

Section 3

Reversing the Net Out-Migration of College-Educated Nebraskans

Priority 3. Reduce, eliminate, and then reverse the net out-migration of Nebraskans with high levels of educational attainment.

The third priority recommended by the 2003 LR 174 Task Force is to reduce, eliminate, and then reverse the net out-migration of Nebraskans with high levels of educational attainment. This priority was advised because data from the 2000 U.S. Census showed that Nebraska lost more college-educated adults than the state attracted between 1995 and 2000. Furthermore, during the same period, Nebraska attracted a significant net in-migration of adults with less than a high school education. The results of this analysis underscore the importance of developing more employment opportunities for individuals who are educated at Nebraska's colleges and universities.

The migration analysis presented in the *2004 Baseline Report* was based on the U.S. Census Bureau's estimates of the numbers of *adults aged 22 to 64* who left and entered the state during the five-year period preceding the 2000 census. These estimates and the resulting estimates of net migration were based on responses to questions asked on the 2000 Census long-form, completed by a one-in-six sample of U.S. households.

Migration estimates based on 2000 census data were included in the *2004 Baseline Report* with the intention that they would later be compared to data collected through the 2010 decennial census. However, the U.S. Census Bureau no longer collects migration data comparable to the data collected in 2000. Instead, the Census Bureau replaced the long-form of the decennial census with the annual American Community Survey (ACS).

First conducted in 2005, the ACS is an ongoing survey that provides annual population estimates for the United States. The ACS is collected monthly over the course of the survey year, and migration estimates are obtained by asking if members of a household lived in a different residence one year ago.

Compared to the decennial census, the major advantage of the ACS is that it provides new estimates of interstate migration every year, rather than only once every ten years. For the purposes of this report, the major disadvantage of the annual ACS is that it provides estimates of the numbers of 22- to 64-year-olds who migrated to and from Nebraska based on small samples of individuals who entered or left the state. As a result, the migration estimates for 22- to 64-year-olds developed from ACS data can vary dramatically from one year to another, not because any significant changes in migration patterns have occurred, but because estimates based on small samples commonly fluctuate as a result of sampling error. In contrast, the migration data collected through the long-form of the decennial census in 2000 were from large samples of respondents, thus resulting in estimates with small margins of error.

In 2015, the nationwide ACS had an initial sample of approximately 3.54 million households. Using the total ACS sample, the U.S. Census Bureau publishes estimates of the number of adults 25 years of age or older that move in to or out of each state. However, the only way to obtain migration estimates for 22- to 64-year-olds is to develop them based on a smaller sample of ACS data that is available for public use, Public Use Microdata Sample (PUMS).

The ACS PUMS files include the survey responses obtained from an annual sample of about 1% of Nebraska's households. However, only a small fraction of the individuals surveyed report that they lived in Nebraska for less than a year or that they moved out of Nebraska within one year of the survey. When these groups of respondents are classified by level of education, sample sizes are further reduced, thereby decreasing the reliability of the migration estimates by education level.

Even though migration estimates based on ACS data can be expected to vary quite dramatically from one year to another, they are currently the *only* available statistics for monitoring Nebraska migration patterns. Consequently, the Coordinating Commission has reported the estimates for 22- to 64-year-olds by education level since ACS data first became available for public use.

Generally, only limited conclusions can be drawn from one-year migration estimates, due to the small samples on which the estimates are based each year and the relatively high margin of error associated with each estimate. Theoretically, by calculating average annual migration estimates based on the combined data collected through five consecutive ACS surveys, these limitations may be reduced. Therefore, beginning with this *2017 Progress Report*, average annual migration estimates presented in this section are calculated using five-year ACS PUMS files.

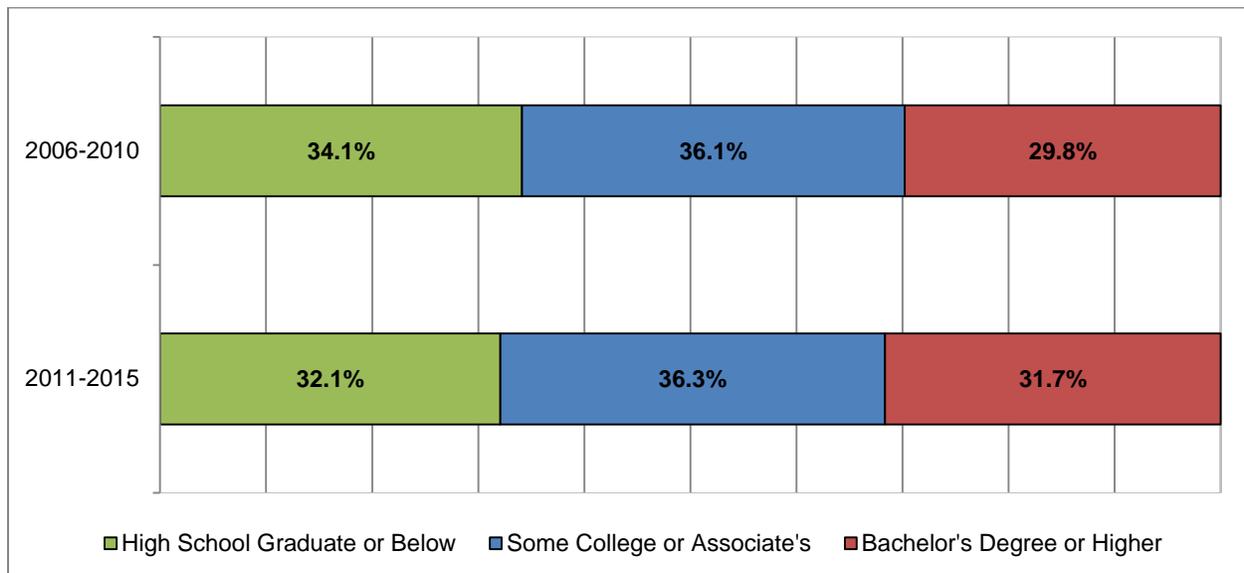
This section summarizes the average annual migration estimates based on the 2011-2015 ACS data collected from samples of 22- to 64-year-olds that migrated to and from the state, and compares these estimates to those based on average annual estimates based on 2006-2010 ACS. To provide context to the average annual migration estimates, the educational attainment of 22- to 64-year-olds is also discussed. While out-migration of Nebraskans with at least a bachelor's degree continues to be a serious issue that Nebraska must address, it is worth noting that the educational attainment of 22- to 64-year-olds continues to increase, albeit less than it would have if out-migration were curtailed.

Educational Attainment for 22- to 64-Year-Olds

- Between 2006-2010 and 2011-2015, Nebraska’s estimated population of 22- to 64-year-olds increased 3.2% (from 997,410 to 1,029,567). (See [Table A13.1](#) in [Appendix 13](#).)
- Analysis by education level reveals that between 2006-2010 and 2011-2015, Nebraska’s estimated population of 22- to 64-year-olds:
 - Decreased 3.0% for high school graduates or below.
 - Increased 3.8% for those with some college or an associate’s degree.
 - Increased 9.7% for those with a bachelor’s degree or higher.
- As shown in [Figure 3.1](#), the result of these increases and decreases is that overall, educational attainment in Nebraska is increasing.

Figure 3.1

**Nebraska Educational Attainment of 22- to 64-Year-Olds
Based on the 2006-2010 and 2011-2015 American Community Survey**



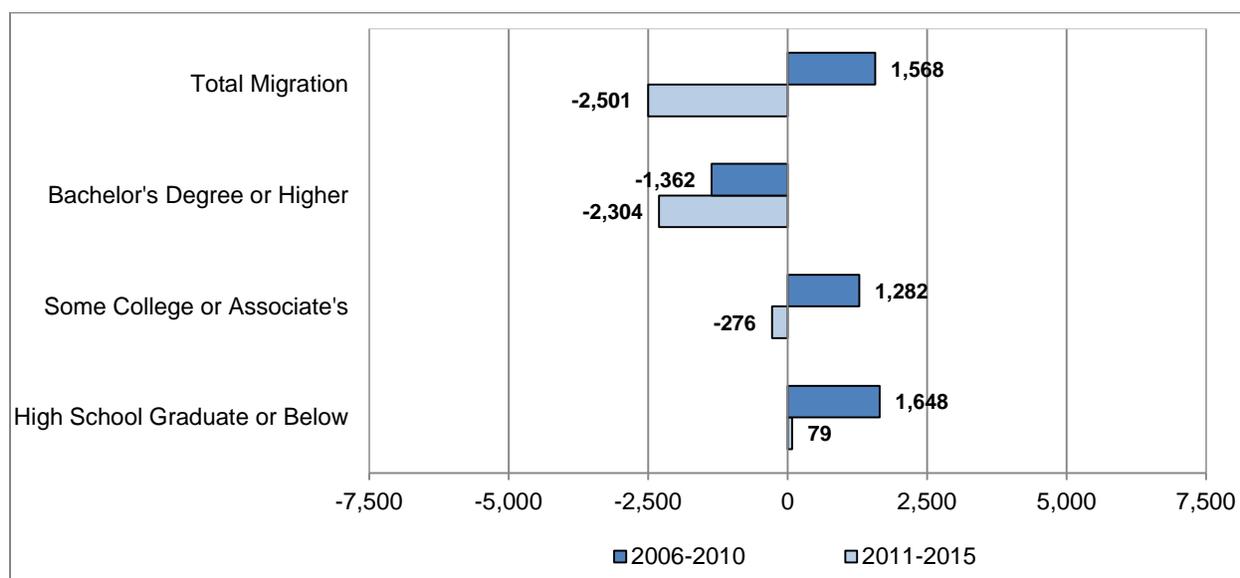
Note. See [Table A13.1](#) in [Appendix 13](#) for supporting data. Data source: U.S. Census Bureau, American Community Survey five-year Public Use Microdata Sample (PUMS) files, 2006-2010 and 2011-2015.

Migration Estimates for 22- to 64-Year-Olds

- [Figure 3.2](#) summarizes the average annual net migration estimates for Nebraska by education level, based on the results of the 2006-2010 and 2011-2015 ACS.³⁶
- The primary reason for the inconsistent net migration estimates shown in [Figure 3.2](#) is that they are based on very small samples. For example, based on the 2011-2015 ACS data available for public use, an average of 79 more individuals with an education level of high school graduate or below moved into Nebraska than moved out of Nebraska per year. This estimate is based on survey responses from 365 individuals who moved to Nebraska and 323 respondents who moved from Nebraska to other states, or a total of 688 individuals who were surveyed in 2011-2015.
- [Figure 3.2](#) demonstrates that the net out-migration of highly educated working-age Nebraskans has not been eliminated since the 2003 LR 174 Task Force prioritized the issue.

Figure 3.2

Nebraska Average Annual Net Migration of 22- to 64-Year-Olds by Education Level Based on the 2006-2010 and 2011-2015 American Community Survey



Note. See Table A13.2 in Appendix 13 for supporting data. Data source: U.S. Census Bureau, American Community Survey five-year Public Use Microdata Sample (PUMS) files, 2006-2010 and 2011-2015.

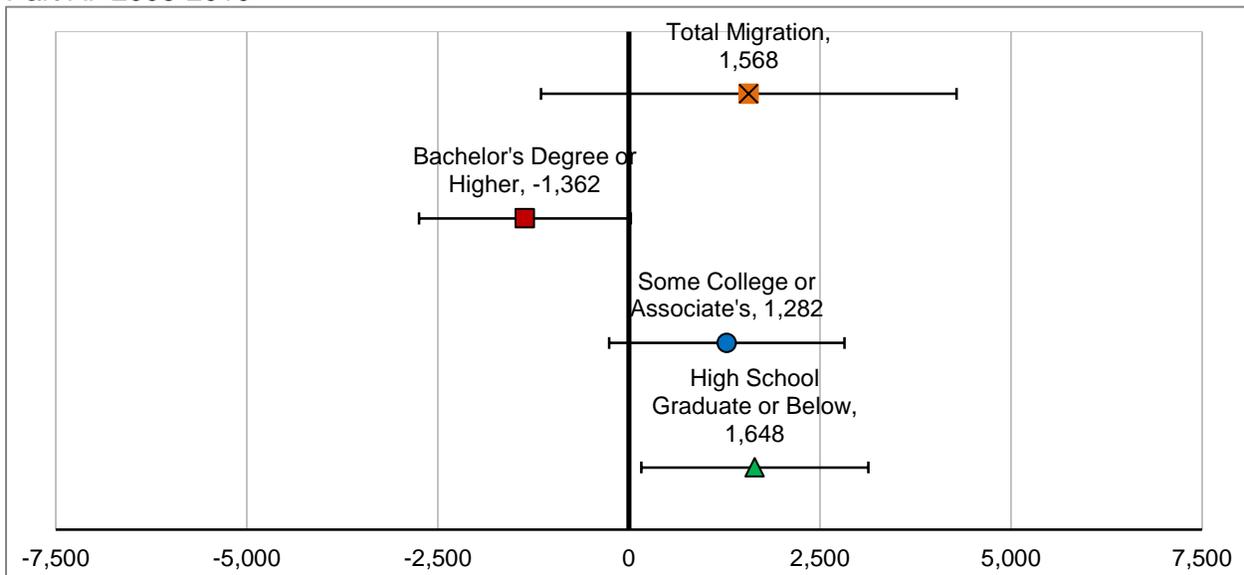
- [Figure 3.3](#) visually illustrates the margins of error for the average annual net migration estimates that are based on 2006-2010 and 2011-2015 ACS data.
- When the margin of error exceeds the absolute value of the point estimate, no conclusions should be drawn about the estimate. For example, since the 2011-2015 estimated average annual net in-migration of 79 individuals with a high school education or below has a 90% margin of error of +/- 1,406, no conclusions can be drawn about the relative migration of that group.

³⁶ Net migration is the difference between the estimated numbers of individuals who moved to or from Nebraska. If net migration is positive, the number of people who moved to the state is higher than the number who left Nebraska. If net migration is negative, the number of people who left the state exceeded the number who moved to Nebraska.

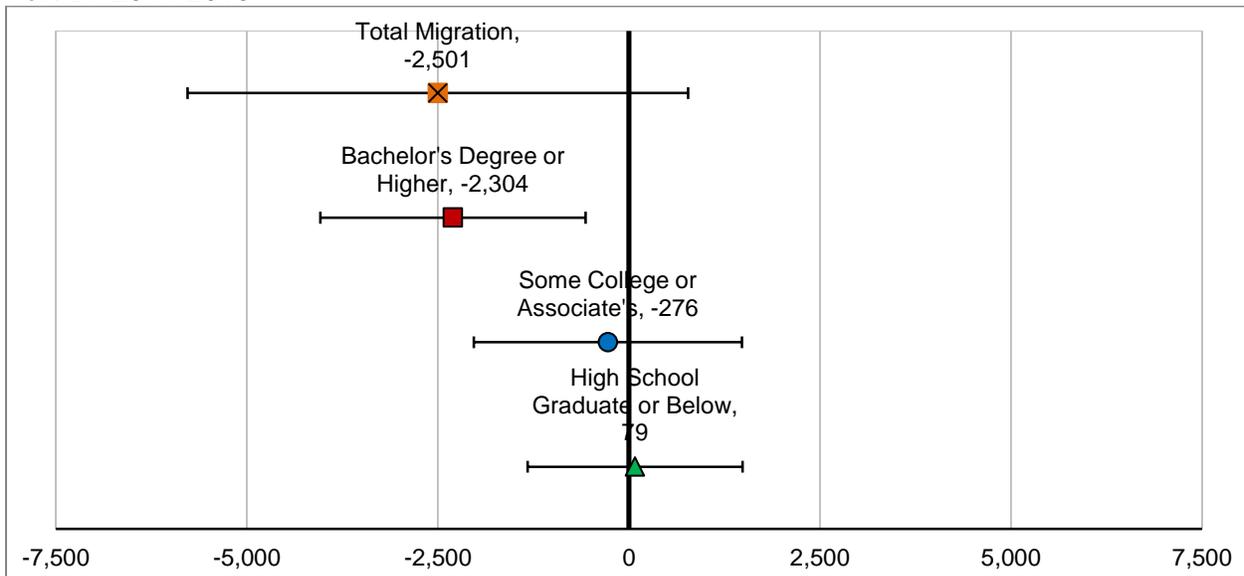
Figure 3.3

**Nebraska Average Annual Net Migration of 22- to 64-Year-Olds by Education Level
Based on the 2006-2010 and 2011-2015 American Community Survey**

Part A: 2006-2010



Part B: 2011-2015



Note. See [Table A13.2](#) and [Table A13.3](#) in [Appendix 13](#) for the margins of error and the number of cases on which each estimate is based. This chart shows each average annual net migration estimate as the mid-point of the range of values based on the margin of error at the 90% confidence level. Data source: U.S. Census Bureau, American Community Survey five-year Public Use Microdata Sample (PUMS) files, 2006-2010 and 2011-2015.

- For the 2006-2010 ACS, no conclusions can be drawn about the estimated net migration of those with some college or associate's degrees or those with bachelor's degrees or higher.
- For the 2011-2015 ACS, no conclusions can be drawn about the estimated net migration of those with a high school education or below or those with some college or associate's degrees.
- However, it is estimated that Nebraska had an average annual net out-migration of 2,304 individuals with a bachelor's degree or higher, +/- 1,735. In other words, if one were to draw

indefinite samples of the population, the average annual net *out-migration* point estimate would fall between 569 and 4,039 90% of the time. Hence Nebraska was not meeting the goal of eliminating the net out-migration of Nebraskans with high levels of educational attainment during the 2011-2015 time period.

- See [Table A13.3](#) in [Appendix 13](#) for more information on confidence intervals for ACS data.

Migration Estimates Compared to Educational Attainment for 22- to 64-Year-Olds

Although currently available estimates from the U.S. Census Bureau do not reveal a clear picture of overall Nebraska migration patterns at all levels of education, there is still reason to be concerned about the net migration of working-age adults particularly at the bachelor's degree and above level. In fact, using a slightly different population (age 25+ rather than 22-64) the University of Nebraska at Omaha Center for Public Affairs Research calculates that Nebraska ranks 39th in the net loss of people age 25 or older with a bachelor's degree or higher over the past 10 years.³⁷

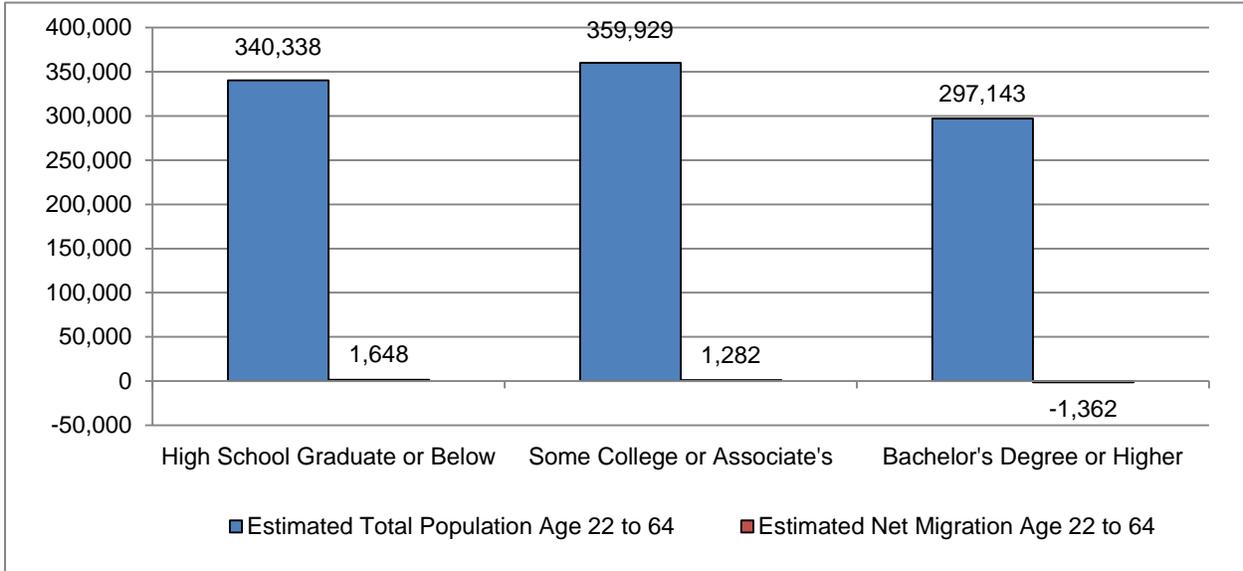
As illustrated in [Figure 3.3](#), the latest available average annual net migration estimate at each education level is small, relative to the corresponding total estimated working-age population of the state. Nevertheless, repeated positive or negative net migration will have a corresponding positive or negative effect on the size and quality of the state's labor force over the long run.

- Analyzing the overall educational attainment and the overall net migration of 22-to-64-year-olds reveals that for every 10,000 people in Nebraska with a high school education or below, there was an average annual net in-migration of 2.4 people for 2011-2015, compared to an average annual net in-migration of 48.4 people for 2006-2010.
- For every 10,000 people in Nebraska with some college or an associate's degree, there was an average annual net *out-migration* of 7.4 people for 2011-2015, compared to an average annual net *in-migration* of 35.6 people for 2006-2010.
- For every 10,000 people in Nebraska with a bachelor's degree or higher, there was an average annual net out-migration of 70.7 people for 2011-2015, compared to an average annual net out-migration of 45.8 people for 2006-2010.

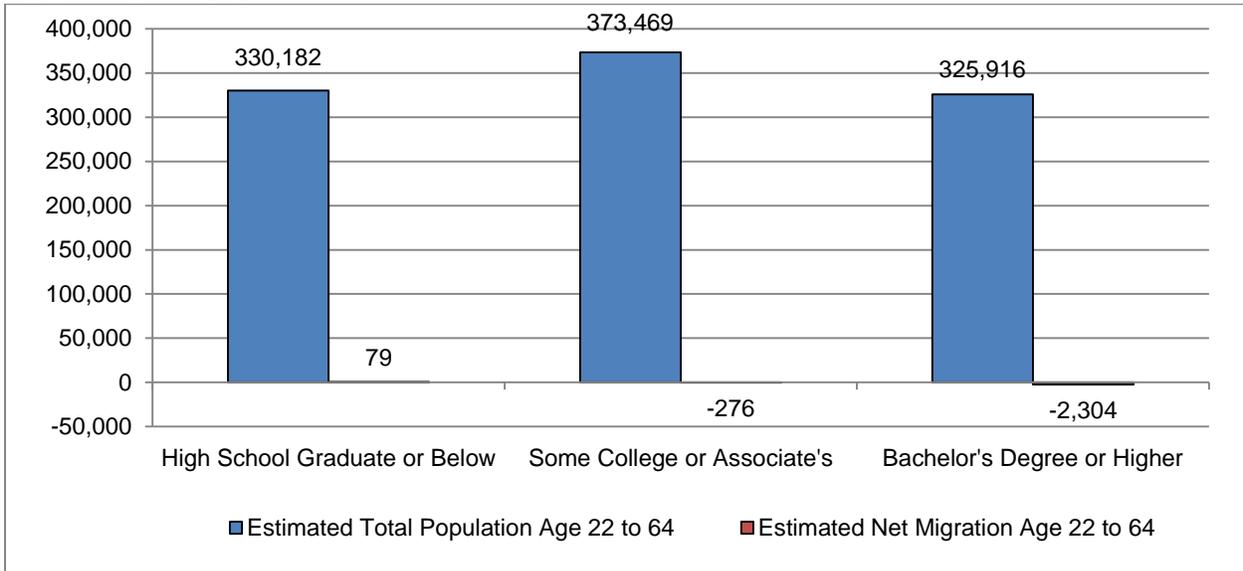
³⁷ Drozd, David. February 2, 2017, *Nebraska Migration and Brain Drain*, Nebraska Chamber of Commerce Annual Meeting.

Figure 3.4
Nebraska Educational Attainment of 22- to 64-Year-Olds Compared to the
Nebraska Average Annual Net Migration of 22- to 64-Year-Olds by Education Level
Based on the 2006-2010 and 2011-2015 American Community Survey

Part A: 2006-2010



Part B: 2011-2015



Note. See [Table A13.1](#) and [Table A13.2](#) in [Appendix 13](#) for supporting data. Data source: U.S. Census Bureau, American Community Survey five-year Public Use Microdata Sample (PUMS) files, 2006-2010 and 2011-2015.

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