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

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Coordinated Population Forecast

2016

Through

2066

Harney County

Urban Growth Boundaries (UGB) & Area Outside UGBs

Population Research Center
PORTLAND STATE UNIVERSITY

Photo Credit: An old shed on Pine Creek Road. (Photo No. harDA0084)
Gary Halvorson, Oregon State Archives
http://arcweb.sos.state.or.us/pages/records/local/county/scenic/harney/19.html

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Prepared by

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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).

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Historical

Different growth patterns occur in different parts of the County and these local trends within the UGBs and the area outside UGBs collectively influence population growth rates for the county as a whole.

Harney County's total population has slowly declined since 2000, with an average annual rate of negative 0.2 percent between 2000 and 2010 (Figure 1). Burns is accountable for the county's overall declining population. All other sub-areas experienced very slight population growths during the 2000 to 2010 period, increasing by a total of 32 persons.

Harney County's population decline in the 2000s was the direct result of frequent net out-migration. The county's aging population has contributed to an increase in deaths, however, a larger number of births relative to deaths caused a natural increase for 8 out of the 15 years between 2000 and 2015 (Figure 12). Even so, net out-migration outweighed these slight natural increases, causing a slow decrease in the Harney County's population since 2000.

Forecast

Total population in Harney County as a whole as well as within its sub-areas are forecast to all decrease at a slightly faster rate in the near-term (2016 to 2035) compared to the long-term (Figure 1). The tapering of growth rates is largely driven by an aging population—a demographic trend which is expected to contribute to a natural decrease (more deaths than births). As natural decrease occurs, population growth will become increasingly reliant on net in-migration.

Harney County's total population is forecast to decrease by more than 500 persons over the entire 50-year forecast period (2016-2066), a loss in population mostly happening in areas outside the UGBs. Sub-areas are expected to generally follow historical patterns of population decrease over the forecast period.

Figure 1. Harney 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)
Harney County	*7,609*	*7,422*	*-0.2%*	*7,313*	*7,051*	*6,732*	*-0.2%*	*-0.1%*
Burns UGB	3,148	2,929	-0.7%	2,955	2,953	2,935	0.0%	0.0%
Hines UGB	1,697	1,707	0.1%	1,700	1,646	1,548	-0.2%	-0.2%
Outside UGBs	2,764	2,786	0.1%	2,659	2,452	2,249	-0.4%	-0.3%

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

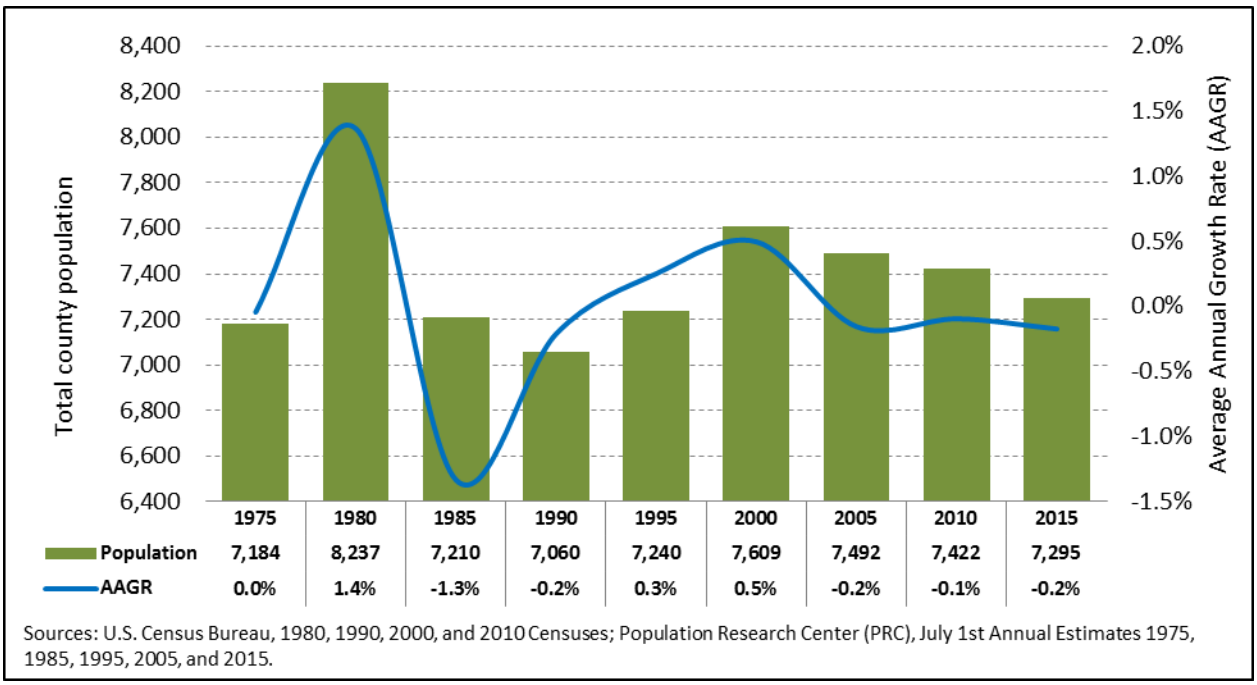
Historical Trends

Different growth patterns occur in different parts of the County. Each of Harney 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

Harney County's total population grew by about 1.5 percent between 1975 and 2015—from roughly 7,200 in 1975 to about 7,300 in 2015 (Figure 2). During this 40-year period there were alternating periods of population increases and decreases, with total population peaking in 1980 at about 8,200 persons. During the 1980s, challenging economic conditions, both nationally and within the county, led to population decline. The county experienced population growth through the 1990s, however, the increase reached its peak in 2000 at which point the county's population began decreasing at a consistent yet slow rate through the 2000s and the most recent years after 2010.

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



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.

Harney County's population change is the combined population growth or decline within each sub-area. During the 2000s, Harney County's average annual population growth rate stood at negative 0.2 percent (Figure 3). At the same time Hines and areas outside the UGBs both recorded an average annual growth rate of 0.1 percent while Burns reported an average annual decrease close to negative one percent.

Figure 3. Harney 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
Harney County	*7,609*	*7,422*	*-0.2%*	*63.7%*	*62.5%*
Burns	3,148	2,929	-0.7%	41.4%	39.5%
Hines	1,697	1,707	0.1%	22.3%	23.0%
Outside UGBs	2,764	2,786	0.1%	36.3%	37.5%

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

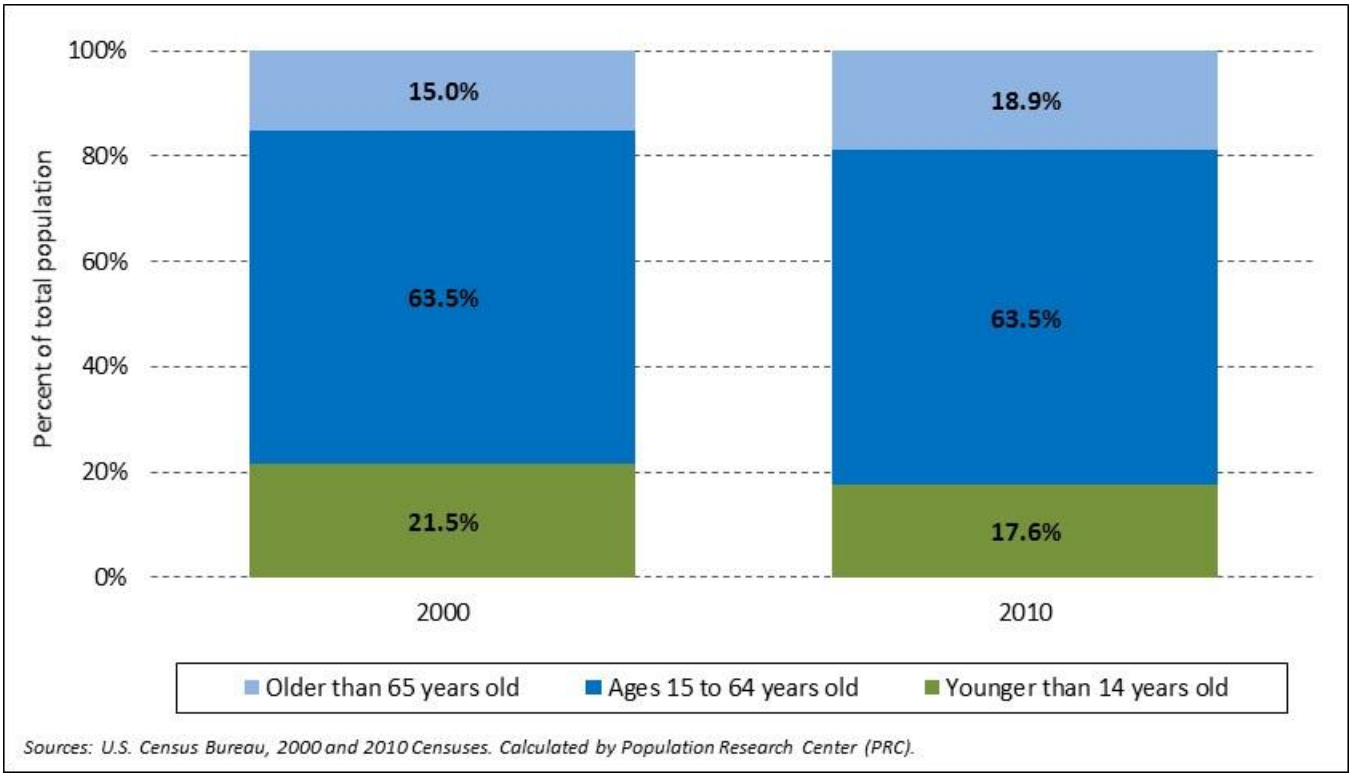
Note 1: For simplicity each UGB is referred to by its primary city's name.

Age Structure of the Population

Harney County's population is aging, a trend observed in most areas across Oregon and the nation. 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. Harney County saw the decreased births too, but only slightly, while the proportion of county population 65 or older increased between 2000 and 2010 (Figure 4). Further underscoring Harney County's trend in aging, the median age went up from about 40 in 2000 to 45 in 2010, an increase that is more than what is observed statewide and, in many cases, double the increase in age seen in many of Oregon's counties over the same time period.[1]

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

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



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]. Contrary to statewide trends, the overall population share of Hispanics within Harney County decreased from 2000 to 2010 (Figure 5), and the population share of White, non-Hispanics decreased over the same time period as the county recorded a loss in White, non-hispanic persons due to its overall population decrease. This decrease in population share of the Hispanic population and most 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 component change.

[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. Harney County—Hispanic or Latino and Race (2000 and 2010)

Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
Total population	*7,609*	*100.0%*	*7,422*	*100.0%*	*-187*	*-2.5%*
Hispanic or Latino	316	4.2%	294	4.0%	-22	-7.0%
Not Hispanic or Latino	7,293	95.8%	7,128	96.0%	-165	-2.3%
White alone	6,823	89.7%	6,648	89.6%	-175	-2.6%
Black or African American alone	9	0.1%	16	0.2%	7	77.8%
American Indian and Alaska Native alone	276	3.6%	227	3.1%	-49	-17.8%
Asian alone	39	0.5%	34	0.5%	-5	-12.8%
Native Hawaiian and Other Pacific Islander alone	4	0.1%	1	0.0%	-3	-75.0%
Some Other Race alone	5	0.1%	6	0.1%	1	20.0%
Two or More Races	137	1.8%	196	2.6%	59	43.1%

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

Births

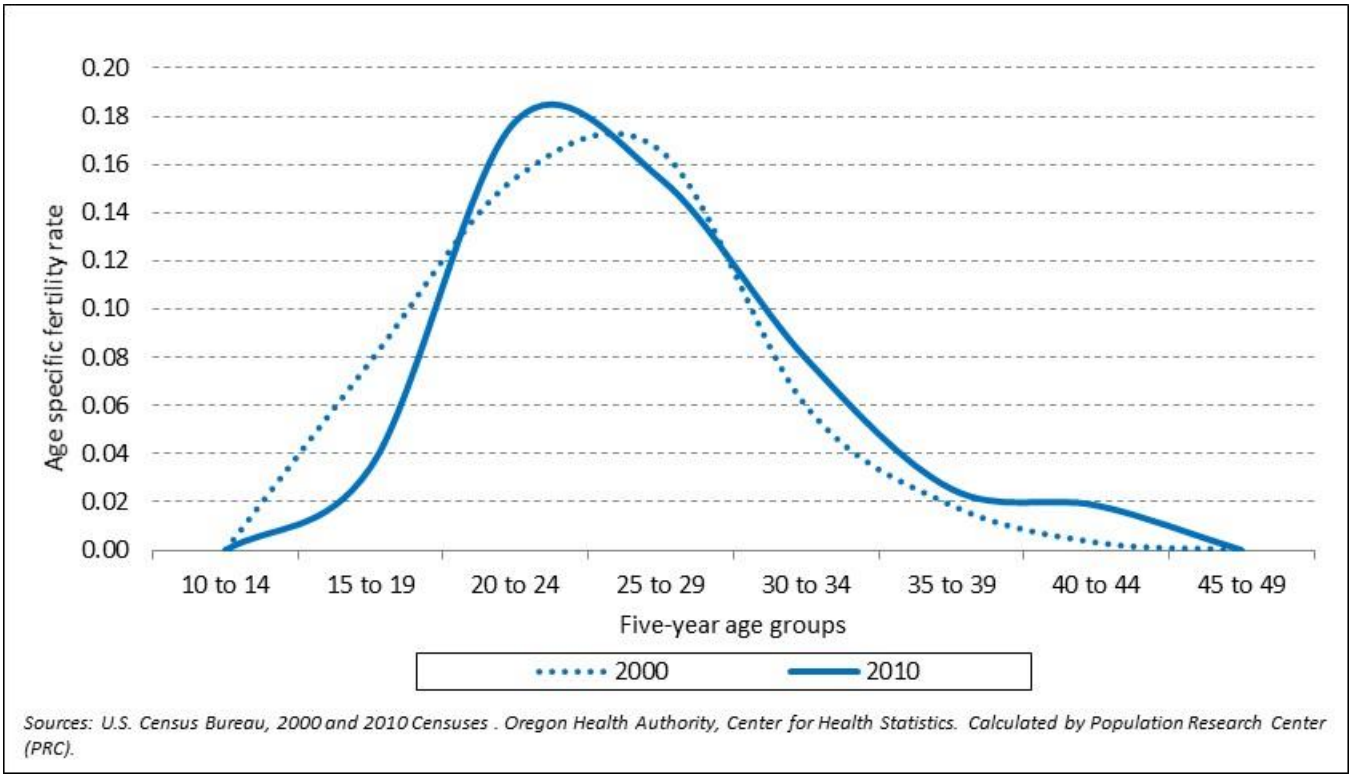
Historical fertility rates for Harney County do not mirror trends similar to Oregon as a whole. Total fertility rates increased in Harney County from 2000 to 2010, while they decreased for the state over the same time period (Figure 6). At the same time, fertility for women in their lower 20s marginally increased in Harney County while they decreased in Oregon as a whole (Figure 7 and Figure 8). Contrary to age specific fertility rate trends throughout the state, fertility rates for younger women in Harney County are actually higher in 2010 compared to earlier decades, even though they still choose to have children at an older age. County fertility changes are distinct from those of the state in two ways. First, total fertility in Harney County increased during the 2000s, which differed from the decrease observed statewide. Second, total fertility in the county remains well above *replacement fertility*, while for Oregon as a whole, total fertility continues to fall further below replacement fertility.

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

	2000	2010
Harney County	2.40	2.45
Oregon	1.98	1.80

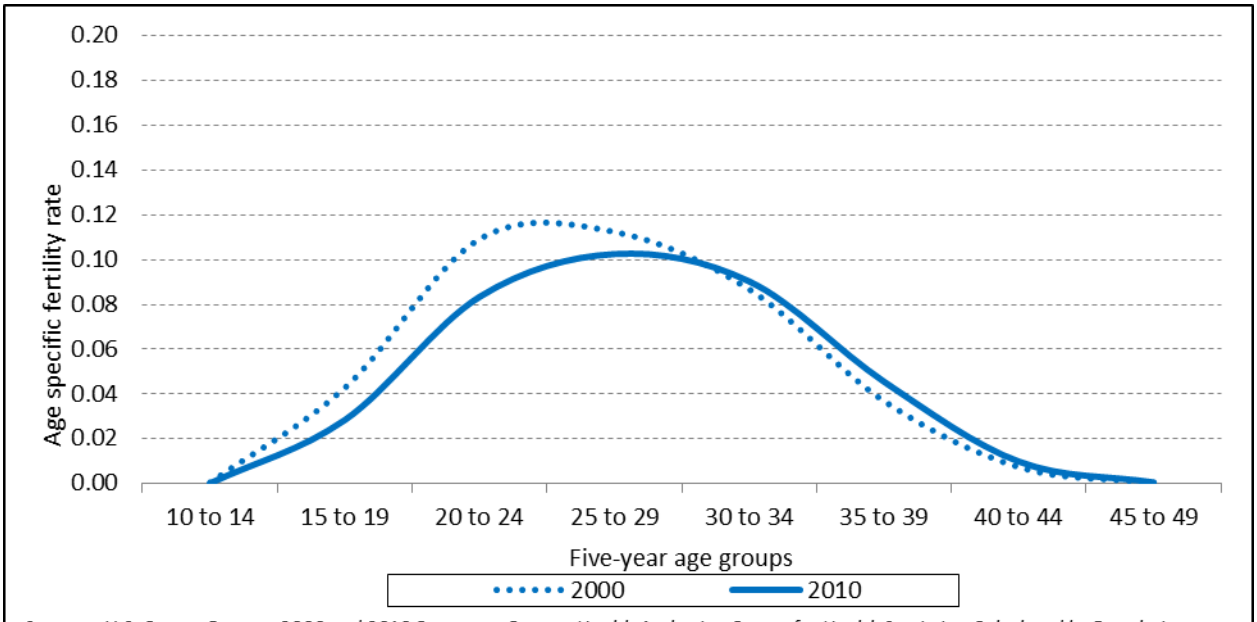
Sources: U.S. Census Bureau, 2000 and 2010 Censuses . Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).

Figure 7. Harney 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 within Hatney County. Generally the number of births fluctuates from year to year. For example, a decrease in births between two years could easily show an increase for a different time period; however for the 10-year period from 2000 to 2010 Harney county saw a decrease in births (Figure 9).

Figure 9. Harney County—Total Births (2000 and 2010)

	2000	2010	Absolute Change	Relative Change
Harney County	*94*	*88*	*-6*	*-6.4%*

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

Deaths

The population in Sherman County is aging and people are living longer. For Harney County in 2000, life expectancy for males was 76 years and for females was 81 years. By 2010, life expectancy had risen to 79 years for males and 88 years for females. For both Harney 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 between 2000 and 2010 (Figure 10).

Figure 10. Harney County—Total Deaths (2000 and 2010)

	2000	2010	Absolute Change	Relative Change
Harney County	*76*	*86*	*10*	*13.2%*

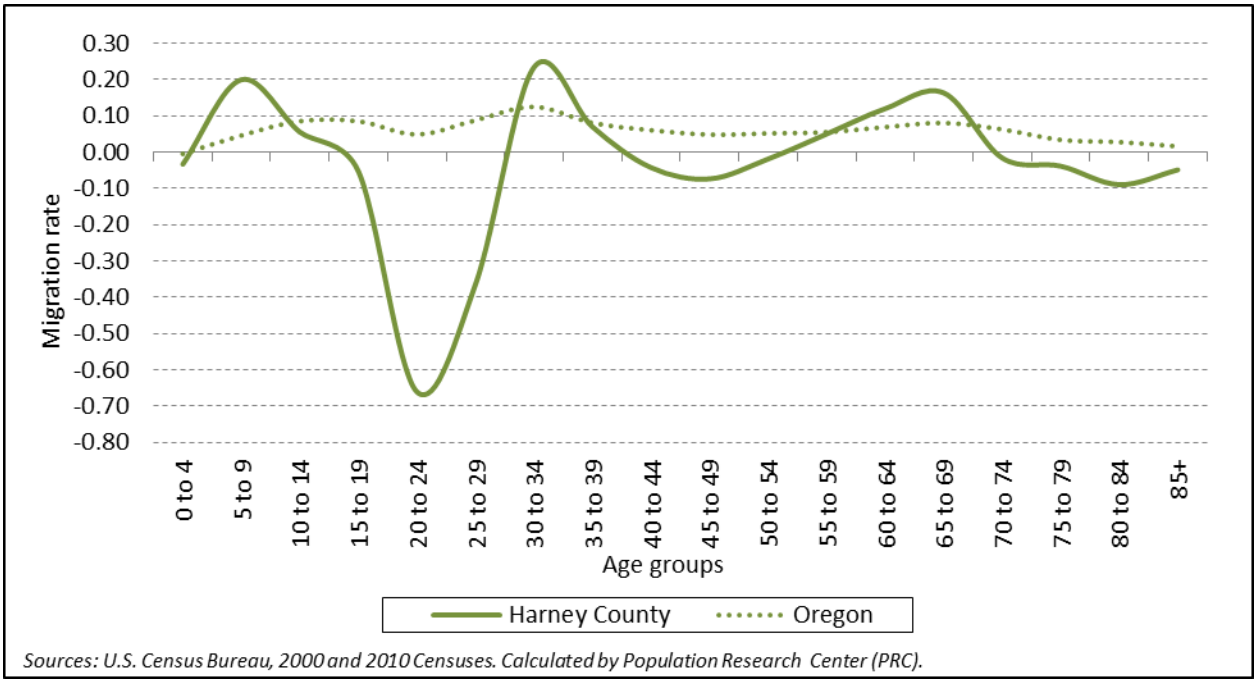
Sources: Oregon Health Authority, Center for Health Statistics. Aggregated by Population Research Center (PRC).

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 historical age-specific migration rates by five-year age group, both for Harney 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 aged migrants who likely moved into the county due to economic opportunities. Many in this group of 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. Also, retirees in Harney County have reported to move out in search of better health care services.

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

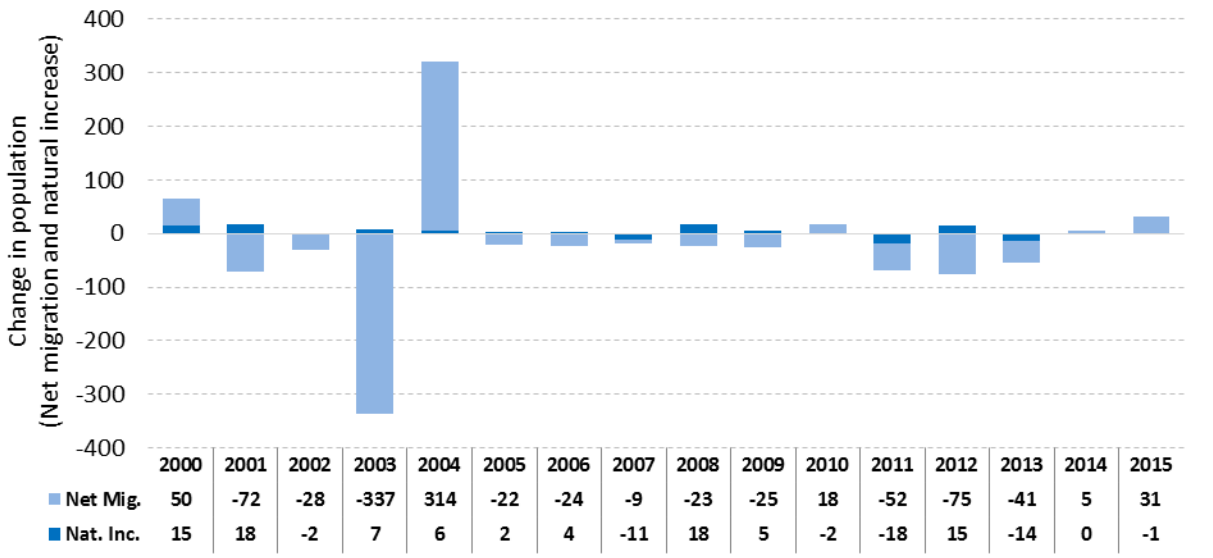


Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).

Historical Trends in Components of Population Change

In summary, Harney County's steady population decline in the 2000s was the result of a slow natural increase outweighed by net out-migration (Figure 12). On average there were a larger number of births relative to deaths, leading to a natural increase (more births than deaths) in 8 out of 15 years between 2000 to 2015. While net out-migration was the norm during most of the period between 2000 and 2013, this has shifted toward net in-migration in recent years. The county recorded fluctuating natural increases since 2000, however, most years recorded little to no change. Throughout the entire 15 year period, net migration has driven population change.

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



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Net Mig.	50	-72	-28	-337	314	-22	-24	-9	-23	-25	18	-52	-75	-41	5	31
Nat. Inc.	15	18	-2	7	6	2	4	-11	18	5	-2	-18	15	-14	0	-1

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

The total number of housing units in Harney County increased by a little less than 9 percent over the entire 2000 to 2010 period; this resulted in an increase of more than 300 housing units (Figure 13). Hines and the area outside UGBs accounted for the largest gains in housing units. Burns only gained a slight proportion of the county's total increase in housing units (20 units).

The rates of increase in the number of total housing units in the county, UGBs, and area outside UGBs are not necessarily representative of the direction and rate of change in their corresponding populations. The pattern of population and housing change in Hines and the area outside UGBs between 2000 and 2010 is relatively similar, however, the growth rates for housing may slightly differ from the rates for population because the numbers of total housing units are smaller than the numbers of persons. Population and housing patterns for Burns and the county as a whole, however, do not coincide; more units were added by 2010 while their total population decreased.

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

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010
Harney County	*3,533*	*3,835*	*0.8%*	*100.0%*	*100.0%*
Burns	1,531	1,551	0.1%	43.3%	40.4%
Hines	716	802	1.1%	20.3%	20.9%
Outside UGBs	1,286	1,482	1.4%	36.4%	38.6%

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

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

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 Harney County declined slightly; this was most likely due to slack in demand for housing as individuals experienced the effects of the Great Recession. All of the sub-areas posted similar slight declines in the occupancy rate except Burns.

Average household size, or PPH, in Harney County was 2.3 in 2010, only slightly lower than in 2000 (Figure 14). Harney County's PPH in 2010 was slightly lower than for Oregon as a whole, which had a PPH of 2.5. PPH varied across the two UGBs, with all of them falling between 2.1 and 2.5 persons per household in 2010. The area outside UGBs reported the highest county PPH at 2.5.

Figure 14. Harney 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
Harney County	*2.5*	*2.3*	*-0.2*	*85.9%*	*83.6%*	*-2.4%*
Burns	2.3	2.1	-0.2	85.6%	86.1%	0.5%
Hines	2.5	2.3	-0.3	92.6%	91.9%	-0.7%
Outside UGBs	2.6	2.5	-0.1	82.7%	76.5%	-6.2%

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 Harney County's population forecast[3]. The assumptions are derived from observations based on life events, as well as trends unique to Harney County. 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

During the forecast period, the population in Harney County is expected to age more quickly during the earlier years of the forecast period and then remain relatively stable over the forecast horizon. Fertility rates are expected to slightly decline throughout the forecast period. Total fertility in Sherman County is forecast to decrease from 2.44 children per woman in 2015 to 2.37 children per woman by 2065.

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 is projected to follow the statewide trend of increasing life expectancy throughout the forecast period—progressing from a life expectancy of 82 years in 2010 to 91 in 2060. However, in spite of increasing life expectancy and the corresponding increase in survival rates, Harney County's aging population and large population cohort reaching a later stage of life will increase the overall number of deaths throughout the forecast period.

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 Harney County. Net out-migration of younger persons and net in-migration of middle-age individuals will persist throughout the forecast period. Countywide average annual net migration is expected to increase from 18 net out-migrants in 2015 to 27 net in-migrants in 2035. Over the last 31

[3] 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.

years of the forecast period, average annual net migration is expected to decrease gradually from 31 net in-migrants in 2040 to 9 in 2065. Net in-migration is expected to account for most of the Harney County's population growth, if any, throughout the entire forecast period.

Assumptions for Sub-Areas

Rates of population growth for the smaller UGBs are assumed to be determined by corresponding growth in the number or the 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.

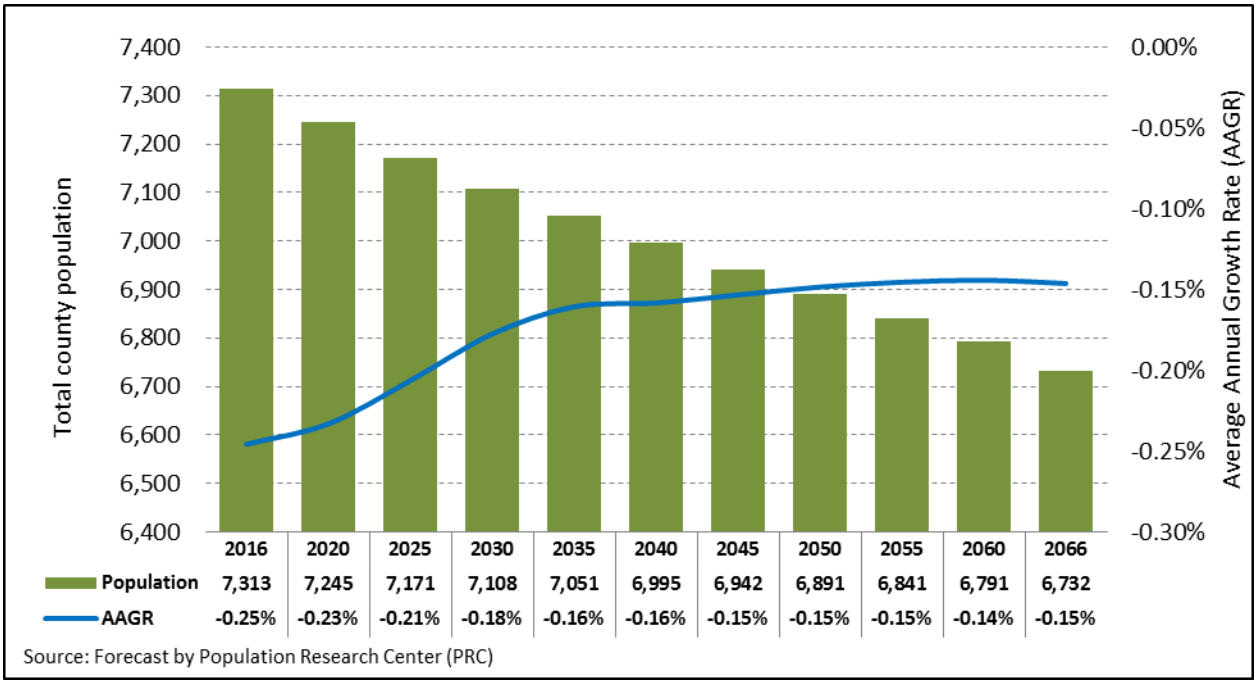
PPHs are assumed to be fairly stable over the forecast period. Occupancy rates are assumed to be steady for Burns UGB, but will expect a gradually decreasing trend for Hines and outside UGB Area over the future 50 years. All sub-areas are assumed to experience some population losses. For county sub-areas 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 Harney County, countywide and sub-area populations are expected to decrease over the forecast period. The countywide population growth rate is forecast to consistently decrease from 2016 and on throughout the forecast period. Forecasting tapered population growth is driven by both an aging population—contributing to a steady increase in deaths up to 2040 at which point the numbers will slowly decrease—as well as the expectation of decreasing in-migration and a continuous natural decrease over the second half of the forecast period. The combination of these factors will likely result in a slowly increase for the negative population growth rate as time progresses through the forecast period.

Harney County's total population is forecast to decrease by about 580 persons (8 percent) from 2016 to 2066, which translates into a total countywide population of more than 6,700 in 2066 (Figure 15). The population is forecast to decrease at a decreasing rate of 0.2 percent in the the first half of the forecast period (2016-2035) and continue decreasing at a consistent rate—approximately 0.1 percent—throughout the second half. This anticipated slower population decrease in the second half of the forecast period is based on the assumption that the number of deaths will decrease.

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



Harney County's only two UGBs, Burns and Hines, are forecast to experience a combined population decrease of 170 throughout the entire forecast period, losing most persons during the 2035-2066 period. The area outside UGBs is forecast to lose 410 persons at a stable rate throughout the entire forecast period.

Figure 16. Harney County and 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
Harney County	*7,313*	*7,051*	*6,732*	*-0.2%*	*-0.1%*	*100.0%*	*100.0%*	*100.0%*
Burns	2,955	2,953	2,935	0.0%	0.0%	40.4%	41.9%	43.6%
Hines	1,700	1,646	1,548	-0.2%	-0.2%	23.2%	23.3%	23.0%
Outside UGBs	2,659	2,452	2,249	-0.4%	-0.3%	36.4%	34.8%	33.4%

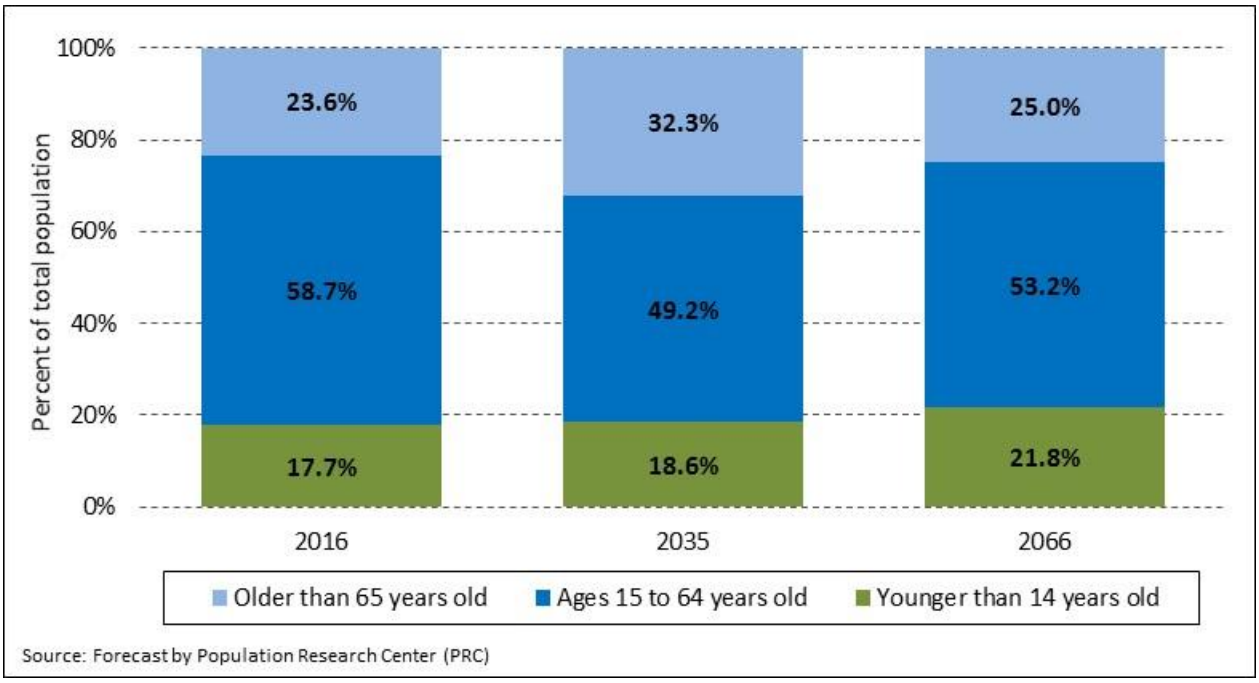
Source: Forecast by Population Research Center (PRC)

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

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 24 percent to about 32 percent; however the proportion of the population 65 or older is expected to decrease from 2035 to 2066 (Figure 17). For a more detailed look at the age structure of Harney County's population see the forecast table published to the forecast program website (http://www.pdx.edu/prc/opfp).

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

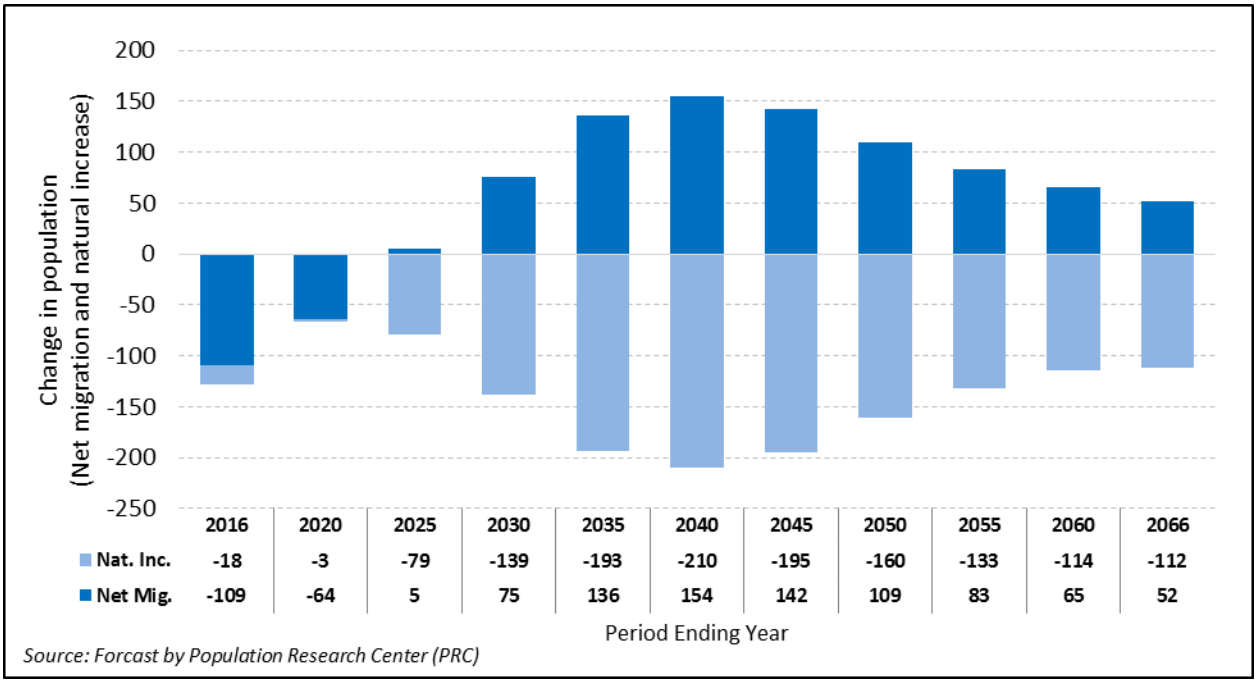


As the countywide population ages in the near-term—contributing to a slow-growing population of women in their years of peak fertility—and more women choose to have fewer children, the increase in average annual births is expected to decline; this combined with the rise in number of deaths, is expected to cause a natural increase to a decrease in magnitude between 2015 and 2040 (Figure 18).

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

In summary, natural decrease outweighing net in-migration is expected to lead to population decline throughout the entire forecast period (Figure 18).

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



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 Burns and Hines did not submit survey responses.

Harney County—11/9/2015						
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 Quarters Facilities**	**Future Employers**	**Infrastructure**	**Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes**
Overall moderate population decline throughout the county as working class employment has declined substantially over the last decade. No observed population spike in minority racial or ethnic groups. Elderly population shares are gradually rising due	When the two largest (private sector) employers closed in the mid-2000s, there may have been as many as 70-100 dwellings empty. That number has stabilized gradually to around an	No planned housing development over the last decade and or the foreseeable future.	Potential for existing residential care facility expanding in the near future, however no plans or permits have been applied for to date.	- Pacific Foods plans to move into old mill site within the next two years. The business will start within 12-18 months, and initially bring 25-40 jobs and 200 possible in over the next 5 years.	City of Burns Municipal Airport improvements: runway and tarmac renovations including the taxi lane major renovation (complete rebuild improvement) ($1,000,000 total project valuation). Replacement of lighting system in planning stages. New fire suppression system (Connect	**Promos:** Buildable lands inventory for commercial and industrial expansion within city limits of Burns and Hines adds potential for commercial, industrial, and residential growth. Infrastructure requires minimal private investment to initiate expansion into undeveloped areas. In 2008, a completely new district hospital and renovated medical clinic was established. After the renovation, the Hospital had a roughly 20% bump in

Harney County—11/9/2015						
to low cost of living within the Burns/Hines area. This may affect the average number of persons per household (decline) due to aging population.	empty housing stock of roughly 15-20 homes within the Burns-Hines area. During that same period, roughly 150-200 homes county-wide were on the market. That number has also stabilized to a present stock of roughly 60-75 homes. In 2007-2011, new housing from zoning approvals was at an all-			- Small diameter saw mill may locate to the same old mill site within the next year. It will bring 8-10 jobs. - The golf resort located at the Silvies Valley Ranch will bring provide roughly 40 jobs.	Oregon project $518,000) completed over the last few years.	employment. **Hinders:** Mill industry and RV parts industries closed from 2007-2009. 500 total jobs lost in that time period. Two largest private employers in the county lost in two year period. Natural resources management employment (private forest & agriculture) have been heavily impacted by the endangered species act and other litigious actions across the county. Also, Lack of major interstate transportation connections for commercial and industrial freight limits growth of both sectors. Rail has not been available in county for decades.

Harney County—11/9/2015						
	time low compared to housing permits counted from the early 1980's-2000's (year by year). Over the last 4 years, new housing approvals (county) have averaged 9/year, with an average of 5 replacements over that same period (replacement units/demolished units).					

Harney County—11/9/2015	
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies	City of Burns initiating major update to Airport Master Plan. Document will provide a contemporary guidance document for development and enhancements of the facility. In 2009, the Cities of Burns and Hines in collaboration with Harney County and the Burns Paiute Tribe, updated local economic and housing studies in an effort to establish existing industrial lands developmentally-constricted by floodzone and other factors. The assessment resulted in a re-designation of 40 acres to industrial land within Burns City limits along Monroe street.
Other information (e.g. planning documents, email correspondence, housing development survey)	

Burns—Harney 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 Quarters 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						

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

Hines—Harney County —NO SURVEY RESPONSE

Hines—Harney 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 Quarters 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						

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

Appendix B: Specific Assumptions

Burns

The 5-year average annual housing unit growth rate is assumed to slightly decline. The overall annual average is close to zero percent throughout the forecast period, a rate that is marginally lower than the 2010-2015 average level. The occupancy rate is assumed to be stable at 86 percent throughout the 50-year horizon. PPH is assumed to stay steady at 2.15 over the forecast period. The group quarters population is assumed to stay at the average level after 2010s.

Hines

The 5-year average annual housing unit growth rate is assumed to gradually decline throughout the forecast period, which is consistent with the historical trend during the 2000s. The occupancy rate is assumed to gradually decrease, and averages above 89 percent throughout the 50-year horizon. PPH is assumed to be stable at 2.25 over the forecast period. The group quarters population is assumed to remain at the average level after 2010.

Outside UGBs

The 5-year average annual housing unit growth rate is assumed to gradually decline throughout the forecast period, and the overall 50-year annual average is slightly lower than the average growth rate between 2010 and 2015 period. The occupancy rate is assumed to gradually decrease, and averages above 70 percent throughout the 50-year horizon. PPH is assumed to be stable at 2.3 over the forecast period. The group quarters population is assumed to remain at zero.

Appendix C: Detailed Population Forecast Results

Figure 19. Harney 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	388	406	386	389	397	414	430	439	440	440	444	444
05-09	442	424	451	436	445	458	479	494	496	494	497	498
10-14	466	461	441	477	468	481	496	515	522	522	522	523
15-19	444	450	449	437	480	474	489	500	511	516	518	518
20-24	347	298	307	314	311	345	341	349	351	356	360	360
25-29	272	293	246	259	269	269	299	294	295	295	300	302
30-34	366	291	327	279	298	311	312	345	333	333	334	336
35-39	411	401	304	346	300	323	338	337	366	352	353	353
40-44	383	401	393	302	351	306	330	343	337	364	351	351
45-49	377	362	386	385	301	351	307	328	336	327	355	353
50-54	485	370	355	385	389	306	358	311	327	333	326	331
55-59	581	505	363	355	390	398	314	366	313	327	335	333
60-64	626	616	520	381	378	418	427	336	384	327	344	346
65-69	610	659	652	559	415	415	460	467	362	411	352	355
70-74	454	557	619	624	543	408	410	450	450	347	396	384
75-79	302	365	477	540	555	486	368	368	398	395	308	316
80-84	180	195	245	330	380	397	348	265	262	281	281	268
85+	178	192	251	310	382	434	435	383	355	369	363	362
Total	**7,313**	**7,245**	**7,171**	**7,108**	**7,051**	**6,995**	**6,942**	**6,891**	**6,841**	**6,791**	**6,742**	**6,732**

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

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

Area/Year	2016	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2066
Harney County	7,313	7,245	7,171	7,108	7,051	6,995	6,942	6,891	6,841	6,791	6,742	6,732
Burns UGB	2,955	2,955	2,955	2,955	2,953	2,951	2,949	2,946	2,943	2,940	2,936	2,935
Hines UGB	1,700	1,691	1,676	1,661	1,646	1,630	1,615	1,599	1,583	1,567	1,551	1,548
Outside UGB Area	2,659	2,599	2,539	2,492	2,452	2,414	2,378	2,346	2,315	2,284	2,255	2,249

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