

Chapter 2: New Castle County Today

2.0 Population & Demographics

By State Code, the population projections provided by the Delaware Population Consortium must be used for comprehensive planning. The Delaware Population Consortium is a cooperative consortium comprised of state, county, and local governments that work together to produce an annual set of population and household projections for the State of Delaware as well as all three counties and the major municipalities within the State.

2.1 Methodology¹

The methodology used by the Consortium is as follows²:

The projection process begins with the 2000 age-race-gender distribution (obtained from the US Bureau of Census) for the jurisdiction being projected. This distribution is comprised of 101 separate age cohorts beginning with the 0 age group and ending with the 100-and-over age group. The projection process uses the modified age-race-gender (MARS) estimates produced during 2002 to correct certain flaws in the estimates prepared by the Census Bureau in 2000. It also reflects the 2000-2005 age-race-gender distributions provided by the US Centers for Disease Control and Prevention (CDC) for single race categories, and the 2006-2008 American Community Survey.

Appropriate survival rates are applied to each single-year age-race-gender cohort. A ten-year survival rate is used to account for mortality. Each age group has its own unique survival rate. Applying the appropriate survival rate to the 0 age group, for example, yields the likely number of persons alive in 2000 who will survive to age 1 in 2001. This procedure is followed until all age groups have been survived with the exception of the birth cohort (age 0 in 2001).

The 0 age group in 2010 is formed from all of those persons expected to be born during the 2009-2010 period. This is estimated by applying an annual birth rate for females in each separate age group beginning with 10 and ending with 49. For example, if the single-year fertility rate for females of age 30 is multiplied by the number of females in that age group in the base year, the result is the likely number of births for those females over the one-year projection period. This is done for all relevant age groups. These estimates are summed to produce the new birth cohort. The birth cohort is then survived to 2001. This procedure is applied for each subsequent time

¹ During preparation of this plan, the 2010 U.S. Census and the 2011 Delaware Population Consortium projections were released and evaluated to ensure that the numbers did not change any of the assumptions used.

² Delaware Population Consortium

period from 2002 to 2040. The end result of this two-step process is a projection of population growth due solely to natural increase. It must be adjusted for net migration.

The conventional procedure to adjust the projections for net-migration is to calculate a migration rate for each age-race-gender category for some past time period (such as 1995-2000), and to make assumptions about how those rates will change in the future. This procedure works well if the migration rates from the reference period accurately predict the future. If the nature of migration is changing, the result will be unsatisfactory. The rapid change in migration during the 1980s, for example, stands in stark contrast to that of the 1970s. For that reason, and the need to integrate employment projections with the population projections, another method is used to estimate migration.

Mortality

Mortality rates are based on age-by-sex-by-race, single-year survival rates calculated from data on the deaths of Delaware residents from 2000-2005 and the underlying population for each cohort in the 2000-2005 interval. Using actual deaths through 2009, survival rates are scaled proportionately so the estimated number of deaths agrees with the actual data. In addition, actual deaths for 2009 and the estimated deaths for 2010 were allowed to influence the 2010 projection. This scaling procedure was followed separately for the State, each of the counties, and the City of Wilmington, resulting in a slightly different set of mortality assumptions for each. Projections for the cities of Newark and Dover utilize the County-wide rates since the populations are too small to produce stable rates.

Fertility

The assumptions for fertility rates were derived using births to Delaware residents from 1999-2008 and the underlying female population groups from the same period. Using these as a base, the rates are scaled proportionally to produce the estimated number of births 2001-2009 using actual births through 2009. Following the same procedures as in mortality above, estimated births in 2009 were allowed to influence the 2009 projection. This scaling procedure was followed separately for the State, each of the counties, and the City of Wilmington, resulting in a slightly different set of fertility assumptions for each. Projections for the cities of Newark and Dover utilize the County-wide rates since the populations are too small to produce stable rates.

Labor-force

Resident employment is calculated to balance the employment forecast with the population projections. This calculation requires a number of assumptions. The first is taken from the Bureau of Labor Statistics (BLS), which provides the current and projected labor-force participation rates for each age-sex cohort from 2000 through 2020. Applying these rates allows the derivation of a theoretical labor-force. An unemployment rate is then applied to that theoretical labor-force. That

rate is the same as the one used in generating the employment forecasts. The result of this calculation is employment by place of residence. Resident jobs are derived from employment by place of residence by making adjustments for self-employment, agricultural jobs, and workers with multiple-jobs. BLS also provides labor force estimates from the Current Population Survey (CPS), Local Area Unemployment Statistics (LAUS), Current Employment Statistics (CES), and the Quarterly Census of Employment and Wages (QCEW). These are blended to update current employment.

Bureau of Labor Statistics' estimates and forecasts are used to establish an employment starting point. A single adjustment is required to generate an estimate for resident jobs from the employment forecasts. Net commuting (i.e., in-commuters less out-commuters) is used to adjust the employment forecast.

Migration

Employment (i.e., number of jobs) is usually forecast using an economic model as opposed to a demographic model. It is assumed that there will be a sufficient number of persons to fill those jobs. If the projected population due to natural increase is too low, then net in-migration is required to fill the jobs. Alternatively, if the projected population is too high, net out-migration will occur. In either case, the migration rates from the reference year are modified proportionally to produce sufficient net migration to allow the employment forecasts and the population projection to balance. The final amount of net migration is an output of that calculation. If that estimate seems too high, adjustments must be made to the employment forecasts or to one of the other assumptions in the labor-force estimate.

Adjustments

Projecting population is a risky business and is dependent on the quality of the assumptions. Those can change from year to year as better data becomes available. Thus, it is imperative that the projections be reviewed annually. This report is the result of the Consortium's continuing monitoring and review process.

There are data that can be used to adjust the path of the projection without going through a major revision. First, the annual population estimates (not forecasts) provided by the Federal State Cooperative for Population Estimates (FSCPE) is useful for monitoring the total population. Second, actual birth and death statistics issued by National Center for Health Statistics (NCHS) and the Delaware Health Statistics Center are quite valuable. Third, school enrollment data, estimated migration from the Bureau of Census and the IRS, Medicare enrollment data from Health Care Financing Administration (HCFA), and the data from the Census Bureau's Current Population Survey (CPS) and American Community Survey (ACS) can help guide structural changes in the age groups. Finally, data from the Department of Labor tracks changes in employment growth. It is imperative that these indicators are tracked and that the projections are modified annually. These projections

were carefully benchmarked to known data in 2009 (e.g. actual births, deaths, and estimated migration for the 2000-2009 period).

Hispanics

In preparation for the post 2010 Census benchmarking when the race categories will shift to white non-Hispanic, black non-Hispanic, other non-Hispanic, and Hispanic, a separate projection for Hispanics is provided. This projection is made by using the overall age structure of the total population and applying the current percentage of a given age-gender category measured in the American Community Survey for years 2006-2008 combined. A final adjustment was made based on projections from the US Census Bureau as to the overall rate of growth for the Hispanic population in both the state and the nation.

2.2 Demographics

Population

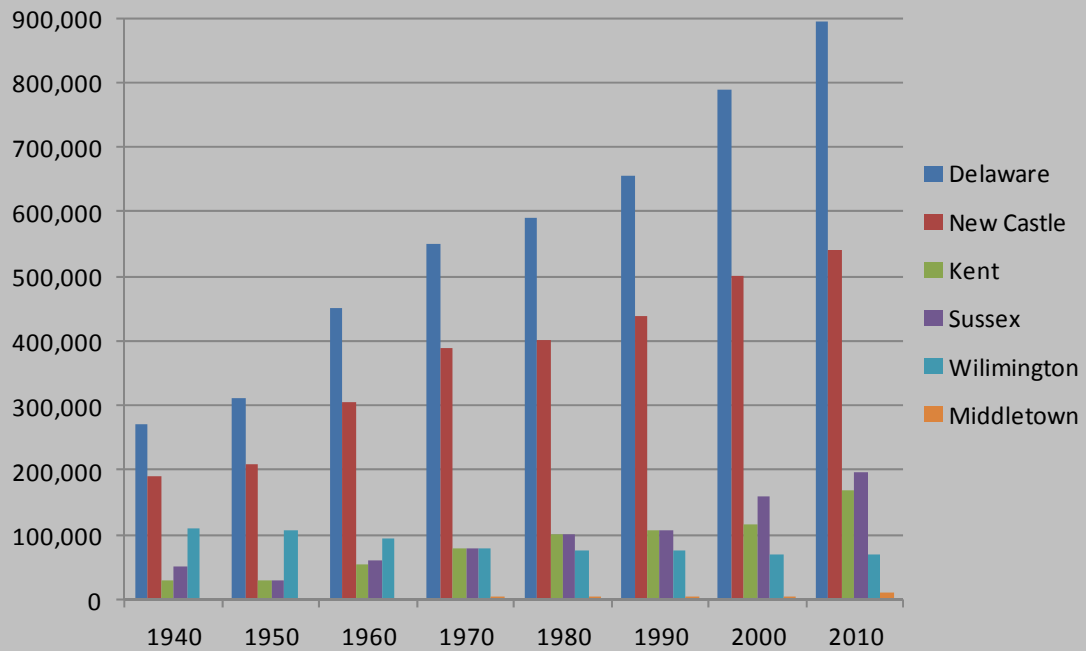
Overall population in New Castle County is expected to rise 9.5% from 2010 to 2040 as shown in Table 2-1. This is compared to a projected rise of 25.1% for the State of Delaware, 56.7% for Sussex County, and 28.0% for Kent County.

Table 2-1: 2010 Delaware Population Consortium Population Projections									
	2000	2005	2010	2015	2020	2025	2030	2035	2040
Delaware	786,408	839,924	895,173	940,449	981,922	1,019,497	1,054,631	1,088,245	1,120,523
New Castle	501,855	520,929	538,170	554,405	567,764	578,739	589,267	598,817	606,881
Sussex	157,439	175,687	196,945	216,160	235,341	254,556	272,511	290,363	308,690
Kent	127,114	143,308	160,058	169,884	178,817	186,202	192,853	199,065	204,952

* source: Delaware Population Consortium, 2010

Since 1940, population rise in Delaware has been consistent, with a slight leveling in New Castle County between 1970 and 1980 and slight decreases in the City of Wilmington since 1940. See Figure 2-1 below.

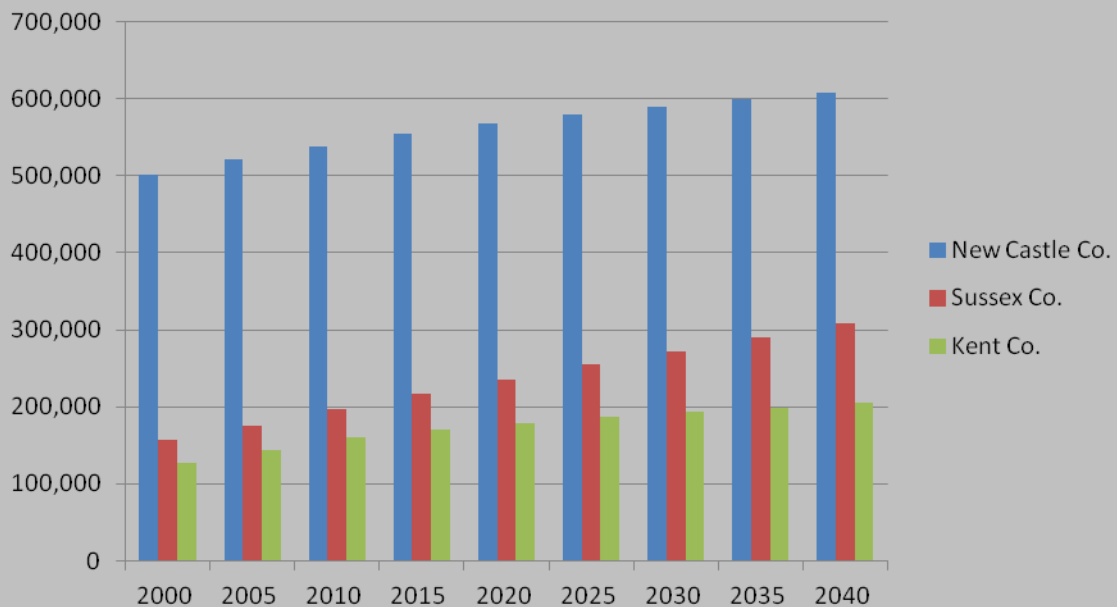
Figure 2-1: Population Growth 1940-2010



* Source: U.S. Census

Moving forward, growth in New Castle County is expected to slow compared to the County's southern neighbors, the counties of Sussex and Kent as shown below in Figure 2-2.

Figure 2-2: Delaware Counties Population Change 2000-2040



* Source: Delaware Population Consortium, 2010

Age Cohort

With respect to age cohorts, the most significant projected change will be for persons over age 70 as shown in Table 2-2 below. Increase of 117.9% for persons between the ages of 70 and 79, and 147.1% for persons over age 80 are projected. All other age cohorts are projected to increase very slightly or decrease between the years 2010 and 2040.

**Table 2-2: 2010 Delaware Population Consortium Projections
New Castle County Population by Age**

Age Group	2000	2005	2010	2015	2020	2025	2030	2035	2040
0-9	69,327	69,533	71,890	72,145	71,538	70,566	71,024	72,706	74,624
10-19	71,341	72,586	71,224	70,913	73,205	73,424	73,009	72,220	72,746
20-29	70,022	72,128	72,683	73,216	71,815	71,,458	73,981	74,522	74,197
30-39	81,450	73,739	70,370	72,013	72,425	72,901	71,587	71,508	74,119
40-49	77,334	83,033	80,417	72,789	69,193	70,805	71,400	72,115	70,889
50-59	55,426	65,550	74,164	79,990	77,544	70,114	66,835	68,656	69,306
60-69	34,513	39,436	50,061	59,793	67,950	73,315	71,233	64,689	61,949
70-79	27,676	27,009	27,361	32,109	41,236	49,352	56,407	61,144	59,641
80+	14,766	17,915	20,000	21,437	22,858	26,804	33,791	41,257	49,410

* source: Delaware Population Consortium, 2010

Jobs and Labor Force

With respect to jobs and labor force, it is projected that the number of persons in the labor force should decrease slightly from 2010 to 2040, while the number of jobs should increase. This is shown in Table 2-3 below. As a result, it is anticipated that there will be more available jobs in the County than there are County residents to fill them.

**Table 2-3: 2010 Delaware Population Consortium Projections
Jobs and Labor Force**

	2000	2005	2010	2015	2020	2025	2030	2035	2040
Labor Force	277,950	280,650	284,105	286,717	285,930	283,770	282,738	282,597	283,258
Jobs	297,790	289,730	275,821	300,059	302,165	299,877	298,784	298,635	299,335
Net Jobs	19,840	9,080	-8,284	13,342	16,235	16,107	16,046	16,038	16,077

* source: Delaware Population Consortium, 2010

Households

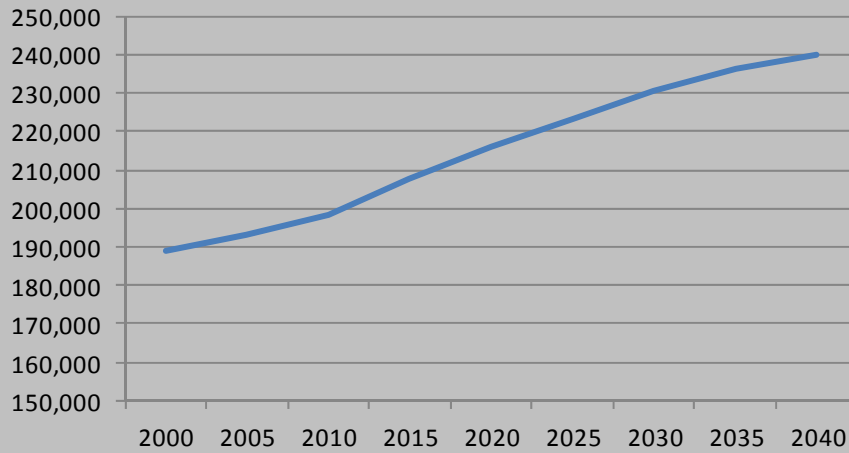
With respect to the number of households, it is projected that there will be an increase of 41,934 new households, which equates to a 21.6% increase between 2010 and 2040, as shown in Table 2-4 and Figure 2-3 below.

**Table 2-4: 2010 Delaware Population Consortium Projections
Number of Households**

	2000	2005	2010	2015	2020	2025	2030	2035	2040
Households	188,938	192,939	198,173	207,723	215,962	223,423	230,447	236,157	240,107
Change	--	4,001	5,234	9,550	8,239	7,461	7,024	5,710	3,950

* source: Delaware Population Consortium, 2010

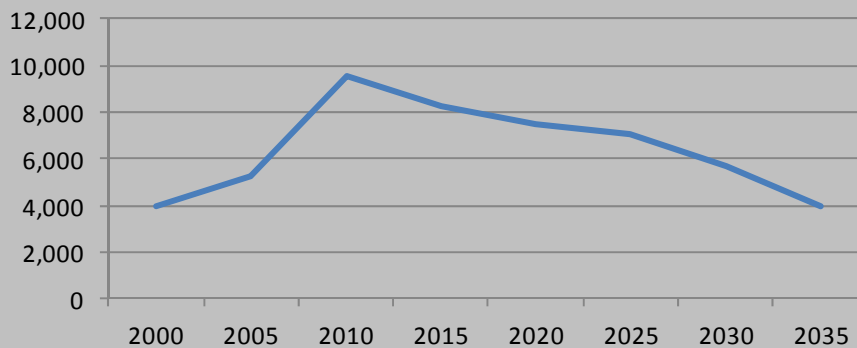
Figure 2-3: Projected Number of Households



* source: Delaware Population Consortium, 2010

While the number of households is expected to grow through 2040, the pace of growth is expected to peak around 2015 and then slow until 2040 as shown in Figure 2-4. This can be caused by any number of factors, including such things as a potential build-out of the County, and an increased mortality rate due to the County's aging population.

Figure 2-4: Change in Number of Households



* source: Delaware Population Consortium, 2010

Families in

Need

Families and people experiencing poverty have been increasing across the nation. In New Castle County in 2010, 7.5% of families and 11.3% of all people were living below the poverty level as shown in Table 9-5 below. All categories of poverty have risen significantly since 2000, due in large part to the recent economic recession and resulting dramatic increase in unemployment. These figures represent a significant part of the population whose basic needs may not be met.

Meeting the needs of those at the lowest end of the income spectrum is a challenge that must be faced through the coordination of State, County and local governments. For County government, the availability of housing for those in poverty is the greatest challenge and one which the County faces by working in cooperation with the Delaware State Housing Authority to channel funds for housing assistance and by encouraging diversity in the housing stock. [MOVE TO HOUSING](#)

Table 2-5			
New Castle County Poverty Status - Percent Below Poverty Level			
	2000	2010	Change
All Families	5.6	7.5	+34%
Families with no husband present	18.3	22.0	+20%
All people	8.4	11.3	+35%
Under 18	10.2	15.7	+54%
18 and older	7.7	9.9	+29%
Unrelated individuals 15 and over	18.9	23.7	+25%
Source: U.S. Census 2000 & 2010			