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Coordinated Population Forecast for Baker County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2016-2066

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Coordinated Population Forecast

2016

Through

2066

Baker County

Urban Growth
Boundaries (UGB)
& Area Outside UGBs

Population Research Center
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How to Read this Report

This report should be read with reference to the documents listed below—downloadable on the Forecast Program website (http://www.pdx.edu/prc/opfp).

Specifically, the reader should refer to the following documents:

- *Methods and Data for Developing Coordinated Population Forecasts*—Provides a detailed description and discussion of the methods employed to prepare the forecasts. This document also describes the data sets and assumptions that feed into these methods and determine the forecast output.
- *Forecast Tables*—Provides complete tables of population forecast numbers by county and all sub-areas within each county for each five-year interval of the forecast period (i.e., 2016-2066).

Table of Contents

Table of Figures

Executive Summary

Historical

Baker County's population declined between 2000 and 2010, losing on average of just over 60 people per year (Figure 1); however in recent years this pattern has changed and population increase has occurred. Between 2010 and 2015 the county added on average about 20 persons per year (Figure 2).

Baker County's population decline in the 2000s was the result of natural decrease and periods of substantial net out-migration. The larger number of deaths relative to births has led to natural decrease (more deaths than births) in every year from 2000 to 2015 (Figure 12). While net in-migration fluctuated dramatically during the early and middle years of the last decade, the number of in-migrants has been slightly more stable during recent years (2010-2015), contributing to population increase.

Forecast

Total population in Baker County is forecast to increase in the near-term (2016 to 2035), a trend that is driven by growth in the three sub-areas of Baker City, Richland, and Sumpter (Figure 1); however population decline is expected for the county over the last 31 years of the forecast period. This population decrease is the result of growing natural decrease, which is expected to surpass net in-migration between 2030 and 2035.

Overall the county is forecast to see nearly no net change in population over the entire 50-year period, beginning the forecast at around 16,400 in 2016 and ending at about 16,400 in 2066.

Figure 1. Baker County and Sub-Areas—Historical and Forecast Populations, and Average Annual Growth Rates (AAGR)

	Historical			Forecast				
	2000	2010	AAGR (2000-2010)	2016	2035	2066	AAGR (2016-2035)	AAGR (2035-2066)
Baker County	*16,741*	*16,134*	*-0.4%*	*16,410*	*16,584*	*16,401*	*0.1%*	*0.0%*
Baker City UGB	9,927	9,871	-0.1%	9,941	10,028	10,111	0.0%	0.0%
Greenhorn UGB	-	-	0.0%	2	2	2	0.0%	0.0%
Haines UGB	426	416	-0.2%	415	407	390	-0.1%	-0.1%
Halfway UGB	354	319	-1.0%	318	314	308	-0.1%	-0.1%
Huntington UGB	513	440	-1.5%	445	427	412	-0.2%	-0.1%
Richland UGB	154	187	1.9%	212	272	301	1.3%	0.3%
Sumpter UGB	171	204	1.8%	219	252	292	0.7%	0.5%
Unity UGB	139	79	-5.7%	65	54	48	-1.0%	-0.4%
Outside UGBs	5,057	4,618	-0.9%	4,793	4,827	4,537	0.0%	-0.2%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses; Forecast by Population Research Center (PRC).

Historical Trends

Different growth patterns occur in different parts of the County. Each of Baker County's sub-areas was examined for any significant demographic characteristics or changes in population or housing growth that might influence their individual forecasts. Factors that were analyzed include age composition of the population, ethnicity and race, births, deaths, migration, and number or growth rate of *housing units* as well as the *occupancy rate* and *persons per household (PPH)*. It should be noted that population trends of individual sub-areas often differ from those of the county as a whole. However, in general, local trends within sub-areas collectively influence population growth rates for the county.

Population

Baker County's total population grew by about six percent between 1975 and 2015—from roughly 15,500 in 1975 to about 16,400 in 2015 (Figure 2). During this 40-year period, the county experienced periods of population growth and decline. Overall Baker County experienced a population low of approximately 15,300 in 1990 and a high of about 16,700 in 2000. The 2000s were marked by a population decrease, but in recent years (2010-2015) the county has seen a population increase.

Figure 2. Baker County—Total Population (1975-2015)

	1975	1980	1985	1990	1995	2000	2005	2010	2015
Population	15,540	16,158	15,731	15,317	16,680	16,741	16,326	16,134	16,425
AAGR	0.8%	0.8%	-0.5%	-0.5%	1.7%	0.1%	-0.5%	-0.2%	0.4%

Sources: U.S. Census Bureau, 1980, 1990, 2000, and 2010 Censuses; Population Research Center (PRC), July 1st Annual Estimates 1975, 1985, 1995, 2005, and 2015.
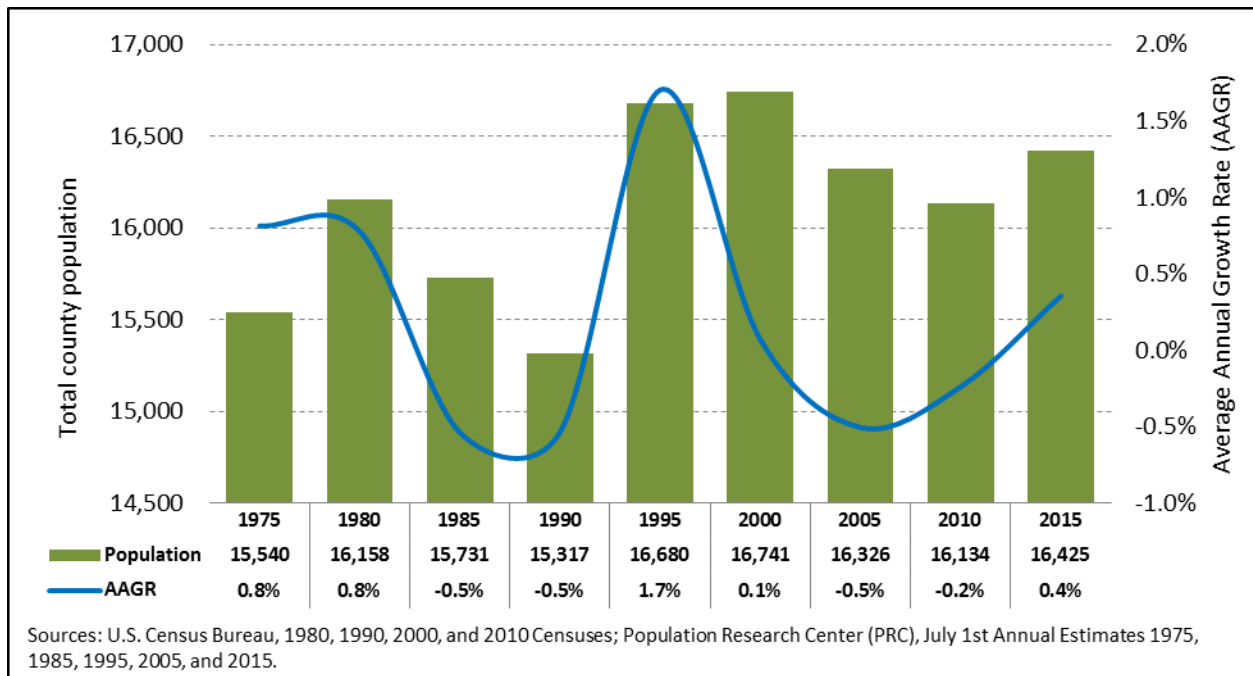
Baker County's population change is the combined population growth or decline within each sub-area. During the 2000s, Baker County's average annual population growth rate stood at negative four-tenths of one percent (Figure 3). While most of the county's sub-areas saw similar declines in population, two sub-areas, Richland and Sumpter, recorded population increase.

Figure 3. Baker County and Sub-areas—Total Population and Average Annual Growth Rate (AAGR) (2000 and 2010)

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010
Baker County	*16,741*	*16,134*	*-0.4%*	*100.0%*	*100.0%*
Baker City	9,927	9,871	-0.1%	59.3%	61.2%
Greenhorn	0	0	0.0%	0.0%	0.0%
Haines	426	416	-0.2%	2.5%	2.6%
Halfway	354	319	-1.0%	2.1%	2.0%
Huntington	513	440	-1.5%	3.1%	2.7%
Richland	154	187	1.9%	0.9%	1.2%
Sumpter	171	204	1.8%	1.0%	1.3%
Unity	139	79	-5.7%	0.8%	0.5%
Outside UGBs	5,057	4,618	-0.9%	30.2%	28.6%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses.

Note 1: For simplicity each UGB is referred to by its primary city's name.

Age Structure of the Population

Baker County's population is aging, a trend similar to most areas across Oregon (Figure 4). An aging population significantly influences the number of deaths, but also yields a smaller proportion of women in their childbearing years, which may result in a decline in births. For Baker County this has been true, but only slightly so. Further underscoring Baker County's trend in aging, the median age went from about 43 in 2000 to 48 in 2010, an increase that is nearly twice of what is observed statewide over the same time period.[1]

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[1] Median age is sourced from the U.S. Census Bureau's 2000 and 2010 Censuses, DP-1.

Figure 4. Baker County—Age Structure of the Population (2000 and 2010)

Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).
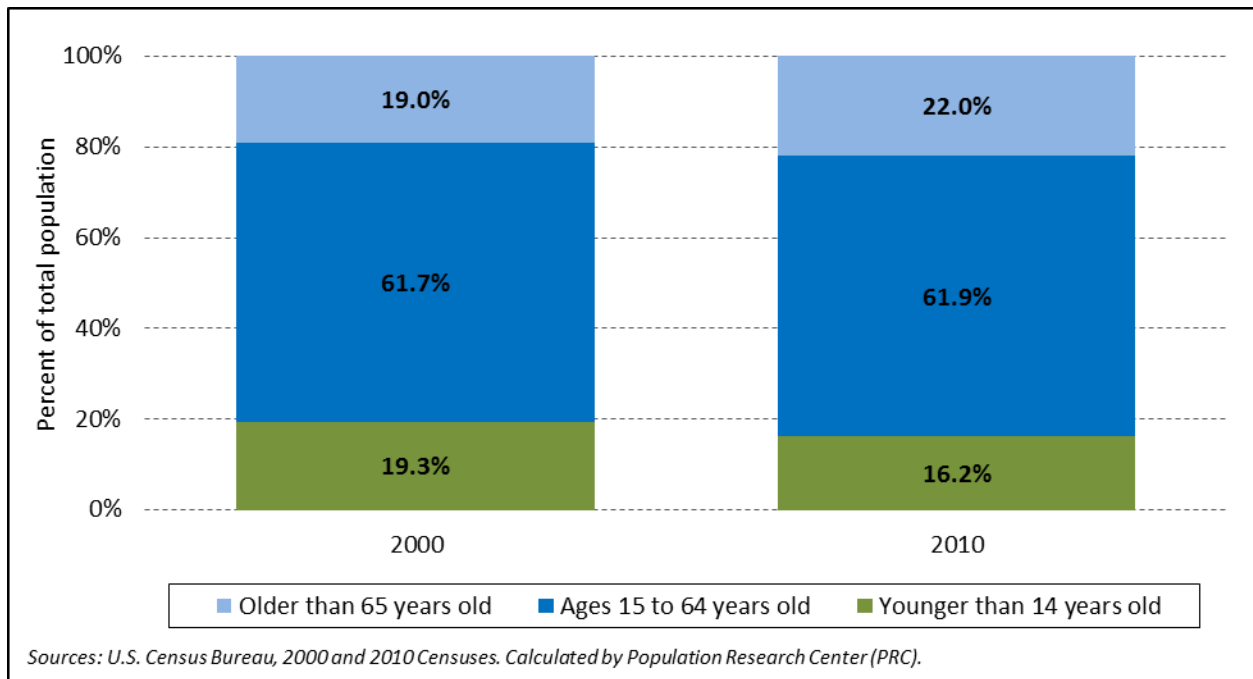
Race and Ethnicity

While the statewide population is aging, another demographic shift is occurring across Oregon—minority populations are growing as a share of total population. A growing minority population affects both the number of births and average household size[2]. The Hispanic population within Baker County increased substantially from 2000 to 2010 (Figure 5), while the White, non-Hispanic population decreased over the same time period. This increase in the Hispanic population and some other minority populations is notable, but overall the minority population has remained a relatively small proportion of total population and will likely not substantively influence future population change.

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[2] Historical data shows that some racial/ethnic groups, such as Hispanics, generally have higher fertility rates than other groups (http://www.pewsocialtrends.org/2012/05/17/explaining-why-minority-births-now-outnumber-white-births/); also average household sizes can vary among racial/ethnic groups (https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&sqi=2&ved=0ahUKEwjp09-PltXMAhUC_WMKHQFZCBEQFggcMAA&url=http%3A%2F%2Fwww.census.gov%2Fpopulation%2Fsocdemo%2Fhh-fam%2Fcps2011%2FtabAVG1.xls&usg=AFQjCNFfO2dYB_OKGxp-ag3hBMVDx4_j9w&cad=rja).

Figure 5. Baker County—Hispanic or Latino and Race (2000 and 2010)

Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
Total population	*16,741*	*100.0%*	*16,134*	*100.0%*	*-607*	*-3.6%*
Hispanic or Latino	392	2.3%	528	3.3%	136	34.7%
Not Hispanic or Latino	16,349	97.7%	15,606	96.7%	-743	-4.5%
White alone	15,838	94.6%	14,944	92.6%	-894	-5.6%
Black or African American alone	37	0.2%	52	0.3%	15	40.5%
American Indian and Alaska Native alone	167	1.0%	170	1.1%	3	1.8%
Asian alone	62	0.4%	78	0.5%	16	25.8%
Native Hawaiian and Other Pacific Islander alone	7	0.0%	9	0.1%	2	28.6%
Some Other Race alone	10	0.1%	7	0.0%	-3	-30.0%
Two or More Races	228	1.4%	346	2.1%	118	51.8%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses.

Births

Historical fertility rates for Baker County do not mirror trends of Oregon as a whole. Total fertility rates remained relatively unchanged in Baker County from 2000 to 2010, while they decreased for the state over the same time period (Figure 6). At the same time fertility for senior mothers marginally increased in both Baker County and Oregon (Figure 7 and Figure 8). As Figure 7 demonstrates, fertility rates for younger women in Baker County are lower in 2010 compared to earlier decades, and women are choosing to have children at older ages. While age specific fertility largely mirrors statewide patterns, county fertility changes are distinct from those of the state in two ways. First, total fertility in Baker County remained unchanged during the 2000s, which differed from the decrease observed statewide. Second, total fertility in the county stayed well above *replacement fertility*, while for Oregon as a whole, total fertility fell further below replacement fertility.

Figure 6. Baker County and Oregon—Total Fertility Rates (2000 and 2010)

	2000	2010
Baker County	2.33	2.33
Oregon	1.98	1.80

Sources: U.S. Census Bureau, 2000 and 2010 Censuses .
Oregon Health Authority, Center for Health Statistics.
Calculated by Population Research Center (PRC).

Figure 7. Baker County—Age Specific Fertility Rate (2000 and 2010)

Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).
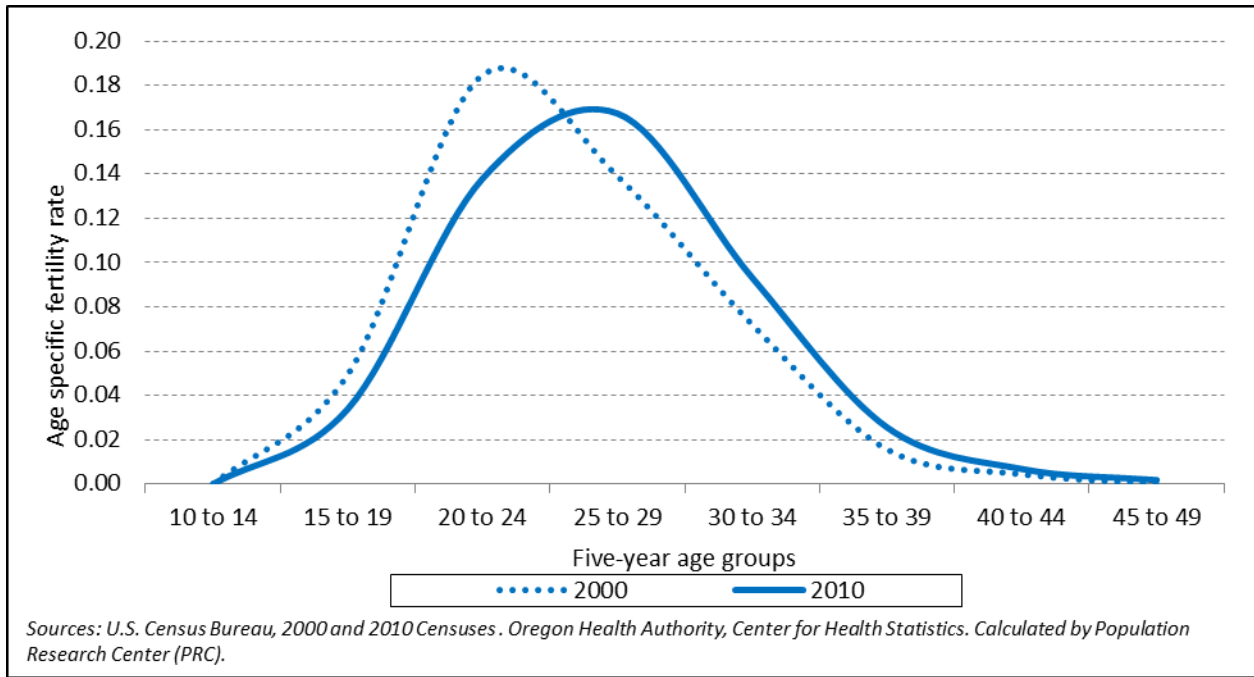
Figure 8. Oregon—Age Specific Fertility Rate (2000 and 2010)

Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).

Figure 9 shows the number of births by the area in which the mother resides. Generally, the number of births fluctuates from year to year. For example, a sub-area with an increase in births between two

years could easily show a decrease for a different time period; however for the 10- year period from 2000 to 2010 the county as a whole and Baker City saw a decrease in births (Figure 9).

Figure 9. Baker County and Sub-Areas—Total Births (2000 and 2010)

	2000	2010	Absolute Change	Relative Change	Share of County 2000	Share of County 2010
Baker County	*168*	*165*	*-3*	*-1.8%*	*100.0%*	*100.0%*
Baker City	118	110	-8	-6.8%	70.2%	66.7%
Outside UGBs	50	55	5	10.0%	29.8%	33.3%

Sources: Oregon Health Authority, Center for Health Statistics. Aggregated by Population Research Center (PRC).

Note 1: For simplicity each UGB is referred to by its primary city's name.

Note 2: All other areas includes all smaller UGBs (those with populations less than 7,000) and the area outside UGBs. Detailed, point level death data were unavailable for 2000, thus PRC was unable to assign deaths to some UGBs.

Deaths

The population in the county, as a whole, is aging and contrary to the statewide trend, people are not necessarily living longer.[3] For Baker County in 2000, life expectancy for males was 78 years and for females was 80 years. By 2010, life expectancy had declined for males, falling to 76 years, but had remained relatively unchanged for females. For both Baker County and Oregon, the survival rates changed little between 2000 and 2010—underscoring the fact that mortality is the most stable component of population change. Even so, the total number of countywide deaths increased (Figure 10).
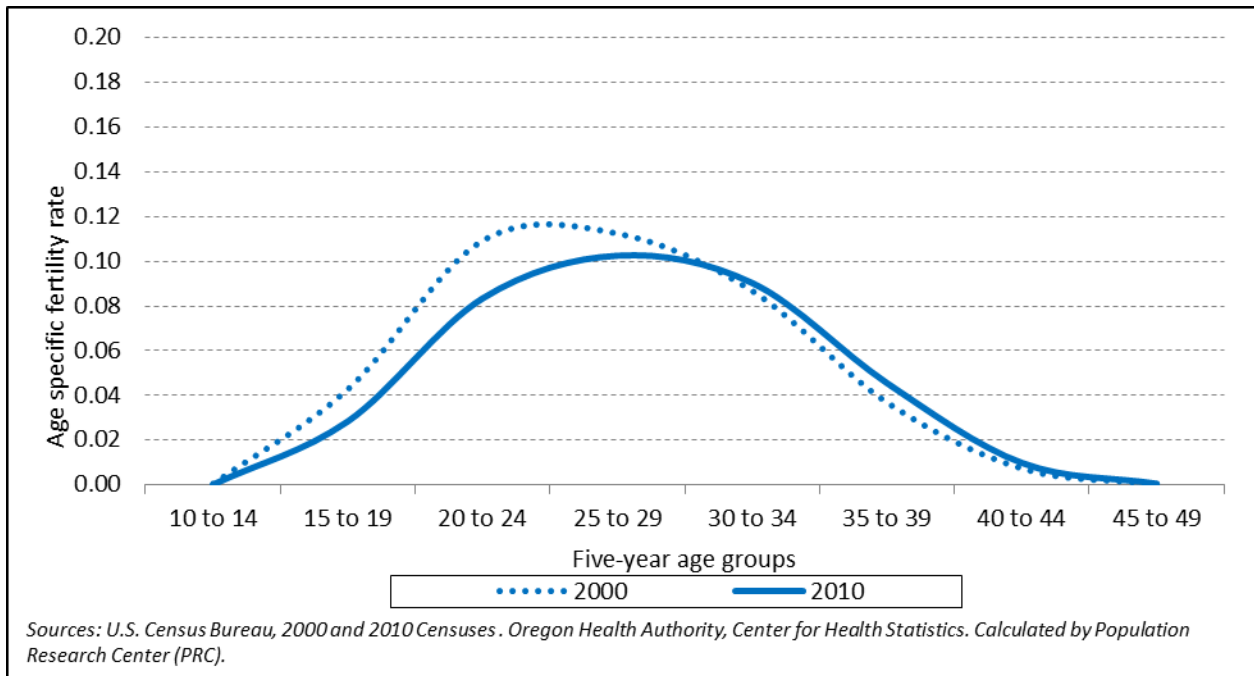
Figure 10. Baker County and Sub-Areas—Total Deaths (2000 and 2010)

	2000	2010	Absolute Change	Relative Change	Share of County 2000	Share of County 2010
Baker County	*174*	*195*	*21*	*12.1%*	*100.0%*	*100.0%*
Baker City	110	120	10	9.1%	63.2%	61.5%
All other areas	64	75	11	17.2%	36.8%	38.5%

Sources: Oregon Health Authority, Center for Health Statistics. Aggregated by Population Research Center (PRC).

Note 1: For simplicity each UGB is referred to by its primary city's name.

Note 2: All other areas includes all smaller UGBs (those with populations less than 7,000) and the area outside UGBs. Detailed, point level death data were unavailable for 2000, thus PRC was unable to assign deaths to some UGBs.

Migration

The propensity to migrate is strongly linked to age and stage of life. As such, age-specific migration rates are critically important for assessing these patterns across five-year age cohorts. Figure 11 shows the

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[3] Researchers have found evidence for a widening rural-urban gap in life expectancy. This gap is particularly apparent between race and income groups and may be one explanation for the decline in life expectancy in the 2000s. See the following research article for more information. *Singh, Gopal K., and Mohammad Siahpush. "Widening rural-urban disparities in life expectancy, US, 1969-2009." American Journal of Preventative Medicine 46, no. 2 (2014): e19-e29.*

historical age-specific migration rates by five-year age group, both for Baker County and Oregon. The migration rate is shown as the number of net migrants per person by age group.

From 2000 to 2010, younger individuals (ages with the highest mobility levels) moved out of the county in search of employment and education opportunities, as well as military service. At the same time however, the county attracted a substantial number of middle-age and older migrants. Many of these middle-age migrants were assumed to be accompanied by their children as shown in the in-migration of persons under the age of 14 in Figure 11.

Figure 11. Baker County and Oregon—Age Specific Migration Rates (2000-2010)

Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).
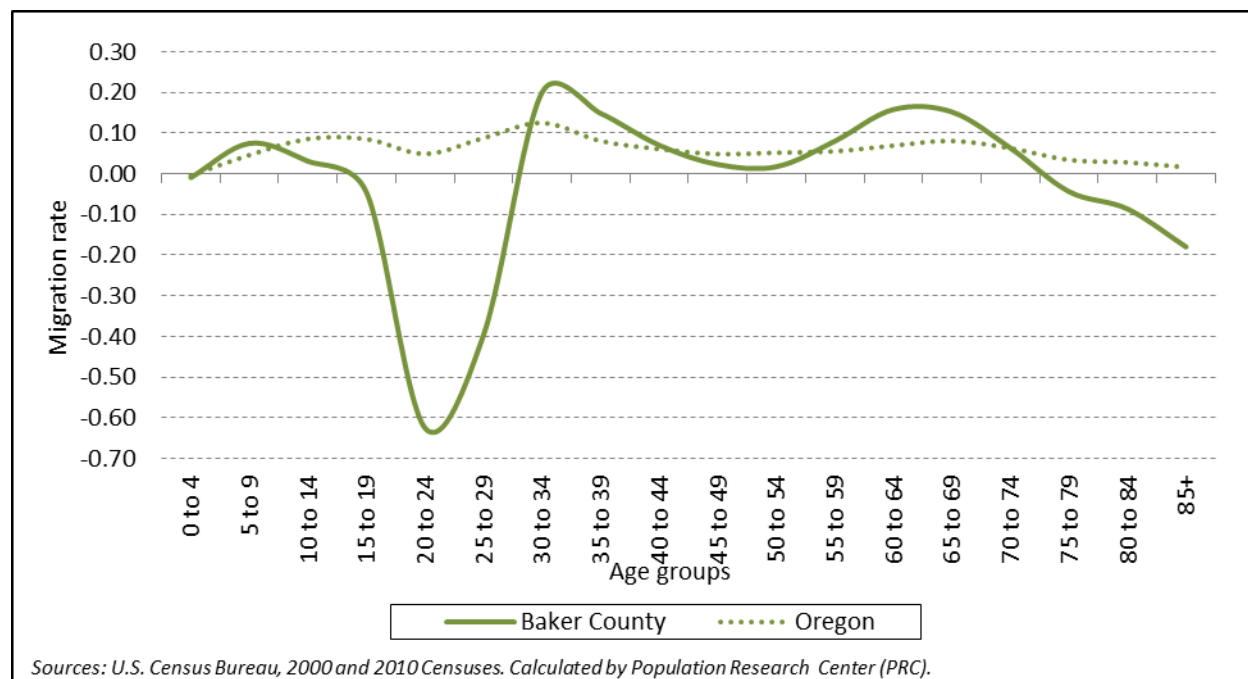
Historical Trends in Components of Population Change

In summary, Baker County's population decline in the 2000s was the result of natural decrease and periods of substantial net out-migration (Figure 12). The larger number of deaths relative to births has led to natural decrease (more deaths than births) in every year from 2000 to 2015. While net in-migration fluctuated dramatically during the early and middle years of the last decade, the number of in-migrants has been slightly more stable during recent years (2010-2015), contributing to population increase.

Figure 12. Baker County—Components of Population Change (2000-2015)

Sources: Population Research Center, July 1st Annual Estimates 2000-2015. Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).
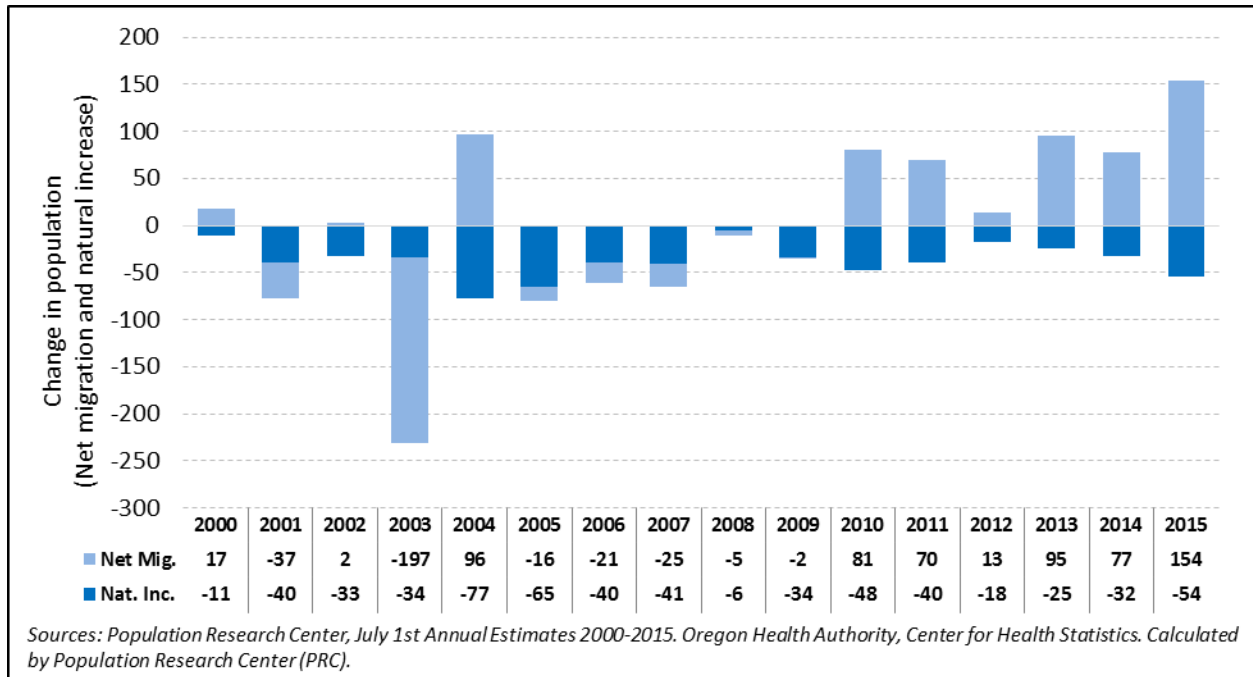
Housing and Households

Over the entire 2000 to 2010 period, the total number of housing units increased by about five percent countywide; this resulted in more than 400 new housing units (Figure 13). Baker City captured the largest share of the growth in total housing units, with the area outside urban growth boundaries (UGBs) also seeing a large share of the countywide housing growth. In terms of relative housing growth, Sumpter grew the most during the 2000s; its total housing units increased 43 percent (92 housing units) by 2010.

Figure 13. Baker County and Sub-Areas—Total Housing Units (2000 and 2010)

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010
Baker County	*8,402*	*8,826*	*0.5%*	*100.0%*	*100.0%*
Baker City	4,477	4,669	0.4%	53.3%	52.9%
Greenhorn	7	10	3.6%	0.1%	0.1%
Haines	207	201	-0.3%	2.5%	2.3%
Halfway	208	218	0.5%	2.5%	2.5%
Huntington	300	272	-1.0%	3.6%	3.1%
Richland	128	134	0.5%	1.5%	1.5%
Sumpter	215	307	3.6%	2.6%	3.5%
Unity	78	62	-2.3%	0.9%	0.7%
Outside UGBs	2,782	2,953	0.6%	33.1%	33.5%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses.

Note 1: For simplicity each UGB is referred to by its primary city's name.

Occupancy rates tend to fluctuate more than PPH. This is particularly true in smaller UGB areas where fewer housing units allow for larger changes—in relative terms. From 2000 to 2010, the occupancy rate in Baker County declined slightly; this was most likely due to slack in demand for housing as individuals experienced the effects of the Great Recession. Many sub-areas experienced similar declines in occupancy rates, with the Unity UGB experiencing a more extreme decline in the occupancy rate, at the same time the Richland UGB recorded an increase in its occupancy rate of 11 percentage points.

Average household size, or PPH, in Baker County was 2.2 in 2010, smaller than in 2000 (Figure 14). Baker County's PPH in 2010 was slightly smaller than for Oregon as a whole, which had a PPH of 2.5. PPH varied across the sub-areas, with all of which except for Greenhorn falling near two persons per household. In 2010 the largest PPH was in Haines with 2.4 and the smallest was 1.7 in Richland and Sumpter.

Figure 14. Baker County and Sub-Areas—Persons per Household (PPH) and Occupancy Rate

	Persons Per Household (PPH)			Occupancy Rate		
	2000	2010	Change 2000-2010	2000	2010	Change 2000-2010
Baker County	*2.4*	*2.2*	*-0.1*	*81.9%*	*79.8%*	*-2.2%*
Baker City	2.4	2.3	-0.1	90.1%	90.6%	0.4%
Greenhorn	0.0	0.0	0.0	0.0%	0.0%	0.0%
Haines	2.3	2.4	0.0	88.4%	87.1%	-1.3%
Halfway	2.1	1.9	-0.2	81.3%	77.5%	-3.7%
Huntington	2.2	2.1	-0.1	77.0%	77.6%	0.6%
Richland	1.7	1.7	0.0	70.3%	81.3%	11.0%
Sumpter	1.8	1.7	-0.1	44.2%	38.8%	-5.4%
Unity	2.3	2.0	-0.3	76.9%	64.5%	-12.4%
Outside UGBs	2.5	2.3	-0.2	72.6%	67.4%	-5.2%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses.

Note 1: For simplicity each UGB is referred to by its primary city's name.

Assumptions for Future Population Change

Evaluating past demographic trends provides clues about what the future will look like, and helps determine the most likely scenarios for population change. Past trends also explain the dynamics of population growth specific to local areas. Relating recent and historical population change to events that influence population change serves as a gauge for what might realistically occur in a given area over the long-term.

Assumptions about fertility, mortality, and migration were developed for Baker County's population forecast as well as the forecasts for larger sub-areas.[4] The assumptions are derived from observations based on life events, as well as trends unique to Baker County and its larger sub-areas. Population change for smaller sub-areas is determined by the change in the number or the growth rate of total housing units and PPH. Assumptions around housing unit growth as well as occupancy rates are derived from observations of historical building patterns and current plans for future housing development. In addition, assumptions for PPH are based on observed historical patterns of household demographics, for example, the average age of householders. The forecast period is 2016-2066.

Assumptions for the County and Baker City UGB

The population in Baker County is expected to age more quickly during the initial 19-year period and then shift toward a slightly younger population over the last 31-year period. Fertility rates are expected to slightly decline throughout the forecast period. Similar patterns of declining total fertility are expected within the county's larger sub-areas.

Changes in mortality and life expectancy are more stable compared to fertility and migration. One influential factor affecting mortality and life expectancy is the advancement in medical technology and health care. The county and larger sub-areas are projected to follow the statewide trend of increasing life expectancy throughout the forecast period—progressing from a life expectancy of 78 years in 2010 to 85 in 2060. However, in spite of increasing life expectancy and the corresponding increase in survival rates, Baker County's aging population and large population cohort reaching a later stage of life will increase the overall number of deaths during the initial 19-year period of the forecast period; as the population shifts toward younger ages over the final 31-year period, the number of deaths are expected to decline. Baker City will experience a similar pattern in the number of deaths.

Migration is the most volatile and challenging demographic component to forecast due to the many factors influencing migration patterns. Economic, social, and environmental factors—such as employment, educational opportunities, housing availability, family ties, cultural affinity, climate change, and natural amenities—occurring both inside and outside the study area can affect both the direction and the volume of migration. Net migration rates will change in line with historical trends unique to Baker County. Net out-migration of younger persons and net in-migration of middle-age and

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[4] County sub-areas with populations greater than 7,000 in the forecast launch year were forecast using the *cohort-component method*. County sub-areas with populations less than 7,000 in forecast launch year were forecast using the *housing-unit method*. See Glossary of Key Terms at the end of this report for a brief description of these methods or refer to the *Methods* document for a more detailed description of these forecasting techniques.

older individuals will persist throughout the forecast period. Countywide average annual net migration is expected to increase to 85 net in-migrants by 2035. Over the final 31-year, it is expected to slightly decline, falling to about 50 by 2065.

Assumptions for smaller Sub-Areas

Rates of population growth for the smaller UGBs are assumed to be determined by corresponding growth in the number or growth rate of housing units, as well as changes in housing occupancy rates and PPH. The change in housing unit growth is much more variable than change in housing occupancy rates or PPH.

PPHs of most sub-areas are assumed to stay stable over the forecast period except Unity, whose PPH is assumed to decline slightly over the forecast period. Occupancy rates are assumed to increase slightly for three UGBs, Baker City, Richland, and Sumpter. The other UGBs, including Haines, Halfway, Huntington, and Unity, are assumed to see some decrease over the forecast period.

In addition, for sub-areas experiencing population growth, we assume a higher growth rate in the near-term, with growth stabilizing over the remainder of the forecast period. If planned housing units were reported in the surveys, then they are assumed to be constructed over the next 5-15 years. Finally, for county sub-areas where population growth has been flat or has declined, and there is no planned housing construction, population growth is held mostly stable with little to no change.

Forecast Trends

Under the most-likely population growth scenario in Baker County, countywide and sub-area populations are expected to slightly increase over the initial 14 years of the forecast period, but then decrease back to the 2016 population level by 2066. Overall the population is not expected to either grow or decline dramatically, starting and ending the forecast period at about the same level. This pattern is driven by a growing natural decrease in the initial 19-year period, outpacing net in-migration. Once natural decrease surpasses net in-migration between 2030 and 2035, the number of deaths are expected slightly decline, leading to a drop in the magnitude of the natural decrease and eventually a slowing of the rate of population decline.

Baker County's total population is forecast to experience a decrease of nine persons from 2016 to 2066 (Figure 15). The population is forecast to grow in the near-term (2016-2030) and then decline over the rest years of the forecast period. The anticipated population growth in the near-term is based on the assumption that middle-age and older persons will continue to migrate into the county—bringing their families or having more children.

Figure 15. Baker County—Total Population (2016-2066)

	2016	2020	2025	2030	2035	2040	2045	2050	2055	2060	2066
Population	16,410	16,530	16,596	16,610	16,584	16,542	16,495	16,456	16,428	16,414	16,401
AAGR	0.28%	0.18%	0.08%	0.02%	-0.03%	-0.05%	-0.06%	-0.05%	-0.03%	-0.02%	-0.01%

Source: Forecast by Population Research Center (PRC)
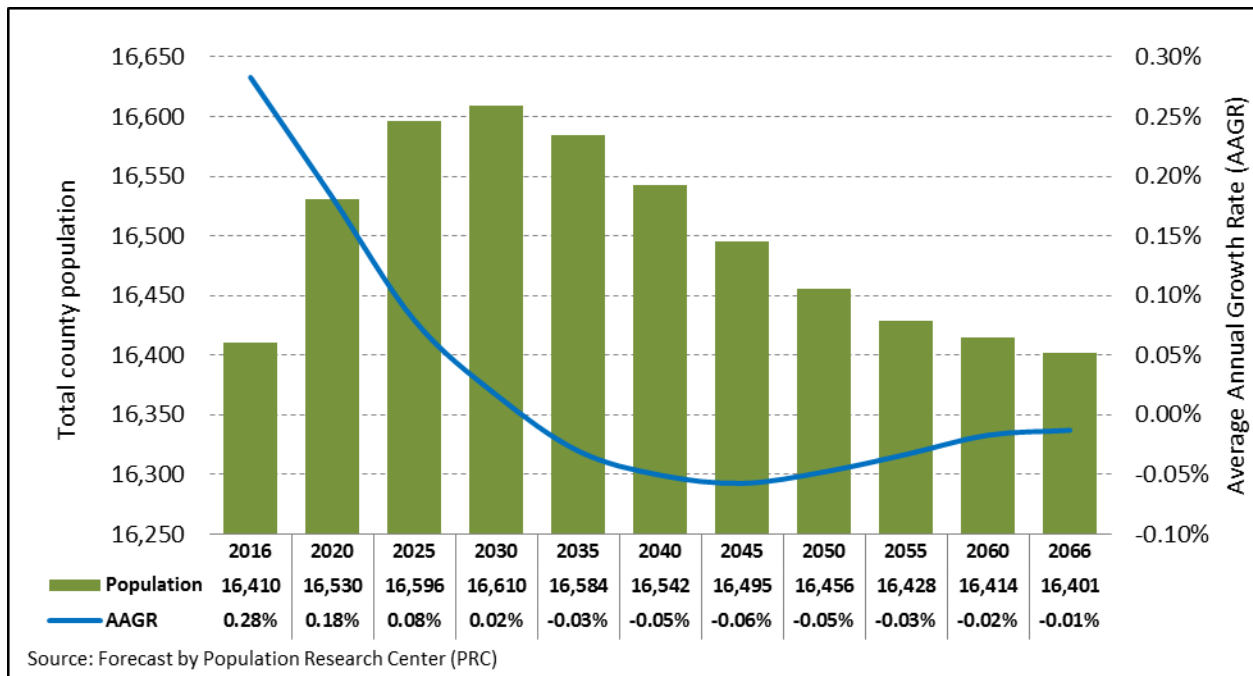
Baker City UGB, the largest UGB of the county, is forecast to experience population growth of nearly 90 from 2016 to 2035, with about the same amount of growth from 2035 to 2066 (Figure 16). The population outside UGBs is expected to slightly increase from 2016 to 2035, but then decrease by nearly 300 persons over the last 31-year period. Baker City is expected to increase as a share of countywide population, while the area outside UGBs is forecast to decline as a share of county population.

Figure 16. Baker County and Larger Sub-Areas—Forecast Population and AAGR

	2016	2035	2066	AAGR (2016-2035)	AAGR (2035-2066)	Share of County 2016	Share of County 2035	Share of County 2066
Baker County	*16,410*	*16,584*	*16,401*	*0.1%*	*0.0%*	*100.0%*	*100.0%*	*100.0%*
Baker City	9,941	10,028	10,111	0.0%	0.0%	60.6%	60.5%	61.6%
Smaller UGBs	1,677	1,730	1,753	0.2%	0.0%	10.2%	10.4%	10.7%
Outside UGBs	4,793	4,827	4,537	0.0%	-0.2%	29.2%	29.1%	27.7%

Source: Forecast by Population Research Center (PRC)

Note 1: For simplicity each UGB is referred to by its primary city's name.

Note 2: Smaller UGBs are those with populations less than 7,000 in forecast launch year.

Forecast Trends in Components of Population Change

As previously discussed, a key factor in increasing deaths is an aging population. From 2016 to 2035 the proportion of county population 65 or older is forecast to grow from roughly 26 percent to about 34 percent; however the proportion of the population 65 or older is expected to actually slightly decrease from 2035 to 2066 (Figure 17). For a more detailed look at the age structure of Baker County's population see the forecast table published to the forecast program website (http://www.pdx.edu/prc/opfp).

Figure 17. Baker County—Age Structure of the Population (2016, 2035, and 2066)

Source: Forecast by Population Research Center (PRC)
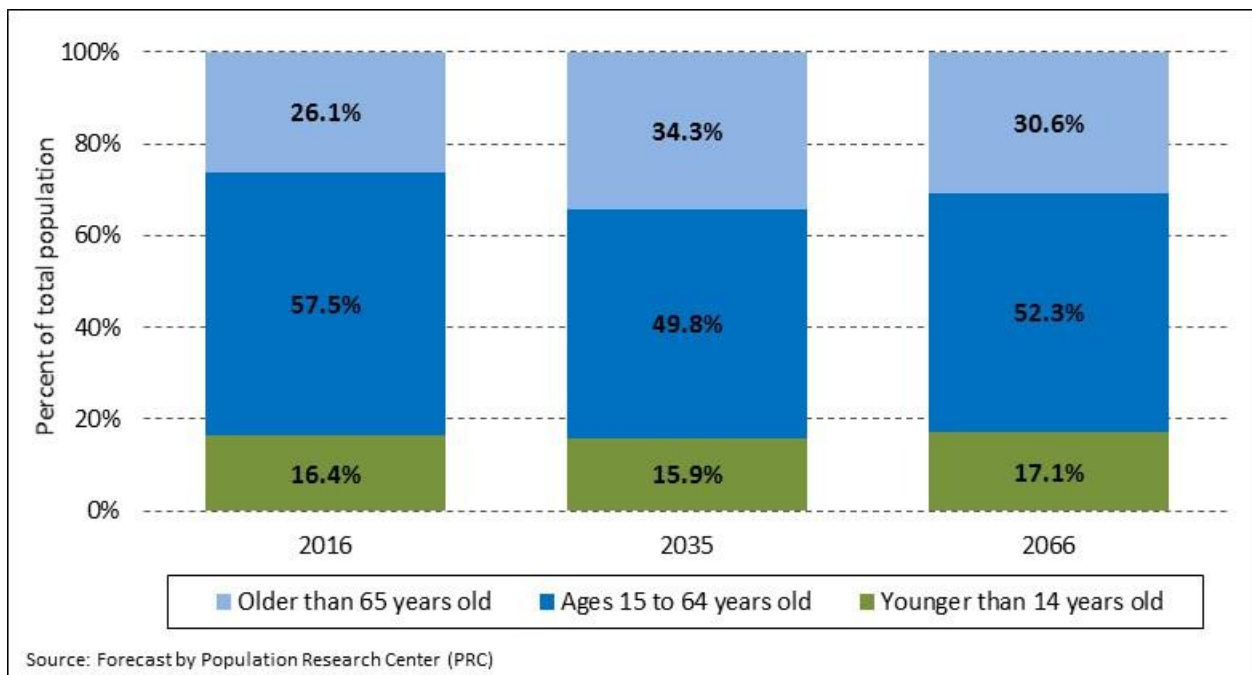
As the countywide population ages in the near-term—contributing to a slow-growing population of women in their years of peak fertility—and more women choose to have fewer children and have them at an older age, the increase in average annual births is expected to remain relatively unchanged; this combined with the rise in number of deaths, is expected to cause natural decrease in larger magnitudes between 2016 and 2040 (Figure 18).

Net in-migration is forecast to increase gradually in the near-term and then decline slowly over the remainder of the forecast period. The majority of these net in-migrants are expected to be middle-aged or older individuals and children under the age of 14.

In summary, an increase in the magnitude of natural decrease and steady net in-migration are expected to lead to population increase reaching its peak in 2030 (Figure 18). Throughout the remaining 36 years natural decrease is expected to exceed net in-migration, leading to population decline.

Figure 18. Baker County—Components of Population Change, 2016-2066

	2016	2020	2025	2030	2035	2040	2045	2050	2055	2060	2066
■ Nat. Inc.	-147	-160	-295	-395	-452	-465	-446	-403	-345	-290	-306
■ Net Mig.	452	280	360	409	427	423	399	363	318	276	292

Source: Forcast by Population Research Center (PRC)
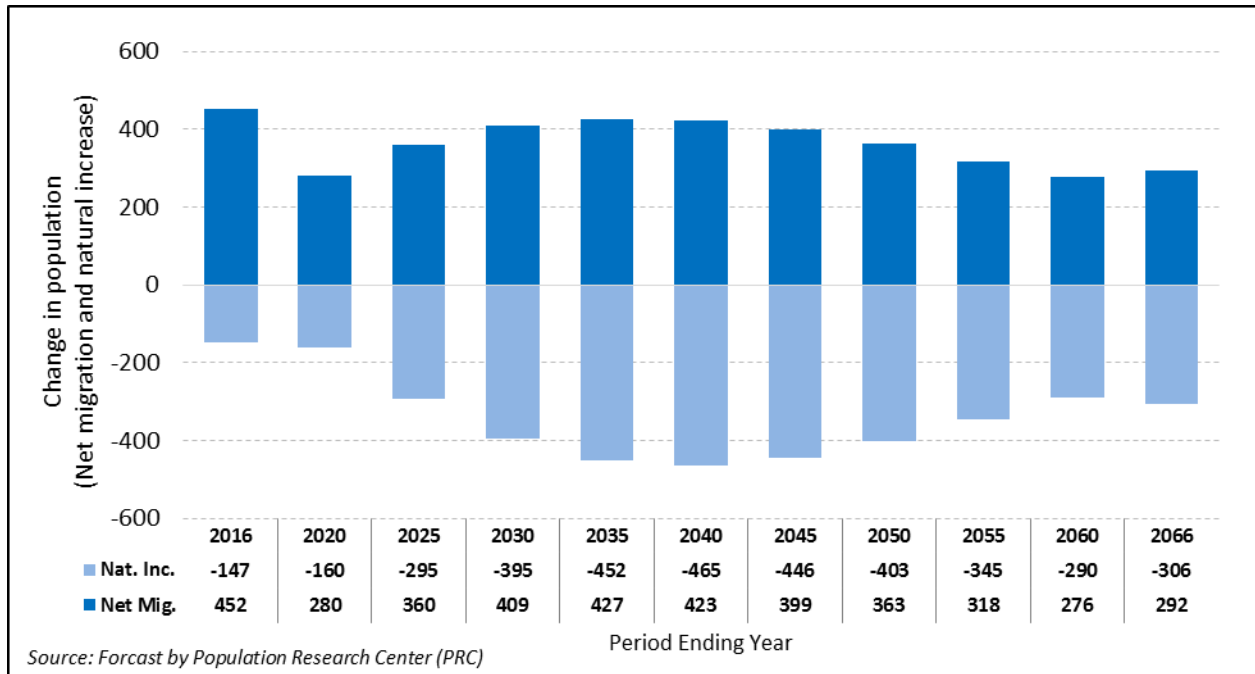
Glossary of Key Terms

Cohort-Component Method: A method used to forecast future populations based on changes in births, deaths, and migration over time; this method models the population in age cohorts, which are survived into progressively older age groups over time and are subject to age-specific mortality, fertility and net migration rates to account for population change.

Coordinated population forecast: A population forecast prepared for the county along with population forecasts for its city urban growth boundary (UGB) areas and non-UGB area.

Housing unit: A house, apartment, mobile home or trailer, group of rooms, or single room that is occupied or is intended for residency.

Housing-Unit Method: A method used to forecast future populations based on changes in housing unit counts, vacancy rates, the average numbers of persons per household (PPH), and group quarters population counts.

Occupancy rate: The proportion of total housing units that is occupied by individuals or groups of persons.

Persons per household (PPH): The average household size (i.e. the average number of persons per occupied housing unit for a particular geographic area).

Replacement Level Fertility: The average number of children each woman needs to bear in order to replace the population (to replace each male and female) under current mortality conditions. This is commonly estimated to be 2.1 children per woman in the U.S.

Appendix A: Surveys and Supporting Information

Supporting information is based on planning documents and reports, and from submissions to PRC from city officials and staff, and other stakeholders. The information pertains to characteristics of each city area, and to changes thought to occur in the future. The cities of Greenhorn, Haines, Halfway, Richland, Sumpter, and Unity did not submit survey responses.

Baker City—Baker County—10/26/2015

Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est. Year Completion	Future Group quarterss Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
None	Very slight increase in single family dwellings, mostly infill projects, as economy recovers	No housing developments planned	None	No significant change	None	**Promos:** **Hinders:** Lack of economic opportunity

Baker City—Baker County—10/26/2015	
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies	N/A
Other information (e.g. planning documents, email correspondence, housing development survey)	

Greenhorn—Baker County—NO SURVEY RESPONSE						
Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est. Year Completion	Future Group quarterss Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
						Promos: Hinders:
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies						

Other information (e.g. planning documents, email correspondence, housing development survey)	

Haines—Baker County—NO SURVEY RESPONSE						
Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est. Year Completion	Future Group quarterss Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
						Promos: Hinders:
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies						

Other information (e.g. planning documents, email correspondence, housing development survey)	

Halfway—Baker County—NO SURVEY RESPONSE

Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est. Year Completion	Future Group quarterss Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
						Promos: Hinders:
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies						

Other information (e.g. planning documents, email correspondence, housing development survey)	

City of Huntington—Baker County—11/3/2015

Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est. Year Completion	Future Group quarterss Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
The City of Huntington is about the same as last year.	No new housing development last year	None	None	None	The City of Huntington is currently working on a grant for a new waste water treatment facility plant. Completion in 2018.	**Promos:** **Hinders:**
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies						

City of Huntington—Baker County—11/3/2015
Other information (e.g. planning documents, email correspondence, housing development survey)	No foreseeable changes in population in 2015 - 2016

Richland—Baker County—NO SURVEY RESPONSE

Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est. Year Completion	Future Group quarterss Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
						Promos: Hinders:
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies						

Richland—Baker County—NO SURVEY RESPONSE	
Other information (e.g. planning documents, email correspondence, housing development survey)	

Sumpter—Baker County—NO SURVEY RESPONSE						
Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est. Year Completion	Future Group quarterss Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
						Promos: Hinders:
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies						

Sumpter—Baker County—NO SURVEY RESPONSE	
Other information (e.g. planning documents, email correspondence, housing development survey)	

Unity—Baker County—NO SURVEY RESPONSE

Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est. Year Completion	Future Group quarterss Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
						Promos: Hinders: .
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and						

Unity—Baker County—NO SURVEY RESPONSE	
studies	
Other information (e.g. planning documents, email correspondence, housing development survey)	

Appendix B: Specific Assumptions

Baker City

Total fertility rates are assumed to follow the historical trend observed from the 2000 to 2010 period, gradually declining over the forecast period. Survival rates for 2060 are assumed to be the same as those forecast for the county as a whole. Baker City has historically had the similar survival rates as observed countywide, which corresponds with a similar life expectancy. Age-specific net migration rates are assumed to generally follow historical patterns for Baker County, but at slightly higher rates over the forecast period.

Greenhorn

The 5-year average annual housing unit growth rate is assumed to be stable at zero percent throughout the forecast period. The occupancy rate is assumed to be steady at 10 percent throughout the 50 year horizon. PPH is assumed to be stable at 2 over the forecast period. Group quarters population is assumed to remain at zero.

Haines

The 5-year average annual housing unit growth rate is assumed to slightly decline over the forecast period, but will remain higher than the historical average in the 2000s. The occupancy rate is assumed to see a slight decrease over the 50-year horizon, and averages above 86 percent. PPH is assumed to stay steady at 2.35 over the forecast period. There is no group quarters population in Haines.

Halfway

The 5-year average annual housing unit growth rate is assumed to slightly decline over the forecast period, and the overall 50-year average is close to zero percent. Occupancy rate is assumed to be steady over the 50-year horizon, with an average of 75.2 percent. PPH is assumed to stay at an average level of 1.89 over the forecast period. The group quarters population is assumed to remain at zero.

Huntington

The 5-year average annual housing unit growth rate is assumed to slightly decline over the forecast period, but still remain higher than the historical average level in the 2000s. The occupancy rate is assumed to slightly decline over the forecast period, and averages 74.3 percent over the forecast period. PPH is assumed to stay stable at 2.15. There is no group quarters population in Huntington.

Richland

The 5-year average annual housing unit growth rate is assumed to slightly decline over the forecast period, but the overall 50-year annual average rate is close to 0.8 percent. The occupancy rate is assumed to be fairly stable throughout the 50-year horizon, and averages 79 percent. PPH is assumed to stay stable at 1.72 over the forecast period. The group quarters population is assumed to remain at zero.

Sumpter

The 5-year average annual housing unit growth rate is assumed to gradually decline over the forecast period, and averages close to 0.6 percent annual over the 50-year period. The occupancy rate is assumed to be fairly stable throughout the 50-year horizon, with an average of 39 percent. PPH is assumed to stay stable at 1.71 over the forecast period. There is no group quarters population in Sumpter.

Unity

The 5-year average annual housing unit growth rate is assumed to very slightly decline over the forecast period, and averages close to zero percent annually over the 50-year period. The occupancy rate is assumed to decrease some over the forecast period, and averages 53 percent. PPH is assumed to decline gradually from 1.84 to about 1.64 over the forecast period. The group quarters population is assumed to remain at zero through the 50 year horizon.

Outside UGBs

The 5-year average annual housing unit growth rate is assumed to gradually decline over the forecast period, and averages close to zero percent annually over the 50-year forecast period. The occupancy rate is assumed to be steady at 67.4% over 50-year horizon. PPH is assumed to be stable at 2.27 over the forecast period. The group quarters population is assumed to stay at the recent historical average levels over the forecast period.

Appendix C: Detailed Population Forecast Results

Figure 19. Baker County - Population by Five-Year Age Group

Population Forecasts by Age Group / Year	2016	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2066
00-04	881	844	810	811	839	873	890	895	889	889	881	883
05-09	911	939	894	867	876	917	953	969	957	948	936	939
10-14	899	933	975	938	918	939	980	1,016	1,014	999	976	979
15-19	906	884	931	984	955	947	965	1,006	1,024	1,019	991	992
20-24	680	639	625	668	714	702	693	705	721	732	719	719
25-29	630	629	587	580	626	679	666	657	656	670	671	673
30-34	855	698	704	662	661	723	781	765	741	739	744	749
35-39	833	971	758	772	734	743	810	875	842	814	801	807
40-44	807	835	1,017	802	825	795	802	873	926	890	849	851
45-49	897	812	852	1,048	835	871	836	842	901	954	904	901
50-54	1,077	917	816	865	1,077	870	905	868	860	919	961	957
55-59	1,299	1,150	946	851	912	1,149	927	963	909	899	948	963
60-64	1,455	1,403	1,213	1,009	917	996	1,253	1,011	1,032	973	951	967
65-69	1,383	1,500	1,445	1,264	1,062	979	1,062	1,337	1,061	1,083	1,009	1,011
70-74	1,119	1,295	1,443	1,408	1,245	1,060	976	1,057	1,309	1,038	1,046	1,038
75-79	813	941	1,140	1,287	1,274	1,145	975	900	959	1,189	933	941
80-84	479	588	721	892	1,027	1,043	945	810	741	795	983	944
85+	486	553	718	901	1,085	1,111	1,076	908	884	866	1,100	1,086
Total	**16,410**	**16,530**	**16,596**	**16,610**	**16,584**	**16,542**	**16,495**	**16,456**	**16,428**	**16,414**	**16,403**	**16,401**

Population Forecasts prepared by: Population Research Center, Portland State University, June 30, 2016.

Figure 20. Baker County's Sub-Areas - Total Population

Area / Year	2016	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2066
Baker County	16,410	16,530	16,596	16,610	16,584	16,542	16,495	16,456	16,428	16,414	16,403	16,401
Baker City UGB	9,941	9,993	10,030	10,037	10,028	10,013	10,004	10,006	10,025	10,058	10,101	10,111
Greenhorn UGB	2	2	2	2	2	2	2	2	2	2	2	2
Haines UGB	415	414	413	410	407	405	402	399	396	394	391	390
Halfway UGB	318	318	317	316	314	312	311	309	308	308	308	308
Huntington UGB	445	442	437	432	427	423	419	416	414	413	412	412
Richland UGB	212	228	245	261	272	282	290	295	298	300	301	301
Sumpter UGB	219	227	236	245	252	259	266	272	278	284	291	292
Unity UGB	65	61	58	56	54	52	51	50	49	48	48	48
Outside UGB Area	4,793	4,844	4,858	4,852	4,827	4,793	4,752	4,706	4,658	4,606	4,549	4,537

Population Forecasts prepared by: Population Research Center, Portland State University, June 30, 2016.