



LANCASTER COUNTY POPULATION PROJECTIONS: 2010 to 2050

Summary Report

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EXECUTIVE SUMMARY

In projections prepared for Lancaster County, population and household growth continues in each decade between 2010 and 2050. The projections show the population increasing to about 321,000 in 2020, rising by more than 35,000 people or 12.4% from 2010. The number of households rises to nearly 130,000 in 2020, an increase of 14.4%, nearly identical to the growth rate during the 2000s.

The adjectives “steady” and “stable” accurately describe Lancaster County’s expected future growth. Between 2020 and 2050, the projections indicate growth of nearly 40,000 persons and 18,000 households each decade. The county should reach the milestones of having 150,000 households just after 2030, and 400,000 people in 2040.

In recent decades, Lancaster County’s population has become more diverse.



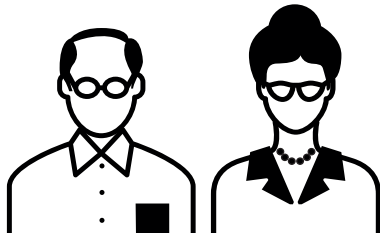
To understand future changes, the projections compare population values between non-Hispanic Whites and all other population groups. The projections indicate the portion of Lancaster County’s population comprised of persons of color rises by five percentage points per decade, similar to what occurred in the 1990s and 2000s. The number of diverse individuals more than doubles from about 65,000 in 2020 to 155,000 in 2050, when one in three Lancaster County residents will be a person of color.

The projections utilize birth, death, and migration rates calculated for each single year of age. Given the large segment of college students that move into and out of the area, analyzing by single year of age substantially enhances data quality.

Detailed evaluations of the college-age population structure and its corresponding migration enrich key components and strengthen these projections.

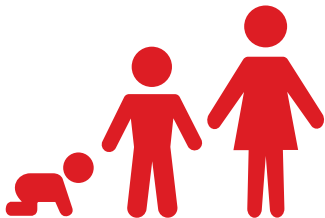
While those age 20 to 24 remain the largest Lancaster County population segment out to 2050, aging represents a central element of future population change. Growth occurs across all age groups, but the projections show the highest percentage gains happen as “baby boomers” born from 1946 to 1964 age into older age categories.

Specific examples of aging include:



- those age 65 and older doubling from 31,000 in 2010 to 61,000 in 2030 and rising to 75,000 by 2050
- those age 75 and older exceeding children under age 5 by 2025, likely for the first time in history
- households headed by a person age 85 or older, of which 70% currently live alone and often with a disability or special needs, tripling from 3,500 in 2010 to nearly 11,500 in 2050

Other notable findings from the projections include:






- rising levels of both births and deaths within the county, with deaths increasing faster, softening population growth from natural change
- an increasing number of children under age 18, exceeding 75,000 by 2030 and 90,000 by 2050



While no projections will match future values exactly and future local or world events can change population dynamics quickly, area leaders can use these projections as a guide for understanding Lancaster County’s growth, which should continue unabated for the foreseeable future.

- continuation of long-term trends of family households and those with children declining as a share of all households
- an increased prevalence of one-person households, representing about one-third of households by 2040
- average household size continuing a slow and steady decline, ending at 2.30 persons per household in 2050 versus 2.40 in 2010 and 2.89 in 1970

1990 to 2010 Lancaster County Statistics with 2020 to 2050 Projection

| Year |  Total Households | |  Total Population | |  Persons of Color | | |
|------|--|-------------|--|-------------|--|-------------|-----------------------|
| | Number | Growth Rate | Number | Growth Rate | Number | Growth Rate | Portion of Population |
| 1990 | 82,759 | n/a | 213,641 | n/a | 13,120 | n/a | 6.1% |
| 2000 | 99,187 | 19.9% | 250,291 | 17.2% | 28,224 | 115.1% | 11.3% |
| 2010 | 113,373 | 14.3% | 285,407 | 14.0% | 44,705 | 58.4% | 15.7% |
| 2020 | 129,716 | 14.4% | 320,670 | 12.4% | 65,608 | 46.8% | 20.5% |
| 2030 | 147,809 | 13.9% | 360,558 | 12.4% | 92,444 | 40.9% | 25.6% |
| 2040 | 165,615 | 12.0% | 399,519 | 10.8% | 121,816 | 31.8% | 30.5% |
| 2050 | 182,845 | 10.4% | 439,258 | 9.9% | 155,250 | 27.4% | 35.3% |



OVERVIEW

The population in Lancaster County and the city of Lincoln have been growing. In every decade since 1900, the population has risen, even managing a small gain in the depression years of the 1930s. In more recent times, population growth has achieved a high decade rate above 17 percent in the 1990s, a low decade rate slightly above 10 percent in the 1980s, with the 1970s and 2000s being in the middle of this range, with growth rates of about 14 percent.

Will the local population grow each decade in the near future? What rate of growth is most likely? Will increases occur primarily in certain age groups? How will the number of households and average household size change? These are the types of questions that population projections can answer. No one knows exactly how population changes will occur, and unforeseen future local and world events such as recessions or wars can change population dynamics dramatically. In general, however, mathematical modeling based on the past and utilizing assumptions for the future provides a sense of expected changes likely to occur.

Population projections are especially important as preparations continue for the needs of the sizable baby-boom population. With the first “boomers” turning age 75 in 2021, their changing needs given housing preferences, greater possibilities of losing a spouse, and eventual possible need for long-term care or nursing home facilities come into focus as one looks 15 to 30 years into the future to 2035 and 2050. Current and future development of housing and infrastructure will need to adapt and prepare for the coming demographic changes. Population and housing projections are a useful tool in the planning process.

Lancaster County has additional complexities regarding its population since a major university, a penitentiary, and Nebraska’s state government are located there. As such, Lancaster County experiences a relatively high rate of migration, attracting college-

aged students and some in their early working years but also often having those with a newly completed degree move out of the area. Migration not only has a direct influence on the residential location of families and individuals but also upon potential future families (where people will be when they eventually get married and have children). Thus, understanding and modeling migration accurately is a key component in portraying the future population structure of Lancaster County.

With migration in mind, these projections utilize the “trend” level of migration that has occurred in the recent past. With birth and survival rates remaining relatively steady over time, changes in migration are a more variable factor for how the population will change. This has been witnessed locally when lower levels of migration in the 1980s (+ 2.0% decade rate) lead to lower population growth, while the 1990s had relatively high levels of growth due to high migration (+ 9.3%). This trend level of migration can be viewed not only as an average between these high and low levels but also indicative of the longer-term trend since 1970 and what occurred most recently in the 2000s (+ 4.9% decade rate, used in calculating age-specific migration rates). Population estimates from the Census Bureau establish migration rates for the 2010s in this range as well (+ 6.0% for the full decade as extrapolated from 2019 estimates).

The trend level of migration is pegged at + 5.5 percent per decade, based upon similar averages of rates from the last three completed decades (average of 5.4%) as well as the average of those three decades plus estimates for the 2010s (average of 5.6%). The trend level is the scenario most likely to occur, as it smoothes the actual future changes that will likely sometimes be above and sometimes below the trend level. The trend level of migration and population growth represents the most reasonable method for evaluating longer periods of time, as Lancaster County has not experienced consecutive decades of either high or low migration in recent times.

With the targeted decade rate of migration established, an analysis of age-specific migration rates based upon population changes in the 2000s followed. This process involved determining migration rates for five-year age groups and then smoothing those values into rates for individual ages. Having rates for each single year of age was crucial to correctly pattern the “jumps” in migration that occur as college students both come into and often later leave Lancaster County.

A comprehensive analysis conducted on the population structure for college ages improved the overall precision of these projections by age. The detailed patterning of college age changes and utilizing migration rates for single years of age strengthen these projections when compared to others. Since these projections were tailored to specific Lancaster County trends and prepared using the most current data available, they provide a

locally grounded approach to detailing the complex nature of Lancaster County’s population.

Based upon the trend level of growth, the projections also provide information on the future housing structure in Lancaster County. These projections detail not only the total number of persons, but also those living in housing units and group quarters settings. With this information, the total number of households and average household size were determined, along with projections by age of the householder. Additionally, the number of one-person households and the number of nonfamily and family households, including those that have children under age 18, illustrate further details on the future housing structure. Such projections further aid planning and development regarding the demand for 1-person households (apartments and smaller homes) as well as housing and other amenities for families with children (parks, playgrounds, etc.).



The Nebraska State Capitol in Lincoln



DATA SUMMARY

While users of data from projections should exercise discretion in the conclusions they draw from the information, the following points illustrate some of the key pieces of information gleaned from the projections. They are not necessarily listed in any particular order. The tables and figures referenced follow in the next section.

1. Based on the current 2019 population estimates from the U.S. Census Bureau, another year of growth typical for the 2010s period would give Lancaster County about 322,000 people in 2020. However, impacts on growth and the 2020 Census count by COVID-19 virus complications are undetermined. Given the closure of college campuses and movement to online learning, the migration and count of college students could be inaccurate. Thus, having a 2020 Census count around 320,000 persons is quite plausible, under the assumption that the Census estimates program has been accurate in tracking the area’s population since 2010. The projection model puts the 2020 population near 321,000, which appears reasonable (Table 1).

2. The projection model pegs the 2035 population at nearly 380,000, a growth of more than 59,000 persons from 2020 or about 18 percent (Table 1). By 2050, the Lancaster County population will approach 440,000, for an additional growth of 59,000 over the projected 2035 level, or a rise of 16% from 2035 to 2050.

3. Natural change steadily will increase population growth in each five-year period early in the projection period, the relative difference between these two factors will shrink over time and net migration is expected to be larger in the 2040s (Figure 1). Natural change will steadily increase the population by about 10,000 per five-year period, until softening in the 2040s. Net migration, following a 5.5% target rate, will trend upward as the overall population increases.

4. The number of births and deaths steadily trend upward, but the rise in deaths eventually will outpace the increase in births, leading to the lower levels of natural change (Figure 2). Thus, it appears that there may be an increased need for schools based on the growth in births and child population over the projection period.

5. The composition of natural change will change, with levels trending downward for non-Hispanic Whites while rising for other population groups (Figure 3). The changes for Whites will stem primarily from a rise in deaths, as White births remain quite consistent in a range of 15,500 to 16,500 for each five-year period (Table 2). Conversely, births among diverse population groups will increase from about 4,500 per five-year period in the 2010s to around 10,000 per five year period in the 2040s (Table 3). Deaths will rise for diverse populations as well, but will remain relatively low given the relatively young age structure of diverse populations versus the relatively older population of non-Hispanic Whites, which is heavily composed of the aging “baby boom” population.

6. Overall, the projected populations of both non-Hispanic Whites and diverse populations grow in each 5-year period, but the gains will be increasingly larger for diverse populations and increasingly smaller for Whites (Figures 4). Diverse populations have and will continue to increase their respective share of the total population by about 5 percentage points per decade, from about 6% in 1990 to 16% in 2010 and 26% by 2030. In 2050, diverse populations should represent more than 1 in 3 Lancaster County residents (35.3%), with the number of diverse residents more than doubling from a projected 66,000 in 2020 to more than 155,000 by 2050 (Table 3). The non-Hispanic White population will nearly total 285,000 in 2050, up about 30,000 or 11% over the projected 255,000 in 2020 (Table 2).

7. Figures 5-8 show the population values among major racial groups from 1990 to 2050 for the total population, those under age 18, those 18 to 64, and those age 65 and older respectively. Each shows the same pattern, with the total population and each major racial group “stepping” upward to new population highs each decade. Sometimes the “steps” are large, such as sizeable growth among diverse population of primary working ages (18-64), while sometimes they are small, such as among non-Hispanic Whites under age 18. Notable increases will occur among the 65 and older population, from about 31,000 in 2010 to 46,000 in 2020 and 61,000 in 2030 (Figure 8). Most of this growth will occur among non-Hispanic Whites, but diverse populations will contribute to the increases as well. With all “baby boomers” being age 65+ in 2030, senior growth will slow in the 2030s and 2040s, but continue rising. Thus, housing for seniors, hospitals, and aspects of care and quality of life will take on increased needs as the population ages and the senior population grows.

8. To illustrate the impact of aging, Figure 9 shows that by 2025 the population age 75 or older will exceed the number of children under age 5. It will likely be the first time in history with more elders of this age versus young children. In 2010, there were about 5,000 more young children than seniors aged 75+. However, with sustained but slow growth among children versus a large increase in those age 75+ as “baby boomers” enter this age range, such seniors not only overtake young children but eventually far exceed them, with sharp growth until 2040 before growth lessens. By 2050 there will be nearly 15,000 more people age 75+ than children under age five in Lancaster County. Thus, this suggests larger increases in needs for elder care workers relative to the continued rising need for childcare workers.

9. Given Lancaster County’s migration structure where a large immigration occurs among college-aged persons followed by a general outmigration of those aged 25-44, who take along their young children (Figures 12 and 13), any positive increase in net migration leads to a sizeable increase in births and the under 18 population. The demographic theory of more positive migration leading not only to more people overall but also a higher level of births and children

is especially apparent in Lancaster County. Retaining more people age 25-44 who are considering moving away from the area would have significant impacts on the population’s overall structure.

10. The total number of households increases steadily in a linear pattern reaching about 130,000 in 2020, 157,000 in 2035 and nearly 183,000 in 2050 (Table 4). While the numeric increase in households will be about 26,500 in both the 15-year periods from 2020 to 2035 and 2035 to 2050, the rate of household growth will slow as the housing base number increases in size. Figure 11 shows that while household growth during the 2010s decade (+ 14.4%) will increase at a nearly identical rate to what occurred in the 2000s (+ 14.3%), this decade rate of growth will slow over time, even as the rise in the number of households is consistent each decade (Table 4). Figure 11 shows the same pattern for decade growth in total population, with the projected increases in both population and households in the 2040s being the lowest of any decade since the 1970s.

11. While both family and nonfamily households will increase in number, the projection shows the rate of growth will be faster among nonfamily households. Part of this is due to increases in 1-person households (nonfamily by definition), which steadily rise to be about one-third of all households by 2040, versus being 27.5% of all households in 1990 (Table 4, Figure 10). Some of this change likely stems from married “baby boomer” couples moving into age cohorts where the loss of a spouse occurs more frequently, thus changing a 2-person household to a 1-person household. The portion of households where one person lives alone rises with age.

12. As the number and portion of households with one person living alone rises, the average household size slowly continues falling, as it has for several decades. Figure 10 shows the average household size in Lancaster County was nearly three persons per unit in 1970, when many “baby boom” children still lived in their parent’s homes. Persons per household dropped below 2.5 in 1990 and stabilized at 2.40 in both 2000 and 2010. The projections show a declining average household size each decade, ending with 2.30 persons per household in 2050.

13. While both family households and those with children will increase in overall number, their relative percentage or share of the total number of households will decrease as it has tended to since 1970 (Table 4). Family households comprised more than 75% of Lancaster households in 1970, but that has dropped in each decade, with 60% of households being composed of families (two or more related individuals in the same unit) in 2010. Projected values continue this decline in each decade, although slowly, ending with 57% of households being composed of families in 2050. Likewise, family households with their own children under 18 used to comprise more than 40% of households in 1970, falling to below 30% of households by 2010. The projections indicate a slow decline will continue, with 26% of households being families with their own children under 18 in 2050.

14. While households headed by all various ages will each increase, the growth will be relatively faster among those headed by someone relatively older.

The number of households with a householder age 65-74 will double from 2010 to when it sets a near-term peak in 2030, while those with a householder aged 85+ will more than triple from 2010 to 2050 (Table 4).

While these changes speak to the aging of the “baby boom” population, we can also easily identify the smaller “generation X” cohort that follows them. For example, the “baby boom” population was age 45-64 in 2010, and Table 4 shows there were more than 21,000 households headed by someone age 45-54 at that time. As “baby boomers” age out of this age range, the number of households headed by someone 45-54 declines to around 19,000 from 2015 to 2025 when the smaller “generation X” cohort is of this age. Then households headed by someone 45-54 rise to new highs in 2030 and beyond as the “millennial” population cohort (children of baby boomers) enters this age range. The smaller “generation X” cohort is age 55-64 in 2025 to 2035 and age 65-74 in 2035 to 2045 (Table 4).



Downtown Lincoln Skyline

Table 1: Lancaster County Total Population Projected from 2010 Census to 2050 by Sex and Age

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|----------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Total Population | 285,407 | 302,860 | 320,670 | 340,568 | 360,558 | 379,781 | 399,519 | 419,117 | 439,258 |
| Change in Population | n/a | 17,453 | 17,810 | 19,898 | 19,990 | 19,223 | 19,739 | 19,598 | 20,141 |
| Natural Change | n/a | 9,957 | 9,795 | 10,367 | 10,592 | 10,558 | 10,012 | 9,159 | 9,050 |
| Births | n/a | 20,178 | 20,494 | 21,688 | 22,912 | 24,366 | 25,517 | 26,137 | 26,765 |
| Deaths | n/a | 10,221 | 10,699 | 11,321 | 12,320 | 13,808 | 15,505 | 16,978 | 17,715 |
| Net Migration | n/a | 7,496 | 8,015 | 9,531 | 9,398 | 8,665 | 9,727 | 10,439 | 11,091 |
| % of change | | 42.9% | 45.0% | 47.9% | 47.0% | 45.1% | 49.3% | 53.3% | 55.1% |

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Male | 143,048 | 152,053 | 161,158 | 171,248 | 181,330 | 191,019 | 201,023 | 211,067 | 221,450 |
| Under 5 | 10,311 | 10,177 | 10,340 | 10,944 | 11,564 | 12,299 | 12,882 | 13,197 | 13,516 |
| 5 to 9 | 9,605 | 10,175 | 10,045 | 10,205 | 10,803 | 11,415 | 12,142 | 12,719 | 13,031 |
| 10 to 14 | 8,517 | 9,618 | 10,190 | 10,061 | 10,220 | 10,819 | 11,433 | 12,161 | 12,739 |
| 15 to 19 | 10,709 | 10,892 | 12,332 | 13,134 | 13,024 | 13,116 | 13,898 | 14,679 | 15,617 |
| 20 to 24 | 16,076 | 16,167 | 16,478 | 18,599 | 19,654 | 19,378 | 19,761 | 20,918 | 22,118 |
| 25 to 29 | 12,626 | 13,214 | 13,253 | 13,503 | 15,262 | 16,185 | 15,991 | 16,266 | 17,229 |
| 30 to 34 | 10,393 | 11,811 | 12,376 | 12,417 | 12,661 | 14,324 | 15,201 | 15,029 | 15,286 |
| 35 to 39 | 9,160 | 10,149 | 11,538 | 12,096 | 12,155 | 12,405 | 14,040 | 14,899 | 14,733 |
| 40 to 44 | 8,660 | 8,683 | 9,626 | 10,958 | 11,502 | 11,565 | 11,811 | 13,377 | 14,208 |
| 45 to 49 | 9,145 | 8,480 | 8,518 | 9,454 | 10,780 | 11,330 | 11,401 | 11,653 | 13,211 |
| 50 to 54 | 9,288 | 9,005 | 8,370 | 8,427 | 9,373 | 10,707 | 11,272 | 11,359 | 11,625 |
| 55 to 59 | 8,482 | 9,027 | 8,779 | 8,189 | 8,267 | 9,223 | 10,559 | 11,139 | 11,248 |
| 60 to 64 | 6,718 | 8,066 | 8,620 | 8,415 | 7,883 | 7,984 | 8,938 | 10,261 | 10,853 |
| 65 to 69 | 4,415 | 6,230 | 7,512 | 8,068 | 7,912 | 7,448 | 7,573 | 8,514 | 9,806 |
| 70 to 74 | 3,093 | 3,984 | 5,657 | 6,859 | 7,410 | 7,306 | 6,916 | 7,066 | 7,984 |
| 75 to 79 | 2,425 | 2,671 | 3,470 | 4,969 | 6,061 | 6,596 | 6,546 | 6,244 | 6,417 |
| 80 to 84 | 1,842 | 1,892 | 2,109 | 2,776 | 4,022 | 4,936 | 5,424 | 5,426 | 5,236 |
| 85+ | 1,583 | 1,813 | 1,944 | 2,172 | 2,777 | 3,983 | 5,237 | 6,160 | 6,595 |

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Female | 142,359 | 150,807 | 159,512 | 169,320 | 179,228 | 188,761 | 198,497 | 208,051 | 217,808 |
| Under 5 | 9,860 | 9,784 | 9,940 | 10,520 | 11,116 | 11,822 | 12,381 | 12,683 | 12,989 |
| 5 to 9 | 9,302 | 9,734 | 9,660 | 9,813 | 10,387 | 10,975 | 11,673 | 12,226 | 12,525 |
| 10 to 14 | 8,202 | 9,315 | 9,748 | 9,676 | 9,828 | 10,403 | 10,992 | 11,691 | 12,246 |
| 15 to 19 | 10,477 | 10,520 | 11,926 | 12,528 | 12,531 | 12,618 | 13,368 | 14,117 | 15,017 |
| 20 to 24 | 14,764 | 15,648 | 15,890 | 18,044 | 18,846 | 18,663 | 19,025 | 20,133 | 21,282 |
| 25 to 29 | 11,531 | 12,146 | 12,913 | 13,066 | 14,848 | 15,539 | 15,422 | 15,678 | 16,598 |
| 30 to 34 | 9,390 | 10,826 | 11,406 | 12,136 | 12,277 | 13,952 | 14,609 | 14,507 | 14,743 |
| 35 to 39 | 8,467 | 9,206 | 10,608 | 11,180 | 11,892 | 12,043 | 13,689 | 14,332 | 14,229 |
| 40 to 44 | 8,026 | 8,056 | 8,757 | 10,100 | 10,650 | 11,336 | 11,481 | 13,055 | 13,674 |
| 45 to 49 | 9,071 | 7,898 | 7,936 | 8,630 | 9,964 | 10,513 | 11,199 | 11,345 | 12,907 |
| 50 to 54 | 9,466 | 9,007 | 7,852 | 7,901 | 8,600 | 9,940 | 10,498 | 11,192 | 11,345 |
| 55 to 59 | 8,864 | 9,324 | 8,887 | 7,764 | 7,824 | 8,532 | 9,872 | 10,438 | 11,139 |
| 60 to 64 | 7,196 | 8,595 | 9,064 | 8,658 | 7,584 | 7,656 | 8,366 | 9,694 | 10,265 |
| 65 to 69 | 4,806 | 6,843 | 8,196 | 8,672 | 8,306 | 7,301 | 7,386 | 8,094 | 9,396 |
| 70 to 74 | 3,667 | 4,482 | 6,414 | 7,713 | 8,196 | 7,879 | 6,951 | 7,055 | 7,757 |
| 75 to 79 | 3,221 | 3,318 | 4,082 | 5,883 | 7,105 | 7,590 | 7,328 | 6,503 | 6,626 |
| 80 to 84 | 2,829 | 2,692 | 2,803 | 3,480 | 5,067 | 6,143 | 6,608 | 6,413 | 5,743 |
| 85+ | 3,220 | 3,413 | 3,428 | 3,555 | 4,208 | 5,859 | 7,647 | 8,895 | 9,330 |

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|-----------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Totals: Under 5 | 20,171 | 19,961 | 20,280 | 21,465 | 22,679 | 24,121 | 25,263 | 25,880 | 26,505 |
| 5 to 9 | 18,907 | 19,909 | 19,704 | 20,019 | 21,189 | 22,390 | 23,815 | 24,944 | 25,555 |
| 10 to 14 | 16,719 | 18,933 | 19,939 | 19,737 | 20,049 | 21,222 | 22,425 | 23,852 | 24,984 |
| 15 to 19 | 21,186 | 21,412 | 24,259 | 25,662 | 25,555 | 25,734 | 27,266 | 28,795 | 30,634 |
| 20 to 24 | 30,840 | 31,815 | 32,368 | 36,643 | 38,500 | 38,041 | 38,786 | 41,051 | 43,400 |
| 25 to 29 | 24,157 | 25,361 | 26,167 | 26,569 | 30,110 | 31,724 | 31,413 | 31,943 | 33,827 |
| 30 to 34 | 19,783 | 22,637 | 23,782 | 24,553 | 24,938 | 28,275 | 29,810 | 29,537 | 30,029 |
| 35 to 39 | 17,627 | 19,356 | 22,145 | 23,276 | 24,047 | 24,448 | 27,729 | 29,231 | 28,961 |
| 40 to 44 | 16,686 | 16,739 | 18,383 | 21,058 | 22,152 | 22,901 | 23,292 | 26,432 | 27,881 |
| 45 to 49 | 18,216 | 16,377 | 16,455 | 18,084 | 20,744 | 21,843 | 22,600 | 22,998 | 26,117 |
| 50 to 54 | 18,754 | 18,011 | 16,222 | 16,328 | 17,974 | 20,647 | 21,770 | 22,551 | 22,971 |
| 55 to 59 | 17,346 | 18,352 | 17,666 | 15,954 | 16,091 | 17,755 | 20,431 | 21,577 | 22,387 |
| 60 to 64 | 13,914 | 16,661 | 17,684 | 17,073 | 15,467 | 15,640 | 17,305 | 19,955 | 21,118 |
| 65 to 69 | 9,221 | 13,073 | 15,707 | 16,740 | 16,218 | 14,749 | 14,958 | 16,608 | 19,202 |
| 70 to 74 | 6,760 | 8,466 | 12,071 | 14,571 | 15,606 | 15,184 | 13,868 | 14,121 | 15,741 |
| 75 to 79 | 5,646 | 5,989 | 7,553 | 10,853 | 13,166 | 14,186 | 13,874 | 12,748 | 13,043 |
| 80 to 84 | 4,671 | 4,584 | 4,913 | 6,257 | 9,088 | 11,079 | 12,032 | 11,839 | 10,979 |
| 85+ | 4,803 | 5,226 | 5,372 | 5,727 | 6,985 | 9,842 | 12,884 | 15,056 | 15,925 |

Table 2: Lancaster County Non-Hispanic White Population Projected from 2010 Census to 2050 by Sex and Age

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|----------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Total Population | 240,702 | 248,302 | 255,062 | 262,302 | 268,114 | 273,470 | 277,703 | 281,002 | 284,008 |
| Change in Population | n/a | 7,600 | 6,761 | 7,240 | 5,811 | 5,356 | 4,234 | 3,299 | 3,006 |
| Natural Change | n/a | 6,452 | 5,737 | 5,486 | 4,786 | 3,775 | 2,536 | 1,531 | 1,265 |
| Births | n/a | 16,057 | 15,689 | 15,891 | 15,973 | 16,161 | 16,270 | 16,327 | 16,381 |
| Deaths | n/a | 9,605 | 9,952 | 10,405 | 11,187 | 12,386 | 13,734 | 14,796 | 15,116 |
| Net Migration | n/a | 1,148 | 1,024 | 1,754 | 1,025 | 1,581 | 1,698 | 1,768 | 1,741 |
| % of change | | 15.1% | 15.1% | 24.2% | 17.6% | 29.5% | 40.1% | 53.6% | 57.9% |

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Male | 119,472 | 123,490 | 127,085 | 130,866 | 133,779 | 136,494 | 138,701 | 140,547 | 142,323 |
| Under 5 | 7,508 | 7,751 | 7,583 | 7,680 | 7,721 | 7,814 | 7,867 | 7,895 | 7,923 |
| 5 to 9 | 7,198 | 6,913 | 7,136 | 6,977 | 7,068 | 7,107 | 7,192 | 7,242 | 7,269 |
| 10 to 14 | 6,553 | 7,006 | 6,732 | 6,949 | 6,793 | 6,882 | 6,919 | 7,003 | 7,051 |
| 15 to 19 | 8,614 | 8,419 | 9,008 | 8,777 | 9,036 | 8,754 | 8,882 | 8,930 | 9,036 |
| 20 to 24 | 13,439 | 13,091 | 12,816 | 13,705 | 13,085 | 13,524 | 13,272 | 13,444 | 13,522 |
| 25 to 29 | 10,268 | 10,257 | 9,968 | 9,759 | 10,446 | 10,030 | 10,366 | 10,150 | 10,289 |
| 30 to 34 | 8,441 | 9,398 | 9,403 | 9,136 | 8,954 | 9,588 | 9,224 | 9,536 | 9,334 |
| 35 to 39 | 7,444 | 8,042 | 8,962 | 8,974 | 8,729 | 8,559 | 9,173 | 8,824 | 9,128 |
| 40 to 44 | 7,264 | 6,976 | 7,540 | 8,413 | 8,435 | 8,208 | 8,055 | 8,638 | 8,320 |
| 45 to 49 | 7,906 | 7,073 | 6,805 | 7,364 | 8,230 | 8,262 | 8,047 | 7,903 | 8,483 |
| 50 to 54 | 8,263 | 7,751 | 6,951 | 6,703 | 7,269 | 8,139 | 8,184 | 7,982 | 7,850 |
| 55 to 59 | 7,754 | 7,997 | 7,525 | 6,772 | 6,548 | 7,122 | 7,992 | 8,053 | 7,871 |
| 60 to 64 | 6,220 | 7,339 | 7,600 | 7,179 | 6,488 | 6,293 | 6,869 | 7,730 | 7,809 |
| 65 to 69 | 4,093 | 5,749 | 6,813 | 7,091 | 6,729 | 6,110 | 5,950 | 6,522 | 7,364 |
| 70 to 74 | 2,898 | 3,691 | 5,218 | 6,218 | 6,510 | 6,210 | 5,671 | 5,549 | 6,112 |
| 75 to 79 | 2,304 | 2,496 | 3,208 | 4,573 | 5,480 | 5,779 | 5,549 | 5,106 | 5,026 |
| 80 to 84 | 1,778 | 1,790 | 1,964 | 2,557 | 3,686 | 4,447 | 4,735 | 4,583 | 4,265 |
| 85+ | 1,527 | 1,751 | 1,854 | 2,039 | 2,574 | 3,666 | 4,755 | 5,457 | 5,671 |

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Female | 121,230 | 124,811 | 127,977 | 131,437 | 134,335 | 136,976 | 139,002 | 140,455 | 141,685 |
| Under 5 | 7,172 | 7,451 | 7,289 | 7,383 | 7,422 | 7,510 | 7,561 | 7,588 | 7,614 |
| 5 to 9 | 6,858 | 6,605 | 6,862 | 6,709 | 6,796 | 6,832 | 6,914 | 6,961 | 6,987 |
| 10 to 14 | 6,325 | 6,676 | 6,432 | 6,683 | 6,532 | 6,617 | 6,653 | 6,732 | 6,778 |
| 15 to 19 | 8,497 | 8,170 | 8,573 | 8,339 | 8,694 | 8,421 | 8,543 | 8,589 | 8,688 |
| 20 to 24 | 12,484 | 12,763 | 12,367 | 13,069 | 12,540 | 13,025 | 12,778 | 12,940 | 13,011 |
| 25 to 29 | 9,638 | 9,544 | 9,786 | 9,459 | 9,992 | 9,616 | 9,997 | 9,783 | 9,912 |
| 30 to 34 | 7,879 | 8,855 | 8,769 | 9,004 | 8,699 | 9,188 | 8,854 | 9,205 | 9,002 |
| 35 to 39 | 7,055 | 7,536 | 8,469 | 8,389 | 8,615 | 8,327 | 8,799 | 8,479 | 8,815 |
| 40 to 44 | 6,839 | 6,636 | 7,084 | 7,971 | 7,899 | 8,118 | 7,847 | 8,294 | 7,998 |
| 45 to 49 | 8,067 | 6,692 | 6,501 | 6,942 | 7,820 | 7,754 | 7,976 | 7,712 | 8,154 |
| 50 to 54 | 8,624 | 7,975 | 6,624 | 6,444 | 6,888 | 7,768 | 7,709 | 7,936 | 7,679 |
| 55 to 59 | 8,173 | 8,459 | 7,836 | 6,523 | 6,354 | 6,804 | 7,681 | 7,632 | 7,865 |
| 60 to 64 | 6,699 | 7,888 | 8,185 | 7,597 | 6,341 | 6,188 | 6,641 | 7,507 | 7,470 |
| 65 to 69 | 4,517 | 6,350 | 7,498 | 7,807 | 7,267 | 6,085 | 5,951 | 6,404 | 7,253 |
| 70 to 74 | 3,468 | 4,211 | 5,948 | 7,053 | 7,374 | 6,889 | 5,791 | 5,682 | 6,134 |
| 75 to 79 | 3,077 | 3,130 | 3,826 | 5,443 | 6,480 | 6,812 | 6,390 | 5,403 | 5,322 |
| 80 to 84 | 2,733 | 2,563 | 2,635 | 3,250 | 4,669 | 5,583 | 5,910 | 5,571 | 4,753 |
| 85+ | 3,125 | 3,307 | 3,292 | 3,372 | 3,953 | 5,438 | 7,008 | 8,037 | 8,250 |

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|-----------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Totals: Under 5 | 14,680 | 15,202 | 14,872 | 15,063 | 15,143 | 15,324 | 15,428 | 15,484 | 15,537 |
| 5 to 9 | 14,056 | 13,518 | 13,999 | 13,686 | 13,864 | 13,939 | 14,106 | 14,203 | 14,255 |
| 10 to 14 | 12,878 | 13,682 | 13,164 | 13,633 | 13,325 | 13,499 | 13,572 | 13,735 | 13,830 |
| 15 to 19 | 17,111 | 16,589 | 17,580 | 17,117 | 17,730 | 17,175 | 17,425 | 17,519 | 17,724 |
| 20 to 24 | 25,923 | 25,855 | 25,183 | 26,774 | 25,625 | 26,549 | 26,049 | 26,383 | 26,533 |
| 25 to 29 | 19,906 | 19,801 | 19,755 | 19,217 | 20,438 | 19,646 | 20,363 | 19,933 | 20,201 |
| 30 to 34 | 16,320 | 18,254 | 18,172 | 18,140 | 17,653 | 18,776 | 18,078 | 18,740 | 18,337 |
| 35 to 39 | 14,499 | 15,578 | 17,431 | 17,363 | 17,344 | 16,886 | 17,972 | 17,303 | 17,943 |
| 40 to 44 | 14,103 | 13,612 | 14,624 | 16,384 | 16,334 | 16,327 | 15,902 | 16,932 | 16,318 |
| 45 to 49 | 15,973 | 13,765 | 13,306 | 14,305 | 16,050 | 16,016 | 16,023 | 15,615 | 16,637 |
| 50 to 54 | 16,887 | 15,726 | 13,576 | 13,146 | 14,157 | 15,907 | 15,893 | 15,918 | 15,528 |
| 55 to 59 | 15,927 | 16,456 | 15,360 | 13,295 | 12,901 | 13,926 | 15,674 | 15,685 | 15,736 |
| 60 to 64 | 12,919 | 15,226 | 15,785 | 14,776 | 12,829 | 12,481 | 13,510 | 15,238 | 15,280 |
| 65 to 69 | 8,610 | 12,099 | 14,311 | 14,898 | 13,995 | 12,195 | 11,902 | 12,926 | 14,618 |
| 70 to 74 | 6,366 | 7,902 | 11,166 | 13,270 | 13,884 | 13,099 | 11,461 | 11,231 | 12,246 |
| 75 to 79 | 5,381 | 5,626 | 7,034 | 10,016 | 11,960 | 12,591 | 11,939 | 10,509 | 10,347 |
| 80 to 84 | 4,511 | 4,353 | 4,599 | 5,807 | 8,355 | 10,030 | 10,644 | 10,154 | 9,017 |
| 85+ | 4,652 | 5,057 | 5,146 | 5,411 | 6,527 | 9,104 | 11,763 | 13,494 | 13,922 |

Table 3: Lancaster County Diverse Populations Projected from 2010 Census to 2050 by Sex and Age

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|----------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Total Population | 44,705 | 54,558 | 65,608 | 78,266 | 92,444 | 106,311 | 121,816 | 138,115 | 155,250 |
| Change in Population | n/a | 9,853 | 11,049 | 12,658 | 14,178 | 13,867 | 15,505 | 16,299 | 17,135 |
| Natural Change | n/a | 3,505 | 4,058 | 4,881 | 5,806 | 6,783 | 7,476 | 7,628 | 7,785 |
| Births | n/a | 4,121 | 4,805 | 5,797 | 6,939 | 8,205 | 9,247 | 9,810 | 10,384 |
| Deaths | n/a | 616 | 747 | 916 | 1,133 | 1,422 | 1,771 | 2,182 | 2,599 |
| Net Migration | n/a | 6,348 | 6,991 | 7,777 | 8,372 | 7,084 | 8,029 | 8,671 | 9,350 |
| % of change | | 64.4% | 63.3% | 61.4% | 59.0% | 51.1% | 51.8% | 53.2% | 54.6% |

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Male | 23,576 | 28,563 | 34,073 | 40,382 | 47,551 | 54,525 | 62,322 | 70,519 | 79,128 |
| Under 5 | 2,803 | 2,426 | 2,758 | 3,264 | 3,843 | 4,486 | 5,015 | 5,301 | 5,593 |
| 5 to 9 | 2,407 | 3,262 | 2,909 | 3,228 | 3,734 | 4,309 | 4,950 | 5,477 | 5,762 |
| 10 to 14 | 1,964 | 2,612 | 3,458 | 3,112 | 3,428 | 3,937 | 4,513 | 5,158 | 5,687 |
| 15 to 19 | 2,095 | 2,473 | 3,325 | 4,357 | 3,988 | 4,362 | 5,016 | 5,748 | 6,581 |
| 20 to 24 | 2,637 | 3,076 | 3,662 | 4,894 | 6,569 | 5,854 | 6,489 | 7,474 | 8,596 |
| 25 to 29 | 2,358 | 2,957 | 3,285 | 3,745 | 4,816 | 6,155 | 5,625 | 6,116 | 6,940 |
| 30 to 34 | 1,952 | 2,413 | 2,973 | 3,281 | 3,707 | 4,735 | 5,977 | 5,494 | 5,952 |
| 35 to 39 | 1,716 | 2,107 | 2,576 | 3,122 | 3,426 | 3,846 | 4,867 | 6,075 | 5,605 |
| 40 to 44 | 1,396 | 1,708 | 2,087 | 2,545 | 3,067 | 3,356 | 3,756 | 4,739 | 5,887 |
| 45 to 49 | 1,239 | 1,407 | 1,713 | 2,091 | 2,550 | 3,068 | 3,354 | 3,750 | 4,728 |
| 50 to 54 | 1,025 | 1,254 | 1,419 | 1,724 | 2,105 | 2,568 | 3,088 | 3,377 | 3,776 |
| 55 to 59 | 728 | 1,030 | 1,255 | 1,417 | 1,720 | 2,101 | 2,566 | 3,086 | 3,377 |
| 60 to 64 | 498 | 727 | 1,020 | 1,237 | 1,395 | 1,691 | 2,069 | 2,531 | 3,043 |
| 65 to 69 | 322 | 480 | 698 | 977 | 1,183 | 1,338 | 1,622 | 1,992 | 2,442 |
| 70 to 74 | 195 | 292 | 439 | 641 | 900 | 1,096 | 1,245 | 1,516 | 1,872 |
| 75 to 79 | 121 | 175 | 262 | 397 | 581 | 817 | 997 | 1,138 | 1,391 |
| 80 to 84 | 64 | 102 | 145 | 219 | 336 | 490 | 690 | 843 | 971 |
| 85+ | 56 | 62 | 90 | 133 | 203 | 317 | 482 | 704 | 924 |

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Female | 21,129 | 25,995 | 31,535 | 37,883 | 44,892 | 51,786 | 59,495 | 67,596 | 76,123 |
| Under 5 | 2,688 | 2,333 | 2,651 | 3,137 | 3,694 | 4,311 | 4,820 | 5,095 | 5,375 |
| 5 to 9 | 2,444 | 3,129 | 2,797 | 3,104 | 3,590 | 4,142 | 4,759 | 5,264 | 5,538 |
| 10 to 14 | 1,877 | 2,639 | 3,316 | 2,992 | 3,296 | 3,785 | 4,339 | 4,959 | 5,467 |
| 15 to 19 | 1,980 | 2,349 | 3,354 | 4,189 | 3,837 | 4,196 | 4,825 | 5,528 | 6,328 |
| 20 to 24 | 2,280 | 2,885 | 3,523 | 4,975 | 6,305 | 5,638 | 6,248 | 7,194 | 8,271 |
| 25 to 29 | 1,893 | 2,603 | 3,127 | 3,607 | 4,856 | 5,922 | 5,425 | 5,895 | 6,686 |
| 30 to 34 | 1,511 | 1,971 | 2,637 | 3,132 | 3,578 | 4,764 | 5,755 | 5,303 | 5,740 |
| 35 to 39 | 1,412 | 1,670 | 2,139 | 2,791 | 3,277 | 3,716 | 4,890 | 5,853 | 5,413 |
| 40 to 44 | 1,187 | 1,420 | 1,673 | 2,129 | 2,751 | 3,218 | 3,633 | 4,761 | 5,676 |
| 45 to 49 | 1,004 | 1,205 | 1,435 | 1,688 | 2,144 | 2,760 | 3,223 | 3,633 | 4,753 |
| 50 to 54 | 842 | 1,032 | 1,228 | 1,457 | 1,713 | 2,173 | 2,789 | 3,256 | 3,667 |
| 55 to 59 | 691 | 865 | 1,051 | 1,242 | 1,470 | 1,728 | 2,190 | 2,806 | 3,274 |
| 60 to 64 | 497 | 707 | 879 | 1,060 | 1,243 | 1,468 | 1,726 | 2,187 | 2,795 |
| 65 to 69 | 289 | 493 | 698 | 866 | 1,040 | 1,216 | 1,435 | 1,690 | 2,143 |
| 70 to 74 | 199 | 272 | 465 | 660 | 822 | 989 | 1,161 | 1,373 | 1,622 |
| 75 to 79 | 144 | 188 | 257 | 440 | 625 | 778 | 938 | 1,101 | 1,304 |
| 80 to 84 | 96 | 129 | 168 | 230 | 397 | 560 | 698 | 841 | 991 |
| 85+ | 95 | 106 | 136 | 183 | 255 | 421 | 639 | 858 | 1,080 |

| Category | Census 2010 | 2015 Proj | 2020 Proj | 2025 Proj | 2030 Proj | 2035 Proj | 2040 Proj | 2045 Proj | 2050 Proj |
|-----------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Totals: Under 5 | 5,491 | 4,759 | 5,408 | 6,401 | 7,536 | 8,797 | 9,835 | 10,396 | 10,968 |
| 5 to 9 | 4,851 | 6,391 | 5,706 | 6,333 | 7,325 | 8,451 | 9,709 | 10,741 | 11,300 |
| 10 to 14 | 3,841 | 5,251 | 6,774 | 6,104 | 6,724 | 7,722 | 8,853 | 10,117 | 11,155 |
| 15 to 19 | 4,075 | 4,822 | 6,678 | 8,546 | 7,825 | 8,559 | 9,841 | 11,276 | 12,910 |
| 20 to 24 | 4,917 | 5,960 | 7,185 | 9,869 | 12,875 | 11,492 | 12,737 | 14,668 | 16,867 |
| 25 to 29 | 4,251 | 5,559 | 6,412 | 7,352 | 9,673 | 12,078 | 11,050 | 12,011 | 13,626 |
| 30 to 34 | 3,463 | 4,384 | 5,610 | 6,413 | 7,285 | 9,499 | 11,732 | 10,797 | 11,692 |
| 35 to 39 | 3,128 | 3,777 | 4,715 | 5,913 | 6,703 | 7,562 | 9,757 | 11,928 | 11,018 |
| 40 to 44 | 2,583 | 3,128 | 3,760 | 4,674 | 5,819 | 6,574 | 7,389 | 9,500 | 11,563 |
| 45 to 49 | 2,243 | 2,612 | 3,149 | 3,779 | 4,693 | 5,827 | 6,577 | 7,383 | 9,481 |
| 50 to 54 | 1,867 | 2,286 | 2,647 | 3,182 | 3,817 | 4,741 | 5,877 | 6,633 | 7,442 |
| 55 to 59 | 1,419 | 1,895 | 2,306 | 2,659 | 3,190 | 3,829 | 4,757 | 5,891 | 6,651 |
| 60 to 64 | 995 | 1,434 | 1,899 | 2,297 | 2,638 | 3,159 | 3,795 | 4,718 | 5,838 |
| 65 to 69 | 611 | 974 | 1,396 | 1,842 | 2,223 | 2,554 | 3,057 | 3,682 | 4,584 |
| 70 to 74 | 394 | 564 | 905 | 1,301 | 1,722 | 2,085 | 2,406 | 2,890 | 3,494 |
| 75 to 79 | 265 | 362 | 519 | 837 | 1,205 | 1,595 | 1,935 | 2,239 | 2,695 |
| 80 to 84 | 160 | 231 | 313 | 450 | 733 | 1,050 | 1,388 | 1,685 | 1,962 |
| 85+ | 151 | 168 | 226 | 316 | 458 | 738 | 1,121 | 1,561 | 2,004 |

Table 4. Lancaster County Household Characteristics from Historic Censuses and Projections from 2010 to 2050

Sources: 1970 Census (Characteristics of the Population - Vol. 1, part 29 - table 36, pg 133); 1980 Census (General Population Characteristics - PC80-1-B29 - Table 47, pg 139 & Table 31, pg 56); 1990 Census (General Population Characteristics - 1990 CP-1-29 - Table 57, pg 120); 2000 Census (SF 1 data, AFF Quick Tables DP-1, QT-H1, and QT-P10); 2010 Census (AFF tables DP-1, H17); all U.S. Census Bureau

| | Actual Historic Data | | | | | Projected Data | | | | | | | |
|-------------------------------------|----------------------|---------|---------|---------|---------|----------------|---------|---------|---------|---------|---------|---------|---------|
| Category | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 |
| Total population | 167,972 | 192,884 | 213,641 | 250,291 | 285,407 | 302,860 | 320,670 | 340,568 | 360,558 | 379,781 | 399,519 | 419,117 | 439,258 |
| In households | 156,002 | 180,612 | 202,170 | 238,094 | 271,591 | 288,537 | 306,155 | 325,609 | 344,854 | 363,490 | 382,317 | 400,904 | 420,050 |
| In group quarters | 11,970 | 12,272 | 11,471 | 12,197 | 13,816 | 14,323 | 14,515 | 14,959 | 15,704 | 16,291 | 17,203 | 18,213 | 19,209 |
| % of total population in households | 92.9 | 93.6 | 94.6 | 95.1 | 95.2 | 95.3 | 95.5 | 95.6 | 95.6 | 95.7 | 95.7 | 95.7 | 95.6 |

| | | | | | | | | | | | | | |
|--|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total households | 53,912 | 71,769 | 82,759 | 99,187 | 113,373 | 121,424 | 129,716 | 138,305 | 147,809 | 156,955 | 165,615 | 173,937 | 182,845 |
| Decade change in households | n/a | 17,857 | 10,990 | 16,428 | 14,186 | | 16,343 | | 18,093 | | 17,806 | | 17,230 |
| Decade growth rate in households | n/a | 33.1 | 15.3 | 19.9 | 14.3 | | 14.4 | | 13.9 | | 12.0 | | 10.4 |
| Nonfamily households | 12,986 | 24,190 | 29,774 | 38,485 | 45,163 | 49,219 | 52,924 | 57,000 | 61,747 | 66,555 | 70,919 | 74,638 | 78,431 |
| Family households | 40,926 | 47,579 | 52,985 | 60,702 | 68,210 | 72,205 | 76,793 | 81,305 | 86,062 | 90,400 | 94,696 | 99,299 | 104,414 |
| With own children under 18 | 21,828 | 23,942 | 26,385 | 30,059 | 32,121 | 33,327 | 35,038 | 36,947 | 39,362 | 41,761 | 43,849 | 45,906 | 47,740 |
| % of family households with children <18 | 53.3 | 50.3 | 49.8 | 49.5 | 47.1 | 46.2 | 45.6 | 45.4 | 45.7 | 46.2 | 46.3 | 46.2 | 45.7 |
| % Family households | 75.9 | 66.3 | 64.0 | 61.2 | 60.2 | 59.5 | 59.2 | 58.8 | 58.2 | 57.6 | 57.2 | 57.1 | 57.1 |
| % of households with own children <18 | 40.5 | 33.4 | 31.9 | 30.3 | 28.3 | 27.4 | 27.0 | 26.7 | 26.6 | 26.6 | 26.5 | 26.4 | 26.1 |

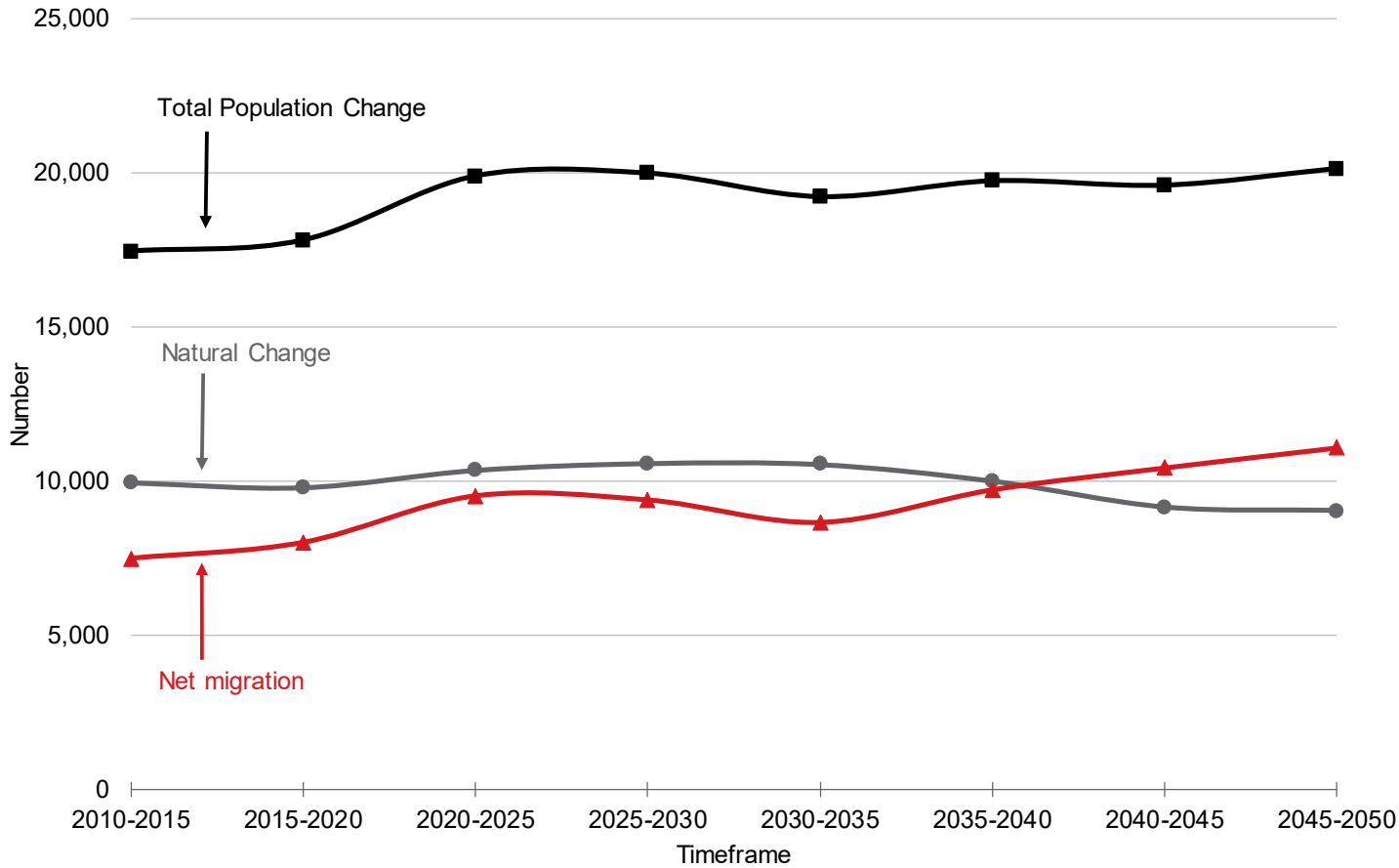
| | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Persons per household (average household size) | 2.89 | 2.52 | 2.44 | 2.40 | 2.40 | 2.38 | 2.36 | 2.35 | 2.33 | 2.32 | 2.31 | 2.30 | 2.30 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|

| | Actual Historic Data | | | | | Projected Data | | | | | | | |
|--|----------------------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|--------|--------|--------|
| Category | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 |
| Head of household/ householder by age | | | | | | | | | | | | | |
| 15 to 24 years | 7,566 | 10,930 | 8,635 | 11,070 | 11,123 | 11,380 | 12,141 | 13,396 | 13,773 | 13,712 | 14,202 | 15,018 | 15,918 |
| 25 to 34 years | 10,709 | 19,498 | 20,466 | 19,847 | 22,605 | 24,693 | 25,867 | 26,653 | 28,700 | 31,281 | 31,918 | 32,053 | 33,291 |
| 35 to 44 years | 8,794 | 10,802 | 18,481 | 21,251 | 18,830 | 19,808 | 22,086 | 23,994 | 25,003 | 25,625 | 27,613 | 30,125 | 30,764 |
| 45 to 54 years | 16,503 | 9,230 | 10,832 | 19,025 | 21,332 | 19,843 | 18,722 | 19,577 | 22,026 | 24,173 | 25,242 | 25,913 | 27,927 |
| 55 to 64 years | | 8,747 | 9,108 | 10,757 | 18,847 | 21,109 | 21,259 | 19,812 | 18,931 | 20,033 | 22,637 | 24,914 | 26,097 |
| 65 to 74 years | 10,340 | 7,122 | 8,074 | 8,457 | 9,976 | 13,445 | 17,488 | 19,880 | 20,205 | 19,005 | 18,302 | 19,510 | 22,185 |
| 75 to 84 years | | 5,440 | 5,406 | 6,533 | 7,137 | 7,314 | 8,272 | 10,917 | 14,199 | 16,120 | 16,529 | 15,687 | 15,327 |
| 85+ years | | | 1,757 | 2,247 | 3,523 | 3,833 | 3,881 | 4,076 | 4,972 | 7,005 | 9,171 | 10,717 | 11,336 |

| | | | | | | | | | | | | | |
|-----------------------|-----|-----|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| Household size | | | | | | | | | | | | | |
| 1 person | n/a | n/a | 22,770 | 28,831 | 33,960 | 36,914 | 39,693 | 42,750 | 46,310 | 49,916 | 53,189 | 55,978 | 58,823 |
| 2 or more persons | n/a | n/a | 59,989 | 70,356 | 79,413 | 84,510 | 90,023 | 95,555 | 101,499 | 107,039 | 112,426 | 117,959 | 124,022 |
| % 1-person households | n/a | n/a | 27.5 | 29.1 | 30.0 | 30.4 | 30.6 | 30.9 | 31.3 | 31.8 | 32.1 | 32.2 | 32.2 |

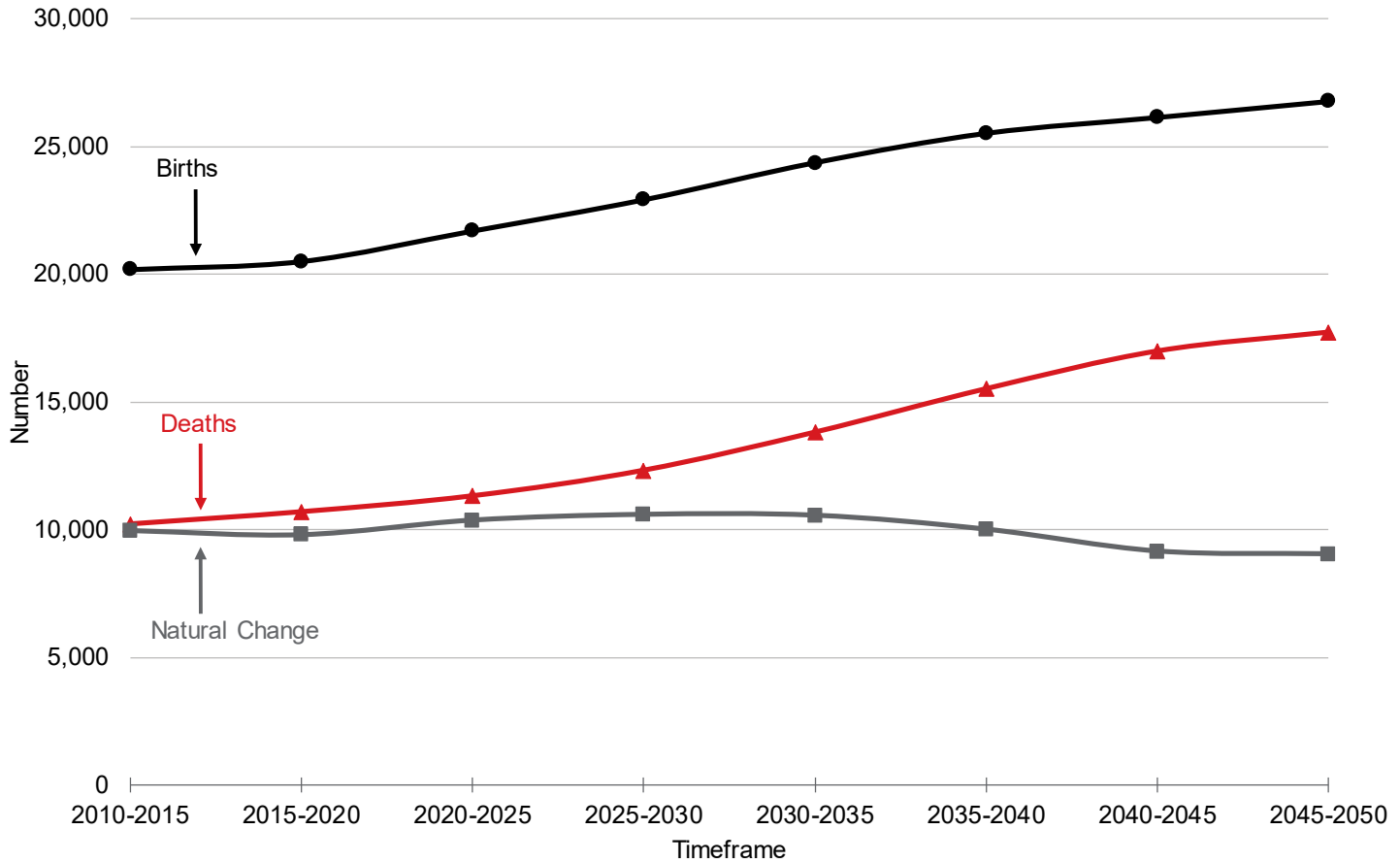
With deaths set to increase and natural change softening, net migration will likely contribute more to total population change in the future

Figure 1. Projected Lancaster County total population change with components of change: 2010-2050



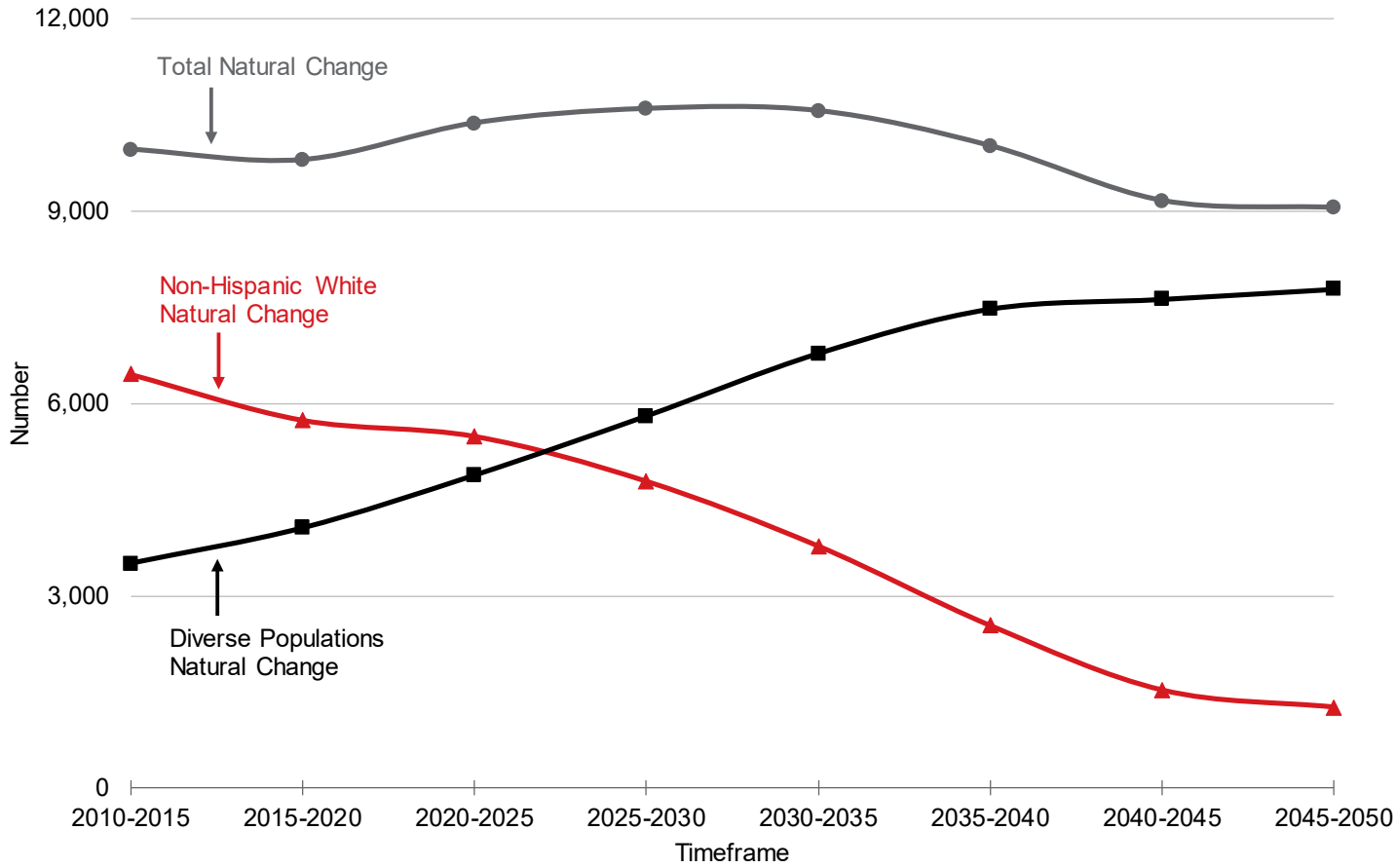
While both births and deaths are expected to rise, deaths will rise faster, lowering the level of natural change

Figure 2. Projected Lancaster County births, deaths and natural change: 2010-2050



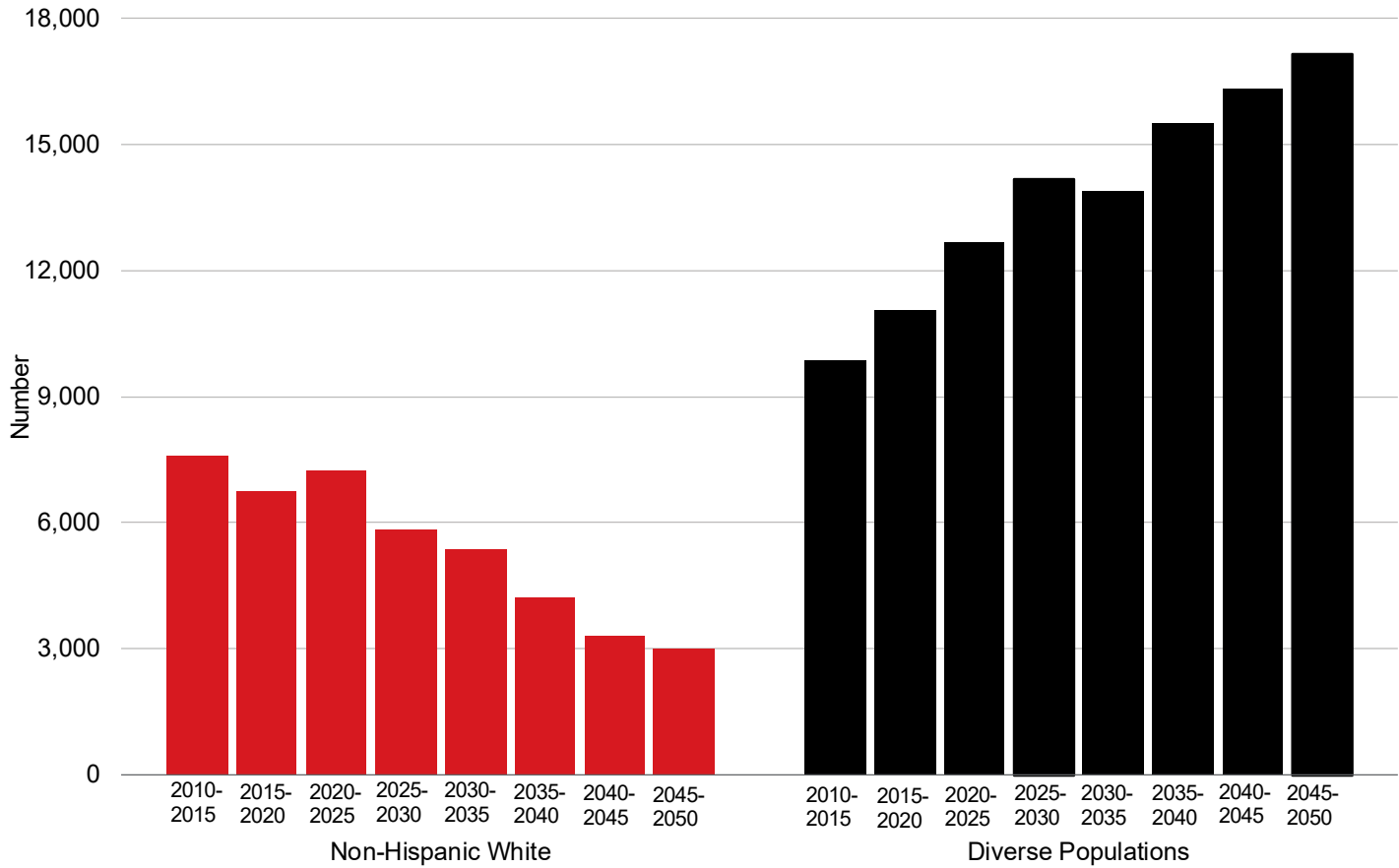
With non-Hispanic White births steady but deaths rising, associated natural change will fall, versus rising for other population groups

Figure 3. Projected Lancaster County natural change for major racial groups: 2010-2050



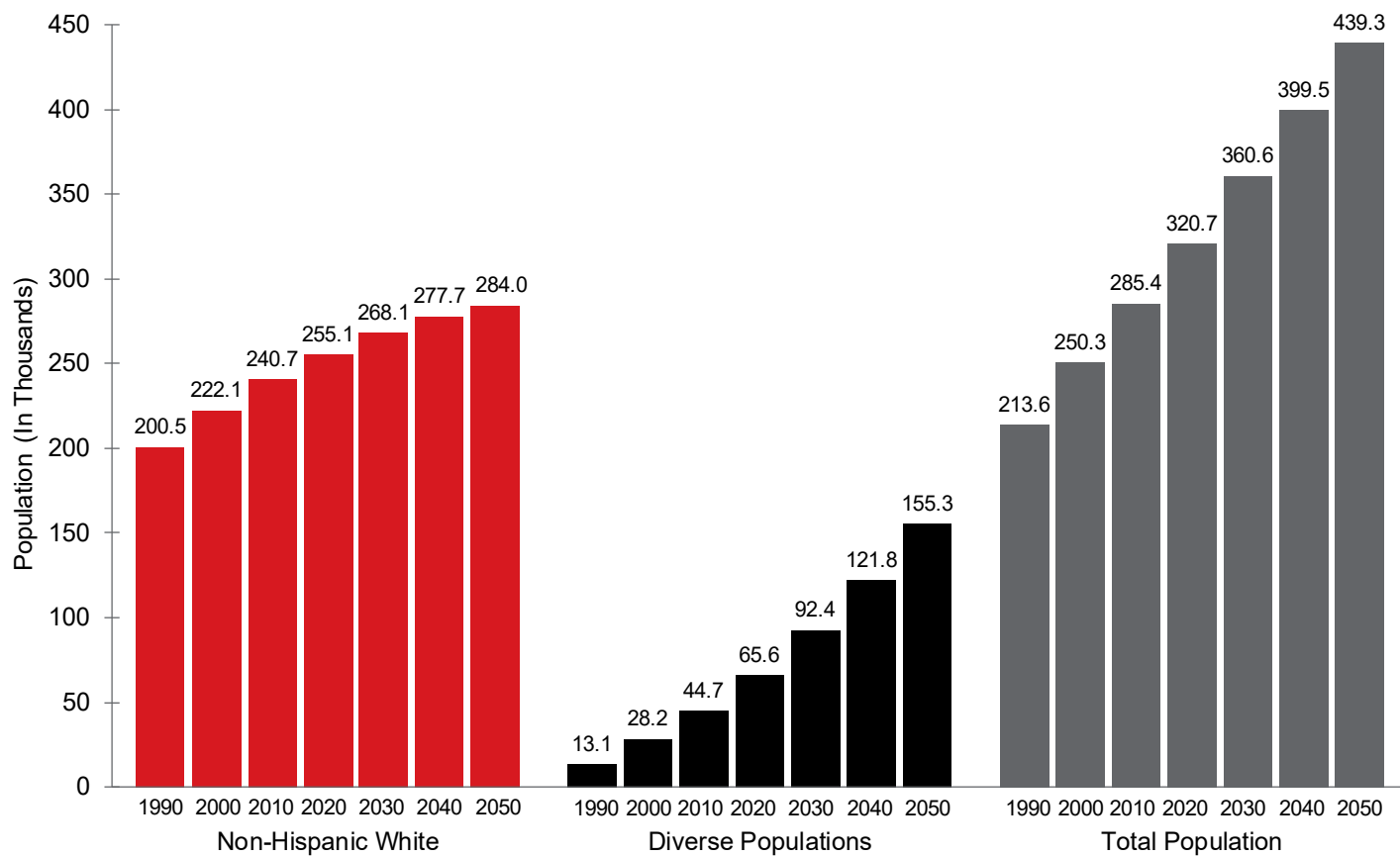
While the local population rises by about 20,000 persons every five years, the distribution of those gains will change with diverse populations contributing a larger share

Figure 4. Projected Lancaster County population change for major racial groups: 2010-2050



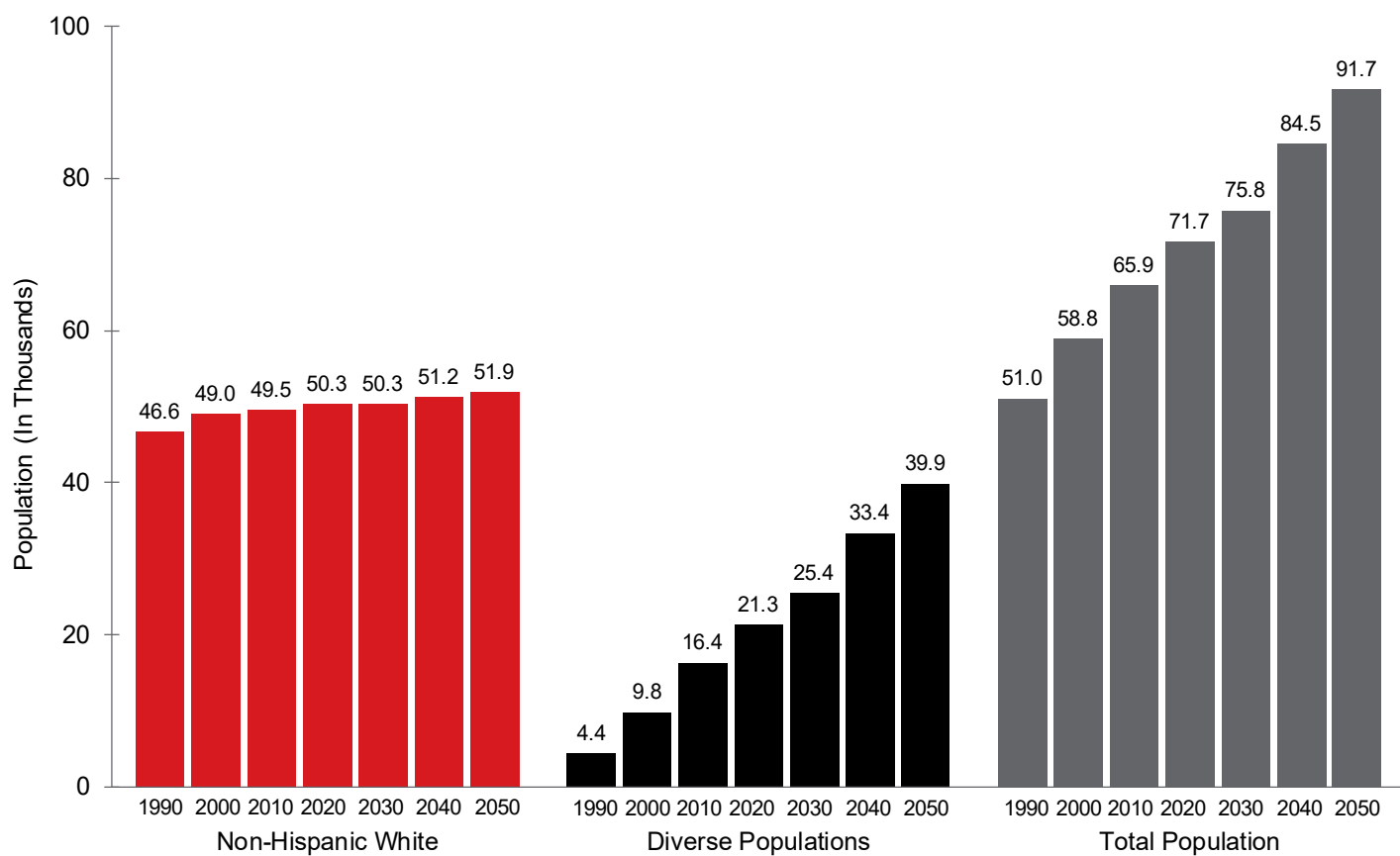
Both major racial groups have and will continue to increase in population, with larger gains among diverse populations, leading to future population growth of about 40,000 per decade

Figure 5. Actual and projected Lancaster County population for major racial groups: 1990-2050



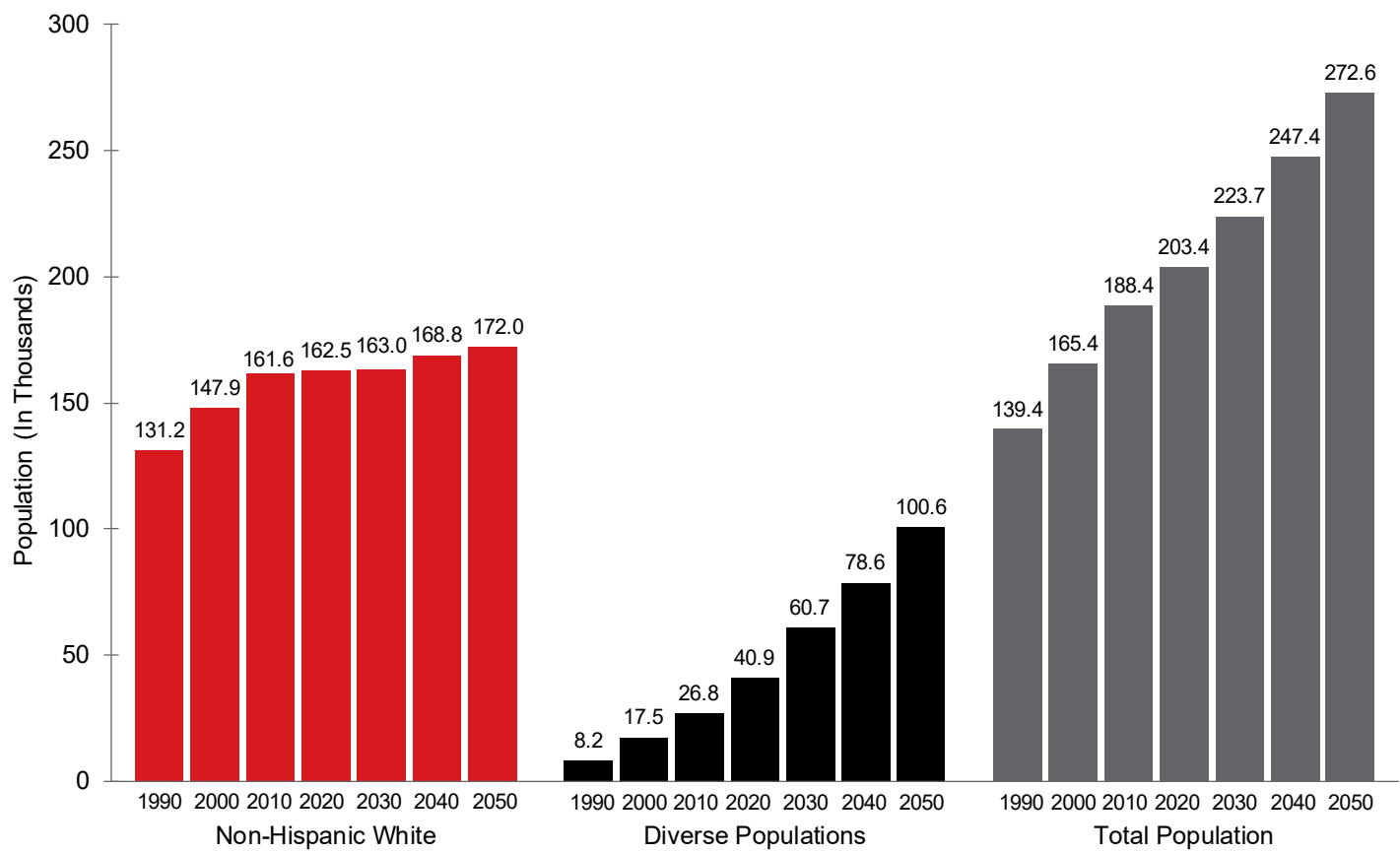
The number of children under age 18 will continue rising, increasing the need for schools and child care facilities, with the child population becoming increasingly diverse

Figure 6. Actual and projected Lancaster County under 18 population for major racial groups: 1990-2050



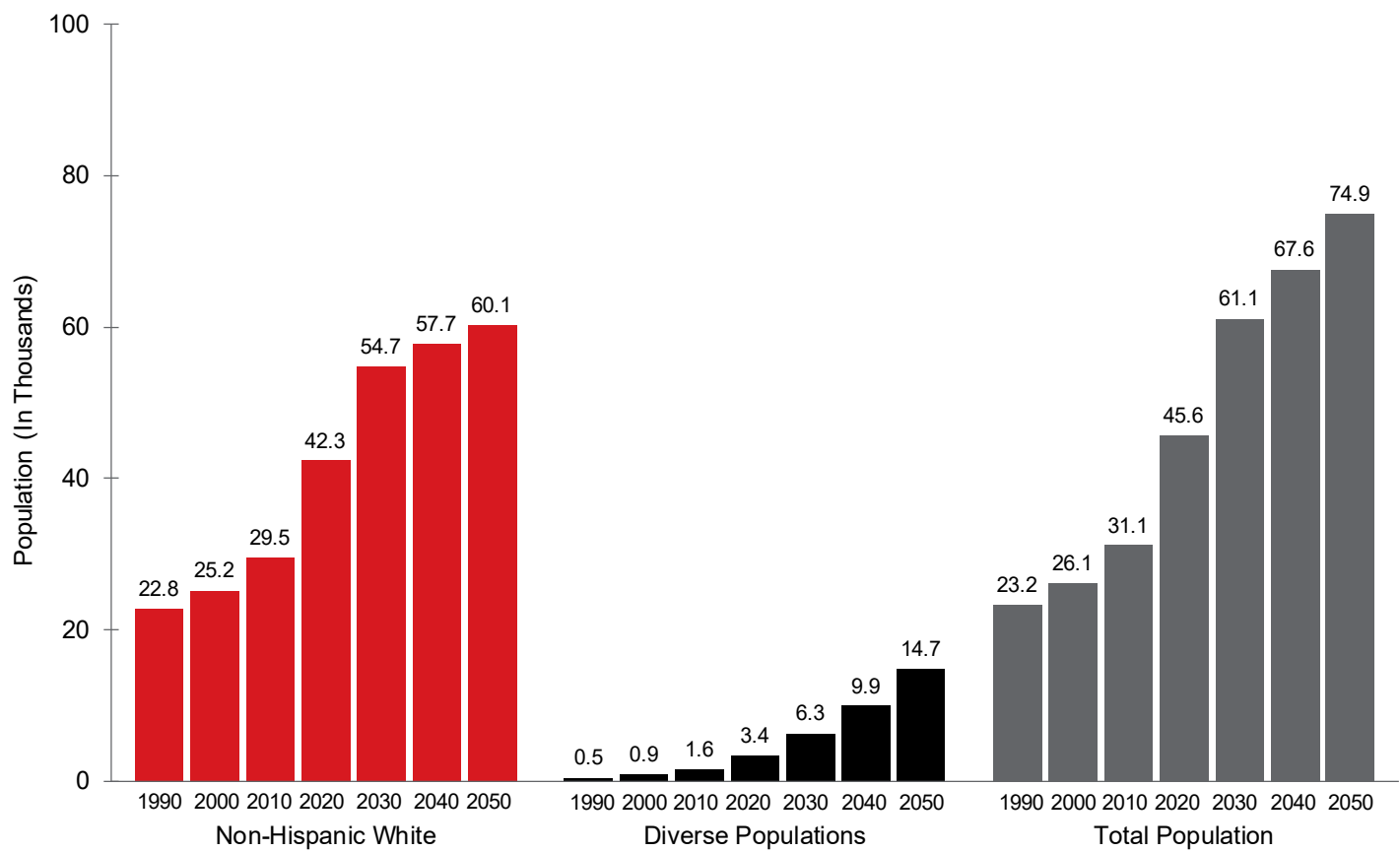
The number of working age adults will grow substantially, with larger gains among diverse populations

Figure 7. Actual and projected Lancaster County age 18-64 population for major racial groups: 1990-2050



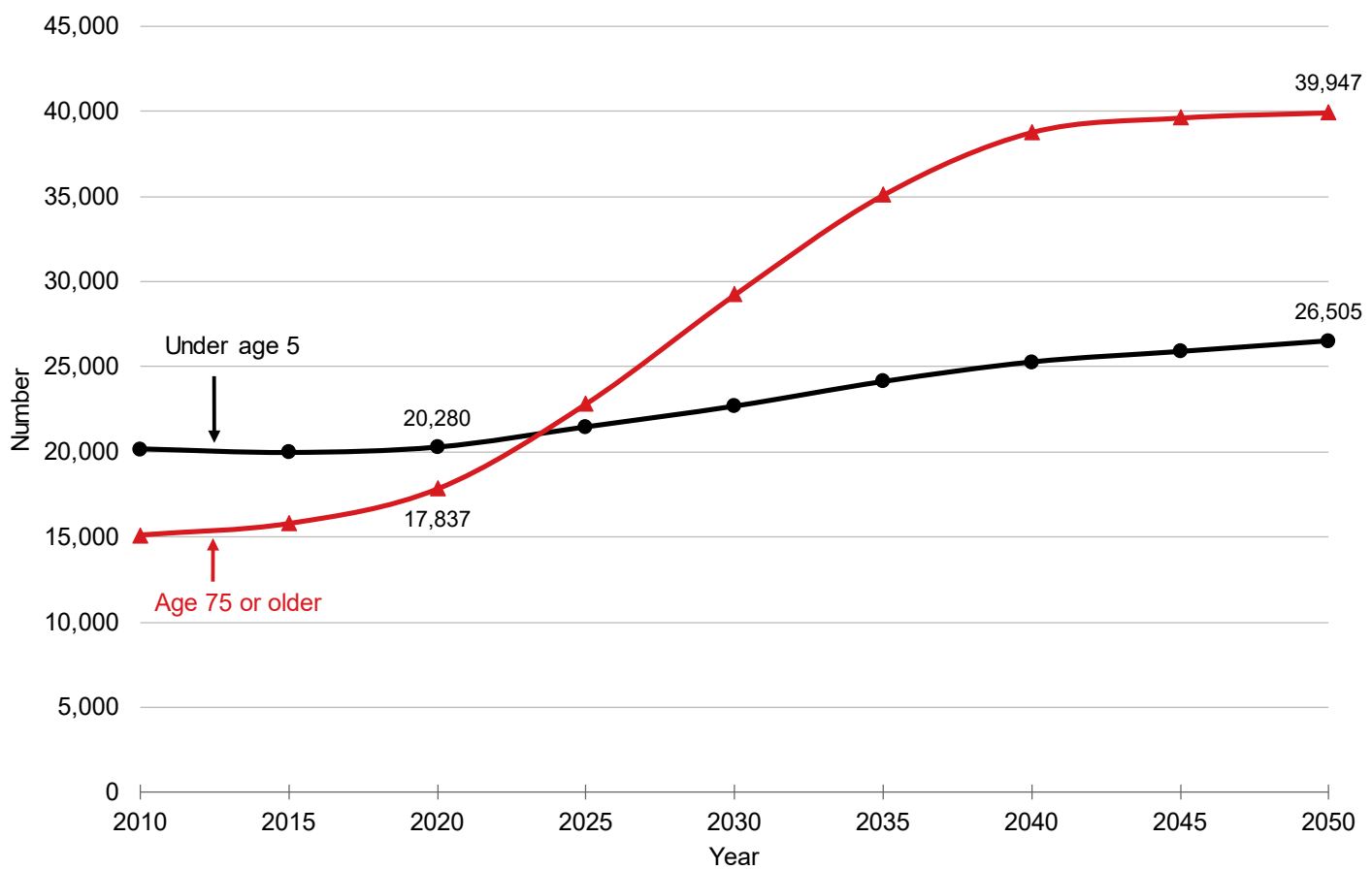
The age 65 and older population will rise greatly in the 2010s and 2020s, with a slower amount of continued growth thereafter, increasing needs for senior living and care facilities

Figure 8. Actual and projected Lancaster County age 65+ population for major racial groups: 1990-2050



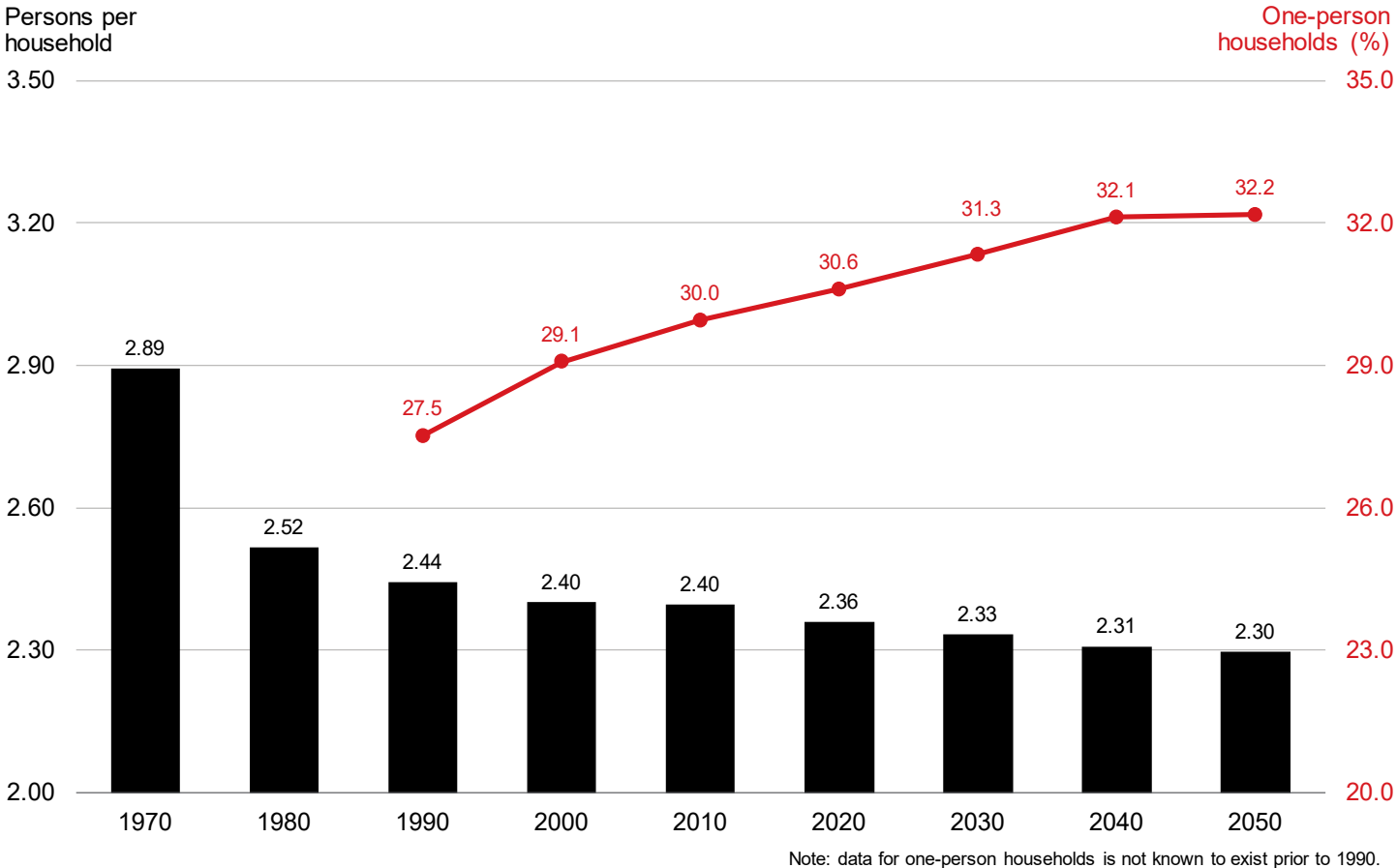
Aspects of aging will lead to situations not experienced in the past such as elders outnumbering children, implying relatively more needs for elder care versus child care

Figure 9. Projected Lancaster County population in select age groups: 2010-2050



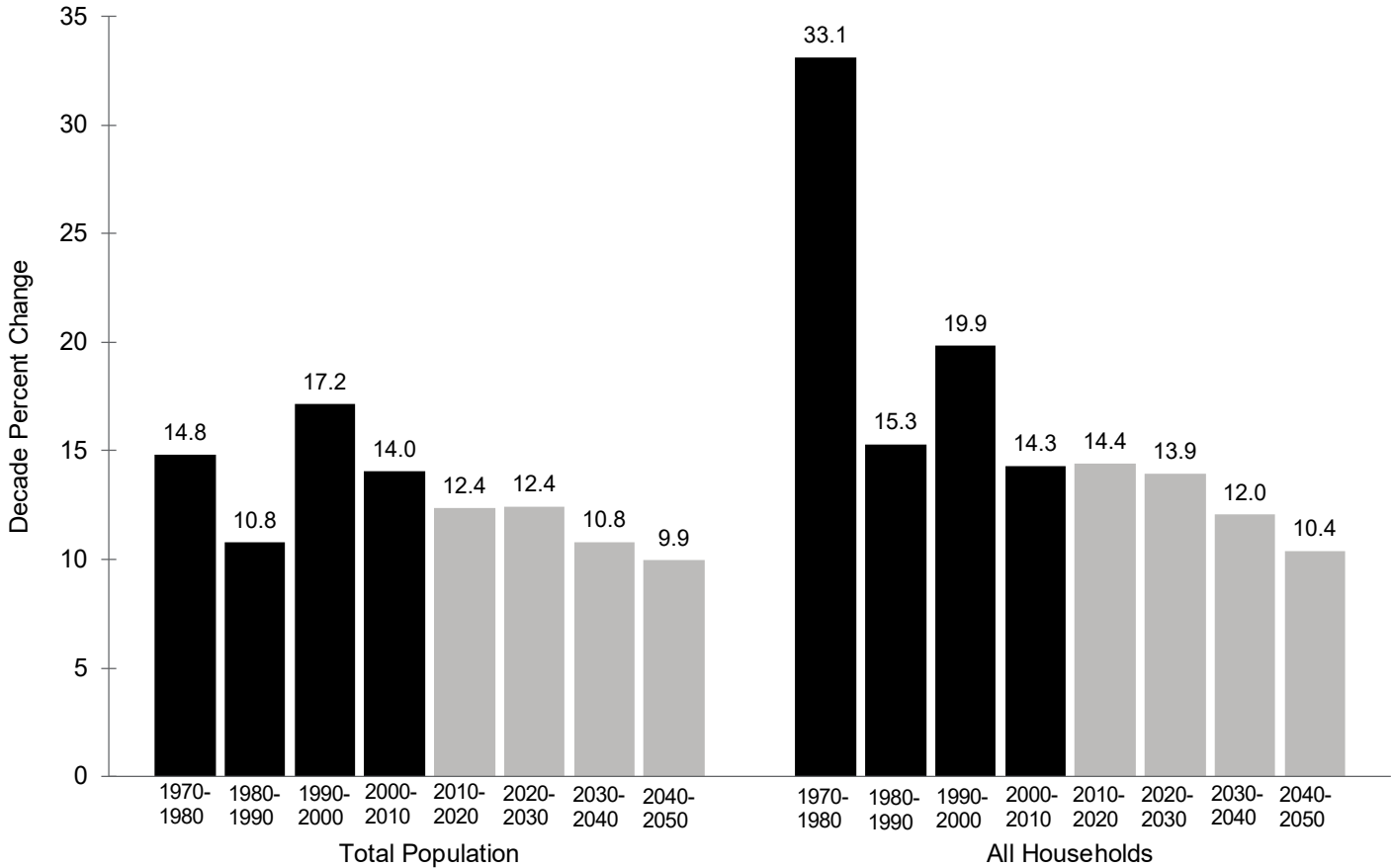
Increases in the portion of households where one individual lives alone contribute in part to a declining average household size

Figure 10. Actual and projected Lancaster County household size and one-person households: 1970-2050



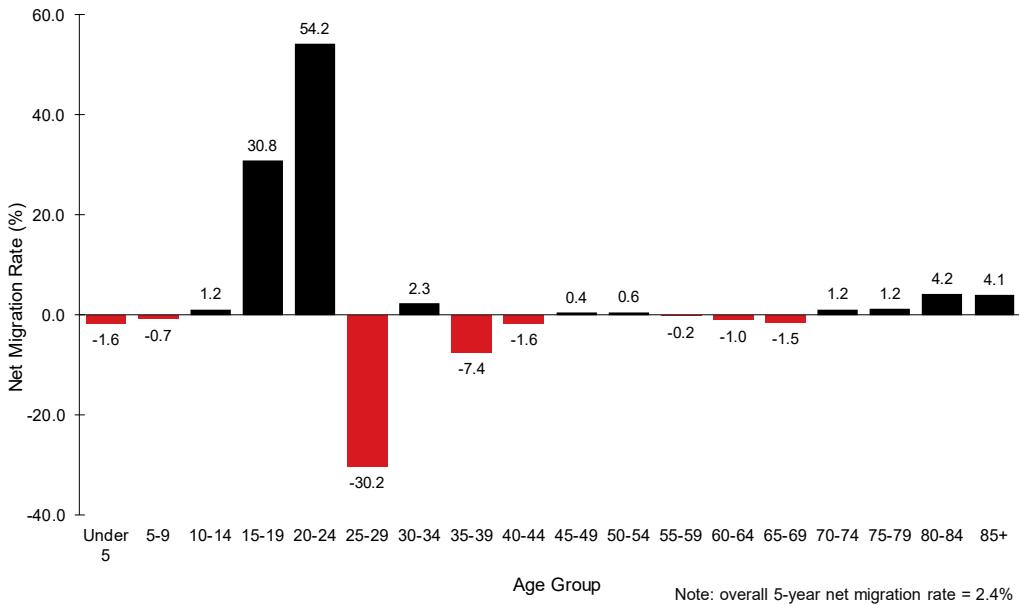
As the size of the base population and number of households increases, the decade rate of change will slow over time

Figure 11. Actual and projected Lancaster County population and household change rates: 1970-2050



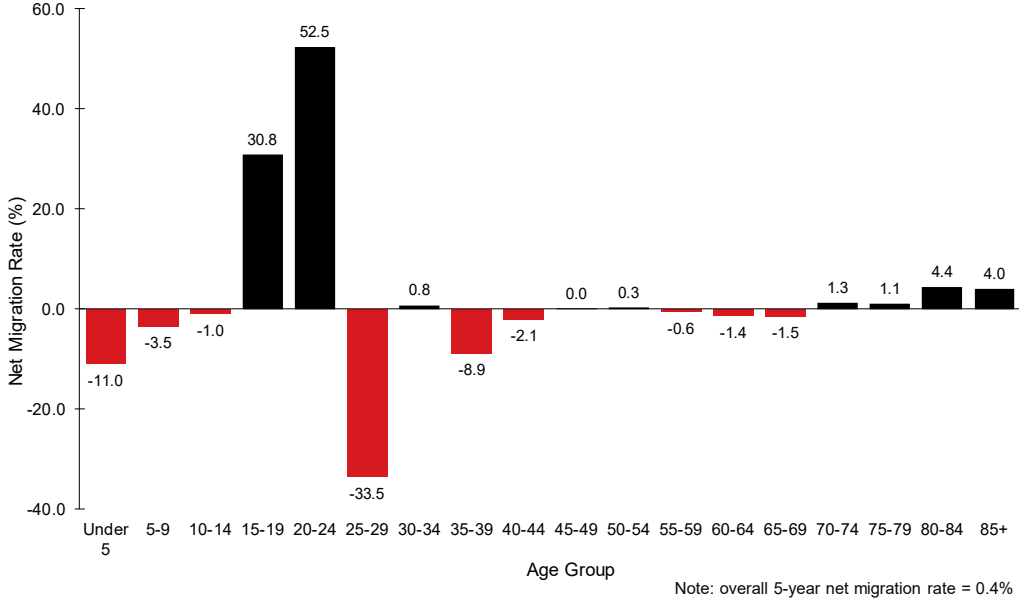
The arrival and departure of college students dominate Lancaster County migration patterns

Figure 12. Five-year net migration rates in Lancaster County by age for 2000-2010 using two 5-year periods



Lancaster County pulls in White college students and seniors but loses post college, children and retirees

Figure 13. Five-year net migration rates for non-Hispanic Whites in Lancaster County by age for 2000-2010 using two 5-year periods



The methods used in preparing the projected values varied by the type of data being projected and the amount of available historic and projected data for the United States and/or Lancaster County. The methods also varied between Phase I of the project (population projections) and Phase II (household projections). The following section details the methods used for each phase.

PHASE I – POPULATION PROJECTIONS

Age-Specific Migration Rates

Determining age specific migration rates enhanced the projection’s data quality. Given Lancaster County’s structure as home to a major university, the county experiences a relatively high level of migration as many move to the county for college and often subsequently move away upon completion of a degree. Moreover, those of working age along with their families are moving into and out the area and many persons move after retiring. Establishing the age-specific migration rates were a key part of the projections process.

The calculation of migration rates involved comparing 2000 and 2010 Census counts accounting for the number of births and deaths that occurred during the decade. Overall, the county experienced a net immigration, with the rate being 4.9 percent. This was comparable to the average that occurred between the economically challenged “farm crisis” decade of the 1980s when the net immigration was relatively low (2.0 percent) and the economically robust “dot com” boom of the 1990s when the net immigration strengthened to 9.0 percent. The average of these rates from the 1980s and 1990s was 5.5 percent and represented the “trend” level of migration in the projections completed in 2010. In addition, Census Bureau estimates of migration since 2010 and the longer-term average looking back to 1970 supported using a 5.5 percent decade rate.

Analyzing migration rates by age is a specialty of our office and we have completed such analyses for numerous geographic areas. Taking the 2000 population count by single year of age, the population is “flowed forward” by subtracting out annual deaths by the specific ages at which they occurred as well as adding annual births. Comparing the difference of this population flow to the Census Bureau estimated population in 2005, summarized in five-year age groups, effectively shows the net level of migration. The same analysis for the 2005 to 2010 period compares the “population flow” to the 2010 Census counts. Averaging the two sets of migration rates from 2000-2005 and 2005-2010 provided greater stability in the net migration figures for each specific 5-year age group. Figure 12 shows the 5-year migration rates for 5-year age groups in the 2000s.

An equal interval approach adjusted the 5-year migration rates for 5-year age groups into annual rates for single-year ages, since the model projected the data annually for each specific single year of age. Dividing the 5-year rates by five turned them into annual rates, assigned to the midpoint of each 5-year age category (e.g. age 7 for 5-9 year olds). The difference between that 5-year migration rate and the next higher age category was divided by five, with that amount being added from the midpoint age. For example, Figure 12 shows the 5-year migration rates for 75-79 and 80-84 year olds as 1.2 and 4.2 percent respectively. Divided by five, they are 0.24 and 0.84 respectively as annual rates. Their .60 difference divided by five is an equal interval factor of .12, so starting at the five year age group midpoint of 77 years old, 0.12 is added to the annual rate of 0.24 so that the rate equals 0.84 at the midpoint of the next five year age group (age 82 for 80-84 year olds). This process effectively smoothed the changes from one five-year age group to the next rather than having large spikes or gaps in the data.

The projections held migration rates for ages 90 and above at zero, since little migration occurs at this age. The projections also upwardly adjusted migration rates from age 82 by 0.1%, so that targeted projected migration in these older age categories more closely resembled actual changes seen during the 2000s (a relatively strong net immigration of 4.1%). Applying a constant factor to the migration rates for single years of age adjusted the overall 4.9% decade rate from the 2000s into the 5.5% trend level of migration used in the projections.

A ratio analysis of how the 2010 Census total population at college ages changed from one year to the next aided the determination of migration rates for these key ages. The ratios established the level of migration needed to maintain the proper age structure for those of college age. Without targeting these specific age-based migration rates, the total number of persons flowing through the model would not have matched what actually occurs. These efforts, while difficult, improved the overall structure of the model for identifying how the college-age population changes from migration.

The total population and non-Hispanic White projection models used similar approaches for calculating migration by age. Figure 13 shows the migration rates by age for non-Hispanic Whites.

Overall, the population values for diverse population groups were equal to the difference between the projected total population and the projected non-Hispanic White population.

Age-Specific Fertility Rates (for age of the mother)
Compiling birth data over time, the models relied most heavily on births by single year of age of the mother between 2008 and 2012. Calculating an average of the annual births by single year of age over these five years smoothed yearly fluctuations. Dividing the average births by the 2010 Census count of Lancaster County women by single year of age created the fertility rates. Using a moving average of three specific years of age from the youngest to the oldest ages (13-49) further smoothed the age-specific fertility rates.

Comparing these Lancaster County fertility rates by single year of age to corresponding values for the United States showed local differences. Ratios of the Lancaster County rates to the U.S. rates indicated that Lancaster County has a lower birth rate than the U.S. for women age 25 and younger, while Lancaster County rates are higher for older age groups.

Applying these ratios to national fertility rates in Census Bureau population projections to 2050 localized the reproductive patterns and trends that the Census Bureau expects into the future. The models held the ratios constant throughout the 2010 to 2050 projection timeframe.

Beginning the population projection from the 2010 year allowed a comparison of the actual number of births that occurred in Lancaster County from 2010 to 2018 to those projected. This analysis showed the model projected too many births to mothers under age 30 while predicting too few for older mothers. National statistics as well as those in Nebraska indicate that fertility rates for women in their late teens and early 20s are currently at all-time lows. Thus, adjustments to fertility rates made the models more closely match actual local birth trends. The models adjusted fertility rates for each single year of age in the age categories below:

| | Fertility Rate Adjustment | |
|--------------|---------------------------|--------------------|
| Age Category | Total Population | Non-Hispanic White |
| Under 15 | None | None |
| 15-19 | -25% | -30% |
| 20-24 | -20% | -25% |
| 25-29 | -10% | -5% |
| 30-34 | 5% | 10% |
| 35-39 | 10% | 15% |
| 40-44 | None | None |
| 45-49 | None | None |

Age-Specific Survival Rates

The models used survival rates for single years of age to calculate the number of persons surviving from one year to the next. This provided the number of deaths by specific ages as well as the total number of deaths. The projections used survival rates from U.S. Census Bureau national projection models, specifically for the non-Hispanic White/non-Hispanic Asian category. They listed survival rates separately for males and females by single year of age and for each year out to 2050.

When comparing the initial projections of deaths to those that actually occurred in Lancaster County between 2010 and 2018, the models’ number of deaths was too high for younger ages and too low for older ages. Thus, the models incorporated adjustments to the survival rates to change the number of deaths by age to replicate more accurately the local patterns since 2010 in Lancaster County. The table below shows the adjustments (note that lowering survival increases deaths).

| | Survival Rate Adjustment | |
|--------------|--------------------------|--------------------|
| Age Category | Total Population | Non-Hispanic White |
| Under 20 | None | None |
| 20 to 24 | 0.01% | 0.01% |
| 25 to 59 | 0.02% | 0.02% |
| 60 to 69 | 0.03% | 0.03% |
| 70 to 79 | -0.10% | n/a |
| 70 to 74 | n/a | -0.10% |
| 75 to 79 | n/a | -0.20% |
| 80 to 89 | -1.00% | -1.00% |
| 90 to 94 | -5.00% | -5.00% |
| 95 and older | -10.00% | -10.00% |

Flow through of population along with components of change

In order to project the population into the future, the models started with the 2010 Census population distribution by single year of age. The

models applied the age-specific survival rates and birth rates by age of mother to this data, as well as the migration rates by single-year of age, effectively transitioning the population forward from 2010 to 2011. The process repeated for each subsequent year to 2050.

Population estimates from the U.S. Census Bureau illustrated how the model’s population values compared to those officially prepared by the bureau. Projected figures were similar to but slightly below the Census estimates (by about 3,000 people in 2015 for example). While the 2009 vintage population estimates suggested a 2010 population that was only 1,500 below the eventual 2010 Census count, a comparison of the 1999 vintage estimate to the final 2000 count indicated the Census Bureau underestimated the Lancaster County population by about 10,000 persons. Thus, the 2020 Census headcount may be up to 10,000 above or below the current 2019-based extrapolated estimate of about 321,000 in 2020.

The number of deaths in each annual period equaled the inverse of the survival rate multiplied by the corresponding number of persons in that age group. For example, when a survival rate of a male 70-year old is 0.975 then the death rate is one minus that value, or 1 – 0.975 or 0.025. This means that 2.5 percent of those 70 year olds pass away prior to achieving their 71st birthday. Thus, multiplying 0.025 times the number of person age 70 at that time gives the corresponding number of deaths for 70 year-olds. Simply summation of the deaths by each specific year of age showed the total level of deaths.

Similarly, multiplying the age-specific fertility rate by the number of women of that age provided age-specific births. Summing the number of births for women age 13 to 49 gave the total number of births.

In this analysis, net migration represented the residual value from subtracting natural change (births minus deaths) from the total population change. While the models applied age-specific migration rates leading in part to overall population change, the clearest calculation of net migration uses this residual method.

PHASE II – HOUSEHOLD PROJECTIONS

Household versus Group Quarters Population and Households by Age of the Householder

The projected total populations calculated in Phase I provided the basis for determining projected aspects of households. The population projection gave the total number of persons every 5 years from 2010 to 2050. To determine household statistics, the first calculation involved the percentage of population that actually lived in housing units, rather than group quarters housing (college dorms, nursing homes, prisons, etc.).

A compilation of historic information starting with the 1970 Census through the 2010 Census revealed the total population and the population in both households and group quarters. The 2010 Census

provided figures for not only the total population by age but also the population living in households by age. Summing these values into relevant age categories (15-24, 25-34 ... 75-84, 85+) isolated the population in group quarters by age via subtraction.

The 2010 Census also had tables for the number of households headed by persons in various age groups. Dividing the population in households for the various age groups by the number of householders of each age determined the average household size for each age category. These values declined when comparing young householders (where many are in college with multiple roommates) to older households (where many people live alone after the death of a spouse). A replicated analysis using the 2013-2017 American Community Survey (ACS) Public Use Microdata Samples (PUMS), the latest available at the time of the analysis, showed very similar patterns, as listed below.

| | 2010 Census | | | | | 2013-2017 ACS PUMS | | | | |
|--------------|------------------|----------------------|-----------------------|--------------------|------------------|--------------------|----------------------|-----------------------|--------------------|------------------|
| Age Category | Total Population | Living in households | Percent in households | Head of households | Persons per unit | Total population | Living in households | Percent in households | Head of households | Persons per unit |
| Under 15 | 55,797 | 55,662 | 99.8% | n/a | n/a | 59,885 | 59,775 | 99.8% | n/a | n/a |
| 15 to 24 | 52,026 | 42,705 | 82.1% | 11,123 | 3.84 | 57,513 | 48,067 | 83.6% | 12,366 | 3.89 |
| 25 to 34 | 43,940 | 42,726 | 97.2% | 22,605 | 1.89 | 43,947 | 42,634 | 97.0% | 22,912 | 1.86 |
| 35 to 44 | 34,313 | 33,408 | 97.4% | 18,830 | 1.77 | 36,775 | 36,198 | 98.4% | 19,903 | 1.82 |
| 45 to 54 | 36,970 | 36,195 | 97.9% | 21,332 | 1.70 | 34,619 | 33,868 | 97.8% | 19,695 | 1.72 |
| 55 to 64 | 31,260 | 30,917 | 98.9% | 18,847 | 1.64 | 34,957 | 34,406 | 98.4% | 20,970 | 1.64 |
| 65 to 74 | 15,981 | 15,741 | 98.5% | 9,976 | 1.58 | 22,671 | 22,536 | 99.4% | 14,394 | 1.57 |
| 75 to 84 | 10,317 | 9,950 | 96.4% | 7,137 | 1.39 | 10,899 | 10,688 | 98.1% | 6,954 | 1.54 |
| 85+ | 4,803 | 4,287 | 89.3% | 3,523 | 1.22 | 5,295 | 4,735 | 89.4% | 3,769 | 1.26 |
| Totals | 285,407 | 271,591 | 95.2% | 113,373 | 2.40 | 306,561 | 292,907 | 95.5% | 120,963 | 2.42 |

Taking the Phase I projected population and using the percentages for the portion of the total population that was in households by age (shown above) provided the projected population in households to 2050 as well as by age. The methodology applied the percentages from the 2010 Census to the 2010 year as well as the five years from 2011 to 2015. Then, to smooth the values over time, the model applied the average of the 2010 Census and 2013-2017 ACS PUMS percentages to the five years from 2016 to 2020 and then the 2013-2017 ACS PUMS percentages to all remaining years from 2021 to 2050. The sum of the age-specific data for the population in households provided the total projected population living in households, and when subtracted from the projected total population from Phase I, showed the number and percentage of the population expected to live in group quarters.

Having calculated the population living in households by age out to 2050, using the persons per unit by age (shown above) determined the number of households by age of the head of the household (also referred to as the householder). Dividing the projected population living in households by age by the persons per unit for each age category calculated the total number of households by age of the householder. The approach applied values in the same manner as described above (2010 Census values to the 2010 year and from 2011 to 2015; the average of the 2010 Census and 2013-2017 ACS PUMS values from 2016 to 2020, with the 2013-2017 ACS PUMS values applied to the remaining projection period of 2021 to 2050).

Total Number of Households and Average Household Size

Having calculated one of the pieces of information sought in the projections, namely the number of households by age of the householder, all that was required for determining the total number of households was simply to sum the age-specific data for households by age of the householder. Then, given the projections for the total population living in households based off the projection for the total overall population, finding the average household size over time simply required the division of the projected population in households by the projected number of households.

The calculated average household size steadily declined from the 2.40 persons per unit found in the 2010 Census, to 2.35 in 2025 and 2.30 in both 2045 and 2050. A declining household size made intuitive sense given that persons per unit declined as age increased (see table above) and the movement of the large “baby boom” segment of the population into older age groups over time.

It is worth noting that the methods for calculating the number of households and average household size described above differ substantially from those used in the projections completed in 2010. Ten years ago, the method focused on projecting the average household size into the future, and then dividing the population in households by that to determine the total number of households. This new approach took the sound population projections and reliable, consistent data from the 2010 Census and ACS to determine the population in households and number of households, with average household size being the last calculated figure.

This change should be viewed as an improvement in methods, as the projection of average household size ten years ago was difficult and had less of a statistical approach, following research from Wisconsin and Sacramento. The new methods incorporate a statistical calculation approach that should be sound and reliable. The model predicted the number of households within 200 of the ACS estimate for 2018, a 0.1% difference.

Number and Percentage of Households with 1-Person Living Alone

While historic data for Lancaster County was only available since 1990, it showed that the percentage of households that have only one resident has been increasing. The number of 1-person households by age of the householder was available from the 1990 and 2000 Censuses but not for all ages from the detailed tables of the 2010 Census. Thus, the model incorporated custom calculations for the portion of households living alone by age using the 2008-2012 and 2014-2018 Public Use Microdata Samples from the Census Bureau’s American Community Survey.

The portion of one-person households is relatively high for younger ages (during college and early working years) and then declines as families form at middle age. The live alone percentage then rises as children move out of the household and is highest for the oldest age categories given mortality among spouses. The table below shows the Lancaster County figures. Averaging the two timeframes of ACS data provided better stability to the age-specific figures. Doing so also gave values in the model that were very similar to the actual 2010 Census overall living alone percentage as well as those from the 2014-2018 ACS detailed tables.

| | Portion of Households Where 1-Person Lives Alone | | |
|----------------|--|-----------|---------|
| Age Category | 2008-2012 | 2014-2018 | Average |
| 15 to 24 | 30.6% | 30.1% | 30.4% |
| 25 to 34 | 26.2% | 26.6% | 26.4% |
| 35 to 44 | 22.4% | 17.6% | 20.0% |
| 45 to 54 | 26.1% | 22.9% | 24.5% |
| 55 to 64 | 31.6% | 32.9% | 32.2% |
| 65 to 74 | 35.5% | 38.5% | 37.0% |
| 75 to 84 | 50.8% | 49.2% | 50.0% |
| 85+ | 71.1% | 68.5% | 69.8% |
| All households | 30.5% | 30.2% | 30.3% |

Applying the averaged percentages of 1-person households by age of the householder to the projected number of households by age of the householder calculated the number of 1-person households. Simple division into the total number of households gave the projected percentage of 1-person households to 2050.

Nonfamily and Family Households along with Family Households with Children

With the number and percentage of 1-person households calculated as described above, the next step projected nonfamily and family households. Households that have only one resident are nonfamily households by definition. Historic data showed the prevalence of other nonfamily households (roommates, unmarried partners, etc.).

The historic analysis indicated that other non-family households consistently represented 25% of all nonfamily households. Stated differently, the ratio of 1-person living alone households to other types of nonfamily households that had two or more people was three to one. This held true for the 2000 and 2010 Censuses as well as the 2014-2018 five-year and 2018 one-year ACS products. Thus, dividing the previously calculated number of nonfamily households where 1-person lived alone by three determined the number of nonfamily households with two or more residents. This maintained the three to one ratio, or nonfamily households with two or more members being 25% of all nonfamily households over time out to 2050, given the stability of these values in the recent past.

The simple sum of nonfamily households where 1-person lived alone and nonfamily households with two or more residents gave the total number of nonfamily households. Having already projected total households, the subtraction of nonfamily households from total households provided the projected number of family households to 2050.

2008-2012 PUMS calculations and birth trends aided the determination of households and families with children under 18 years of age. Historical data showed the percentage of Lancaster County family households that had children under 18 declined from 1970 to 1980, remained stable at around 50 percent from 1980 to 2000, and then declined from 2000 to 2010 (see Table 4). The 2008-2012 PUMS provided the portion of households that had an own child under age 18 for each household age category. Multiplying these percentages shown below by the previously calculated number of projected households in each age category determined the overall presence of children under age 18 in households.

| Percent of households with own kids under age 18 | | |
|--|--------------------|-------------|
| Age Category | 2008-2012 ACS PUMS | As adjusted |
| 15 to 24 | 13.2 | 12.7 |
| 25 to 34 | 48.9 | 48.9 |
| 35 to 44 | 61.3 | 61.3 |
| 45 to 54 | 32.6 | 32.6 |
| 55 to 64 | 5.7 | 5.7 |
| 65 to 74 | 0.0 | 0.0 |
| 75 to 84 | 1.0 | 0.0 |
| 85+ | 0.0 | 0.0 |
| Total households | 28.4 | 28.3 |

Making two small adjustments seemed appropriate. Births among teens and women in their early 20s have declined to all-time lows nationally and in Nebraska. The number of Lancaster County births for women age 15-24 declined by 4 percent per year between 2010 and 2016 (the center points of 5-year averages used to provide greater reliability). Thus, one adjustment decreased the portion of households with children under age 18 headed by a person age 15-24 by 4% from 13.2% to 12.7%. Moreover, the small portion of households age 75-84 with their own children appeared as a fluke in the data. While sometimes an older parent of this age could have one or more adult children living with them, this occurs only in rare circumstances. Given that those age 65-74 and 85+ did not have any of their own children living with them, the adjustment also made the age 75-84 category equal zero.

Multiplying these percentages by the total number of households by age provided the number of households projected to have children under 18 at future points in time. Simple division showed the portion of total households and family households projected to have their own children under age 18 out to 2050.

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U.S. Census Bureau, Population Estimates Branch, 2018 and 2019 Vintage County Estimates.

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Vital Statistics for Births by Single Year Age of Mother and Deaths by Single Year of Age, for both the total and non-Hispanic White Populations, Nebraska Department of Health and Human Services, processed October 2019.



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