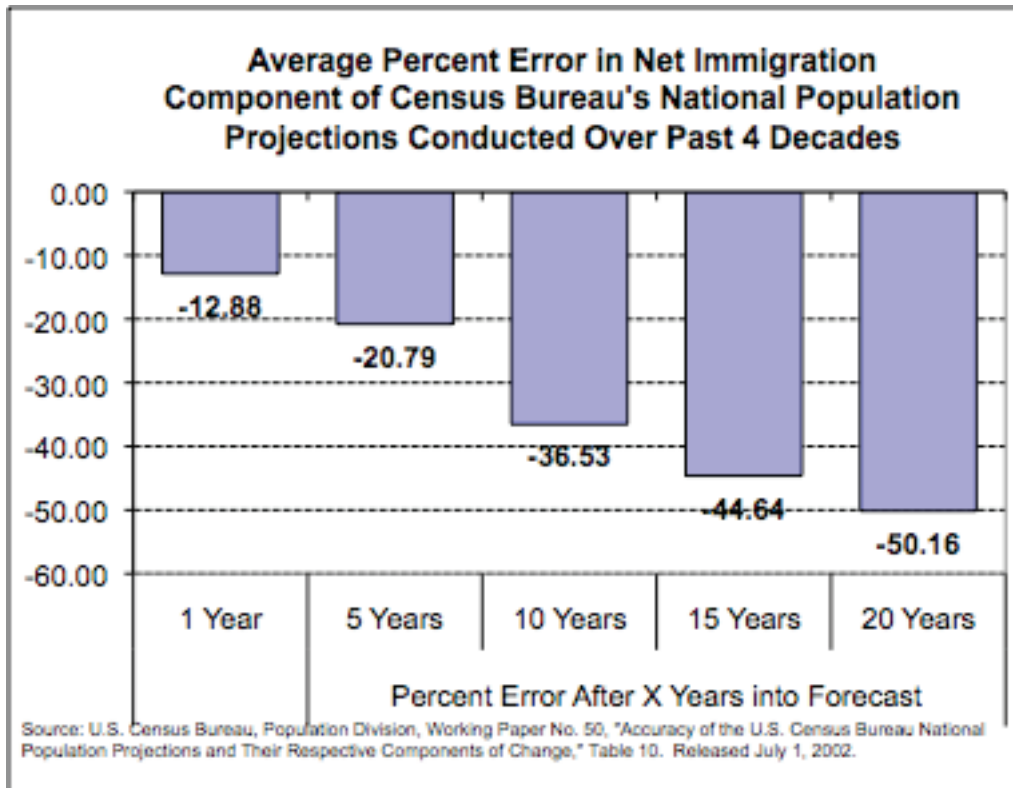
¹² This is the first set of population projections not released as a report, but rather released on the World Wide Web as tables and a document on methodology. See <http://www.census.gov/population/www/projections/natproj2000.html>. This method of release allowed for much greater detail.

dating back to the 1960s.¹³ Figure 5 summarizes their analysis of the error in the immigration component of the projections. The average error across the 13 projections was almost 13 percent after just 1 year into the projection period and fully 50 percent after 20 years.

With this uncertainty about immigration as background we released a new set of household projections in 2000 based on these 2000 middle-series population projections. The projections are summarized in the last column of Table 3. The slightly higher immigration assumptions, at least in the short run, translated into slightly higher levels of projected household growth in the early 2000s. The assumption of declining immigration after 2004 was counterbalanced by the movement of the echo boom generation into the prime household formation ages after 2005 so projected household growth increased for 2010-2015 and 2015-2020. When presenting and discussing these latest household projections, we often would suggest that they were likely on the conservative side given that immigration was surely running higher than the Census Bureau population projections assumed.

¹³ Tammany J. Mulder, Accuracy of the U.S. Census Bureau National Population Projections and Their Respective Components of Change, Population Division Working Paper Series No. 50, Population Division, U.S. Census Bureau, July 1, 2002.

Figure 5 - Percent Error for Net Immigration Forecasts of the U.S.: 1963-2001



The 2000 Joint Center household projections, for the first time, included a breakdown by race/Hispanic origin. The Office of Policy Development and Research at HUD took interest in these household projections, being the first available by race/Hispanic origin, and they commissioned the Joint Center to do additional sensitivity analyses of the projections to the immigration assumptions. That research was published in a special HUD report.¹⁴ Instead of using the Census Bureau's low and high series that we discounted as being unrealistically extreme, we instead estimated a low immigration population projection based on 500,000 net migrants and a high series based on 1,000,000 net migrants. In terms of household numbers added over the 2000-2020 period, under the low immigration scenario 1.11 million new households were added annually, and under the high immigration scenario, 1.27 million. The middle series produced 1.19 million annually. All of these numbers are in the same ballpark as the numbers from previous 1990s household projections summarized in Table 3. Because the alternative immigration scenarios affect two groups in particular, namely Hispanics and Asians,

¹⁴ George S. Masnick and Zhu Xiao Di, Projections of U.S. Households by Race/Hispanic Origin, Age, Family Type and Tenure to 2020: A Sensitivity Analysis, *Issue Papers on Demographic Trends Important to Housing*, U.S. Department of Housing and Urban Development, Office of Policy Development and Research (February 2003).

the relative importance of the alternative immigration scenarios is magnified for household projections within these race/Hispanic origin groups. This is discussed further in the 2003 HUD report.

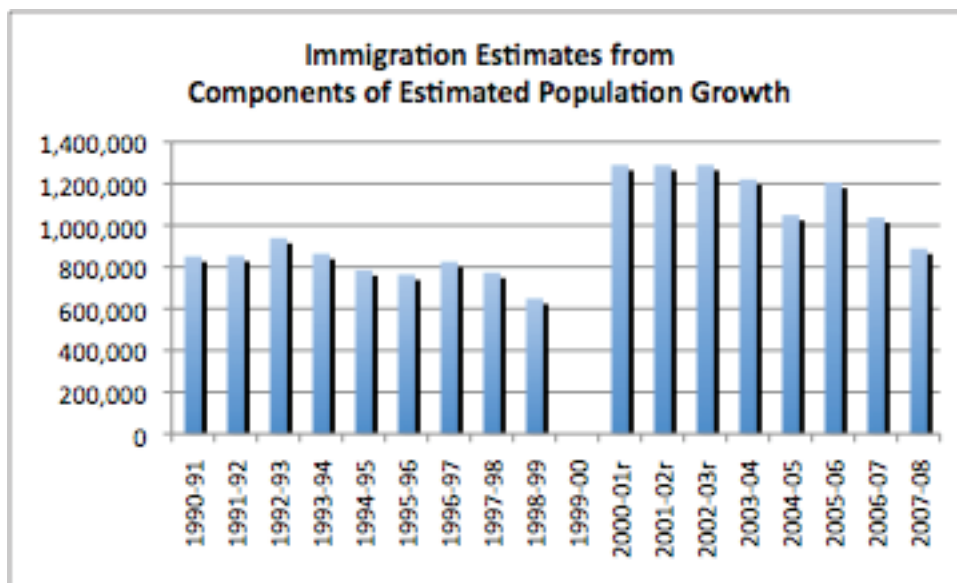
Household Projections since 2000 – The 2000 Census and the Annual American Community Survey Increase Immigration and Minority Growth Estimates

When the 2000 census was tabulated it became apparent that population estimates during the late 1990s were considerably below the actual U.S. resident population in 2000. The 2000 Census counted about 6.8 million more people than the Census Bureau had previously estimated as residing in the U.S. in 2000. Initially it was thought that the majority of the 6.8 million higher Census count was undocumented immigrants that were unaccounted for in previous population estimates. Further analysis of the 2000 Census questionnaires revealed that much of the 6.8 million could be explained by the difference in net Census undercount between 1990 and 2000. Whatever the true levels of actual 1990s undocumented immigration implied by the differences between 1990 and 2000 Census counts, the Census Bureau concluded that net foreign immigration in the first decade of the new century was significantly higher than previously estimated or projected.

The advent of the annual American Community Survey (ACS), designed to replace the 2010 census long form and now sent to 250,000 households each month (3 million each year), has provided us with more accurate information on annual net immigration (Figure 6). In the early 2000s, however, when the counties sampled by the first rounds of the ACS were still selective and not necessarily representative of the total U.S. population, immigration estimates were higher than in Figure 5, fluctuating between 1.3 and 1.5 million. Eventually, 2000-2003 estimates were revised downward to 1.29 million after re-weighting of the American Community Survey¹⁵. It is clear from Figure 6 that immigration levels in the first half of the 2000s decade, in particular, were running well above the estimates of the 1990s, and that accurate population projections would need to reflect these higher levels.

¹⁵ See memo form Signe Wetrogan, Census Bureau Population Division, dated February 27, 2004.

Figure 6 – Immigration Estimates Were Increased After the 2000 Census



In the early 2000s the Census Bureau was anxious to release new national population projections that would be re-benchmarked to the larger population base from the 2000 census, but uncertainty about what should be assumed about long-term immigration and fertility trends (fertility being strongly influenced by immigration) delayed the release. Finally, in 2004, still uncommitted to a methodology that would reflect the higher immigration levels and higher fertility of immigrants, the Census Bureau released an “interim” set of population projections that included a re-benchmark to the 2000 census population counts, but changed the assumptions about immigration and fertility that were used in their 2000 projections only very marginally. When these interim population projections were released in 2004 it was expected that a fully revised set of population projections with new immigration and fertility assumptions would be released in 2005.

The Joint Center also decided to release new “interim” household projections in 2004 in order to take advantage of the 2000 census re-benchmarking and we anticipated that we would then update these projections in 2005.¹⁶ The 2004 interim population projections were only released for non-Hispanic whites, Hispanics, and for the total population, preventing us from providing household projections with a full non-Hispanic race breakdown. In addition, the race/Hispanic origin questions in the 2000 census were fundamentally altered by allowing for

¹⁶ George S. Masnick, Eric Belsky and Zhu Xiao Di, The Impact of New Census Bureau Interim National Population Projections on Projected Household Growth in the United States, Joint Center for Housing Studies Research Note N04-1 (June 2004).

multiple race answers, by switching the order of the race and Hispanic origin questions, by introducing new terminology discussing what is meant by Hispanic origin, by how the races with smaller numbers were grouped together, and by changing the wording of the questionnaire. These various changes are more fully discussed in Research Note N04-1. The bottom line was that household projections by race/Hispanic origin produced before the 2000 census benchmarks were incorporated are not comparable to projections done after the new race/Hispanic origin protocol was introduced.

The result of our “interim” household projections demonstrated that the higher population counts of the 2000 Census alone, when incorporated into the new interim population projections, resulted in higher annual projected household growth than previous Joint Center household projections had forecast. The increase is of a magnitude of about 100,000 to 120,000 annually, bringing the total projected household growth 2005-2015 to between 13.3 to 13.5 million households. This number was about 1.0-1.2 million higher than the previous Joint Center household projections for that 10-year span, and all of this added growth was in the minority category. The range of growth in the household projections was introduced because we were unable to calculate cohort headship rate trends due to the change in race/Hispanic origin definitions in the 2000 census and in various government surveys after 2003. Instead, we held family and non-family headship rates constant for the first time using two sources of headship, one series using the 2000 census rates and a second series using 2003 CPS rates. The fact that the immigration assumptions in the 2004 Census Bureau population projections were running below actual estimates was noted and it was again suggested that actual household growth could be about 100,000 per year above levels calculated in our “interim” household projections.

It would not be until 2008 that the new Census Bureau population projections incorporating fundamental changes in immigration and fertility assumptions would be released. So in 2006 we concluded that we could not wait indefinitely for the Census Bureau to revise their “interim” assumptions about immigration to produce a set of population projections that better reflected actual immigration levels. By assuming that the age pattern of net immigration within the broad non-Hispanic white and total minority populations had not changed fundamentally since the 2000 census, it was possible to adjust the 2004 Census Bureau population projections to allow for higher levels of assumed immigration. The Joint Center released two reports in 2006 that revised Census Bureau immigration assumptions upward to 1.2

million annually, a number that more closely reflected the official Census Bureau estimates derived from the American Community Survey shown in Figure 6¹⁷. The 2006 household projections also updated the assumptions about rates of household formation to reflect the levels achieved in 2005 using the 2005 March Supplement to the Current Population Survey. These revised headship rates are slightly lower, especially for minority family household formation, than the 2003 CPS rates used in the 2004 household projections. The 2006 household projections also provided greater detail on family type and a broad breakdown by tenure for total households, non-Hispanic white households and for total minority households than the 2004 projections. As with our 2004 projections, we opted to hold constant family and non-family headship rates, and family-type breakdowns. Our reasoning was that headship rates and family type trends had largely stabilized after shifting significantly over the course of the 1970s, 1980s, and, to a lesser degree, the 1990s. Changing social trends were judged to likely have a minimal impact on the number and types of net new households formed. Instead, we argued that increases in the population and changes in the age composition and minority share of the population driven by aging and immigration are what will primarily drive household growth and household composition in the future.

Figures 7 through 9 are reproduced from the 2006 household projection report (N06-1) and show the importance for household growth of raising the net immigration assumptions to 1.2 million annually. The importance of minority household growth to overall growth, especially after 2010 when baby boom losses increasingly offsets non-Hispanic white gains from echo boomers, can be seen in Figures 8 and 9. These themes are reflected in the 2009 household projections and discussed in greater detail below.

¹⁷ George S. Masnick and Eric S. Belsky, Revised Interim Joint Center Household Projections Based on 1.2 Million Annual Net Immigrants, Joint Center for Housing Studies Research Note N06-1; George S. Masnick and Eric S. Belsky, Addendum to Research Note N06-1 (March 2006): Hispanic Household Projections Including Additional Tenure Projection Detail by Age and Broad Family Type for Non-Hispanic White and Total Minority Households, Joint Center for Housing Studies Research Note N06-4 (December 2006).

Figure 7 – Comparison of 2004 and 2006 Joint Center Household Projections: Total Households

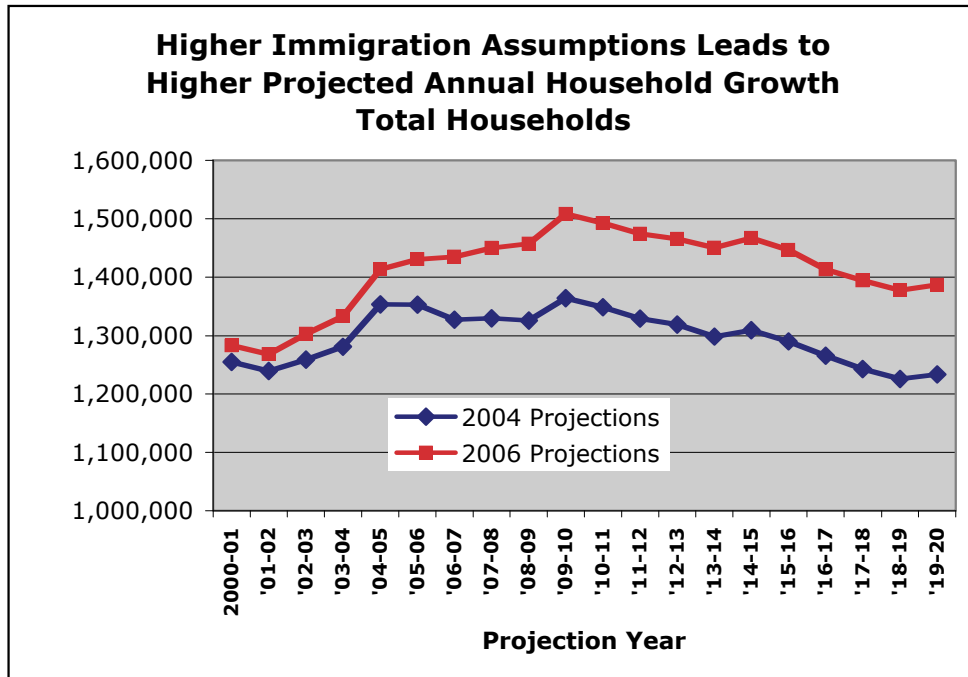


Figure 8 – Comparison of 2004 and 2006 Joint Center Household Projections: Non-Hispanic White Households

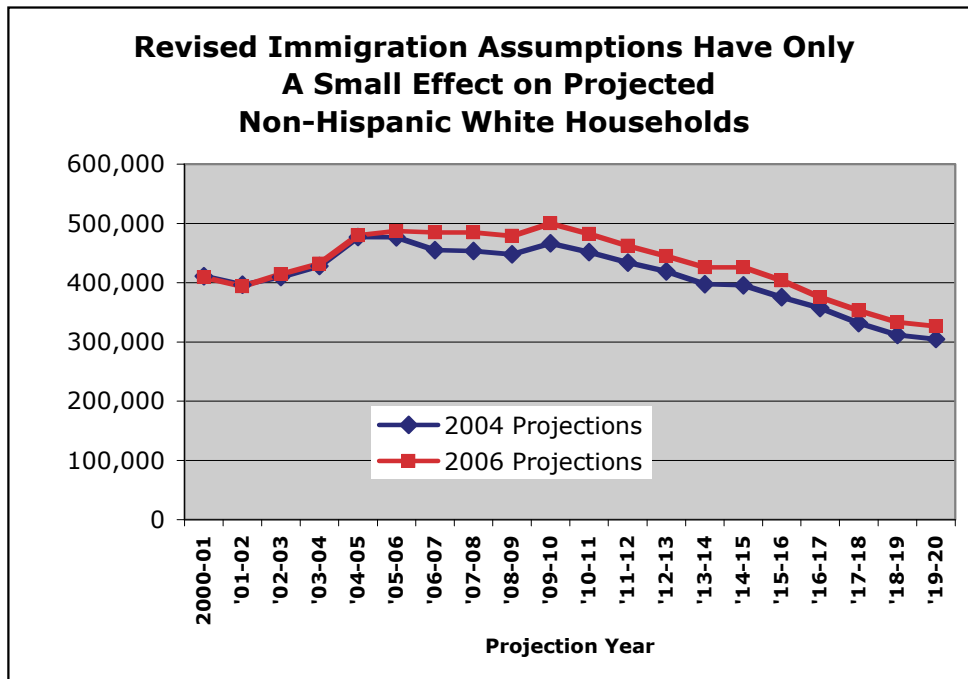
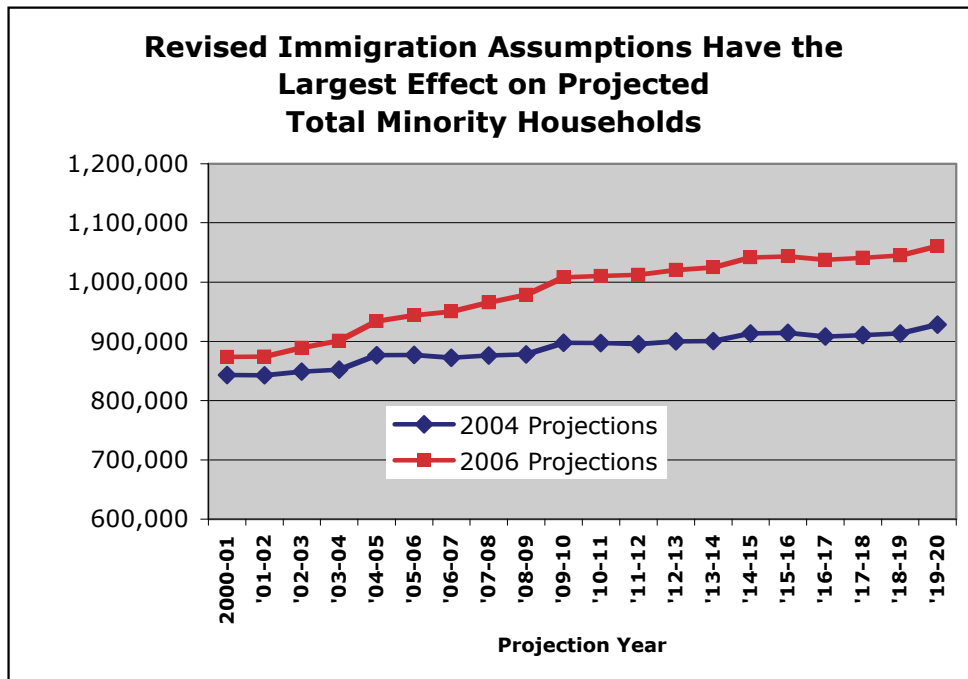


Figure 9 – Comparison of 2004 and 2006 Joint Center Household Projections: Total Minority Households



The New Joint Center Household Projections – Future Immigration Levels Are Still Uncertain

A demographic and economic scenario very similar to the early 1980s is emerging along several important dimensions in the later half of the present decade. The oldest echo boom cohorts age 15-24 in 2005 comprise the largest group ever to enter the household formation ages; just as the younger baby boom cohort aged 15-24 in 1980 was at that time. We are now in a deep recession, just as we were in 1982. Household formations appear to be reacting to the economic conditions of the day and have declined, just as in the early 1980s. The economic recovery of the late 1980s boosted household formation as pent up demand from the youngest baby boomers was realized. But this boost came just as sharply declining levels of household growth from the baby bust generation moving into the young adult age groups was beginning to take place. However, immigration increased in the late 1980s and 1990s, further supporting additional household growth and mitigating the downward thrust from the baby bust.

In the near future there is also a sharp decrease in generational size on the horizon as there was in the 1980s. Instead of a decline in young adults, as occurred when the baby bust

generation reached household formation ages in the early 1980s, this time we expect net household growth to be increasingly weakened as the baby boomers start turn age 65 after 2010 and their households begin to dissolve with gathering speed. And instead of the generational decline in new household formations among young adults as in the late 1980s, the generational losses from the baby boom will occur concurrently with echo boom household growth, (and with baby boom losses accelerating after 2010 at a time when the oldest echo boomers will just start to turn 30.

An important difference between this period and the last, however, is the recent period was not predated by a period of significantly rising headship rates the way the 1980-1982 recession was predated by a major run-up in headship rates that proved unsustainable not only during the period of economic distress in the early 1980s, but also during the strong economy of the latter half of the 1990s. This time, the reduction in household growth, so far, appears to be driven more by a reduction in population growth (immigration) than a consistent retreat in headship rates across age groups.

Another noteworthy difference between now and then is that the echo-boomers are not only a larger, but also a “deeper” generation than baby boomers. Whereas the baby boom spanned two decades of birth cohorts born between 1946 and 1965, the echo boom generation that emerged in 1981 when the number of births had increased to exceed 1966 levels, has continued to build upon itself for almost three decades now. The number of births in the U.S. in 2007 was the largest annual total on record (4.32 million). Growing shares of these births consist of minority Americans born to immigrants.

With immigration and the impact of the economic downturn on headship rates so uncertain, however, how much the pent up demand from echo boomers, who might presently be restrained in their household formation behavior during the current recession, will push household growth into the future, and how changing levels of immigration will influence future household growth, remains to be seen.

We take several lessons from previous projections that we take into the calculation and analyses of our new household projections. First, we understand that the most important factor in determining future household growth is the aging factor. In the new projections it is the aging of the echo boom and baby boom generations. For the sake of discussion we define the echo boom as the cohort born between 1981 and 2000, but in fact it will at least include birth cohorts

through 2010 and probably beyond. We restrict our discussion to the 1981-2000 births because they will be the cohorts entering the young adult ages between 2005 and 2025, the time horizon for our projections. A 20-year deep generation also allows for direct comparison with the baby boom generation, also 20 years deep. Second, we must pay careful attention to the level of immigration in the population projections used to drive the household model. Finally, we look closely into whether the current economic recession has had any impact on headship rates. As it turns out, the trends in headship rates between 2003 and 2008 are minor, making cohort trending appear to be unnecessary and leading us to hold headship rates constant in the projections. It is population size and composition, not headship rate changes, which have so far been behind slowing household growth 2005-2008.

The recently released Census Bureau national population projections that we use to drive the household projections contain assumptions about future levels of immigration that are very much higher than the middle series assumptions of the 2000 release or their 2004 interim series (Figure 10). While released in late 2008, the Census population projections and their underlying assumptions were decided upon in 2007 or earlier, well before the present housing downturn and economic recession had impacted immigration levels very much. Before the present economic downturn it appeared that increased levels of immigration above those of the early 2000s were possible, even likely. Indeed, the Pew Hispanic Center released a set of population projections in early 2008, before the Census Bureau released theirs, which assumed annual immigration would increase slowly by 1 percent per year, rising from 1.4 million in 2005 and reaching 2.1 million immigrants in 2050.¹⁸ While the levels are somewhat higher in these Pew Center projections, the rate of increase is approximately the path assumed in the Census Bureau population projections as well. With the Pew Center's middle series immigration assumption, the rate of immigration remains roughly constant over the period from 2005-2025 at 0.48 percent per year, or just under five immigrants per 1,000 population for each year. This rate is slightly below the rate for the first half of this decade and equal to the average for the last 35 years. Given that immigration's contribution to population growth in the U.S. has steadily increased over the past three decades in response to what Pew identifies as:

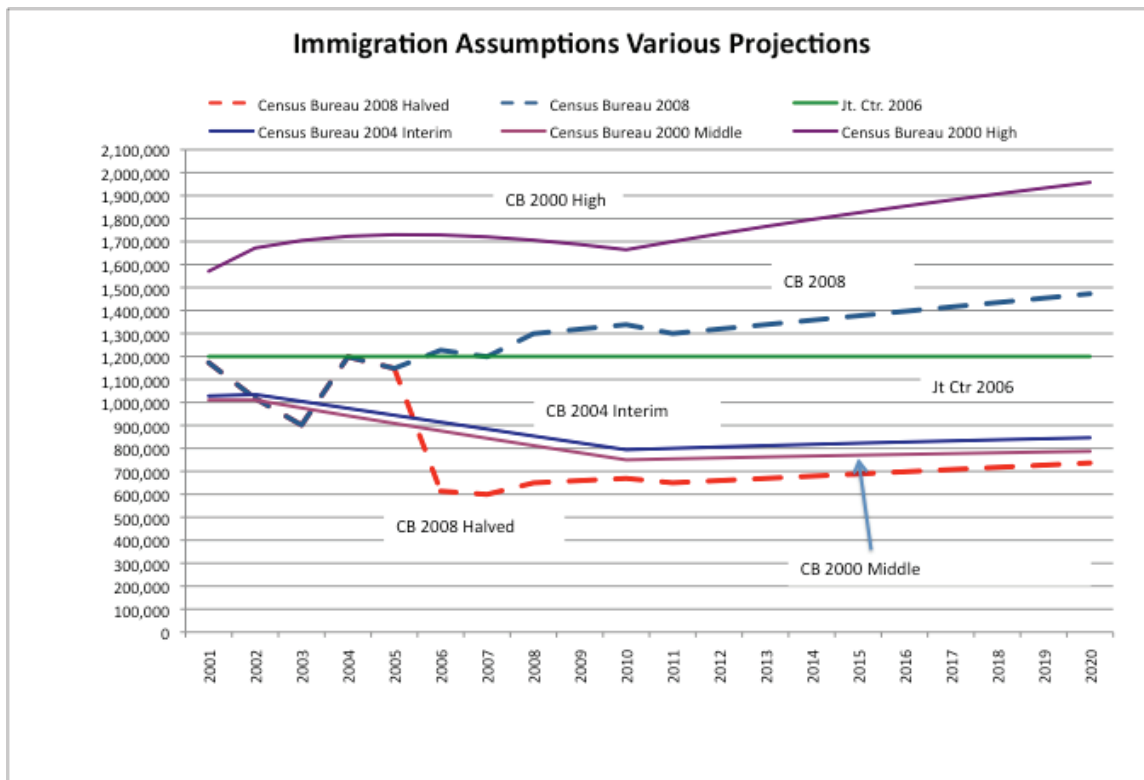
¹⁸ Jeffrey S. Passel and D'Vera Cohn, U.S. Population Projections: 2005–2050, Pew Research Center, Report February 11, 2008.

“a result of increasing globalization and population movements, changes in U.S. immigration laws, the growing linkages of immigrant families within this country to communities abroad and labor market factors,”

one might characterize the Pew assumptions as even being slightly conservative. This alternative series, supervised by an internationally well-respected demographer at Pew, should have given Census Bureau demographers added confidence in their immigration assumptions.

However, because of the deep recession and its impact on both employment opportunities and on public sentiment about the competition that immigrants pose for scarce jobs, for the very first time we need to question whether the new Census Bureau immigration assumptions might indeed be too high for an expected “most likely” scenario. In Figure 10 we have placed the new Census Bureau immigration assumptions in the context of various other immigration assumptions incorporated into Census Bureau population projections issued since 2000. Note the large variability in these numbers. Also included in Figure 10 are one horizontal line representing the 2006 Joint Center assumption of 1.2 million net immigrants annually and another line that simply takes the current Census Bureau assumption and halves it.

Figure 10 – Since 2000 Immigration Projections Have Varied Widely

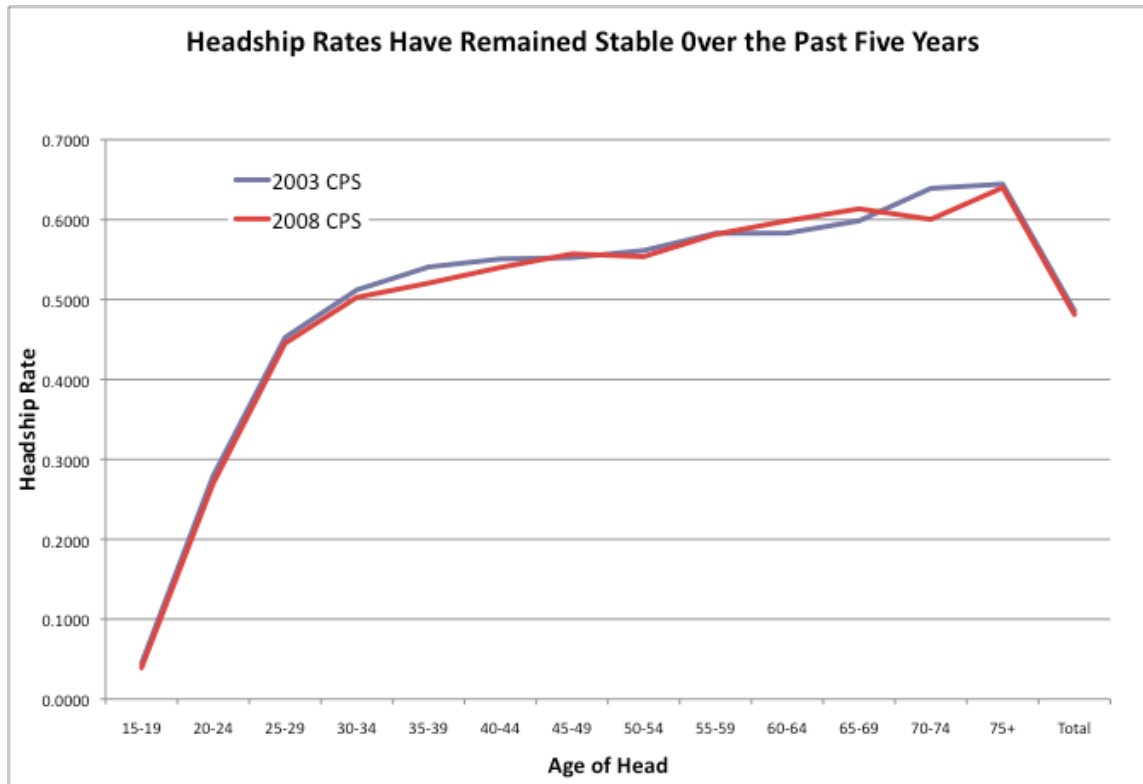


We have produced two sets of household projections, one based upon the 2008 Census Bureau assumption of gradually increasing levels of immigration and one based upon an assumption that starting in 2006 future immigration levels will be only half as large as the Census Bureau assumes (dashed lines in Figure 10). We have called these two alternatives the high and low immigration scenarios, respectively. While the low series that starts at 614,000 in 2006 and slowly rises to 784,000 by 2025 might seem very low compared to the recent immigration estimates in Figure 6, in fact such a dramatic drop in net immigration can be achieved very quickly during a severe recession when job losses both lower the rates of immigration and simultaneously increase the rates of out-migration, especially among illegal immigrants and others who come here only temporarily to work. Just as government estimates erred on the downside when immigration was on the increase, they will err on the upside when it is in decline.

The household projections hold headship rates constant at 2008 levels. Trends since 2003 have shown no systematic change in headship rates (Figure 11). When these rates are smoothed to minimize the effects of random variation, the 2008 rates do show a small but consistent decline among young adults, however, the decline is too small to characterize as a meaningful trend at this time. If we had held headship rates constant at 2003 levels instead of using 2008, projected households would have been just one percent higher in 2020, a difference that can be easily explained by measurement error in the CPS. Perhaps the March date of the CPS used to calculate the rates was too early in the 2008 recession to register a steeper decline. Or perhaps the 2003 levels were still reflective of the 2002 recession as are 2008 levels recession influenced, making our comparison trough-to-trough. Alternatively, declining immigration since the present recession began removes a segment of the population with the very lowest headship rates, so stability in 2008 among the remaining resident population masks a slight decline in the resident population headship (otherwise rates would rise rather than maintain overall stability). We will need to monitor headship trends beyond 2008 to see if the current recession, as it develops, is having the same significant effects on headship rates as occurred during the early 1980s. The longer the recession continues, the more likely there will be an impact on headship of young adults and less immediate will be the impact on new household formation by aging echo boomers. We will revise our projections should incoming information on headship rates,

immigration, and household counts from the 2010 census cause us to view a revision as warranted.

Figure 11 – Headship Rates Have Not Significantly Declined as of March 2008

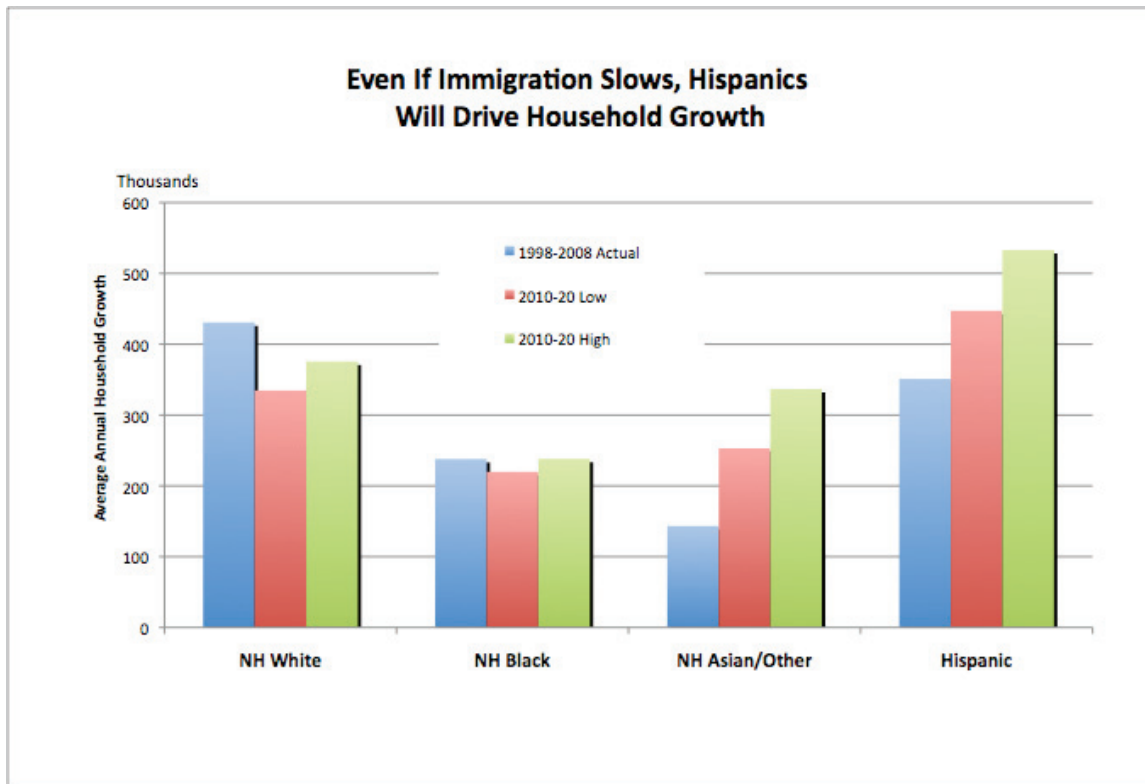


The household projection methodology uses population projections broken down by race/Hispanic origin and headship rates for each race broken down by age and partner/non-partner household type. When the population is decomposed in this way, the specific headship rates are not as stable as in Figure 11, but the differences between the two dates are not systematic enough in one direction or the other to indicate a general trending. Recognizing both the difficulty in extracting a trend from these sub-population data and understanding that our previous projections (when headship trending was used) yielded results for the headship factor that was very small in comparison to the effects from the aging or migration factors, holding headship rates constant seems the logical choice.

Figure 12 summarizes the results of the household projections. Projected non-Hispanic white annual growth 2010-2020 is expected to be 50,000-100,000 less than it was 1998-2008 because of mounting losses from aging baby boomers, but this shortfall is more than completely

made up under the low immigration scenario by projected increases in Asian and Hispanic household growth that is being driven by both new immigration and aging of cohorts already residing in the U.S. in 2005. Under the high immigration scenario, projected household growth summed across all racial and ethnic categories over the next decade will be 300,000 higher per year than in 1998-2008.

Figure 12 – Minority Population Change Drives Household Growth 2010-2020



The effect of the difference between the high and low immigration assumptions and relative weight of the aging and immigration factors for total projected household growth can be better seen in Table 4.

Table 4 – Aging Will Account for Between 50 and 75 Percent of Projected Total Household Growth

Immigration Assumptions		Average Annual Total Household Growth		Due To Aging	Due To Immigration	Due To Headship Trend
High Series	2005-10	1,455,284		1,032,361	422,923	0
	2010-15	1,492,691		1,048,548	444,143	0
	2015-20	1,474,689		1,003,798	470,891	0
	2020-25	1,480,683		976,368	504,315	0
Low Series	2005-10	1,243,822		1,032,361	211,461	0
	2010-15	1,270,619		1,048,548	222,072	0
	2015-20	1,239,243		1,003,798	235,445	0
	2020-25	1,228,525		976,368	252,158	0

Under the low immigration assumption, projected annual household growth will be equivalent to levels we experienced between 1995 and 2005 and slightly above levels experienced 1998-2008 (because of declining household growth 2005-2008). By holding headship rates constant at 2008 levels there is, by definition, no effect on projected household growth of changing headship. As already mentioned, this is an assumption that we will need to monitor closely as the present recession either deepens or recovers. But our view at this time is that, just as in 1980-1985, the lingering effects of a severe economic downturn should dissipate relatively quickly. However, it could result in a shifting of household growth out from 2010-2015 to 2015-2020.

While there does not appear to be a trend in the aggregate projected household growth column or even in the two components of growth in Table 4, the direction and relative importance of trends in total growth and the aging and immigration factors do differ markedly by race/Hispanic origin. The lack of a trend in the aggregate is due to offsetting trends in these different population sub-groups. These trends are summarized in Figures 13 for the low series and Figure 14 for the high series. Whites show a growing weakness from the aging factor because of offsetting echo boom gains and baby boom and older elderly losses, while Asians and Hispanics show steady gains from the aging factor.

Figure 13 – White Baby Boom Losses Will Drive White Household Growth Lower in Spite of Echo Boom Household Growth, While Aging Will Drive Asian and Hispanic Growth Higher

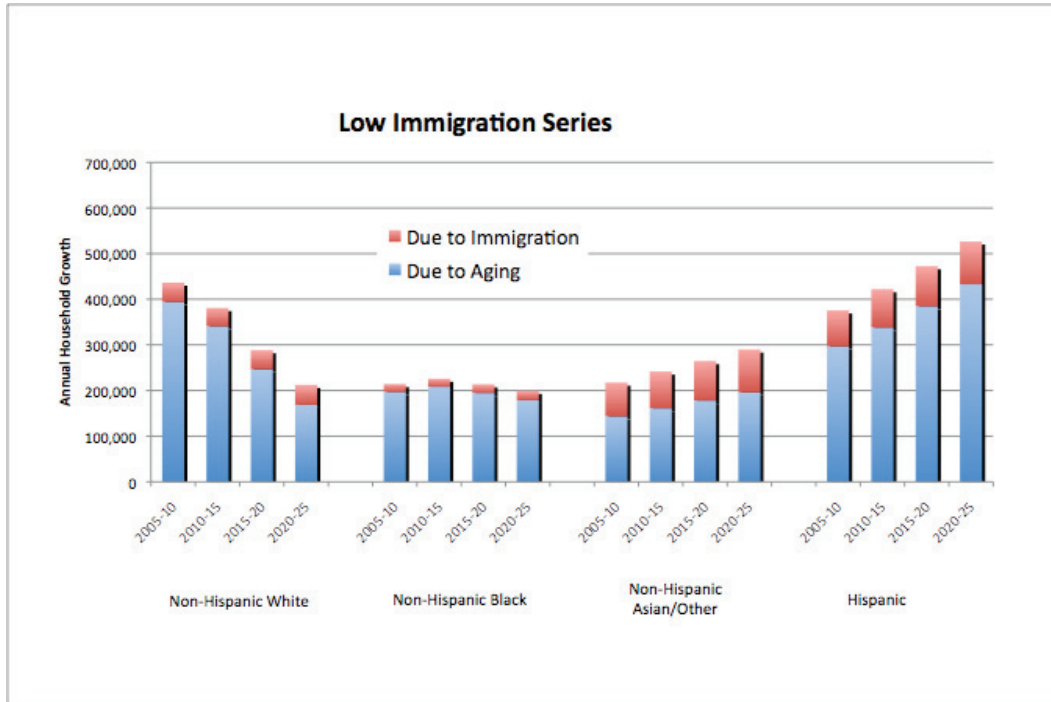
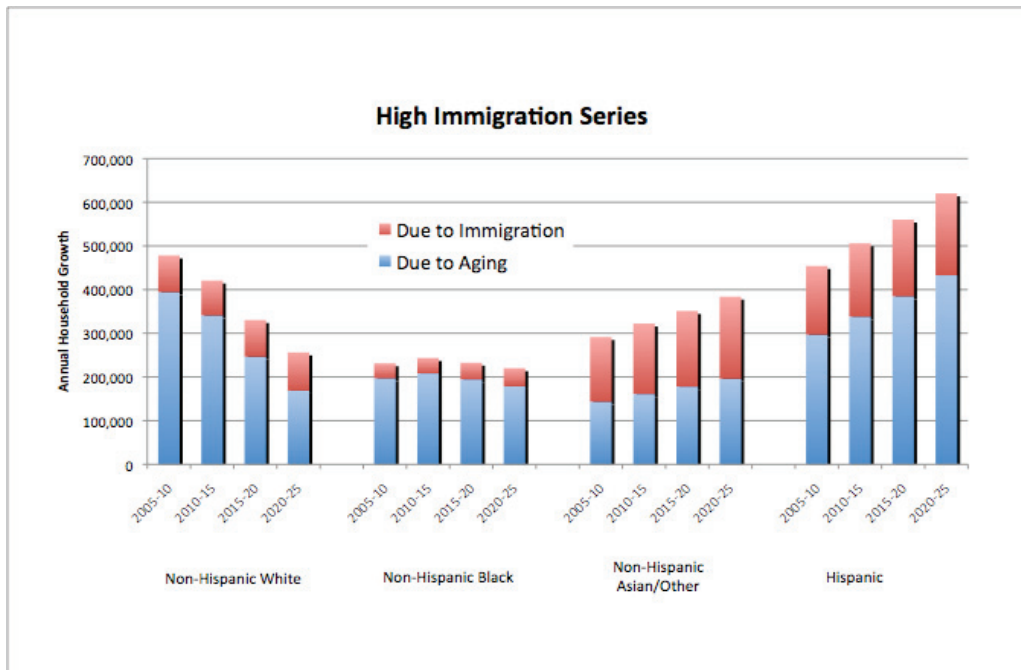


Figure 14 – Even Under High Immigration Scenario the Aging Factor Dominates Hispanic Household Growth



Examining the net household gains and losses for 10-year age cohorts as they age between 2010 and 2020 explains the projected white decline in household growth. Figures 15 and 16 contrast the changes for whites and Hispanics. White echo boomers contribute large gains to household numbers as they age into the 25-35 age group between 2010 and 2020 (+857,000 per year on average), but these gains are offset by losses to the cohorts age 65+ in 2010 and 75+ in 2020 (-875,000 annually). For Hispanics, there are smaller annual gains by the younger age cohort (+253,000 annually) but also much smaller losses among the elderly (-54,000). Even though white echo boomers age 25-34 in 2020 contribute almost four times the number of households as Hispanic echo boomers of the same age, across all age groups combined, Hispanics show a larger net gain in households than whites.

Figure 15 – White Household Gains among Younger Cohorts are Offset by Losses among Older Cohorts

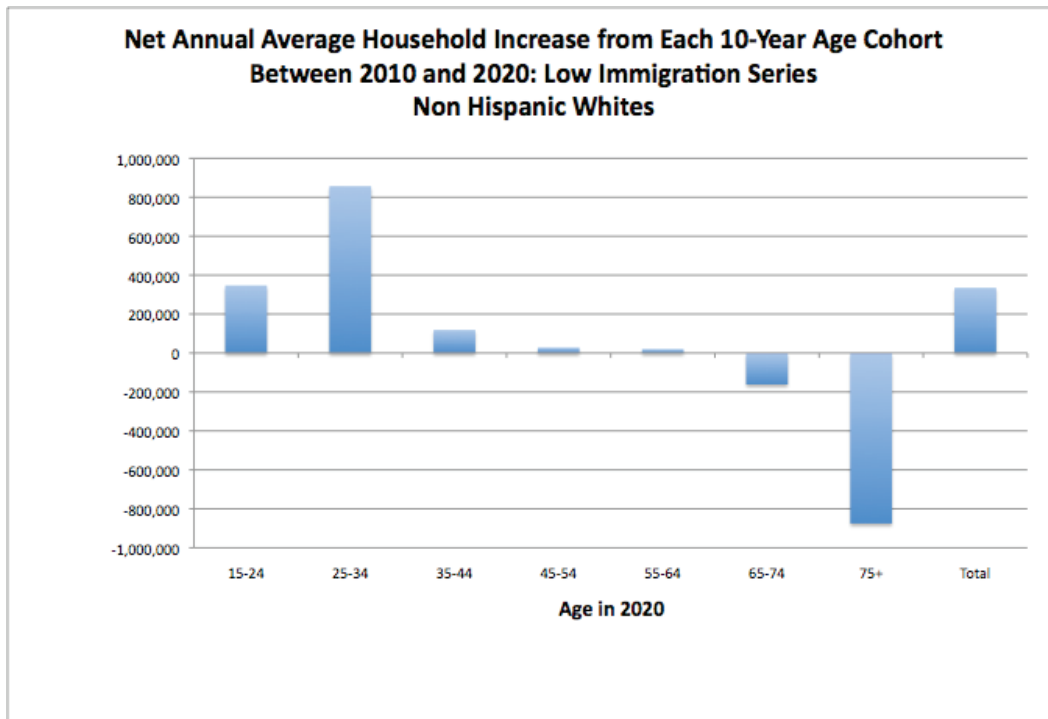
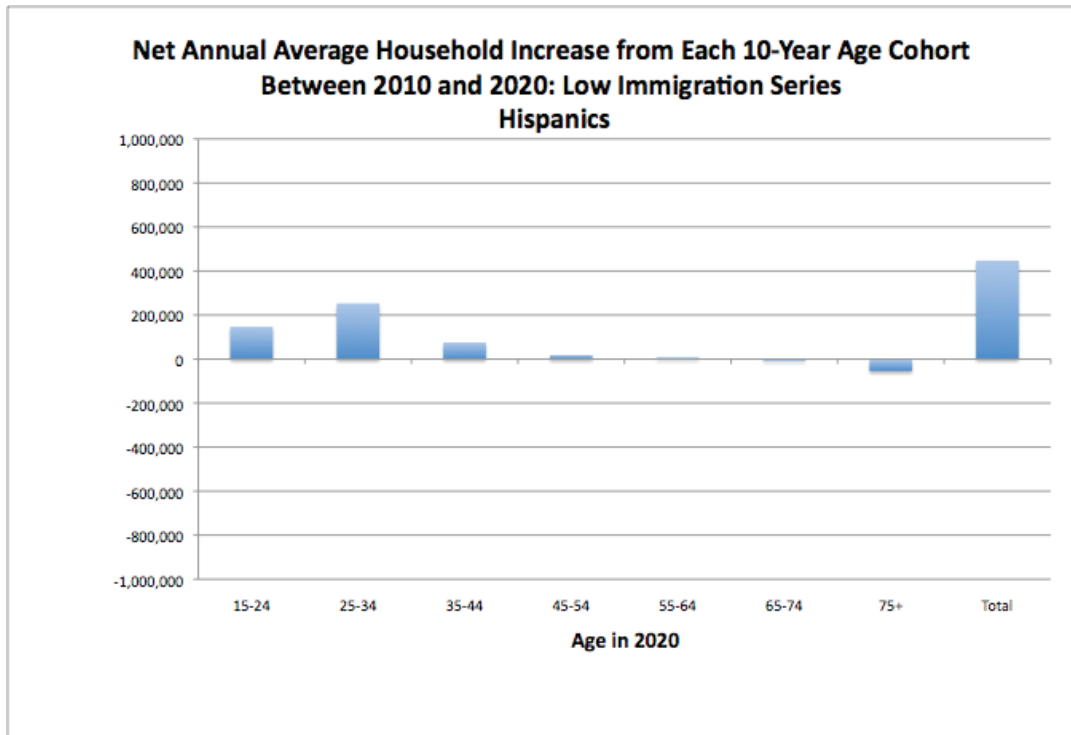


Figure 16 – Hispanic Gains among Younger Cohorts are not Offset by Losses among Older Cohorts



The differences in the age patterns of household growth between whites and minorities result in very different growth patterns by household type. Echo boomers will provide a large number of new married couple households with children. Fully 35 percent of the 12.5 million 25-34 year old headed households in 2020 are married couples with children. But the growth in this number, almost all of which takes place between 2010 and 2020, is more than offset by a greater number of the youngest baby boomers moving into the empty nest stage between 2010 and 2020. After 2015 there is a sharp decline in household growth among white married couples without children present as baby boomers in this category begin to die off. Concurrently, echo boomer households with children present are on the upswing. Single person household growth holds steady throughout the projection period, so by 2020-2025, almost all of the net change in non-Hispanic white households is among single person occupancy (Figure 17). The family composition growth pattern for Hispanics is very different. Because of its younger age structure, and greater propensity to form households with multiple generations, Hispanic household growth

takes place across a wider range of types (Figure 18). Asian household growth follows a similar pattern to Hispanic (see Appendix).

Figure 17 – The Family Composition of White Household Growth Will Soon Be Entirely Among Single Person Households

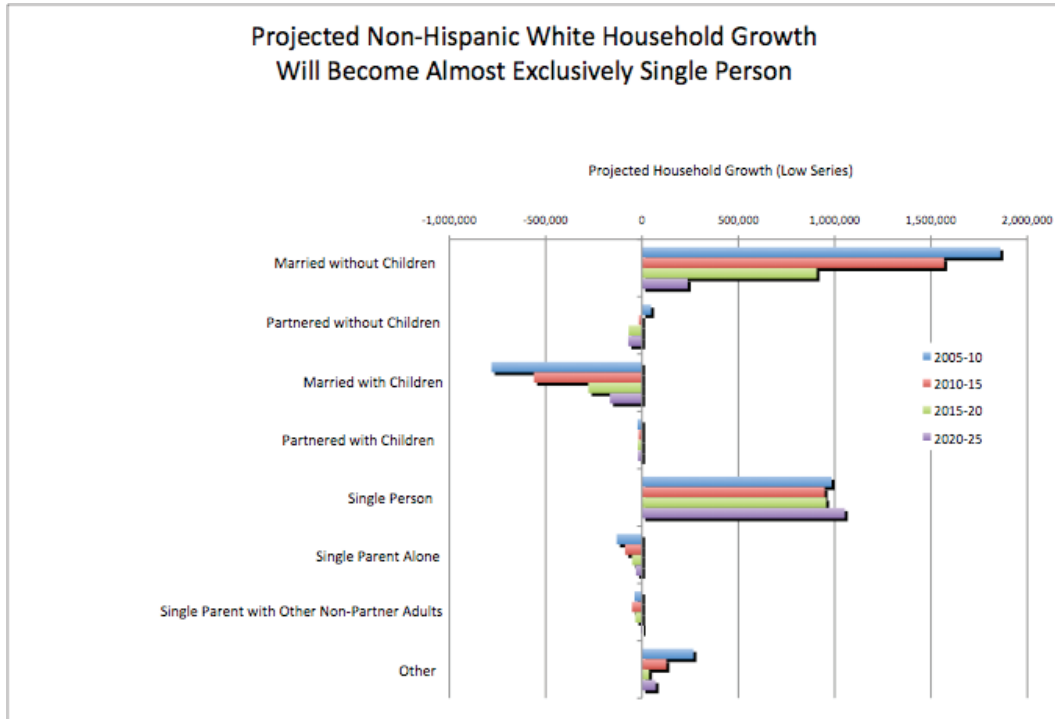
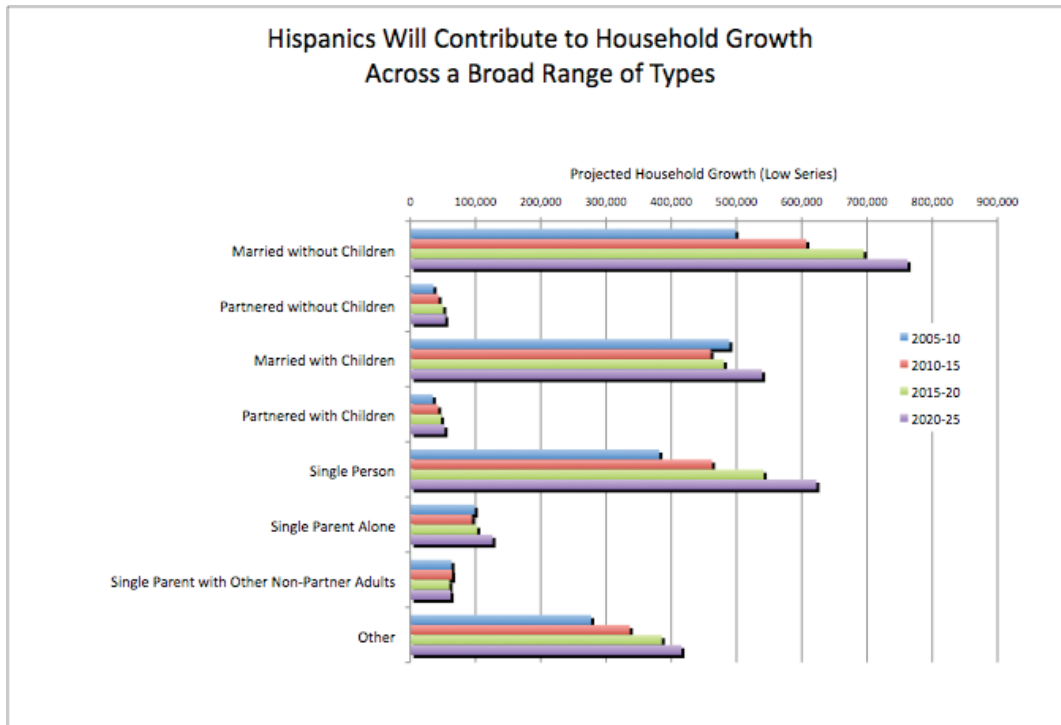


Figure 18 – Hispanic Household Growth Will Be Across Many Family Types



Conclusion

As the first decade of the 21st Century draws to a close we appear to be at a crossroad. One direction will take us down the path formed by a prolonged recession, greatly reduced levels of foreign immigration and a likely weakening of rates of young adult household formation which will offset definite increases in the size of the young adult population due to the aging of the echo boom generation. This scenario will shift household growth further into the future to when the economy recovers, pent-up household formation by echo boomers is unleashed, and immigration will perhaps slowly rebound. The other path will follow a more rapid economic recovery, more timely household formation by echo boomers, and perhaps a return to robust levels of immigration early in the projection period.

Of the three factors in future household growth – aging, immigration and rates of household formation – the aging factor is the most predictable. Aging echo boomers will, sooner or later, form households, and aging baby boomers will steadily be removed from the household population. Between 70 percent (high immigration projections) and 80 percent (low immigration projections) of future household growth is already hard-wired into the projections from the aging

factor. The aging factor will be either become rapidly expressed or be pent-up and unleashed at a later date.

Headship rates can be temporarily influenced by economic conditions, but they too are not likely to shift permanently to entirely new levels unless the economy continues to contract and does not rebound for years. Headship levels are primarily determined by social and cultural factors such as ethnicity, age at marriage, female labor force participation, and lifestyle issues that impact generational residential compatibility. Economic conditions can temporarily distort, but not fundamentally alter, the patterns of household formation of various sub-groups in the population, unless these social and cultural factors are themselves fundamentally altered by a tectonic shift in the economy.

The biggest unknown appears to be immigration. It is affected by economic conditions in both the U.S. and abroad, but is also affected by immigration laws and their enforcement, all of which are variable and hard to predict. It is for this reason that we have produced two sets of household projections with significantly different immigration assumptions. The high immigration series uses the assumptions in the recently released Census Bureau population projections that call for steadily increasing levels of immigration from just below 1.2 million in 2006 to over 1.5 million in 2025. The low immigration household projections assume half the level of immigration in the Census Bureau series. Under the high immigration scenario future household formations should exceed the levels reached in the first half of this decade. But even under the low immigration scenario, projected annual household formations will be close to the average for the 1995-2005 period. Only if a prolonged deep recession lowers immigration even below the low series assumption, or reduces headship rates below what was observed in 2008, will annual household growth fall below one million per year for an extended period of time. Indeed, both Census and the Pew Center assume immigration of well over one million per year 2010-2020.

Appendix A - Low Series Household Projections 2005-2025

Total Households

Low Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent with Other Non- Partner Adults			Total
						Single Parent Alone	Other	Other	
2005 15-19	22,036	95,872	31,970	41,514	143,798	29,409	25,159	489,708	879,466
2005 20-24	507,122	612,915	679,680	328,009	1,563,531	502,366	141,189	1,510,669	5,845,480
2005 25-29	1,274,151	683,918	2,354,396	429,489	2,108,633	884,015	197,081	1,184,880	9,116,564
2005 30-34	1,310,563	401,905	4,197,564	349,791	1,858,841	1,313,704	202,378	666,276	10,301,022
2005 35-39	1,112,661	306,409	5,437,918	322,866	1,815,097	1,237,242	376,967	517,497	11,126,658
2005 40-44	1,580,609	394,687	5,571,808	249,452	2,218,824	1,110,224	586,536	783,018	12,495,158
2005 45-49	2,936,263	380,099	4,207,184	143,976	2,710,934	757,828	401,570	1,165,262	12,703,116
2005 50-54	4,350,252	295,074	2,083,573	42,817	2,742,687	349,416	229,781	1,195,014	11,288,615
2005 55-59	5,057,577	265,356	728,818	10,173	2,981,356	115,179	66,782	1,054,682	10,279,921
2005 60-64	4,218,258	173,965	239,212	6,161	2,480,348	32,803	26,084	766,067	7,942,899
2005 65-69	3,310,350	76,455	82,257	885	2,256,284	25,749	16,151	605,101	6,373,232
2005 70-74	2,569,818	51,455	51,939	4,104	2,042,474	16,406	7,148	499,697	5,243,041
2005 75+	3,752,835	60,441	37,780	0	6,628,614	9,983	7,808	1,254,917	11,752,377
2005 Total	32,002,495	3,798,552	25,704,100	1,929,237	31,551,420	6,384,324	2,284,634	11,692,789	115,347,551
2010 15-19	23,453	95,069	34,425	42,579	143,141	30,217	25,779	505,163	899,826
2010 20-24	519,642	627,734	700,784	338,204	1,609,269	527,959	146,796	1,556,408	6,026,796
2010 25-29	1,361,885	733,500	2,485,850	453,906	2,262,912	948,010	207,174	1,253,382	9,706,618
2010 30-34	1,308,394	402,662	4,218,867	353,075	1,867,871	1,341,445	207,823	671,369	10,371,505
2010 35-39	1,053,019	288,435	5,221,420	312,351	1,732,977	1,197,240	374,121	512,572	10,692,134
2010 40-44	1,432,034	354,536	5,127,616	237,388	2,004,313	1,023,556	557,242	739,836	11,476,522
2010 45-49	2,914,897	377,355	4,240,076	147,745	2,701,243	764,617	410,301	1,193,940	12,750,173
2010 50-54	4,772,090	324,268	2,304,782	48,339	3,023,522	387,911	258,711	1,336,870	12,456,493
2010 55-59	5,616,567	293,708	823,553	11,511	3,332,951	131,289	78,374	1,207,241	11,495,193
2010 60-64	5,385,943	222,421	310,640	8,274	3,175,031	42,770	33,704	994,682	10,173,466
2010 65-69	3,981,060	91,821	99,764	1,128	2,703,228	30,789	19,887	725,533	7,653,210
2010 70-74	2,750,451	54,856	59,000	4,437	2,193,266	17,723	7,654	543,551	5,630,938
2010 75+	3,907,400	63,599	40,796	0	6,876,615	10,209	8,999	1,326,170	12,233,788
2010 Total	35,026,835	3,929,964	25,667,572	1,958,937	33,626,338	6,453,734	2,336,564	12,566,718	121,566,662
2015 15-19	23,309	90,309	34,429	41,481	133,577	29,035	24,082	492,964	869,186
2015 20-24	519,264	618,492	720,520	344,385	1,594,652	540,780	150,444	1,572,019	6,060,558
2015 25-29	1,382,575	745,740	2,541,429	465,920	2,309,385	987,305	213,872	1,279,748	9,925,974
2015 30-34	1,399,150	431,490	4,479,572	375,666	2,005,054	1,436,854	219,501	712,213	11,059,501
2015 35-39	1,061,040	290,509	5,291,006	318,695	1,757,390	1,227,521	387,209	525,318	10,858,688
2015 40-44	1,361,965	333,987	4,958,418	236,269	1,900,340	990,795	555,697	734,453	11,071,923
2015 45-49	2,651,311	342,479	3,952,374	140,368	2,465,701	708,817	385,586	1,129,634	11,776,270
2015 50-54	4,768,473	323,435	2,336,667	50,005	3,033,081	392,789	267,095	1,364,856	12,536,400
2015 55-59	6,173,555	321,723	922,083	12,892	3,684,207	148,033	90,891	1,366,887	12,720,272
2015 60-64	5,998,338	248,515	356,860	10,020	3,560,032	49,813	38,672	1,143,464	11,405,715
2015 65-69	5,113,886	118,488	130,481	1,598	3,487,063	40,047	26,814	947,917	9,866,294
2015 70-74	3,330,104	66,325	72,994	5,208	2,650,730	20,817	9,049	659,551	6,814,779
2015 75+	4,137,501	68,285	44,831	0	7,254,135	10,592	10,588	1,428,268	12,954,200
2015 Total	37,920,469	3,999,776	25,841,665	2,002,509	35,835,349	6,583,200	2,379,500	13,357,292	127,919,759

Appendix A - Low Series Household Projections 2005-2025

Total Households (continued)

Low Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non- Partner Adults	Other	Total
2020 15-19	25,231	93,613	37,501	44,025	137,163	30,583	24,948	524,278	917,343
2020 20-24	498,613	583,073	705,261	333,369	1,501,527	508,929	144,431	1,515,241	5,790,445
2020 25-29	1,360,941	731,730	2,565,219	472,614	2,278,532	1,001,913	220,185	1,288,510	9,919,645
2020 30-34	1,424,922	441,024	4,587,689	386,422	2,056,429	1,496,332	229,478	731,673	11,353,969
2020 35-39	1,143,062	313,404	5,664,109	341,494	1,897,771	1,322,497	414,385	561,078	11,657,800
2020 40-44	1,381,814	337,963	5,048,367	244,261	1,930,714	1,015,860	576,557	759,429	11,294,965
2020 45-49	2,532,136	325,957	3,875,124	139,750	2,364,412	689,699	380,143	1,122,401	11,429,621
2020 50-54	4,380,009	295,118	2,196,947	48,027	2,798,366	366,675	255,527	1,285,128	11,625,797
2020 55-59	6,182,929	319,783	949,063	13,140	3,702,376	152,418	97,125	1,418,413	12,835,248
2020 60-64	6,610,269	274,662	406,709	12,052	3,943,504	57,574	43,649	1,299,582	12,648,001
2020 65-69	5,733,297	133,328	149,955	2,054	3,944,597	46,301	31,955	1,094,723	11,136,210
2020 70-74	4,297,188	85,224	99,410	6,977	3,439,710	27,843	11,905	867,005	8,835,262
2020 75+	4,689,158	78,095	52,062	0	8,189,021	11,774	12,969	1,638,591	14,671,670
2020 Total	40,259,569	4,012,973	26,337,416	2,044,185	38,184,122	6,728,398	2,443,259	14,106,053	134,115,975
2025 15-19	26,342	95,398	39,229	45,415	139,296	31,548	25,512	542,758	945,499
2025 20-24	521,440	600,905	751,290	352,060	1,548,747	529,705	152,084	1,592,565	6,048,795
2025 25-29	1,287,058	687,373	2,469,566	454,151	2,138,422	937,270	213,138	1,238,903	9,425,881
2025 30-34	1,407,985	436,520	4,617,223	390,009	2,041,045	1,521,804	239,372	741,301	11,395,259
2025 35-39	1,174,792	322,046	5,847,024	354,953	1,963,622	1,382,349	436,561	585,440	12,066,785
2025 40-44	1,492,630	365,709	5,428,734	260,128	2,091,169	1,096,276	619,564	816,761	12,170,971
2025 45-49	2,579,625	332,340	3,971,725	144,571	2,417,763	709,967	394,484	1,164,562	11,715,037
2025 50-54	4,224,252	282,495	2,172,179	48,506	2,714,842	359,791	256,538	1,271,166	11,329,769
2025 55-59	5,698,188	290,443	908,825	12,263	3,412,444	144,525	96,605	1,363,013	11,926,306
2025 60-64	6,641,941	276,667	427,124	13,555	3,972,423	61,261	44,552	1,353,225	12,790,749
2025 65-69	6,359,941	147,903	170,740	2,621	4,408,034	53,028	37,657	1,248,078	12,428,003
2025 70-74	4,835,374	95,872	120,492	8,422	3,910,411	33,528	13,957	1,004,706	10,022,762
2025 75+	5,749,877	96,996	65,469	0	10,012,297	14,189	17,128	2,036,830	17,992,786
2025 Total	41,999,445	4,030,667	26,989,619	2,086,654	40,770,515	6,875,242	2,547,152	14,959,307	140,258,602
Household Growth									
2005-10	3,024,340	131,412	-36,528	29,700	2,074,918	69,411	51,930	873,929	6,219,111
2010-15	2,893,634	69,812	174,093	43,572	2,209,010	129,465	42,936	790,574	6,353,097
2015-20	2,339,100	13,196	495,752	41,677	2,348,773	145,198	63,758	748,761	6,196,216
2020-25	1,739,875	17,695	652,203	42,469	2,586,393	146,844	103,894	853,255	6,142,627
Average Annual Household Growth									
2005-10	604,868	26,282	-7,306	5,940	414,984	13,882	10,386	174,786	1,243,822
2010-15	578,727	13,962	34,819	8,714	441,802	25,893	8,587	158,115	1,270,619
2015-20	467,820	2,639	99,150	8,335	469,755	29,040	12,752	149,752	1,239,243
2020-25	347,975	3,539	130,441	8,494	517,279	29,369	20,779	170,651	1,228,525

Appendix A - Low Series Household Projections 2005-2025
Non-Hispanic White Households

Low Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent with Other Non- Partner Adults			Total
						Single Parent Alone	Other	Other	
2005 15-19	6,998	69,148	9,720	24,247	83,748	11,145	7,733	223,200	435,939
2005 20-24	347,935	455,427	379,268	189,911	1,019,318	152,181	64,178	871,012	3,479,230
2005 25-29	923,508	509,829	1,451,749	223,965	1,358,261	311,539	78,768	669,126	5,526,745
2005 30-34	937,974	282,664	2,657,485	210,188	1,175,844	561,656	63,545	338,803	6,228,158
2005 35-39	808,689	226,680	3,688,965	189,502	1,130,658	620,800	142,207	249,205	7,056,707
2005 40-44	1,185,457	308,255	3,989,052	145,688	1,604,477	687,953	269,511	390,336	8,580,729
2005 45-49	2,270,977	293,543	3,004,865	93,224	1,947,809	502,279	224,699	646,545	8,983,943
2005 50-54	3,439,316	223,210	1,522,943	22,169	1,967,782	234,106	133,963	723,134	8,266,622
2005 55-59	4,090,664	221,496	504,419	6,929	2,248,049	71,628	27,463	622,244	7,792,893
2005 60-64	3,478,075	139,158	154,067	1,976	1,898,558	18,419	14,970	464,778	6,170,002
2005 65-69	2,704,949	58,168	55,370	0	1,674,953	16,133	6,846	364,722	4,881,141
2005 70-74	2,164,396	44,855	18,872	905	1,569,825	3,974	3,352	326,310	4,132,489
2005 75+	3,245,767	41,202	20,893	0	5,658,145	8,975	1,059	904,187	9,880,228
2005 Total	25,604,706	2,873,637	17,457,667	1,108,704	23,337,427	3,200,788	1,038,294	6,793,603	81,414,825
2010 15-19	6,672	65,920	9,266	23,115	79,839	10,625	7,372	212,782	415,590
2010 20-24	352,542	461,457	384,289	192,426	1,032,813	154,196	65,028	882,543	3,525,293
2010 25-29	1,003,533	554,008	1,577,549	243,373	1,475,960	338,535	85,594	727,108	6,005,660
2010 30-34	927,177	279,410	2,626,897	207,769	1,162,310	555,191	62,813	334,903	6,156,470
2010 35-39	722,737	202,587	3,296,879	169,361	1,010,485	554,818	127,092	222,718	6,306,678
2010 40-44	1,019,688	265,150	3,431,240	125,315	1,380,114	591,752	231,823	335,753	7,380,835
2010 45-49	2,175,367	281,185	2,878,357	89,299	1,865,804	481,133	215,239	619,325	8,605,710
2010 50-54	3,672,114	238,319	1,626,027	23,669	2,100,976	249,951	143,030	772,081	8,826,167
2010 55-59	4,423,512	239,519	545,462	7,492	2,430,967	77,457	29,698	672,874	8,426,982
2010 60-64	4,358,555	174,387	193,069	2,476	2,379,181	23,081	18,760	582,438	7,731,948
2010 65-69	3,230,599	69,472	66,130	0	2,000,445	19,268	8,177	435,598	5,829,688
2010 70-74	2,269,314	47,030	19,787	948	1,645,921	4,167	3,514	342,128	4,332,809
2010 75+	3,302,479	41,922	21,258	0	5,757,008	9,131	1,078	919,986	10,052,861
2010 Total	27,464,288	2,920,365	16,676,209	1,085,244	24,321,822	3,069,306	999,218	7,060,238	83,596,691
2015 15-19	6,136	60,626	8,522	21,259	73,427	9,771	6,780	195,694	382,215
2015 20-24	335,883	439,652	366,130	183,333	984,009	146,909	61,955	840,840	3,358,711
2015 25-29	1,012,600	559,013	1,591,802	245,571	1,489,295	341,594	86,367	733,678	6,059,920
2015 30-34	1,006,045	303,178	2,850,348	225,442	1,261,179	602,417	68,156	363,391	6,680,156
2015 35-39	715,844	200,655	3,265,438	167,746	1,000,848	549,527	125,880	220,594	6,246,533
2015 40-44	912,595	237,302	3,070,874	112,154	1,235,168	529,604	207,476	300,491	6,605,664
2015 45-49	1,874,416	242,284	2,480,150	76,945	1,607,679	414,570	185,462	533,645	7,415,151
2015 50-54	3,524,044	228,709	1,560,461	22,715	2,016,259	239,873	137,263	740,948	8,470,271
2015 55-59	4,729,294	256,076	583,168	8,010	2,599,012	82,811	31,751	719,388	9,009,510
2015 60-64	4,723,941	189,006	209,254	2,684	2,578,632	25,016	20,333	631,265	8,380,131
2015 65-69	4,062,625	87,364	83,161	0	2,515,650	24,231	10,282	547,784	7,331,097
2015 70-74	2,725,887	56,492	23,768	1,139	1,977,071	5,005	4,221	410,962	5,204,545
2015 75+	3,402,509	43,192	21,902	0	5,931,383	9,408	1,110	947,851	10,357,355
2015 Total	29,031,818	2,903,549	16,114,979	1,066,999	25,269,611	2,980,737	947,037	7,186,530	85,501,261

Appendix A - Low Series Household Projections 2005-2025
Non-Hispanic White Households (continued)

Low Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent with Other Non- Partner Adults			Total
						Single Parent Alone	Other	Other	
2020 15-19	6,166	60,926	8,564	21,364	73,790	9,820	6,813	196,662	384,105
2020 20-24	308,625	403,973	336,418	168,455	904,154	134,987	56,927	772,604	3,086,145
2020 25-29	963,375	531,838	1,514,420	233,634	1,416,896	324,988	82,169	698,012	5,765,332
2020 30-34	1,015,572	306,049	2,877,338	227,577	1,273,121	608,121	68,802	366,832	6,743,410
2020 35-39	778,182	218,129	3,549,803	182,354	1,088,005	597,381	136,842	239,805	6,790,502
2020 40-44	905,727	235,517	3,047,764	111,310	1,225,872	525,618	205,915	298,230	6,555,953
2020 45-49	1,681,423	217,339	2,224,791	69,023	1,442,151	371,886	166,367	478,700	6,651,679
2020 50-54	3,044,239	197,570	1,348,002	19,622	1,741,742	207,214	118,574	640,067	7,317,030
2020 55-59	4,544,715	246,082	560,408	7,698	2,497,575	79,579	30,512	691,311	8,657,878
2020 60-64	5,060,916	202,488	224,181	2,875	2,762,575	26,801	21,783	676,295	8,977,914
2020 65-69	4,417,783	95,001	90,431	0	2,735,570	26,349	11,181	595,672	7,971,987
2020 70-74	3,445,003	71,395	30,039	1,440	2,498,642	6,326	5,335	519,378	6,577,556
2020 75+	3,766,098	47,807	24,242	0	6,565,205	10,413	1,229	1,049,138	11,464,132
2020 Total	29,937,824	2,834,113	15,836,400	1,045,351	26,225,299	2,929,483	912,448	7,222,704	86,943,622
2025 15-19	6,154	60,802	8,547	21,321	73,640	9,800	6,799	196,262	383,325
2025 20-24	310,002	405,775	337,919	169,207	908,188	135,590	57,181	776,051	3,099,914
2025 25-29	883,756	487,884	1,389,259	214,325	1,299,795	298,129	75,378	640,324	5,288,848
2025 30-34	967,028	291,420	2,739,802	216,699	1,212,266	579,053	65,513	349,297	6,421,078
2025 35-39	787,415	220,717	3,591,921	184,517	1,100,914	604,469	138,466	242,650	6,871,069
2025 40-44	985,817	256,342	3,317,265	121,153	1,334,271	572,096	224,123	324,601	7,135,669
2025 45-49	1,672,445	216,178	2,212,911	68,654	1,434,450	369,900	165,478	476,144	6,616,160
2025 50-54	2,737,991	177,695	1,212,393	17,648	1,566,524	186,368	106,646	575,677	6,580,942
2025 55-59	3,932,283	212,921	484,889	6,660	2,161,010	68,855	26,400	598,152	7,491,169
2025 60-64	4,873,140	194,975	215,863	2,769	2,660,075	25,806	20,975	651,202	8,644,806
2025 65-69	4,747,308	102,087	97,176	0	2,939,618	28,315	12,015	640,103	8,566,623
2025 70-74	3,764,527	78,017	32,825	1,573	2,730,390	6,913	5,829	567,550	7,187,624
2025 75+	4,506,769	57,209	29,010	0	7,856,371	12,461	1,471	1,255,470	13,718,760
2025 Total	30,174,633	2,762,022	15,669,780	1,024,526	27,277,513	2,897,755	906,274	7,293,483	88,005,986
Household Growth									
2005-10	1,859,582	46,728	-781,458	-23,460	984,395	-131,482	-39,076	266,635	2,181,865
2010-15	1,567,530	-16,816	-561,231	-18,245	947,790	-88,569	-52,181	126,292	1,904,570
2015-20	906,006	-69,436	-278,578	-21,648	955,687	-51,253	-34,588	36,173	1,442,362
2020-25	236,809	-72,091	-166,620	-20,826	1,052,214	-31,728	-6,174	70,779	1,062,363
Average Annual Household Growth									
2005-10	371,916	9,346	-156,292	-4,692	196,879	-26,296	-7,815	53,327	436,373
2010-15	313,506	-3,363	-112,246	-3,649	189,558	-17,714	-10,436	25,258	380,914
2015-20	181,201	-13,887	-55,716	-4,330	191,137	-10,251	-6,918	7,235	288,472
2020-25	47,362	-14,418	-33,324	-4,165	210,443	-6,346	-1,235	14,156	212,473

Appendix A - Low Series Household Projections 2005-2025
Non-Hispanic Black Households

Low Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent with Other Non- Partner Adults			Total
						Single Parent Alone	Other	Other	
2005 15-19	3,740	6,804	4,908	2,633	39,369	8,512	12,642	72,628	151,237
2005 20-24	25,168	56,506	47,075	34,736	264,634	234,816	35,137	177,758	875,830
2005 25-29	57,264	48,550	143,289	58,171	304,140	366,167	37,793	98,698	1,114,072
2005 30-34	71,227	40,081	270,642	43,079	309,670	440,383	58,068	86,427	1,319,577
2005 35-39	98,632	30,531	410,090	53,839	349,851	361,672	122,832	95,855	1,523,302
2005 40-44	158,337	38,865	406,767	28,623	333,957	222,348	162,796	193,296	1,544,988
2005 45-49	290,128	43,254	323,493	14,980	424,154	133,660	104,571	271,617	1,605,858
2005 50-54	331,495	42,930	136,677	10,921	408,684	60,150	45,756	271,632	1,308,244
2005 55-59	345,811	23,002	66,275	2,185	425,660	26,372	20,515	226,913	1,136,732
2005 60-64	240,498	14,560	32,140	1,283	329,440	7,293	9,357	164,103	798,673
2005 65-69	184,001	8,431	5,646	0	315,802	5,800	1,435	134,761	655,876
2005 70-74	148,366	1,743	11,542	3,199	258,988	12,432	3,796	89,297	529,362
2005 75+	162,622	13,018	9,511	0	517,542	1,009	2,939	182,658	889,299
2005 Total	2,117,291	368,275	1,868,054	253,647	4,281,890	1,880,614	617,637	2,065,643	13,453,050
2010 15-19	3,800	6,912	4,985	2,674	39,992	8,647	12,842	73,778	153,630
2010 20-24	27,101	60,846	50,691	37,405	284,961	252,853	37,836	191,412	943,105
2010 25-29	63,296	53,665	158,384	64,299	336,181	404,743	41,775	109,096	1,231,441
2010 30-34	74,777	42,079	284,128	45,225	325,100	462,326	60,961	90,733	1,385,328
2010 35-39	96,106	29,749	399,585	52,459	340,889	352,408	119,686	93,399	1,484,280
2010 40-44	146,884	36,054	377,343	26,552	309,800	206,264	151,020	179,313	1,433,230
2010 45-49	298,881	44,559	333,253	15,432	436,950	137,693	107,726	279,811	1,654,304
2010 50-54	384,977	49,856	158,727	12,683	474,619	69,854	53,138	315,455	1,519,310
2010 55-59	417,770	27,789	80,066	2,639	514,235	31,860	24,783	274,131	1,373,272
2010 60-64	320,443	19,400	42,823	1,709	438,950	9,718	12,467	218,653	1,064,162
2010 65-69	211,803	9,705	6,499	0	363,520	6,677	1,651	155,124	754,978
2010 70-74	161,793	1,900	12,586	3,488	282,425	13,556	4,140	97,377	577,266
2010 75+	173,758	13,910	10,162	0	552,980	1,078	3,140	195,165	950,193
2010 Total	2,381,387	396,422	1,919,233	264,567	4,700,601	1,957,675	631,166	2,273,449	14,524,501
2015 15-19	3,365	6,122	4,415	2,369	35,421	7,659	11,374	65,344	136,069
2015 20-24	27,536	61,823	51,505	38,005	289,535	256,911	38,443	194,485	958,243
2015 25-29	67,819	57,499	169,700	68,893	360,200	433,660	44,760	116,891	1,319,422
2015 30-34	82,518	46,435	313,541	49,907	358,755	510,187	67,272	100,126	1,528,740
2015 35-39	101,309	31,359	421,219	55,300	359,345	371,487	126,166	98,456	1,564,639
2015 40-44	143,799	35,297	369,419	25,995	303,294	201,933	147,849	175,548	1,403,133
2015 45-49	278,540	41,526	310,573	14,382	407,213	128,322	100,395	260,768	1,541,717
2015 50-54	398,363	51,589	164,246	13,124	491,121	72,283	54,986	326,423	1,572,135
2015 55-59	487,714	32,441	93,471	3,081	600,329	37,194	28,933	320,027	1,603,190
2015 60-64	389,659	23,590	52,073	2,078	533,763	11,817	15,160	265,882	1,294,023
2015 65-69	284,913	13,055	8,742	0	489,000	8,981	2,221	208,669	1,015,583
2015 70-74	188,709	2,217	14,680	4,069	329,411	15,812	4,828	113,578	673,304
2015 75+	190,913	15,283	11,165	0	607,579	1,184	3,451	214,435	1,044,010
2015 Total	2,645,158	418,236	1,984,750	277,202	5,164,965	2,057,429	645,837	2,460,633	15,654,208

Appendix A - Low Series Household Projections 2005-2025
Non-Hispanic Black Households (continued)

Low Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent with Other Non- Partner Adults			Total
						Single Parent Alone	Other	Other	
2020 15-19	3,364	6,120	4,414	2,368	35,408	7,656	11,370	65,320	136,019
2020 20-24	24,436	54,861	45,706	33,726	256,933	227,983	34,114	172,586	850,343
2020 25-29	68,845	58,369	172,268	69,936	365,651	440,223	45,437	118,660	1,339,389
2020 30-34	88,486	49,793	336,218	53,517	384,702	547,087	72,138	107,368	1,639,308
2020 35-39	112,236	34,742	466,652	61,264	398,104	411,556	139,774	109,075	1,733,403
2020 40-44	152,369	37,400	391,435	27,544	321,370	213,967	156,660	186,010	1,486,755
2020 45-49	274,095	40,864	305,617	14,152	400,715	126,274	98,793	256,607	1,517,117
2020 50-54	373,109	48,319	153,834	12,292	459,987	67,701	51,500	305,730	1,472,471
2020 55-59	507,248	33,740	97,214	3,205	624,374	38,683	30,092	332,845	1,667,401
2020 60-64	457,604	27,704	61,153	2,440	626,835	13,877	17,804	312,244	1,519,661
2020 65-69	349,130	15,997	10,712	0	599,216	11,006	2,722	255,701	1,244,485
2020 70-74	256,799	3,016	19,977	5,537	448,269	21,517	6,571	154,559	916,244
2020 75+	219,461	17,569	12,835	0	698,432	1,361	3,967	246,500	1,200,124
2020 Total	2,887,182	428,494	2,078,036	285,980	5,619,995	2,128,891	670,940	2,623,205	16,722,723
2025 15-19	3,396	6,178	4,456	2,390	35,744	7,728	11,478	65,940	137,310
2025 20-24	24,479	54,957	45,786	33,785	257,384	228,383	34,174	172,888	851,835
2025 25-29	61,006	51,723	152,652	61,972	324,015	390,095	40,263	105,148	1,186,874
2025 30-34	89,966	50,626	341,843	54,412	391,138	556,239	73,344	109,164	1,666,732
2025 35-39	120,835	37,404	502,406	65,958	428,606	443,089	150,483	117,433	1,866,213
2025 40-44	169,420	41,585	435,239	30,626	357,333	237,911	174,191	206,825	1,653,131
2025 45-49	291,703	43,489	325,250	15,062	426,457	134,386	105,139	273,092	1,614,576
2025 50-54	368,791	47,760	152,054	12,150	454,664	66,917	50,904	302,192	1,455,432
2025 55-59	477,575	31,767	91,528	3,017	587,850	36,420	28,331	313,375	1,569,863
2025 60-64	478,642	28,977	63,965	2,553	655,654	14,515	18,622	326,599	1,589,527
2025 65-69	412,925	18,921	12,669	0	708,709	13,017	3,219	302,425	1,471,885
2025 70-74	317,642	3,731	24,710	6,849	554,476	26,615	8,127	191,178	1,133,328
2025 75+	278,542	22,298	16,290	0	886,454	1,727	5,034	312,859	1,523,205
2025 Total	3,094,923	439,415	2,168,847	288,773	6,068,481	2,157,043	703,311	2,799,118	17,719,911
Household Growth									
2005-10	264,097	28,147	51,179	10,919	418,711	77,061	13,529	207,807	1,071,451
2010-15	263,771	21,814	65,517	12,635	464,364	99,754	14,670	187,183	1,129,708
2015-20	242,025	10,258	93,286	8,778	455,030	71,462	25,103	162,572	1,068,514
2020-25	207,740	10,921	90,811	2,793	448,486	28,152	32,372	175,913	997,188
Average Annual Household Growth									
2005-10	52,819	5,629	10,236	2,184	83,742	15,412	2,706	41,561	214,290
2010-15	52,754	4,363	13,103	2,527	92,873	19,951	2,934	37,437	225,942
2015-20	48,405	2,052	18,657	1,756	91,006	14,292	5,021	32,514	213,703
2020-25	41,548	2,184	18,162	559	89,697	5,630	6,474	35,183	199,438

Appendix A - Low Series Household Projections 2005-2025
Non-Hispanic Asian/Other Households

Low Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent with Other Non- Partner Adults			Total
						Single Parent Alone	Other	Other	
2005 15-19	1,748	10,228	0	2,549	8,168	4,355	0	75,766	102,815
2005 20-24	58,713	47,745	40,054	20,878	156,749	26,577	6,772	206,050	563,538
2005 25-29	150,818	57,299	157,654	42,633	263,012	59,510	21,562	176,222	928,712
2005 30-34	159,311	32,766	443,487	25,201	186,055	70,991	16,987	119,065	1,053,862
2005 35-39	105,546	24,284	454,101	21,096	175,320	66,237	20,732	64,488	931,804
2005 40-44	101,682	20,243	492,078	11,068	118,898	62,322	41,367	64,853	912,511
2005 45-49	165,301	14,040	412,592	9,072	147,053	36,083	15,649	78,209	877,999
2005 50-54	270,611	10,915	218,686	4,651	197,463	25,492	18,266	78,622	824,707
2005 55-59	324,521	7,349	76,330	0	124,527	3,827	5,741	71,551	613,846
2005 60-64	267,876	10,264	14,337	558	128,349	255	378	44,928	466,945
2005 65-69	213,608	7,694	9,797	217	125,881	0	3,951	42,264	403,410
2005 70-74	138,524	368	9,232	0	104,459	0	0	36,574	289,157
2005 75+	178,352	3,701	412	0	242,370	0	1,667	71,924	498,426
2005 Total	2,136,611	246,897	2,328,761	137,923	1,978,303	355,650	153,071	1,130,516	8,467,732
2010 15-19	1,874	10,964	0	2,733	8,756	4,668	0	81,213	110,206
2010 20-24	60,792	49,436	41,473	21,618	162,302	27,519	7,011	213,350	583,501
2010 25-29	156,019	59,275	163,090	44,103	272,081	61,562	22,306	182,299	960,735
2010 30-34	156,380	32,163	435,328	24,737	182,632	69,685	16,675	116,874	1,034,474
2010 35-39	120,792	27,792	519,693	24,143	200,643	75,805	23,726	73,803	1,066,397
2010 40-44	110,453	21,989	534,521	12,022	129,153	67,697	44,935	70,447	991,216
2010 45-49	180,387	15,322	450,245	9,900	160,473	39,376	17,077	85,346	958,125
2010 50-54	312,255	12,595	252,340	5,367	227,851	29,416	21,077	90,721	951,621
2010 55-59	389,118	8,812	91,524	0	149,314	4,589	6,884	85,793	736,035
2010 60-64	381,139	14,603	20,399	794	182,618	362	538	63,925	664,378
2010 65-69	274,871	9,901	12,607	279	161,984	0	5,084	54,385	519,110
2010 70-74	175,172	465	11,675	0	132,095	0	0	46,250	365,656
2010 75+	219,642	4,558	507	0	298,481	0	2,053	88,575	613,817
2010 Total	2,538,894	267,875	2,533,402	145,696	2,268,382	380,679	167,365	1,252,981	9,555,273
2015 15-19	1,974	11,551	0	2,879	9,224	4,918	0	85,561	116,106
2015 20-24	64,419	52,386	43,947	22,908	171,985	29,160	7,430	226,079	618,314
2015 25-29	156,006	59,270	163,077	44,100	272,058	61,557	22,304	182,283	960,655
2015 30-34	161,748	33,267	450,272	25,586	188,901	72,077	17,247	120,886	1,069,985
2015 35-39	122,260	28,130	526,010	24,437	203,082	76,726	24,015	74,700	1,079,359
2015 40-44	128,019	25,486	619,532	13,934	149,693	78,464	52,081	81,651	1,148,860
2015 45-49	198,546	16,864	495,572	10,896	176,628	43,340	18,796	93,938	1,054,581
2015 50-54	345,835	13,950	279,476	5,944	252,354	32,579	23,343	100,477	1,053,958
2015 55-59	452,449	10,246	106,420	0	173,616	5,335	8,004	99,757	855,828
2015 60-64	459,454	17,604	24,591	957	220,141	437	648	77,060	800,893
2015 65-69	394,163	14,197	18,078	400	232,284	0	7,290	77,988	744,401
2015 70-74	230,588	612	15,368	0	173,883	0	0	60,881	481,331
2015 75+	278,870	5,787	644	0	378,968	0	2,607	112,460	779,335
2015 Total	2,994,332	289,350	2,742,986	152,041	2,602,818	404,594	183,765	1,393,720	10,763,606

Appendix A - Low Series Household Projections 2005-2025
Non-Hispanic Asian/Other Households (continued)

Low Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent with Other Non-Partner Adults			Total
						Single Parent Alone	Partner	Other	
2020 15-19	2,198	12,863	0	3,206	10,272	5,477	0	95,282	129,299
2020 20-24	67,787	55,124	46,245	24,105	180,974	30,685	7,818	237,896	650,633
2020 25-29	160,263	60,887	167,527	45,303	279,483	63,237	22,913	187,258	986,871
2020 30-34	162,181	33,356	451,477	25,655	189,406	72,270	17,293	121,210	1,072,848
2020 35-39	129,783	29,861	558,376	25,940	215,578	81,447	25,492	79,296	1,145,773
2020 40-44	131,626	26,204	636,989	14,327	153,911	80,675	53,549	83,952	1,181,233
2020 45-49	232,051	19,710	579,200	12,735	206,435	50,654	21,968	109,791	1,232,543
2020 50-54	385,258	15,540	311,335	6,622	281,121	36,293	26,004	111,931	1,174,102
2020 55-59	504,358	11,422	118,630	0	193,535	5,948	8,922	111,202	954,017
2020 60-64	536,157	20,543	28,696	1,117	256,892	510	757	89,925	934,596
2020 65-69	479,214	17,261	21,979	486	282,405	0	8,863	94,815	905,023
2020 70-74	333,269	885	22,212	0	251,313	0	0	87,991	695,669
2020 75+	366,405	7,604	846	0	497,923	0	3,425	147,760	1,023,962
2020 Total	3,490,550	311,259	2,943,510	159,496	2,999,249	427,194	197,004	1,558,307	12,086,568
2025 15-19	2,352	13,762	0	3,430	10,990	5,859	0	101,941	138,334
2025 20-24	75,314	61,245	51,379	26,782	201,070	34,092	8,686	264,311	722,879
2025 25-29	162,837	61,865	170,218	46,031	283,971	64,253	23,281	190,265	1,002,721
2025 30-34	166,710	34,288	464,084	26,371	194,695	74,288	17,776	124,594	1,102,805
2025 35-39	133,765	30,777	575,508	26,736	222,193	83,946	26,274	81,729	1,180,928
2025 40-44	141,324	28,135	683,919	15,383	165,251	86,619	57,494	90,137	1,268,261
2025 45-49	241,219	20,488	602,082	13,238	214,590	52,655	22,836	114,128	1,281,237
2025 50-54	453,046	18,274	366,116	7,787	330,586	42,679	30,580	131,626	1,380,692
2025 55-59	564,279	12,779	132,724	0	216,528	6,654	9,982	124,413	1,067,360
2025 60-64	599,495	22,970	32,086	1,249	287,240	570	846	100,548	1,045,003
2025 65-69	562,718	20,268	25,809	571	331,615	0	10,407	111,337	1,062,725
2025 70-74	408,945	1,086	27,255	0	308,379	0	0	107,971	853,638
2025 75+	511,730	10,619	1,182	0	695,412	0	4,783	206,365	1,430,091
2025 Total	4,023,733	336,556	3,132,362	167,577	3,462,520	451,614	212,946	1,749,366	13,536,674
Household Growth									
2005-10	402,283	20,978	204,641	7,773	290,079	25,029	14,294	122,465	1,087,541
2010-15	455,438	21,475	209,584	6,345	334,436	23,915	16,400	140,739	1,208,334
2015-20	496,218	21,909	200,523	7,455	396,430	22,600	13,239	164,587	1,322,962
2020-25	533,184	25,297	188,852	8,081	463,271	24,420	15,942	191,059	1,450,106
Average Annual Household Growth									
2005-10	80,457	4,196	40,928	1,555	58,016	5,006	2,859	24,493	217,508
2010-15	91,088	4,295	41,917	1,269	66,887	4,783	3,280	28,148	241,667
2015-20	99,244	4,382	40,105	1,491	79,286	4,520	2,648	32,917	264,592
2020-25	106,637	5,059	37,770	1,616	92,654	4,884	3,188	38,212	290,021

Appendix A - Low Series Household Projections 2005-2025
Hispanic Households

Low Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent with Other Non-Partner Adults			Total
						Single Parent Alone	Partner	Other	
2005 15-19	9,549	9,692	17,343	12,084	12,512	5,396	4,784	118,114	189,475
2005 20-24	75,306	53,237	213,282	82,483	122,831	88,792	35,103	255,849	926,883
2005 25-29	142,562	68,240	601,705	104,720	183,220	146,799	58,957	240,834	1,547,036
2005 30-34	142,051	46,394	825,950	71,323	187,272	240,675	63,778	121,982	1,699,425
2005 35-39	99,793	24,914	884,762	58,430	159,269	188,532	91,196	107,949	1,614,845
2005 40-44	135,132	27,325	683,911	64,073	161,492	137,601	112,863	134,533	1,456,930
2005 45-49	209,856	29,261	466,234	26,700	191,918	85,806	56,651	168,890	1,235,316
2005 50-54	308,830	18,019	205,267	5,076	168,758	29,668	31,797	121,627	889,042
2005 55-59	296,581	13,508	81,793	1,059	183,121	13,351	13,063	133,974	736,451
2005 60-64	231,809	9,983	38,668	2,345	124,001	6,837	1,379	92,257	507,279
2005 65-69	207,792	2,162	11,445	669	139,648	3,816	3,919	63,354	432,805
2005 70-74	118,532	4,489	12,292	0	109,203	0	0	47,517	292,033
2005 75+	166,094	2,520	6,964	0	210,557	0	2,142	96,148	484,425
2005 Total	2,143,888	309,743	4,049,618	428,962	1,953,800	947,273	475,632	1,703,027	12,011,944
2010 15-19	11,108	11,274	20,173	14,057	14,555	6,277	5,565	137,391	220,399
2010 20-24	79,207	55,995	224,331	86,756	129,194	93,392	36,921	269,102	974,897
2010 25-29	139,036	66,552	586,826	102,131	178,689	143,169	57,499	234,879	1,508,782
2010 30-34	150,060	49,010	872,514	75,344	197,830	254,243	67,374	128,859	1,795,234
2010 35-39	113,385	28,307	1,005,262	66,387	180,960	214,209	103,617	122,651	1,834,779
2010 40-44	155,010	31,344	784,513	73,498	185,247	157,842	129,464	154,322	1,671,240
2010 45-49	260,263	36,290	578,221	33,114	238,015	106,416	70,258	209,457	1,532,034
2010 50-54	402,744	23,499	267,688	6,620	220,076	38,689	41,466	158,613	1,159,394
2010 55-59	386,167	17,588	106,500	1,379	238,434	17,384	17,009	174,442	958,904
2010 60-64	325,806	14,031	54,348	3,295	174,282	9,609	1,938	129,667	712,977
2010 65-69	263,786	2,744	14,530	849	177,279	4,844	4,976	80,426	549,434
2010 70-74	144,173	5,460	14,951	0	132,826	0	0	57,796	355,206
2010 75+	211,521	3,209	8,869	0	268,145	0	2,728	122,444	616,917
2010 Total	2,642,266	345,302	4,538,727	463,430	2,335,533	1,046,075	538,815	1,980,050	13,890,198
2015 15-19	11,834	12,010	21,491	14,975	15,505	6,687	5,928	146,365	234,796
2015 20-24	91,426	64,633	258,937	100,139	149,124	107,799	42,617	310,616	1,125,290
2015 25-29	146,150	69,957	616,851	107,356	187,832	150,494	60,441	246,896	1,585,977
2015 30-34	148,838	48,611	865,412	74,731	196,219	252,174	66,825	127,810	1,780,620
2015 35-39	121,627	30,365	1,078,339	71,213	194,115	229,781	111,149	131,567	1,968,157
2015 40-44	177,551	35,902	898,593	84,186	212,185	180,794	148,291	176,763	1,914,265
2015 45-49	299,809	41,804	666,080	38,145	274,181	122,586	80,934	241,283	1,764,821
2015 50-54	500,231	29,187	332,484	8,222	273,347	48,054	51,503	197,007	1,440,035
2015 55-59	504,099	22,959	139,024	1,800	311,250	22,694	22,203	227,715	1,251,744
2015 60-64	425,283	18,315	70,942	4,301	227,495	12,543	2,530	169,257	930,668
2015 65-69	372,184	3,872	20,500	1,198	250,129	6,834	7,020	113,476	775,213
2015 70-74	184,920	7,004	19,177	0	170,366	0	0	74,131	455,599
2015 75+	265,208	4,023	11,120	0	336,205	0	3,420	153,523	773,500
2015 Total	3,249,161	388,642	4,998,950	506,267	2,797,953	1,140,440	602,862	2,316,409	16,000,684

Appendix A - Low Series Household Projections 2005-2025
Hispanic Households (continued)

Low Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent with Other Non-Partner Adults			Total
						Single Parent Alone	Other	Other	
2020 15-19	13,503	13,705	24,523	17,087	17,693	7,631	6,765	167,014	267,920
2020 20-24	97,765	69,115	276,893	107,083	159,465	115,275	45,572	332,155	1,203,324
2020 25-29	168,458	80,635	711,004	123,742	216,501	173,465	69,667	284,581	1,828,053
2020 30-34	158,683	51,826	922,656	79,674	209,199	268,854	71,246	136,264	1,898,402
2020 35-39	122,861	30,673	1,089,278	71,936	196,084	232,112	112,276	132,902	1,988,122
2020 40-44	192,091	38,842	972,179	91,080	229,561	195,599	160,434	191,238	2,071,024
2020 45-49	344,566	48,045	765,515	43,840	315,112	140,886	93,016	277,303	2,028,282
2020 50-54	577,404	33,689	383,777	9,490	315,517	55,468	59,449	227,400	1,662,194
2020 55-59	626,608	28,539	172,811	2,238	386,892	28,209	27,599	283,056	1,555,952
2020 60-64	555,592	23,927	92,679	5,619	297,201	16,386	3,306	221,119	1,215,829
2020 65-69	487,170	5,068	26,834	1,568	327,406	8,946	9,189	148,534	1,014,715
2020 70-74	262,117	9,928	27,183	0	241,487	0	0	105,077	645,792
2020 75+	337,194	5,115	14,138	0	427,462	0	4,349	195,194	983,452
2020 Total	3,944,013	439,106	5,479,470	553,358	3,339,579	1,242,830	662,867	2,701,837	18,363,061
2025 15-19	14,441	14,657	26,226	18,274	18,922	8,161	7,235	178,615	286,530
2025 20-24	111,646	78,927	316,206	122,287	182,105	131,641	52,042	379,314	1,374,167
2025 25-29	179,459	85,901	757,437	131,823	230,640	184,793	74,216	303,166	1,947,437
2025 30-34	184,281	60,186	1,071,495	92,527	242,946	312,224	82,739	158,246	2,204,644
2025 35-39	132,777	33,148	1,177,189	77,741	211,910	250,845	121,338	143,628	2,148,576
2025 40-44	196,068	39,646	992,311	92,966	234,314	199,650	163,756	195,198	2,113,911
2025 45-49	374,258	52,185	831,482	47,618	342,266	153,026	101,031	301,198	2,203,064
2025 50-54	664,424	38,767	441,616	10,921	363,069	63,828	68,408	261,671	1,912,703
2025 55-59	724,051	32,977	199,684	2,586	447,057	32,595	31,891	327,073	1,797,914
2025 60-64	690,664	29,744	115,210	6,985	369,455	20,370	4,109	274,875	1,511,413
2025 65-69	636,990	6,627	35,086	2,050	428,093	11,697	12,015	194,213	1,326,770
2025 70-74	344,260	13,039	35,702	0	317,166	0	0	138,007	848,173
2025 75+	452,836	6,870	18,987	0	574,060	0	5,840	262,136	1,320,729
2025 Total	4,706,155	492,674	6,018,631	605,778	3,962,001	1,368,829	724,621	3,117,340	20,996,031
Household Growth									
2005-10	498,378	35,559	489,109	34,467	381,733	98,802	63,183	277,023	1,878,254
2010-15	606,895	43,339	460,223	42,837	462,420	94,365	64,047	336,359	2,110,486
2015-20	694,852	50,465	480,521	47,091	541,626	102,390	60,005	385,428	2,362,377
2020-25	762,142	53,567	539,161	52,420	622,422	126,000	61,754	415,503	2,632,969
Average Annual Household Growth									
2005-10	99,676	7,112	97,822	6,893	76,347	19,760	12,637	55,405	375,651
2010-15	121,379	8,668	92,045	8,567	92,484	18,873	12,809	67,272	422,097
2015-20	138,970	10,093	96,104	9,418	108,325	20,478	12,001	77,086	472,475
2020-25	152,428	10,713	107,832	10,484	124,484	25,200	12,351	83,101	526,594

Appendix B - High Series Household Projections 2005-2025

Total Households

High Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non-Partner Adults	Other	Total
2005 15-19	22,036	95,872	31,970	41,514	143,798	29,409	25,159	489,708	879,466
2005 20-24	507,122	612,915	679,680	328,009	1,563,531	502,366	141,189	1,510,669	5,845,480
2005 25-29	1,274,151	683,918	2,354,396	429,489	2,108,633	884,015	197,081	1,184,880	9,116,564
2005 30-34	1,310,563	401,905	4,197,564	349,791	1,858,841	1,313,704	202,378	666,276	10,301,022
2005 35-39	1,112,661	306,409	5,437,918	322,866	1,815,097	1,237,242	376,967	517,497	11,126,658
2005 40-44	1,580,609	394,687	5,571,808	249,452	2,218,824	1,110,224	586,536	783,018	12,495,158
2005 45-49	2,936,263	380,099	4,207,184	143,976	2,710,934	757,828	401,570	1,165,262	12,703,116
2005 50-54	4,350,252	295,074	2,083,573	42,817	2,742,687	349,416	229,781	1,195,014	11,288,615
2005 55-59	5,057,577	265,356	728,818	10,173	2,981,356	115,179	66,782	1,054,682	10,279,921
2005 60-64	4,218,258	173,965	239,212	6,161	2,480,348	32,803	26,084	766,067	7,942,899
2005 65-69	3,310,350	76,455	82,257	885	2,256,284	25,749	16,151	605,101	6,373,232
2005 70-74	2,569,818	51,455	51,939	4,104	2,042,474	16,406	7,148	499,697	5,243,041
2005 75+	3,752,835	60,441	37,780	0	6,628,614	9,983	7,808	1,254,917	11,752,377
2005 Total	32,002,495	3,798,552	25,704,100	1,929,237	31,551,420	6,384,324	2,284,634	11,692,789	115,347,551
2010 15-19	24,324	96,604	35,837	43,736	145,205	30,953	26,309	519,135	922,103
2010 20-24	530,292	637,102	721,335	346,833	1,634,591	539,501	150,518	1,592,399	6,152,571
2010 25-29	1,388,582	746,022	2,545,212	465,528	2,306,418	968,029	213,258	1,286,298	9,919,347
2010 30-34	1,332,252	409,248	4,303,916	359,684	1,900,116	1,365,566	212,713	687,612	10,571,106
2010 35-39	1,065,438	291,602	5,287,591	316,275	1,754,124	1,211,545	379,284	520,571	10,826,430
2010 40-44	1,442,997	356,981	5,174,091	239,574	2,018,633	1,031,802	562,623	747,090	11,573,791
2010 45-49	2,929,188	378,994	4,268,495	148,695	2,714,456	768,588	412,485	1,201,391	12,822,290
2010 50-54	4,789,044	325,205	2,316,188	48,605	3,034,940	389,509	259,996	1,342,514	12,506,002
2010 55-59	5,636,901	294,465	828,056	11,543	3,343,516	131,795	78,872	1,213,121	11,538,269
2010 60-64	5,407,182	223,286	312,437	8,360	3,186,509	42,990	33,801	999,824	10,214,389
2010 65-69	3,997,886	92,264	100,512	1,153	2,714,377	30,920	20,154	729,613	7,686,881
2010 70-74	2,756,786	54,960	59,505	4,446	2,198,825	17,757	7,664	545,661	5,645,605
2010 75+	3,911,185	63,679	40,892	0	6,881,998	10,210	9,043	1,328,178	12,245,186
2010 Total	35,212,058	3,970,411	25,994,067	1,994,432	33,833,708	6,539,167	2,366,719	12,713,407	122,623,969
2015 15-19	25,105	93,452	37,339	43,861	137,793	30,552	25,168	521,760	915,030
2015 20-24	541,105	637,601	762,743	362,096	1,646,407	564,443	158,082	1,645,967	6,318,443
2015 25-29	1,437,226	771,273	2,663,145	489,808	2,398,498	1,028,361	226,403	1,347,497	10,362,212
2015 30-34	1,447,836	444,882	4,653,577	389,158	2,070,783	1,486,113	229,553	745,630	11,467,533
2015 35-39	1,086,368	296,953	5,426,240	326,714	1,800,583	1,256,723	397,795	541,768	11,133,143
2015 40-44	1,384,305	338,950	5,053,597	240,748	1,929,463	1,007,637	566,747	749,354	11,270,801
2015 45-49	2,680,485	345,812	4,010,815	142,320	2,492,686	716,939	390,059	1,144,946	11,924,062
2015 50-54	4,803,360	325,354	2,360,247	50,556	3,056,605	396,086	269,749	1,376,493	12,638,450
2015 55-59	6,215,423	323,271	931,401	12,958	3,705,908	149,076	91,922	1,379,032	12,808,991
2015 60-64	6,042,130	250,298	360,576	10,198	3,583,673	50,265	38,871	1,154,088	11,490,100
2015 65-69	5,148,584	119,404	132,031	1,650	3,510,046	40,316	27,369	956,352	9,935,753
2015 70-74	3,343,234	66,540	74,043	5,226	2,662,244	20,887	9,071	663,927	6,845,171
2015 75+	4,145,324	68,452	45,029	0	7,265,239	10,595	10,678	1,432,420	12,977,736
2015 Total	38,300,485	4,082,243	26,510,782	2,075,294	36,259,927	6,757,991	2,441,467	13,659,235	130,087,424

Appendix B - High Series Household Projections 2005-2025
Total Households (continued)

High Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non-Partner Adults	Other	Total
2020 15-19	28,017	98,480	42,008	47,709	143,689	32,938	26,630	568,961	988,432
2020 20-24	531,104	611,549	768,035	359,709	1,578,603	544,134	155,791	1,625,179	6,174,103
2020 25-29	1,445,581	771,204	2,753,615	509,656	2,416,703	1,065,628	239,636	1,393,670	10,595,693
2020 30-34	1,500,266	461,714	4,857,115	407,294	2,158,167	1,572,646	245,083	783,591	11,985,876
2020 35-39	1,182,258	323,365	5,873,441	353,910	1,964,712	1,367,736	430,807	586,631	12,082,861
2020 40-44	1,416,370	345,627	5,195,893	251,198	1,975,737	1,041,947	593,716	782,570	11,603,057
2020 45-49	2,577,300	331,108	3,965,893	142,778	2,406,210	702,282	387,077	1,146,180	11,658,827
2020 50-54	4,434,201	298,095	2,233,655	48,884	2,834,951	371,803	259,657	1,303,231	11,784,478
2020 55-59	6,247,979	322,180	963,572	13,243	3,736,060	154,037	98,731	1,437,312	12,973,114
2020 60-64	6,678,363	277,434	412,489	12,329	3,980,258	58,275	43,959	1,316,116	12,779,224
2020 65-69	5,787,252	134,755	152,371	2,136	3,980,341	46,719	32,822	1,107,856	11,244,253
2020 70-74	4,317,661	85,558	101,046	7,005	3,457,661	27,951	11,939	873,828	8,882,649
2020 75+	4,701,335	78,354	52,369	0	8,206,302	11,779	13,110	1,645,053	14,708,301
2020 Total	40,847,687	4,139,423	27,371,500	2,155,852	38,839,393	6,997,874	2,538,959	14,570,179	137,460,867
2025 15-19	30,179	102,104	45,431	50,486	148,290	34,799	27,830	604,385	1,043,503
2025 20-24	565,470	639,425	836,381	387,755	1,653,117	577,431	167,480	1,741,671	6,568,731
2025 25-29	1,403,721	741,714	2,728,956	505,232	2,329,101	1,025,261	239,980	1,384,049	10,358,014
2025 30-34	1,511,817	464,999	4,988,524	418,755	2,181,311	1,627,083	260,918	813,043	12,266,450
2025 35-39	1,228,815	335,764	6,135,480	372,069	2,056,006	1,444,761	459,234	620,745	12,652,874
2025 40-44	1,540,239	376,255	5,632,245	269,687	2,153,187	1,132,253	643,267	848,734	12,595,868
2025 45-49	2,641,884	339,431	4,097,128	148,750	2,475,411	727,321	404,052	1,197,413	12,031,389
2025 50-54	4,299,115	286,604	2,222,970	49,694	2,765,440	366,884	262,251	1,296,205	11,549,163
2025 55-59	5,788,070	293,747	928,901	12,405	3,458,956	146,761	98,828	1,389,150	12,116,818
2025 60-64	6,736,084	280,499	435,113	13,939	4,023,242	62,229	44,981	1,376,095	12,972,182
2025 65-69	6,434,535	149,882	174,083	2,735	4,457,466	53,604	38,858	1,266,253	12,577,417
2025 70-74	4,863,737	96,333	122,758	8,461	3,935,281	33,679	14,003	1,014,157	10,088,408
2025 75+	5,766,720	97,355	65,893	0	10,036,209	14,195	17,323	2,045,768	18,043,463
2025 Total	42,810,386	4,204,113	28,413,862	2,239,967	41,673,017	7,246,259	2,679,006	15,597,671	144,864,282
Household Growth									
2005-10	3,209,563	171,859	289,967	65,195	2,282,288	154,843	82,085	1,020,618	7,276,419
2010-15	3,088,427	111,831	516,715	80,862	2,426,219	218,825	74,748	945,828	7,463,455
2015-20	2,547,201	57,181	860,718	80,559	2,579,466	239,883	97,491	910,944	7,373,443
2020-25	1,962,700	64,690	1,042,362	84,115	2,833,624	248,385	140,048	1,027,492	7,403,415
Average Annual Household Growth									
2005-10	641,913	34,372	57,993	13,039	456,458	30,969	16,417	204,124	1,455,284
2010-15	617,685	22,366	103,343	16,172	485,244	43,765	14,950	189,166	1,492,691
2015-20	509,440	11,436	172,144	16,112	515,893	47,977	19,498	182,189	1,474,689
2020-25	392,540	12,938	208,472	16,823	566,725	49,677	28,010	205,498	1,480,683

Appendix B - High Series Household Projections 2005-2025
Non-Hispanic White Households

High Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non-Partner Adults	Other	Total
2005 15-19	6,998	69,148	9,720	24,247	83,748	11,145	7,733	223,200	435,939
2005 20-24	347,935	455,427	379,268	189,911	1,019,318	152,181	64,178	871,012	3,479,230
2005 25-29	923,508	509,829	1,451,749	223,965	1,358,261	311,539	78,768	669,126	5,526,745
2005 30-34	937,974	282,664	2,657,485	210,188	1,175,844	561,656	63,545	338,803	6,228,158
2005 35-39	808,689	226,680	3,688,965	189,502	1,130,658	620,800	142,207	249,205	7,056,707
2005 40-44	1,185,457	308,255	3,989,052	145,688	1,604,477	687,953	269,511	390,336	8,580,729
2005 45-49	2,270,977	293,543	3,004,865	93,224	1,947,809	502,279	224,699	646,545	8,983,943
2005 50-54	3,439,316	223,210	1,522,943	22,169	1,967,782	234,106	133,963	723,134	8,266,622
2005 55-59	4,090,664	221,496	504,419	6,929	2,248,049	71,628	27,463	622,244	7,792,893
2005 60-64	3,478,075	139,158	154,067	1,976	1,898,558	18,419	14,970	464,778	6,170,002
2005 65-69	2,704,949	58,168	55,370	0	1,674,953	16,133	6,846	364,722	4,881,141
2005 70-74	2,164,396	44,855	18,872	905	1,569,825	3,974	3,352	326,310	4,132,489
2005 75+	3,245,767	41,202	20,893	0	5,658,145	8,975	1,059	904,187	9,880,228
2005 Total	25,604,706	2,873,637	17,457,667	1,108,704	23,337,427	3,200,788	1,038,294	6,793,603	81,414,825
2010 15-19	6,700	66,198	9,305	23,213	80,175	10,670	7,403	213,679	417,342
2010 20-24	354,331	463,799	386,240	193,403	1,038,055	154,978	65,358	887,023	3,543,187
2010 25-29	1,010,469	557,837	1,588,451	245,054	1,486,160	340,875	86,185	732,133	6,047,164
2010 30-34	934,053	281,483	2,646,378	209,310	1,170,930	559,308	63,279	337,387	6,202,128
2010 35-39	726,488	203,639	3,313,991	170,240	1,015,729	557,697	127,752	223,874	6,339,410
2010 40-44	1,023,221	266,068	3,443,128	125,750	1,384,896	593,803	232,626	336,917	7,406,409
2010 45-49	2,179,661	281,740	2,884,039	89,475	1,869,487	482,082	215,664	620,548	8,622,696
2010 50-54	3,675,493	238,538	1,627,523	23,691	2,102,909	250,182	143,162	772,791	8,834,290
2010 55-59	4,427,635	239,742	545,971	7,499	2,433,233	77,529	29,726	673,501	8,434,836
2010 60-64	4,362,289	174,536	193,234	2,478	2,381,219	23,101	18,776	582,937	7,738,572
2010 65-69	3,233,047	69,524	66,180	0	2,001,961	19,283	8,183	435,928	5,834,106
2010 70-74	2,269,444	47,032	19,788	949	1,646,015	4,167	3,514	342,148	4,333,057
2010 75+	3,302,524	41,923	21,258	0	5,757,086	9,132	1,078	919,998	10,052,998
2010 Total	27,505,354	2,932,059	16,745,486	1,091,062	24,367,856	3,082,807	1,002,706	7,078,864	83,806,194
2015 15-19	6,190	61,166	8,598	21,448	74,081	9,858	6,840	197,436	385,617
2015 20-24	339,381	444,230	369,943	185,242	994,256	148,439	62,600	849,597	3,393,689
2015 25-29	1,026,158	566,498	1,613,114	248,859	1,509,235	346,167	87,524	743,501	6,141,054
2015 30-34	1,019,407	307,205	2,888,205	228,436	1,277,929	610,418	69,061	368,217	6,768,878
2015 35-39	723,158	202,706	3,298,804	169,460	1,011,074	555,142	127,166	222,848	6,310,358
2015 40-44	919,498	239,097	3,094,102	113,003	1,244,510	533,610	209,045	302,764	6,655,629
2015 45-49	1,882,806	243,369	2,491,252	77,289	1,614,876	416,426	186,292	536,033	7,448,343
2015 50-54	3,530,689	229,140	1,563,403	22,758	2,020,061	240,325	137,522	742,345	8,486,243
2015 55-59	4,737,405	256,515	584,168	8,024	2,603,469	82,953	31,805	720,621	9,024,962
2015 60-64	4,731,272	189,299	209,579	2,688	2,582,634	25,055	20,364	632,244	8,393,136
2015 65-69	4,067,391	87,466	83,258	0	2,518,601	24,259	10,294	548,427	7,339,697
2015 70-74	2,726,109	56,497	23,770	1,139	1,977,232	5,006	4,221	410,996	5,204,970
2015 75+	3,402,568	43,193	21,902	0	5,931,486	9,408	1,110	947,868	10,357,535
2015 Total	29,112,031	2,926,380	16,250,098	1,078,347	25,359,444	3,007,067	953,847	7,222,897	85,910,111

Appendix B - High Series Household Projections 2005-2025
Non-Hispanic White Households (continued)

High Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non-Partner Adults	Other	Total
2020 15-19	6,249	61,741	8,679	21,650	74,778	9,951	6,904	199,293	389,245
2020 20-24	313,913	410,894	342,182	171,341	919,645	137,300	57,902	785,841	3,139,017
2020 25-29	983,903	543,171	1,546,689	238,612	1,447,087	331,913	83,920	712,885	5,888,179
2020 30-34	1,035,759	312,132	2,934,534	232,101	1,298,428	620,209	70,169	374,124	6,877,457
2020 35-39	789,247	221,231	3,600,277	184,947	1,103,475	605,875	138,788	243,214	6,887,054
2020 40-44	916,177	238,234	3,082,927	112,594	1,240,016	531,682	208,290	301,670	6,631,591
2020 45-49	1,694,125	218,980	2,241,598	69,544	1,453,045	374,695	167,623	482,316	6,701,928
2020 50-54	3,054,322	198,224	1,352,466	19,687	1,747,510	207,900	118,967	642,187	7,341,264
2020 55-59	4,557,024	246,748	561,926	7,718	2,504,340	79,794	30,594	693,183	8,681,327
2020 60-64	5,072,032	202,933	224,674	2,882	2,768,643	26,860	21,831	677,780	8,997,635
2020 65-69	4,424,988	95,156	90,578	0	2,740,032	26,392	11,200	596,643	7,984,990
2020 70-74	3,445,323	71,402	30,041	1,440	2,498,874	6,326	5,335	519,426	6,578,168
2020 75+	3,766,171	47,808	24,242	0	6,565,334	10,414	1,229	1,049,158	11,464,356
2020 Total	30,059,233	2,868,654	16,040,813	1,062,516	26,361,206	2,969,312	922,753	7,277,722	87,562,210
2025 15-19	6,265	61,907	8,702	21,708	74,978	9,978	6,923	199,827	390,288
2025 20-24	317,038	414,985	345,588	173,047	928,800	138,667	58,479	793,664	3,170,267
2025 25-29	911,602	503,257	1,433,033	221,078	1,340,750	307,523	77,753	660,499	5,455,494
2025 30-34	994,382	299,663	2,817,303	222,829	1,246,558	595,433	67,366	359,178	6,602,711
2025 35-39	802,418	224,922	3,660,357	188,033	1,121,890	615,986	141,104	247,273	7,001,983
2025 40-44	999,991	260,028	3,364,960	122,895	1,353,455	580,322	227,345	329,268	7,238,262
2025 45-49	1,689,674	218,405	2,235,709	69,361	1,449,228	373,711	167,183	481,049	6,684,319
2025 50-54	2,751,683	178,583	1,218,456	17,737	1,574,358	187,300	107,179	578,556	6,613,851
2025 55-59	3,949,000	213,826	486,950	6,689	2,170,197	69,148	26,512	600,695	7,523,017
2025 60-64	4,888,232	195,579	216,532	2,777	2,668,313	25,886	21,040	653,219	8,671,578
2025 65-69	4,757,075	102,297	97,376	0	2,945,666	28,373	12,040	641,420	8,584,248
2025 70-74	3,764,949	78,026	32,828	1,574	2,730,696	6,913	5,830	567,614	7,188,430
2025 75+	4,506,858	57,210	29,010	0	7,856,526	12,462	1,471	1,255,494	13,719,032
2025 Total	30,339,166	2,808,687	15,946,804	1,047,726	27,461,414	2,951,701	920,225	7,367,756	88,843,479
Household Growth									
2005-10	1,900,649	58,422	-712,181	-17,642	1,030,429	-117,981	-35,588	285,260	2,391,368
2010-15	1,606,677	-5,679	-495,388	-12,715	991,588	-75,740	-48,859	144,033	2,103,918
2015-20	947,202	-57,726	-209,285	-15,831	1,001,762	-37,754	-31,093	54,824	1,652,098
2020-25	279,933	-59,967	-94,009	-14,790	1,100,207	-17,612	-2,528	90,035	1,281,269
Average Annual Household Growth									
2005-10	380,130	11,684	-142,436	-3,528	206,086	-23,596	-7,118	57,052	478,274
2010-15	321,335	-1,136	-99,078	-2,543	198,318	-15,148	-9,772	28,807	420,784
2015-20	189,440	-11,545	-41,857	-3,166	200,352	-7,551	-6,219	10,965	330,420
2020-25	55,987	-11,993	-18,802	-2,958	220,041	-3,522	-506	18,007	256,254

Appendix B - High Series Household Projections 2005-2025
Non-Hispanic Black Households

High Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non-Partner Adults	Other	Total
2005 15-19	3,740	6,804	4,908	2,633	39,369	8,512	12,642	72,628	151,237
2005 20-24	25,168	56,506	47,075	34,736	264,634	234,816	35,137	177,758	875,830
2005 25-29	57,264	48,550	143,289	58,171	304,140	366,167	37,793	98,698	1,114,072
2005 30-34	71,227	40,081	270,642	43,079	309,670	440,383	58,068	86,427	1,319,577
2005 35-39	98,632	30,531	410,090	53,839	349,851	361,672	122,832	95,855	1,523,302
2005 40-44	158,337	38,865	406,767	28,623	333,957	222,348	162,796	193,296	1,544,988
2005 45-49	290,128	43,254	323,493	14,980	424,154	133,660	104,571	271,617	1,605,858
2005 50-54	331,495	42,930	136,677	10,921	408,684	60,150	45,756	271,632	1,308,244
2005 55-59	345,811	23,002	66,275	2,185	425,660	26,372	20,515	226,913	1,136,732
2005 60-64	240,498	14,560	32,140	1,283	329,440	7,293	9,357	164,103	798,673
2005 65-69	184,001	8,431	5,646	0	315,802	5,800	1,435	134,761	655,876
2005 70-74	148,366	1,743	11,542	3,199	258,988	12,432	3,796	89,297	529,362
2005 75+	162,622	13,018	9,511	0	517,542	1,009	2,939	182,658	889,299
2005 Total	2,117,291	368,275	1,868,054	253,647	4,281,890	1,880,614	617,637	2,065,643	13,453,050
2010 15-19	3,839	6,984	5,037	2,702	40,410	8,737	12,976	74,549	155,237
2010 20-24	27,397	61,510	51,244	37,813	288,070	255,611	38,248	193,501	953,394
2010 25-29	64,053	54,307	160,279	65,068	340,202	409,584	42,275	110,401	1,246,169
2010 30-34	75,698	42,597	287,628	45,782	329,105	468,022	61,712	91,851	1,402,395
2010 35-39	96,993	30,024	403,276	52,944	344,037	355,663	120,791	94,262	1,497,990
2010 40-44	147,722	36,259	379,496	26,704	311,568	207,441	151,882	180,337	1,441,410
2010 45-49	299,856	44,704	334,341	15,483	438,376	138,142	108,078	280,725	1,659,704
2010 50-54	385,903	49,976	159,109	12,713	475,760	70,022	53,266	316,214	1,522,964
2010 55-59	418,710	27,851	80,246	2,645	515,392	31,931	24,839	274,748	1,376,363
2010 60-64	321,278	19,450	42,935	1,713	440,093	9,743	12,500	219,223	1,066,935
2010 65-69	212,448	9,735	6,518	0	364,628	6,697	1,656	155,596	757,279
2010 70-74	162,194	1,905	12,617	3,497	283,125	13,590	4,150	97,619	578,697
2010 75+	173,974	13,927	10,175	0	553,670	1,079	3,144	195,409	951,378
2010 Total	2,390,067	399,229	1,932,902	267,065	4,724,438	1,976,263	635,518	2,284,434	14,609,916
2015 15-19	3,446	6,269	4,521	2,425	36,269	7,842	11,647	66,910	139,330
2015 20-24	28,136	63,168	52,626	38,832	295,837	262,503	39,280	198,718	979,101
2015 25-29	69,356	58,803	173,547	70,455	368,366	443,492	45,774	119,541	1,349,334
2015 30-34	84,386	47,486	320,641	51,037	366,878	521,739	68,795	102,393	1,563,355
2015 35-39	103,110	31,917	428,707	56,283	365,732	378,091	128,408	100,206	1,592,453
2015 40-44	145,502	35,715	373,793	26,302	306,885	204,324	149,599	177,626	1,419,746
2015 45-49	280,526	41,822	312,787	14,485	410,116	129,237	101,110	262,628	1,552,710
2015 50-54	400,253	51,834	165,026	13,186	493,451	72,626	55,247	327,972	1,579,595
2015 55-59	489,641	32,569	93,840	3,093	602,702	37,341	29,047	321,292	1,609,526
2015 60-64	391,374	23,694	52,303	2,087	536,113	11,869	15,227	267,053	1,299,720
2015 65-69	286,240	13,116	8,782	0	491,277	9,023	2,232	209,641	1,020,310
2015 70-74	189,532	2,226	14,744	4,086	330,848	15,881	4,850	114,073	676,241
2015 75+	191,355	15,319	11,191	0	608,985	1,187	3,459	214,931	1,046,427
2015 Total	2,662,858	423,937	2,012,508	282,272	5,213,461	2,095,153	654,674	2,482,984	15,827,848

Appendix B - High Series Household Projections 2005-2025
Non-Hispanic Black Households (continued)

High Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non-Partner Adults	Other	Total
2020 15-19	3,490	6,348	4,579	2,456	36,729	7,941	11,794	67,758	141,096
2020 20-24	25,331	56,871	47,380	34,961	266,344	236,334	35,364	178,907	881,491
2020 25-29	71,240	60,400	178,260	72,368	378,369	455,535	47,017	122,787	1,385,977
2020 30-34	91,394	51,430	347,269	55,275	397,347	565,069	74,509	110,897	1,693,189
2020 35-39	115,040	35,610	478,309	62,795	408,048	421,837	143,265	111,800	1,776,703
2020 40-44	155,021	38,051	398,247	28,023	326,962	217,691	159,386	189,247	1,512,628
2020 45-49	277,191	41,325	309,069	14,312	405,241	127,700	99,908	259,506	1,534,253
2020 50-54	376,058	48,701	155,050	12,389	463,623	68,236	51,907	308,147	1,484,112
2020 55-59	510,261	33,941	97,792	3,224	628,082	38,913	30,270	334,822	1,677,305
2020 60-64	460,287	27,866	61,512	2,455	630,511	13,959	17,908	314,075	1,528,573
2020 65-69	351,205	16,092	10,776	0	602,778	11,071	2,738	257,221	1,251,883
2020 70-74	258,086	3,031	20,077	5,565	450,516	21,625	6,604	155,333	920,837
2020 75+	220,151	17,624	12,875	0	700,627	1,365	3,979	247,275	1,203,896
2020 Total	2,914,756	437,289	2,121,194	293,823	5,695,179	2,187,276	684,651	2,657,776	16,991,943
2025 15-19	3,570	6,495	4,685	2,513	37,580	8,125	12,068	69,328	144,364
2025 20-24	25,690	57,678	48,052	35,457	270,125	239,689	35,866	181,447	894,005
2025 25-29	64,333	54,544	160,978	65,352	341,687	411,371	42,459	110,883	1,251,607
2025 30-34	94,006	52,899	357,193	56,855	408,702	581,216	76,638	114,066	1,741,575
2025 35-39	124,730	38,609	518,599	68,084	442,420	457,370	155,333	121,218	1,926,363
2025 40-44	173,105	42,490	444,704	31,292	365,103	243,085	177,979	211,323	1,689,081
2025 45-49	296,007	44,130	330,049	15,284	432,749	136,369	106,690	277,121	1,638,398
2025 50-54	372,894	48,291	153,746	12,285	459,722	67,662	51,470	305,554	1,471,625
2025 55-59	481,771	32,046	92,332	3,044	593,014	36,740	28,580	316,128	1,583,654
2025 60-64	482,381	29,204	64,464	2,573	660,775	14,629	18,768	329,150	1,601,943
2025 65-69	415,817	19,053	12,758	0	713,671	13,108	3,242	304,542	1,482,191
2025 70-74	319,435	3,752	24,850	6,887	557,605	26,765	8,173	192,257	1,139,724
2025 75+	279,501	22,375	16,346	0	889,507	1,733	5,052	313,937	1,528,451
2025 Total	3,133,240	451,566	2,228,755	299,626	6,172,661	2,237,863	722,318	2,846,954	18,092,983
Household Growth									
2005-10	272,776	30,954	64,849	13,418	442,548	95,649	17,881	218,792	1,156,866
2010-15	272,791	24,708	79,606	15,207	489,023	118,890	19,156	198,550	1,217,932
2015-20	251,898	13,352	108,686	11,551	481,718	92,122	29,976	174,791	1,164,095
2020-25	218,484	14,277	107,561	5,803	477,482	50,587	37,668	189,178	1,101,040
Average Annual Household Growth									
2005-10	54,555	6,191	12,970	2,684	88,510	19,130	3,576	43,758	231,373
2010-15	54,558	4,942	15,921	3,041	97,805	23,778	3,831	39,710	243,586
2015-20	50,380	2,670	21,737	2,310	96,344	18,424	5,995	34,958	232,819
2020-25	43,697	2,855	21,512	1,161	95,496	10,117	7,534	37,836	220,208

Appendix B - High Series Household Projections 2005-2025
Non-Hispanic Asian/Other Households

High Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non-Partner Adults	Other	Total
2005 15-19	1,748	10,228	0	2,549	8,168	4,355	0	75,766	102,815
2005 20-24	58,713	47,745	40,054	20,878	156,749	26,577	6,772	206,050	563,538
2005 25-29	150,818	57,299	157,654	42,633	263,012	59,510	21,562	176,222	928,712
2005 30-34	159,311	32,766	443,487	25,201	186,055	70,991	16,987	119,065	1,053,862
2005 35-39	105,546	24,284	454,101	21,096	175,320	66,237	20,732	64,488	931,804
2005 40-44	101,682	20,243	492,078	11,068	118,898	62,322	41,367	64,853	912,511
2005 45-49	165,301	14,040	412,592	9,072	147,053	36,083	15,649	78,209	877,999
2005 50-54	270,611	10,915	218,686	4,651	197,463	25,492	18,266	78,622	824,707
2005 55-59	324,521	7,349	76,330	0	124,527	3,827	5,741	71,551	613,846
2005 60-64	267,876	10,264	14,337	558	128,349	255	378	44,928	466,945
2005 65-69	213,608	7,694	9,797	217	125,881	0	3,951	42,264	403,410
2005 70-74	138,524	368	9,232	0	104,459	0	0	36,574	289,157
2005 75+	178,352	3,701	412	0	242,370	0	1,667	71,924	498,426
2005 Total	2,136,611	246,897	2,328,761	137,923	1,978,303	355,650	153,071	1,130,516	8,467,732
2010 15-19	1,950	11,410	0	2,844	9,112	4,858	0	84,519	114,692
2010 20-24	63,681	51,785	43,444	22,645	170,014	28,826	7,345	223,487	611,227
2010 25-29	166,615	63,301	174,167	47,099	290,560	65,743	23,821	194,680	1,025,985
2010 30-34	166,715	34,289	464,097	26,372	194,701	74,290	17,776	124,598	1,102,839
2010 35-39	125,965	28,982	541,952	25,177	209,237	79,052	24,742	76,964	1,112,071
2010 40-44	114,629	22,820	554,733	12,477	134,036	70,257	46,634	73,111	1,028,699
2010 45-49	186,249	15,819	464,877	10,221	165,688	40,656	17,632	88,120	989,262
2010 50-54	320,067	12,910	258,652	5,501	233,551	30,151	21,604	92,991	975,428
2010 55-59	398,905	9,034	93,826	0	153,070	4,704	7,057	87,951	754,547
2010 60-64	392,264	15,030	20,994	817	187,948	373	553	65,791	683,770
2010 65-69	283,368	10,207	12,996	287	166,991	0	5,241	56,066	535,156
2010 70-74	178,660	474	11,907	0	134,725	0	0	47,170	372,936
2010 75+	221,279	4,592	511	0	300,705	0	2,068	89,235	618,391
2010 Total	2,620,346	280,653	2,642,158	153,441	2,350,338	398,911	174,474	1,304,682	9,925,002
2015 15-19	2,133	12,483	0	3,111	9,969	5,315	0	92,469	125,481
2015 20-24	70,449	57,289	48,061	25,052	188,083	31,890	8,125	247,241	676,191
2015 25-29	178,176	67,693	186,252	50,367	310,721	70,305	25,474	208,188	1,097,175
2015 30-34	183,354	37,711	510,417	29,004	214,133	81,705	19,551	137,034	1,212,908
2015 35-39	133,076	30,618	572,544	26,598	221,048	83,514	26,139	81,308	1,174,845
2015 40-44	136,752	27,225	661,794	14,885	159,905	83,817	55,634	87,221	1,227,231
2015 45-49	210,801	17,905	526,159	11,569	187,530	46,015	19,956	99,736	1,119,670
2015 50-54	362,163	14,608	292,672	6,225	264,269	34,117	24,445	105,221	1,103,720
2015 55-59	472,909	10,710	111,233	0	181,467	5,577	8,366	104,268	894,529
2015 60-64	482,708	18,495	25,835	1,006	231,283	459	681	80,960	841,426
2015 65-69	411,923	14,837	18,893	418	242,750	0	7,619	81,501	777,940
2015 70-74	237,876	632	15,854	0	179,379	0	0	62,805	496,546
2015 75+	282,288	5,858	652	0	383,613	0	2,638	113,838	788,887
2015 Total	3,164,608	316,063	2,970,364	168,234	2,774,150	442,713	198,628	1,501,790	11,536,550

Appendix B - High Series Household Projections 2005-2025
Non-Hispanic Asian/Other Households (continued)

High Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non-Partner Adults	Other	Total
2020 15-19	2,448	14,324	0	3,570	11,439	6,099	0	106,107	143,987
2020 20-24	76,705	62,377	52,329	27,277	204,785	34,722	8,847	269,195	736,236
2020 25-29	195,017	74,091	203,856	55,127	340,091	76,950	27,882	227,866	1,200,881
2020 30-34	196,040	40,320	545,734	31,011	228,950	87,358	20,903	146,515	1,296,831
2020 35-39	146,733	33,760	631,301	29,328	243,733	92,084	28,822	89,652	1,295,413
2020 40-44	145,313	28,929	703,223	15,817	169,915	89,064	59,117	92,681	1,304,058
2020 45-49	251,256	21,341	627,134	13,789	223,519	54,846	23,786	118,877	1,334,546
2020 50-54	410,845	16,572	332,012	7,062	299,792	38,703	27,731	119,365	1,252,082
2020 55-59	536,423	12,148	126,172	0	205,839	6,326	9,490	118,271	1,014,668
2020 60-64	572,596	21,939	30,646	1,193	274,352	544	808	96,036	998,114
2020 65-69	507,043	18,263	23,255	514	298,805	0	9,378	100,322	957,580
2020 70-74	344,690	915	22,973	0	259,925	0	0	91,006	719,509
2020 75+	371,759	7,715	859	0	505,198	0	3,475	149,919	1,038,924
2020 Total	3,756,867	352,695	3,299,493	184,688	3,266,343	486,696	220,237	1,725,813	13,292,831
2025 15-19	2,699	15,794	0	3,937	12,613	6,725	0	116,996	158,764
2025 20-24	87,495	71,151	59,690	31,114	233,590	39,606	10,091	307,061	839,797
2025 25-29	211,190	80,236	220,762	59,699	368,294	83,332	30,194	246,763	1,300,469
2025 30-34	213,807	43,974	595,193	33,821	249,699	95,275	22,798	159,794	1,414,361
2025 35-39	157,342	36,201	676,946	31,449	261,355	98,742	30,906	96,134	1,389,075
2025 40-44	160,362	31,925	776,053	17,455	187,512	98,288	65,239	102,280	1,439,114
2025 45-49	267,931	22,757	668,756	14,704	238,353	58,486	25,365	126,766	1,423,118
2025 50-54	488,636	19,710	394,877	8,399	356,556	46,031	32,982	141,966	1,489,157
2025 55-59	608,880	13,789	143,214	0	233,643	7,180	10,771	134,247	1,151,724
2025 60-64	650,179	24,912	34,798	1,354	311,524	618	917	109,049	1,133,352
2025 65-69	601,425	21,663	27,584	610	354,426	0	11,123	118,996	1,135,827
2025 70-74	424,830	1,128	28,314	0	320,358	0	0	112,165	886,796
2025 75+	519,175	10,774	1,199	0	705,529	0	4,853	209,367	1,450,896
2025 Total	4,393,952	394,013	3,627,385	202,541	3,833,453	534,283	245,239	1,981,583	15,212,449
Household Growth									
2005-10	483,735	33,756	313,396	15,518	372,035	43,261	21,403	174,166	1,457,271
2010-15	544,262	35,410	328,206	14,793	423,811	43,802	24,155	197,107	1,611,548
2015-20	592,260	36,631	329,130	16,453	492,193	43,983	21,609	224,023	1,756,281
2020-25	637,084	41,319	327,892	17,853	567,110	47,587	25,002	255,771	1,919,617
Average Annual Household Growth									
2005-10	96,747	6,751	62,679	3,104	74,407	8,652	4,281	34,833	291,454
2010-15	108,852	7,082	65,641	2,959	84,762	8,760	4,831	39,421	322,310
2015-20	118,452	7,326	65,826	3,291	98,439	8,797	4,322	44,805	351,256
2020-25	127,417	8,264	65,578	3,571	113,422	9,517	5,000	51,154	383,923

Appendix B - High Series Household Projections 2005-2025
Hispanic Households

High Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non-Partner Adults	Other	Total
2005 15-19	9,549	9,692	17,343	12,084	12,512	5,396	4,784	118,114	189,475
2005 20-24	75,306	53,237	213,282	82,483	122,831	88,792	35,103	255,849	926,883
2005 25-29	142,562	68,240	601,705	104,720	183,220	146,799	58,957	240,834	1,547,036
2005 30-34	142,051	46,394	825,950	71,323	187,272	240,675	63,778	121,982	1,699,425
2005 35-39	99,793	24,914	884,762	58,430	159,269	188,532	91,196	107,949	1,614,845
2005 40-44	135,132	27,325	683,911	64,073	161,492	137,601	112,863	134,533	1,456,930
2005 45-49	209,856	29,261	466,234	26,700	191,918	85,806	56,651	168,890	1,235,316
2005 50-54	308,830	18,019	205,267	5,076	168,758	29,668	31,797	121,627	889,042
2005 55-59	296,581	13,508	81,793	1,059	183,121	13,351	13,063	133,974	736,451
2005 60-64	231,809	9,983	38,668	2,345	124,001	6,837	1,379	92,257	507,279
2005 65-69	207,792	2,162	11,445	669	139,648	3,816	3,919	63,354	432,805
2005 70-74	118,532	4,489	12,292	0	109,203	0	0	47,517	292,033
2005 75+	166,094	2,520	6,964	0	210,557	0	2,142	96,148	484,425
2005 Total	2,143,888	309,743	4,049,618	428,962	1,953,800	947,273	475,632	1,703,027	12,011,944
2010 15-19	11,835	12,012	21,495	14,977	15,508	6,688	5,929	146,388	234,833
2010 20-24	84,883	60,007	240,407	92,973	138,452	100,085	39,567	288,387	1,044,762
2010 25-29	147,445	70,577	622,316	108,307	189,496	151,828	60,977	249,084	1,600,029
2010 30-34	155,786	50,880	905,812	78,220	205,380	263,946	69,945	133,776	1,863,745
2010 35-39	115,992	28,958	1,028,372	67,914	185,121	219,134	105,999	125,471	1,876,959
2010 40-44	157,425	31,832	796,733	74,643	188,133	160,300	131,481	156,726	1,697,274
2010 45-49	263,422	36,730	585,239	33,516	240,904	107,708	71,111	211,999	1,550,628
2010 50-54	407,581	23,781	270,903	6,699	222,719	39,154	41,964	160,518	1,173,320
2010 55-59	391,652	17,838	108,013	1,399	241,821	17,631	17,250	176,920	972,523
2010 60-64	331,352	14,270	55,273	3,351	177,249	9,773	1,971	131,874	725,113
2010 65-69	269,022	2,799	14,818	866	180,798	4,940	5,074	82,023	560,340
2010 70-74	146,489	5,548	15,192	0	134,960	0	0	58,725	360,913
2010 75+	213,408	3,237	8,948	0	270,537	0	2,752	123,537	622,419
2010 Total	2,696,292	358,470	4,673,521	482,864	2,391,077	1,081,186	554,021	2,045,427	14,282,857
2015 15-19	13,336	13,535	24,219	16,876	17,474	7,536	6,681	164,946	264,603
2015 20-24	103,139	72,913	292,112	112,969	168,230	121,610	48,077	350,411	1,269,461
2015 25-29	163,536	78,279	690,233	120,127	210,177	168,397	67,631	276,267	1,774,648
2015 30-34	160,689	52,481	934,315	80,681	211,842	272,251	72,146	137,986	1,922,391
2015 35-39	127,024	31,712	1,126,186	74,373	202,728	239,977	116,081	137,405	2,055,486
2015 40-44	182,553	36,913	923,909	86,558	218,163	185,888	152,468	181,743	1,968,195
2015 45-49	306,352	42,716	680,617	38,978	280,165	125,261	82,700	246,549	1,803,338
2015 50-54	510,256	29,771	339,146	8,387	278,825	49,017	52,535	200,955	1,468,892
2015 55-59	515,467	23,477	142,160	1,841	318,269	23,205	22,704	232,850	1,279,974
2015 60-64	436,776	18,810	72,859	4,418	233,643	12,882	2,599	173,831	955,818
2015 65-69	383,031	3,985	21,098	1,233	257,418	7,034	7,225	116,783	797,805
2015 70-74	189,716	7,185	19,675	0	174,785	0	0	76,053	467,415
2015 75+	269,113	4,082	11,284	0	341,155	0	3,471	155,783	784,888
2015 Total	3,360,988	415,862	5,277,812	546,440	2,912,873	1,213,059	634,318	2,451,564	16,812,915

Appendix B - High Series Household Projections 2005-2025
Hispanic Households (continued)

High Immigration Household Projections	Married without Children	Partnered without Children	Married with Children	Partnered with Children	Single Person	Single Parent Alone	Single Parent with Other Non-Partner Adults	Other	Total
2020 15-19	15,831	16,067	28,750	20,033	20,742	8,946	7,931	195,803	314,103
2020 20-24	115,155	81,408	326,144	126,130	187,829	135,778	53,678	391,236	1,417,359
2020 25-29	195,421	93,542	824,809	143,549	251,155	201,230	80,818	330,132	2,120,657
2020 30-34	177,072	57,832	1,029,578	88,907	233,442	300,010	79,502	152,055	2,118,398
2020 35-39	131,239	32,764	1,163,554	76,841	209,455	247,939	119,932	141,965	2,123,690
2020 40-44	199,859	40,413	1,011,496	94,764	238,844	203,510	166,922	198,972	2,154,780
2020 45-49	354,728	49,462	788,092	45,133	324,405	145,041	95,759	285,481	2,088,101
2020 50-54	592,975	34,598	394,127	9,746	324,026	56,964	61,052	233,532	1,707,020
2020 55-59	644,272	29,343	177,682	2,301	397,798	29,004	28,377	291,035	1,599,813
2020 60-64	573,447	24,696	95,657	5,800	306,752	16,913	3,412	228,224	1,254,901
2020 65-69	504,015	5,244	27,762	1,622	338,726	9,255	9,507	153,670	1,049,800
2020 70-74	269,562	10,210	27,955	0	248,346	0	0	108,062	664,135
2020 75+	343,254	5,207	14,392	0	435,143	0	4,427	198,701	1,001,125
2020 Total	4,116,831	480,785	5,910,000	614,826	3,516,665	1,354,590	711,317	2,908,869	19,613,883
2025 15-19	17,644	17,908	32,044	22,328	23,119	9,971	8,839	218,234	350,087
2025 20-24	135,247	95,612	383,051	148,138	220,602	159,469	63,044	459,500	1,664,663
2025 25-29	216,597	103,678	914,183	159,103	278,370	223,035	89,575	365,904	2,350,445
2025 30-34	209,622	68,463	1,218,835	105,250	276,353	355,158	94,116	180,006	2,507,803
2025 35-39	144,325	36,031	1,279,578	84,503	230,341	272,663	131,891	156,120	2,335,453
2025 40-44	206,781	41,813	1,046,529	98,046	247,117	210,558	172,704	205,864	2,229,411
2025 45-49	388,271	54,139	862,615	49,401	355,081	158,756	104,814	312,476	2,285,553
2025 50-54	685,901	40,020	455,891	11,274	374,805	65,891	70,619	270,129	1,974,530
2025 55-59	748,419	34,087	206,405	2,673	462,102	33,692	32,964	338,081	1,858,423
2025 60-64	715,293	30,805	119,319	7,234	382,629	21,096	4,256	284,677	1,565,309
2025 65-69	660,218	6,869	36,365	2,125	443,703	12,123	12,453	201,295	1,375,152
2025 70-74	354,523	13,427	36,766	0	326,621	0	0	142,121	873,459
2025 75+	461,186	6,996	19,337	0	584,646	0	5,948	266,970	1,345,084
2025 Total	4,944,029	549,847	6,610,918	690,074	4,205,489	1,522,413	791,224	3,401,378	22,715,371
Household Growth									
2005-10	552,403	48,727	623,903	53,902	437,276	133,913	78,389	342,400	2,270,913
2010-15	664,697	57,392	604,291	63,575	521,796	131,872	80,296	406,137	2,530,058
2015-20	755,842	64,923	632,187	68,386	603,793	141,532	76,999	457,305	2,800,968
2020-25	827,198	69,061	700,918	75,249	688,824	167,822	79,907	492,509	3,101,488
Average Annual Household Growth									
2005-10	110,481	9,745	124,781	10,780	87,455	26,783	15,678	68,480	454,183
2010-15	132,939	11,478	120,858	12,715	104,359	26,374	16,059	81,227	506,012
2015-20	151,168	12,985	126,437	13,677	120,759	28,306	15,400	91,461	560,194
2020-25	165,440	13,812	140,184	15,050	137,765	33,564	15,981	98,502	620,298

Appendix C: HVS Household Growth Estimates vs. Various Joint Center Projections

(numbers in 1000's)

	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
HVS Households	79,638	87,887	94,224	99,985	105,720	108,231	---	---	---	---
Pitkin and Masnick 1980 (a)	8,966 to 80,701	5,625 to 89,819	91,692 to 97,613	97,921 to 104,412	03,482 to 110,783	---	---	---	---	---
Pitkin and Masnick 1986 (b)	80,319	7,127 to 87,399	93,992 to 94,801	99,533 to 101,013	04,476 to 106,722	---	---	---	---	---
Masnick 1989 and Apgar, Masnick and McArdle 1991 (c)	---	---	94,056	100,171	105,623	---	---	---	---	---
Masnick and McArdle 1994 (d)	---	---	---	98,769	104,977	---	---	---	---	---
Masnick, McArdle and Apgar 1996 (e)	---	---	---	99,200	104,737	110,390	116,344	---	---	---
Masnick and Di 2000 and 2003 (f)	---	---	---	99,093	105,530	111,383	117,280	123,383	129,334	---
Masnick, Belsky and Di 2004 (g)	---	---	---	---	107,906	114,293	120,993	127,598	133,855	140,006
Masnick and Belsky 2006a and 2006b (h)	---	---	---	---	107,438	114,038	121,320	128,670	135,689	---
Masnick and Belsky 2009 Low Series (i)	---	---	---	---	---	115,348	121,567	127,920	134,116	140,259
Masnick and Belsky 2009 High Series(j)	---	---	---	---	---	115,348	122,624	130,087	137,461	144,864
		1980-85 Average Annual	1985-90 Average Annual	1990-95 Average Annual	1995-00 Average Annual	2000-05 Average Annual	2005-10 Average Annual	2010-15 Average Annual	2015-20 Average Annual	2020-25 Average Annual
HVS Growth		1,295	1,267	1,152	1,147	1,373	---	---	---	---
						(omits 2002-03)				
Pitkin and Masnick 1980 (a)	1,332 to 1,824	1,213 to 1,559	1,246 to 1,360	1,112 to 1,274	---	---	---	---	---	---
Pitkin and Masnick 1986 (b)		1,338 to 1,581	1,108 to 1,315	989 to 1,184	---	---	---	---	---	---
Masnick 1989 and Apgar, Masnick and McArdle 1991 (c)	---	---	1,119	1,090	---	---	---	---	---	---
Masnick and McArdle 1994 (d)	---	---	---	1,242	---	---	---	---	---	---
Masnick, McArdle and Apgar 1996 (e)	---	---	---	1,107	1,131	1,191	---	---	---	---
Masnick and Di 2000 and 2003 (f)	---	---	---	1,260	1,145	1,201	1,221	1,190	---	---
Masnick, Belsky and Di 2004 (g)	---	---	---	---	1,277	1,340	1,321	1,251	1,230	---
Masnick and Belsky 2006a and 2006b (h)	---	---	---	---	1,320	1,456	1,470	1,404	---	---
Masnick and Belsky 2009 Low Series (i)	---	---	---	---	---	1,244	1,271	1,239	1,229	---
Masnick and Belsky 2009 High Series(j)	---	---	---	---	---	1,455	1,493	1,475	1,481	---

Note: HVS 5-year average annual growth is calculated as an average of growth estimates from annual numbers, incorporating revised numbers. In 2000-05 only, the revised 2002 estimate was discarded as fundamentally flawed, and the annual average reflects the annual average growth of the four remaining years.

(a) Joint Center population projections low-high fertility assumptions (TRF= 1.5-2.1), low to high 1960-70 vs. 1970-75 cohort housing choice trends

(b) U.S.Census Bureau 1982 middle series population projections with high and low Joint Center marriage assumptions, high and low income assumptions modifying 1975-80 cohort housing trends

(c) Joint Center 1989 population projections and Pitkin and Masnick 1986 middle series headship assumptions

- (d) U.S. Census Bureau 1993 population projections and 1980-1990 CPS/AHS averaged cohort trended headship rates
- (e) U.S. Census Bureau 1996 population projections and 1990-95 CPS cohort trended headship rates
- (f) U.S. Census Bureau 2000 population projections and 1993-1998 CPS cohort trended headship rates
- (g) U.S. Census Bureau 2004 "Interim" population projections and 2003 CPS headship rates held constant
- (h) Joint Center adjustments of U.S. Census Bureau 2004 population projections to allow for 1.2 million annual immigrants and 2005 CPS headship rates held constant
- (i) U.S. Census Bureau 2008 population projections with half the immigration assumptions and 2008 CPS headship rates held constant.
- (j) U.S. Census Bureau 2008 population projections and 2008 CPS headship rates held constant.

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