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Coordinated Population Forecast for Josephine County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2015-2065

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Coordinated Population Forecast

2015

Through

2065

Josephine County

Urban Growth Boundaries (UGB) & Area Outside UGBs

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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 forecast methods employed. This document also describes the 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., 2015-2065). These tables are also located in *Appendix C* of this report.

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Executive Summary

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.

Josephine County's total population as a whole has grown slowly since 2000; with an average annual growth rate of less than one percent between 2000 and 2010 (Figure 1); however some of its sub-areas experienced more rapid population growth during the 2000s. Grants Pass and Cave Junction posted average annual growth rates at 2.1 and 1.6 percent, respectively, during the 2000 to 2010 period.

Josephine County's positive population growth in the 2000s was the result of substantial net in-migration. Meanwhile an aging population not only led to an increase in deaths, but also resulted in a smaller proportion of women in their childbearing years. This along with more women choosing to have fewer children and have them at older ages has led to slow growth in the number of births. The growing number of deaths and shrinking number of births led to natural decrease—more deaths than births—in every year from 2000 to 2014. While net in-migration outweighed natural decrease during the early and middle years of the last decade, the gap between these two numbers shrank during the later years—bringing population decline in 2012. Since 2012 net in-migration has increased, driving population increase for 2013 and 2014.

Forecast

Total population in Josephine County as a whole as well as within its sub-areas will likely grow at a slightly faster pace in the first 20 years of the forecast period (2015 to 2035) relative to the last 30 years (Figure 1). The tapering of growth rates is largely driven by an aging population—a demographic trend which is expected to lead to natural decrease (more deaths than births). As natural decrease occurs over time population growth is expected to become increasingly reliant on net in-migration.

Even so, Josephine County's total population is forecast to increase by more than 16,000 over the next 20 years (2015-2035) and by nearly 38,000 over the entire 50-year forecast period (2015-2065). Sub-areas that showed strong population growth in the 2000s are expected to experience similar rates of population growth during the forecast period.

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

	Historical			Forecast				
	2000	2010	AAGR (2000-2010)	2015	2035	2065	AAGR (2015-2035)	AAGR (2035-2065)
Josephine County	*75,726*	*82,713*	*0.9%*	*83,904*	*100,890*	*122,382*	*0.9%*	*0.6%*
Cave Junction[1]	1,780	2,199	2.1%	2,395	3,177	4,351	1.4%	1.1%
Grants Pass	32,908	38,512	1.6%	39,749	53,787	73,682	1.5%	1.1%
Outside UGBs	41,038	42,002	0.2%	41,761	43,926	44,349	0.3%	0.0%

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

[1] *For simplicity each UGB is referred to by its primary city's name.*

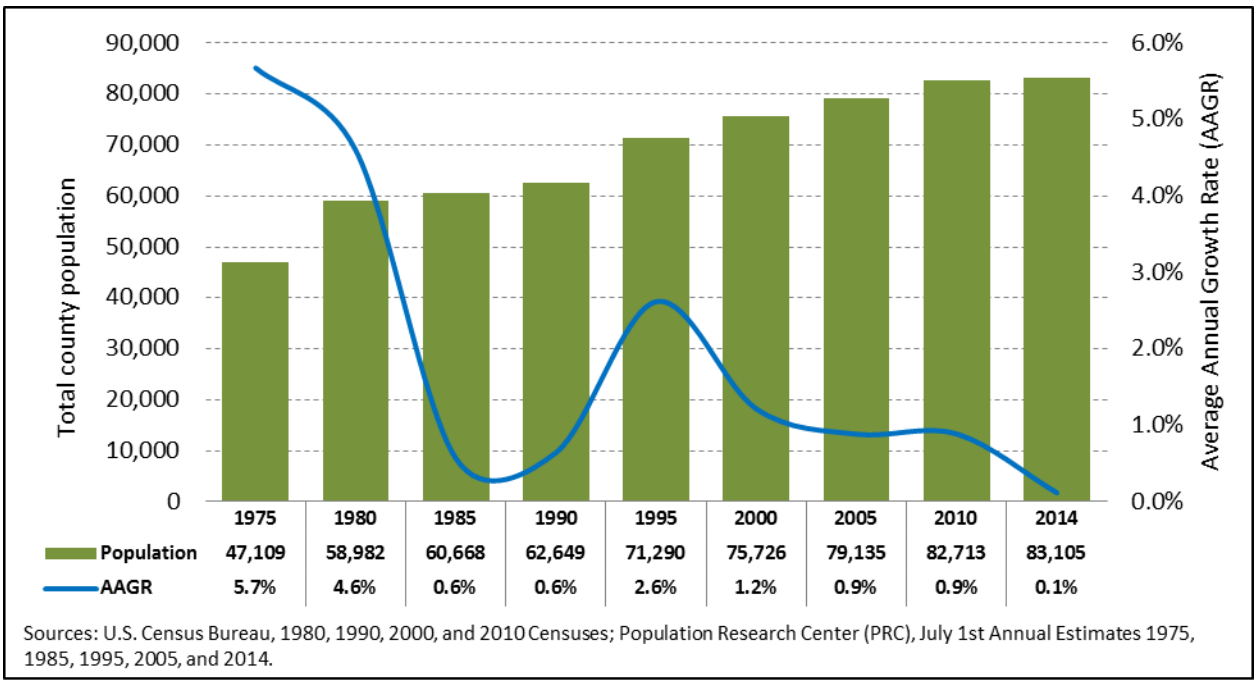
Historical Trends

Different growth patterns occur in different parts of the county. Each of Josephine 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 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, population growth rates for the county are collectively influenced by local trends within its sub-areas.

Population

Josephine County's total population grew by about 76 percent between 1975 and 2014—from roughly 47,000 in 1975 to more than 83,000 in 2014 (Figure 2). During this approximately 40-year period, the county realized the highest growth rates during the 1970s, which coincided with a period of relative economic prosperity. During the early 1980s, challenging economic conditions, both nationally and within the county, yielded a sharp decline in population growth. Since 1985, the county has experienced population growth averaging a little less than one percent per year. During the 2000s, population growth remained positive and averaged nearly one percent per year, in spite of the Great Recession.

Figure 2. Josephine County—Total Population by Five-year Intervals (1975-2010 and 2010-2014)



Sources: U.S. Census Bureau, 1980, 1990, 2000, and 2010 Censuses; Population Research Center (PRC), July 1st Annual Estimates 1975, 1985, 1995, 2005, and 2014.

Josephine County's population change is the sum of its parts, in the sense that countywide population change is the combined population growth or decline within each UGB and the area outside UGBs. During the 2000s, Josephine County's average annual population growth rate was slightly less than one percent, but the growth rate varied to a large degree between urban and non-urban areas across the county. All of the UGBs realized average annual growth rates that were well above one percent, with

Cave Junction recording the highest at more than two percent (Figure 3). At the same time the area outside UGBs experienced an average annual growth rate well below that of the urban areas and due to this, declined as a share of total county population between 2000 and 2010.

Figure 3. Josephine 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
Josephine County	*75,726*	*82,713*	*0.9%*	*100.0%*	*100.0%*
Cave Junction[1]	1,780	2,199	2.1%	2.4%	2.7%
Grants Pass	32,908	38,512	1.6%	43.5%	46.6%
Outside UGBs	41,038	42,002	0.2%	54.2%	50.8%

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

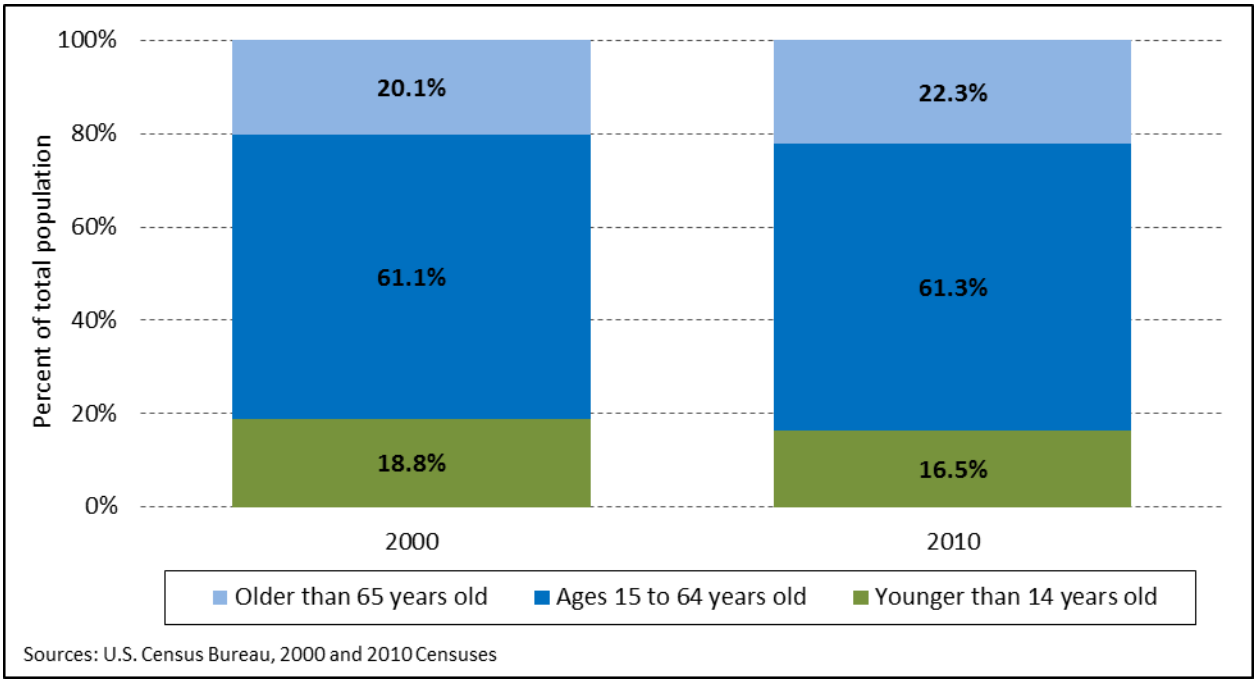
[1] For simplicity each UGB is referred to by its primary city's name.

Age Structure of the Population

Similar to most areas across Oregon, Josephine County's population is aging. 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. This demographic trend underlies some of the population change that has occurred in recent years. From 2000 to 2010 the proportion of county population 65 or older grew from just over 20 percent to approximately 22 percent (Figure 4).[1] Further underscoring the countywide trend in aging, the median age went from about 43 in 2000 to 47 in 2010.[2]

[1] The population over the age of 65 calculated as a proportion of the working age population is known as the elderly dependency ratio. In general this dependency ratio has been growing more rapidly in recent years.
[2] Median age is sourced from the U.S. Census Bureau's 2000 and 2010 Censuses

Figure 4. Josephine 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. The Hispanic population within Josephine County increased substantially from 2000 to 2010 (Figure 5), while the White, non-Hispanic population increased by a smaller amount (in relative terms) over the same time period. This increase in the Hispanic population and other minority populations brings with it several implications for future population change. First, both nationally and at the state level, fertility rates among Hispanic and minority women have tended to be higher than among White, non-Hispanic women. Second, Hispanic and minority households tend to be larger relative to White, non-Hispanic households.

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

Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
Total population	*75,726*	*100.0%*	*82,713*	*100.0%*	*6,987*	*9.2%*
Hispanic or Latino	3,229	4.3%	5,251	6.3%	2,022	62.6%
Not Hispanic or Latino	72,497	95.7%	77,462	93.7%	4,965	6.8%
White alone	69,233	91.4%	73,289	88.6%	4,056	5.9%
Black or African American alone	192	0.3%	295	0.4%	103	53.6%
American Indian and Alaska Native alone	844	1.1%	966	1.2%	122	14.5%
Asian alone	460	0.6%	667	0.8%	207	45.0%
Native Hawaiian and Other Pacific Islander alone	78	0.1%	117	0.1%	39	50.0%
Some Other Race alone	52	0.1%	77	0.1%	25	48.1%
Two or More Races	1,638	2.2%	2,051	2.5%	413	25.2%

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

Births

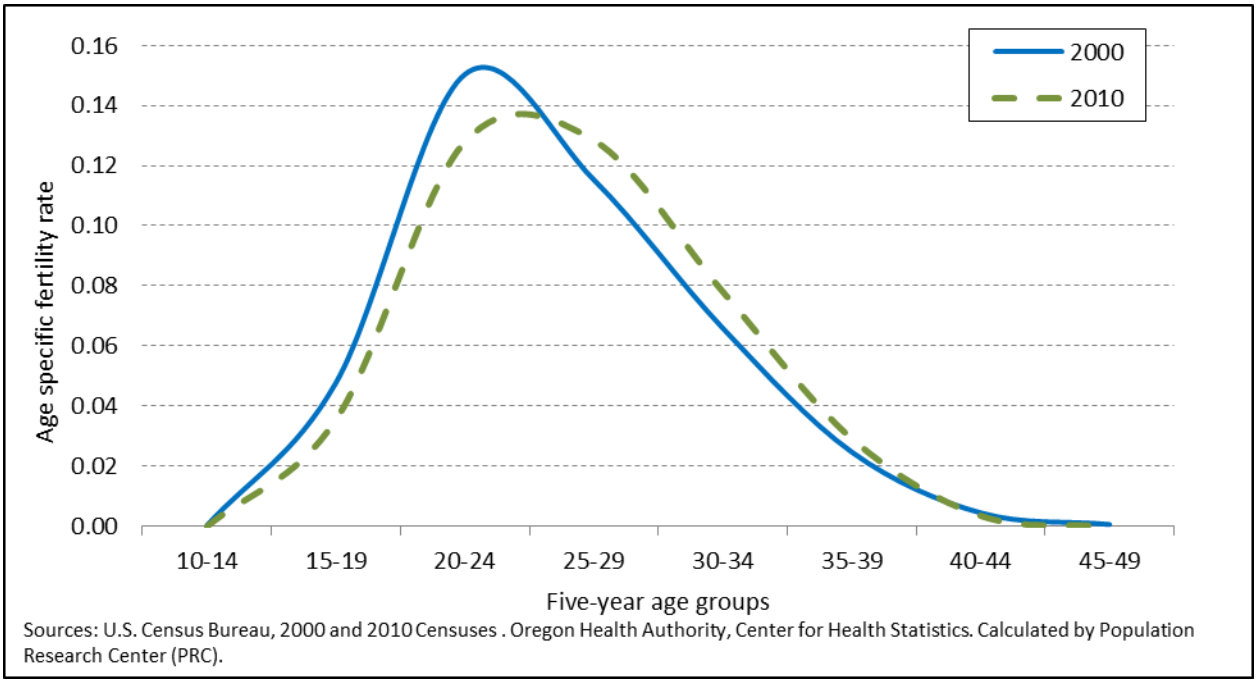
Historical fertility rates for Josephine County mirror trends similar to Oregon as a whole; while total fertility rates decreased for both the county and state from 2000 to 2010 (Figure 6), fertility for older women marginally increased in both Josephine County and Oregon (Figure 7 and Figure 8). As Figure 7 demonstrates, fertility rates for younger women in Josephine County are lower in 2010 compared to 2000, and women are choosing to have children at older ages. While these statistics largely mirror statewide changes, county fertility changes are distinct from those of the state in two ways. First, the decline in total fertility in Josephine County during the 2000s was less pronounced than the statewide decline during this same period. At the same time, total fertility in the county remains just below *replacement fertility*. Second, while fertility among older women did increase within the county it actually increased the most among the upper range of younger women.

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

	2000	2010
Josephine County	2.05	2.01
Oregon	1.98	1.79

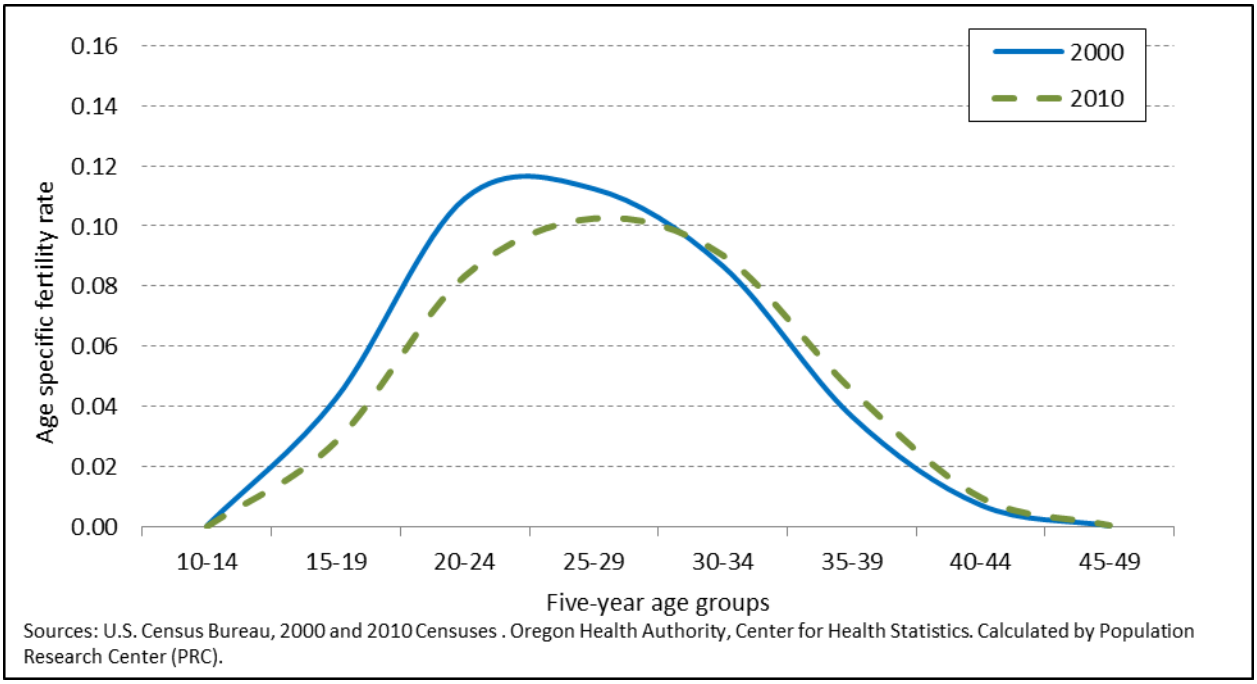
Sources: U.S. Census Bureau, 2000 and 2010 Censuses.
Oregon Health Authority, Center for Health Statistics.
Calculations by Population Research Center (PRC).

Figure 7. Josephine 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. Please note that 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 saw an increase in births (Figure 9).

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

	2000	2010	Absolute Change	Relative Change	Share of County 2000	Share of County 2010
Josephine County	*762*	*793*	*31*	*4.1%*	*100.0%*	*100.0%*
Cave Junction[1]	57	35	-22	-39.1%	7.5%	4.4%
Grants Pass	414	464	50	12.0%	54.4%	58.5%
Outside UGBs	290	294	4	1.3%	38.1%	37.1%

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

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

Deaths

The population in the county as a whole is aging, and contrary to the statewide trend, people aren't necessarily living longer.[3] For Josephine County in 2000, life expectancy for males was 75 years and for females was 80 years. By 2010, life expectancy had decreased slightly for males and increased marginally for females. For both Josephine 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. Josephine County and Sub-Areas—Total Deaths (2000 and 2010)

	2000	2010	Absolute Change	Relative Change	Share of County 2000	Share of County 2010
Josephine County	*964*	*1,094*	*130*	*13.5%*	*100.0%*	*100.0%*
Grants Pass[1]	339	533	194	57.3%	35.1%	48.7%
All other areas[2]	625	561	-64	-10.2%	64.9%	51.3%

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

[1] For simplicity the Grants Pass UGB is referred to by its primary city's name.

[2] All other areas includes the Cave Junction UGB 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

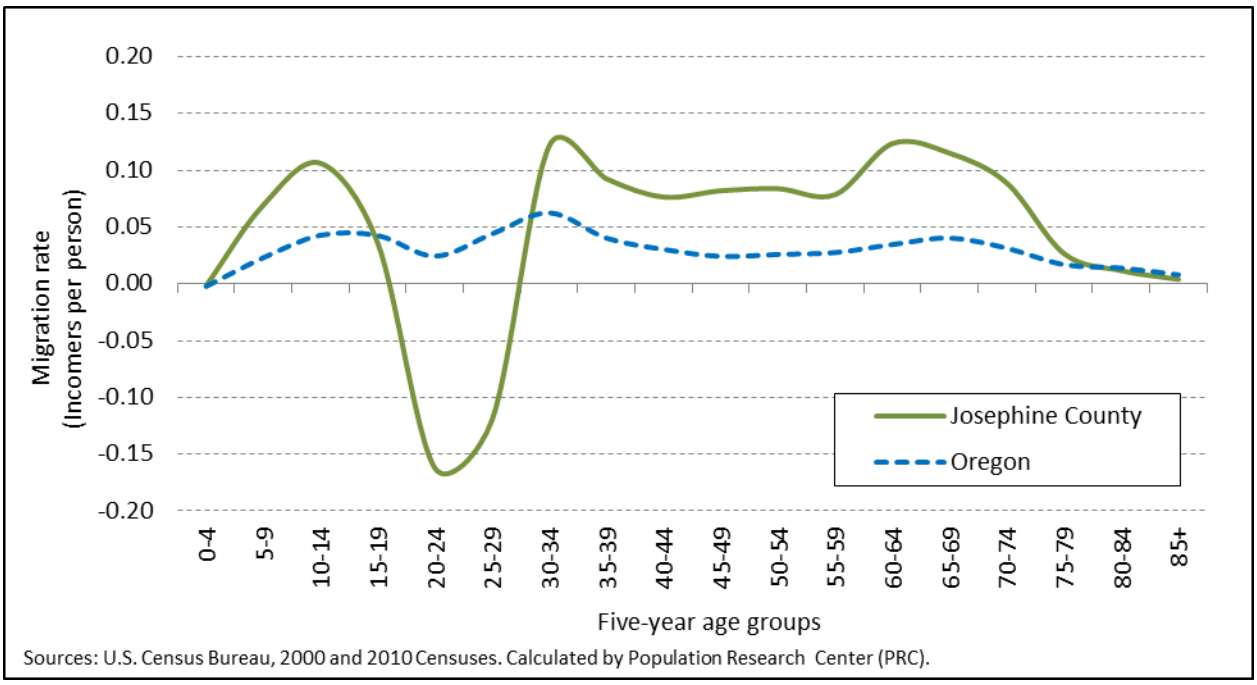
The propensity to migrate is strongly linked to age and stage of life. As such, age-specific migration rates are critically important for assessing these patterns across five-year age cohorts. Figure 11 shows the historical age-specific migration rates by five-year age group, both for Josephine County and Oregon. The migration rate is indicated 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 the

[3] Researchers have found evidence for a widening rural-urban gap in life expectancy. This gap is particularly apparent between race and income groups. This 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 Preventive Medicine 46, no. 2 (2014): e19-e29.*

county attracted a large number of middle-aged to older migrants who likely moved into the county for work-related reasons, moved there to retire, or moved to be closer to family members.

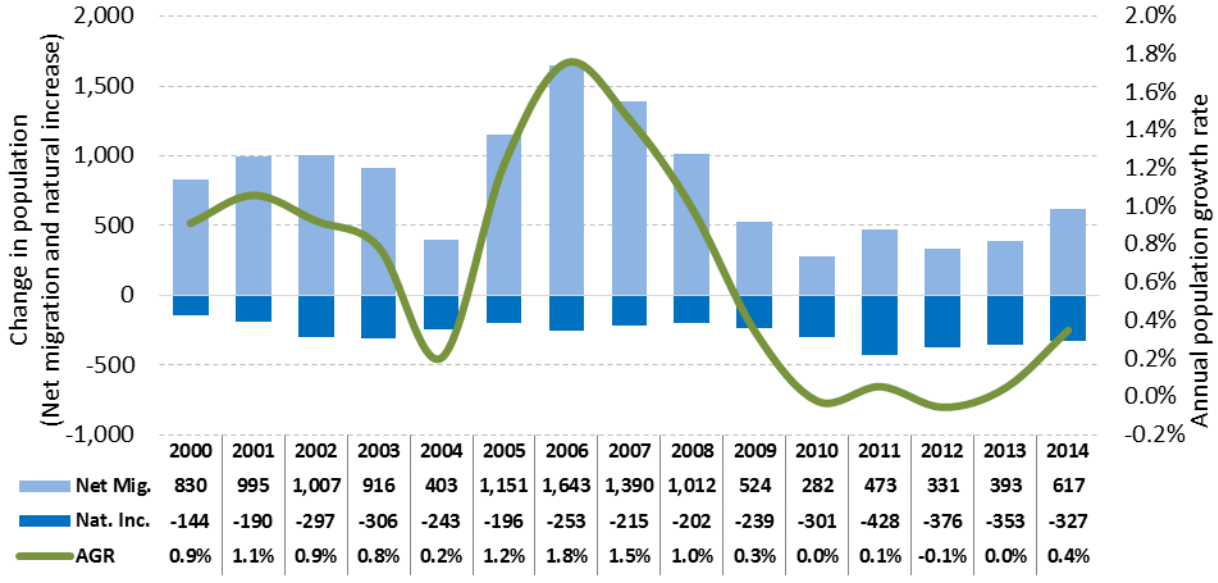
Figure 11. Josephine County and Oregon—Five-year Migration Rates (2000-2010)



Historical Trends in Components of Population Change

In summary, Josephine County's positive population growth in the 2000s was the direct result of substantial net in-migration (Figure 12). Meanwhile an aging population not only led to an increase in deaths, but also resulted in a smaller proportion of women in their childbearing years. This along with more women choosing to have fewer children and have them at older ages has led to slower growth in births. The growing number of deaths and shrinking number of births led to natural decrease—more deaths than births—in every year from 2000 to 2014. While net in-migration outweighed natural decrease during the early and middle years of the last decade, the gap between these two numbers shrank during the later years—bringing population decline in 2012. Since 2012 net in-migration has increased, driving population increase for 2013 and 2014.

Figure 12. Josephine County—Components of Population Change (2000-2010)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Net Mig.	830	995	1,007	916	403	1,151	1,643	1,390	1,012	524	282	473	331	393	617
Nat. Inc.	-144	-190	-297	-306	-243	-196	-253	-215	-202	-239	-301	-428	-376	-353	-327
AGR	0.9%	1.1%	0.9%	0.8%	0.2%	1.2%	1.8%	1.5%	1.0%	0.3%	0.0%	0.1%	-0.1%	0.0%	0.4%

Sources: Population Research Center, July 1st Annual Estimates 2000-2014. Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).

Housing and Households

The total number of housing units in Josephine County increased rapidly during the middle years of this last decade (2000 to 2010), but this growth slowed with the onset of the national recession in 2007. Over the entire 2000 to 2010 period, the total number of housing units increased by 14 percent countywide; this equalled nearly 4,800 new housing units (Figure 13). Grants Pass captured the largest share of the growth in total housing units, with the area outside UGBs also seeing large shares of the countywide housing growth. In terms of relative housing growth, the Grants Pass UGB grew the most during the 2000s: its total housing units increased almost 23 percent (3,246 housing units) by 2010.

The rates of increase in the number of total housing units in the county, UGBs, and area outside UGBs are similar to the growth rates of their corresponding populations. The growth rates for housing may slightly differ than the rates for population because the numbers of total housing units are smaller than the numbers of persons, or the UGB has experienced changes in the average number of persons per household or in occupancy rates. However, the pattern of population and housing change in the county is relatively similar.

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

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010
Josephine County	*33,239*	*38,001*	*1.3%*	*100.0%*	*100.0%*
Cave Junction[1]	906	1,073	1.7%	2.7%	2.8%
Grants Pass	14,276	17,522	2.1%	42.9%	46.1%
Outside UGBs	18,057	19,406	0.7%	54.3%	51.1%

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

[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—in occupancy rates. From 2000 to 2010 the occupancy rate in Josephine County declined slightly; this was most likely due to slack in demand for housing as individuals experienced the effects of the Great Recession. A slight drop in occupancy rates was mostly uniform across all sub-areas, with the exception of the Cave Junction UGB which experienced an increase in its occupancy rate.

Average household size, or PPH, in Josephine County was 2.3 in 2010, down from 2.4 in 2000 (Figure 14). Josephine County's PPH in 2010 was lower than for Oregon as a whole, which had a PPH of 2.5. PPH was about the same across all sub-areas, with all of them falling around 2.3 to 2.4 persons per household.

Figure 14. Josephine 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
Josephine County	*2.4*	*2.3*	*-2.9%*	*93.3%*	*91.2%*	*-2.1%*
Cave Junction[1]	2.3	2.3	-0.8%	83.6%	88.7%	5.2%
Grants Pass	2.4	2.3	-1.7%	94.7%	91.9%	-2.8%
Outside UGBs	2.4	2.4	-3.8%	92.6%	90.7%	-1.9%

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

[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 Josephine County's population forecast as well as the forecasts for larger sub-areas.[4] The assumptions are derived from observations based on life course events, as well as trends unique to Josephine County and its larger sub-areas. Population change for smaller sub-areas is determined by the change in the number 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 householder. The forecast period is 2015-2065.

Assumptions for the County and Larger Sub-Areas

During the forecast period, as the population in Josephine County is expected to continue to age, fertility rates will begin to decline in the near term and continue on this path throughout the remainder of the forecast period. Total fertility in Josephine County is forecast to decrease from 2.0 children per woman in 2015 to 1.9 children per woman by 2065. 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 advances in medical technology. 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 77 years in 2010 to 85 in 2060. However, in spite of increasing life expectancy and the corresponding increase in survival rates, Josephine 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. Larger sub-areas within the county will experience a similar increase in deaths as their population ages.

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 Josephine County. Net out-migration of younger persons and net in-migration of older

[4] County sub-areas with populations greater than 8,000 in the forecast launch year were forecast using the *cohort-component method*. County sub-areas with populations less than 8,000 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.

individuals will persist throughout the forecast period. Countywide average annual net migration is expected to increase from 702 net in-migrants in 2015 to 1,413 net in-migrants in 2035. Over the last 30 years of the forecast period average annual net migration is expected to be more steady, increasing to 1,671 net in-migrants by 2065. With natural increase diminishing in its potential to contribute to population growth, net in-migration will become an increasingly important component of population growth.

Assumptions for Smaller Sub-Areas

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

Occupancy rates are assumed to stay relatively stable over the forecast period, while PPH is expected to decline slightly. Smaller household size is associated with an aging population in Josephine County and its sub-areas.

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 we account for them being constructed over the next 5-15 years. Finally, for county sub-areas where population growth has been flat or declined, and there is no planned housing construction, we hold population growth mostly stable with little to no change.

Supporting Information and Specific Assumptions

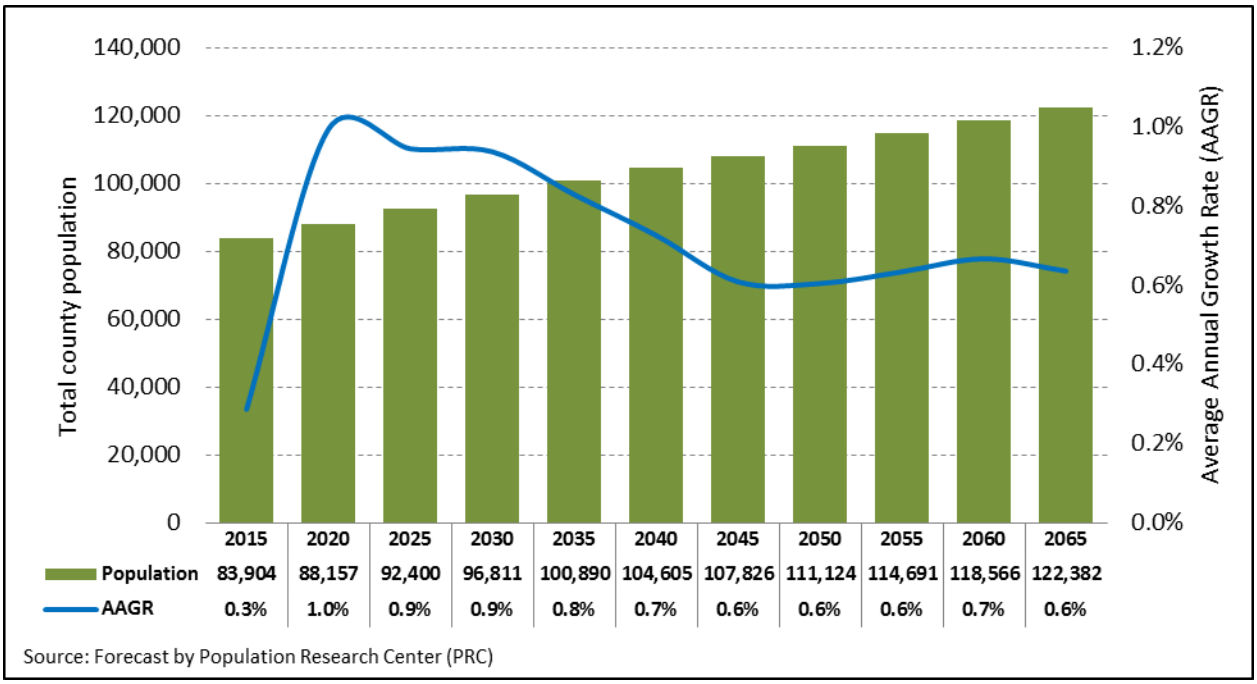
Assumptions used for developing population forecasts are partially derived from surveys and other information provided by local planners and agencies. See *Appendix A* for a summary of all submitted surveys and other information that was directly considered in developing the sub-area forecasts. Also, see *Appendix B* for specific assumptions used in each sub-area forecast.

Forecast Trends

Under the most-likely population growth scenario in Josephine County, countywide and sub-area populations are expected to increase over the forecast period. The countywide population growth rate is forecast to peak in 2020 and then decline over the forecast period. Forecasting tapered population growth is largely driven by an aging population, which is expected to contribute to an increase in deaths, as well as slow growth in births—fewer women within childbearing years (ages 10 to 49). The aging population is expected to in turn contribute to declining natural increase over the forecast period. Net migration is expected to remain relatively steady throughout the forecast period, not fully offsetting the declining natural increase. The combination of these factors will likely result in a slowly declining population growth rate as time progresses through the forecast period.

Josephine County's total population is forecast to grow by nearly 38,500 persons (46 percent) from 2015 to 2065, which translates into a total countywide population of 122,382 in 2065 (Figure 15). The population is forecast to grow at the highest rate—approximately one percent per year—in the near term (2015-2020). This anticipated population growth in the near term is based on two core assumptions: 1) Josephine County's economy will continue to strengthen in the next five years, and; 2) an increasing number of Baby Boomers will retire to the county. The single largest component of growth in this initial period is net in-migration. More than 5,400 net in-migrants are forecast for the 2015 to 2020 period.

Figure 15. Josephine County—Total Forecast Population by Five-year Intervals (2015-2065)



Source: Forecast by Population Research Center (PRC)

The Grants Pass UGB is forecast to increase by more than 14,000 persons from 2015 to 2035, growing from a total population of 39,749 in 2015 to more than 53,787 in 2035. Growth is expected to occur more slowly for Grants Pass during the second part of the forecast period, with total population

increasing to 73,682 by 2065. The Grants Pass UGB is expected to grow as a share of total county population.

Population outside UGBs is expected to grow by more than 2,200 people from 2015 to 2035, but is expected to grow at a much slower rate during the second half of the forecast period, only adding a little more than 400 people from 2035 to 2065. The population of the area outside UGBs is forecast to decline as a share of total countywide population over the forecast period, composing 50 percent of the countywide population in 2015 and about 36 percent in 2065.

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

	2015	2035	2065	AAGR (2015-2035)	AAGR (2035-2065)	Share of County 2015	Share of County 2035	Share of County 2065
Josephine County	*83,904*	*100,890*	*122,382*	*0.9%*	*0.6%*	*100.0%*	*100.0%*	*100.0%*
Grants Pass[1]	39,749	53,787	73,682	1.5%	1.1%	47.4%	53.3%	60.2%
Smaller UGBs[2]	2,395	3,177	4,351	1.4%	1.1%	2.9%	3.1%	3.6%
Outside UGBs	41,761	43,926	44,349	0.3%	0.0%	49.8%	43.5%	36.2%

Source: Forecast by Population Research Center (PRC)

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

Grants Pass, Josephine County's largest UGB, is expected to capture the largest share of total countywide population growth throughout the entire forecast period (Figure 17). At the same time the area outside UGBs are expected to see a large decrease in the share of countywide population growth as time progresses through the forecast period.

Figure 17. Josephine County and Larger Sub-Areas—Share of Countywide Population Growth

	2015-2035	2035-2065
Josephine County	*100.0%*	*100.0%*
Grants Pass[1]	82.6%	92.6%
Smaller UGBs[2]	4.6%	5.5%
Outside UGBs	12.7%	2.0%

Source: Forecast by Population Research Center (PRC)

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

[2] Smaller UGBs are those with populations less than 8,000 in forecast launch year.

The Cave Junction UGB is expected to grow by nearly 800 persons from 2015 to 2035, with an average annual growth rate of more than one percent (Figure 16). Similar to the larger sub-areas and the county as a whole, population growth rates are forecast to decline for the second half of the forecast period (2035 to 2065). Cave Junction is forecast to add nearly 1,200 people from 2035 to 2065.

Figure 18. Josephine County and Smaller Sub-Areas—Forecast Population and AAGR

	2015	2035	2065	AAGR (2015-2035)	AAGR (2035-2065)	Share of County 2015	Share of County 2035	Share of County 2065
Josephine County	*83,904*	*100,890*	*122,382*	*0.9%*	*0.6%*	*100.0%*	*100.0%*	*100.0%*
Cave Junction[1]	2,395	3,177	4,351	1.4%	1.1%	2.9%	3.1%	3.6%
Larger UGBs[2]	39,749	53,787	73,682	1.5%	1.1%	47.4%	53.3%	60.2%
Outside UGBs	41,761	43,926	44,349	0.3%	0.0%	49.8%	43.5%	36.2%

Source: Forecast by Population Research Center (PRC)

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

[2] Larger UGBs are those with populations greater than 8,000 in forecast launch year.

The Cave Junction UGB is expected to record a slight increase in the share of countywide population growth over the 50-year forecast period (Figure 19).

Figure 19. Josephine County and Smaller Sub-Areas—Share of Countywide Population Growth

	2015-2035	2035-2065
Josephine County	*100.0%*	*100.0%*
Cave Junction[1]	4.6%	5.5%
Larger UGBs[2]	82.6%	92.6%
Outside UGBs	12.7%	2.0%

Source: Forecast by Population Research Center (PRC)

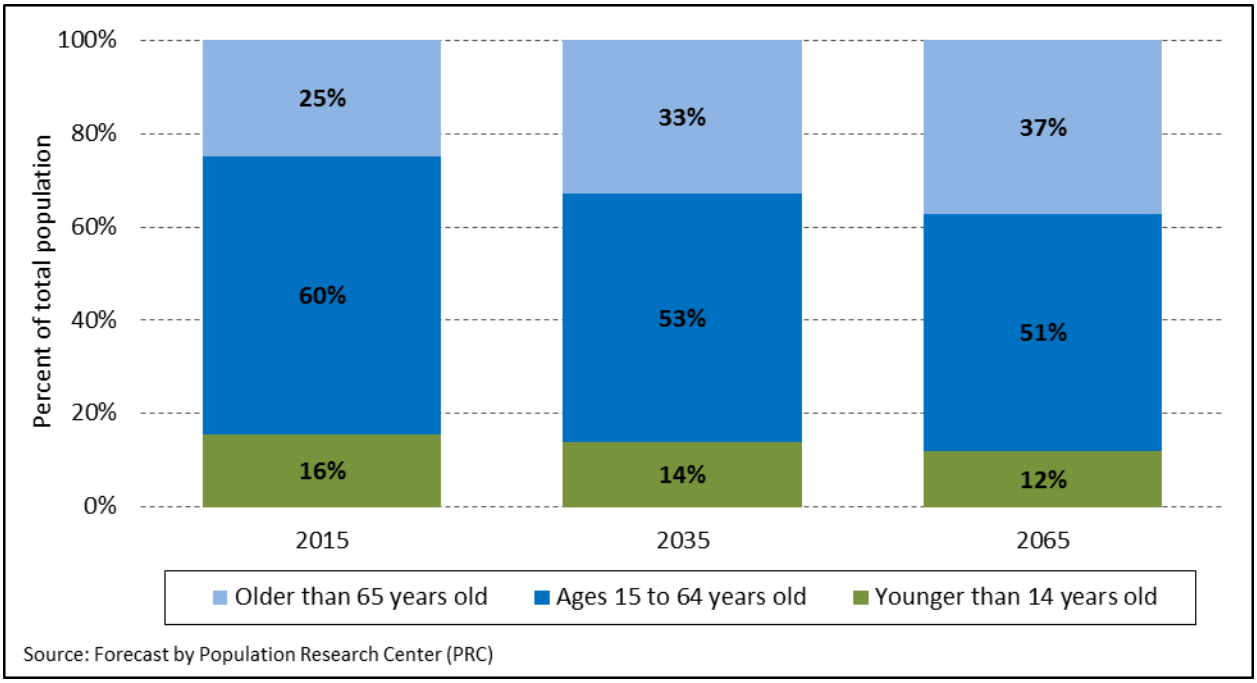
[1] For simplicity each UGB is referred to by its primary city's name.

[2] Larger UGBs are those with populations greater than 8,000 in forecast launch year.

Forecast Trends in Components of Population Change

As previously discussed, a key factor in both declining births and increasing deaths is Josephine County's aging population. From 2015 to 2035 the proportion of county population 65 or older is forecast to grow from about 25 percent to 33 percent. By 2065 about 37 percent of the total population is expected to be 65 or older (Figure 20). For a more detailed look at the age structure of Josephine County's population see the final forecast table published to the forecast program website (http://www.pdx.edu/prc/opfp).

Figure 20. Josephine County—Age Structure of the Population (2015, 2035, and 2065)

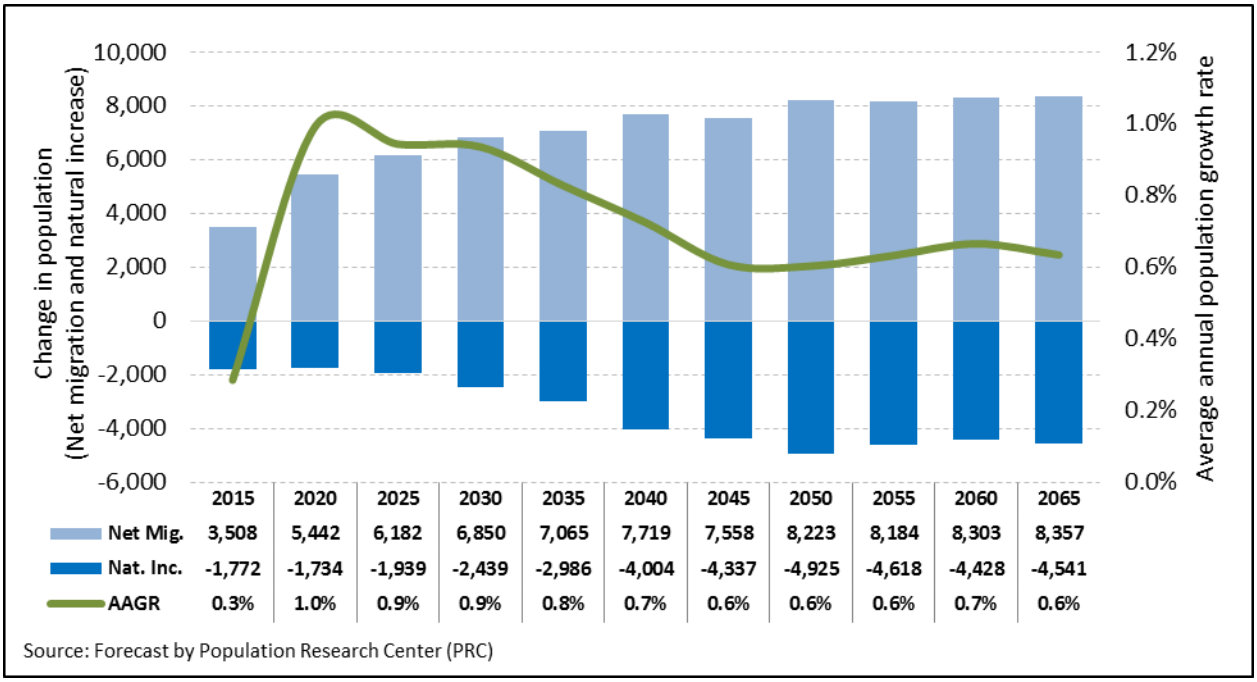


As the countywide population ages—contributing to a slow-growing population of women in their years of peak fertility—and more women choose to have fewer children and have them at an older age, average annual births are expected to decline, although slowly, over the forecast period; this combined with the rising number of deaths, will lead to a growing natural decrease (Figure 21). The total number of deaths countywide is expected to increase more rapidly in the near term, followed by slower growth during the later years of the forecast period. This pattern of initial growth in the number of deaths is explained by the relative size and aging patterns of the Baby Boom and Baby Boom Echo generations. For example, in Josephine County, deaths are forecast to begin to increase significantly during the 2025-2040 period as Baby Boomers age out, and peak again in the 2045-2050 period as children of Baby Boomers (i.e. the Baby Boom Echo) experience the effects of aging.

As the increase in the number of deaths outpaces births, population growth in Josephine County is expected to become increasingly reliant on net in-migration; and in fact positive net in-migration is expected to persist throughout the forecast period. The majority of these net in-migrants are expected to be middle-aged and older individuals.

In summary, growing natural decrease and steady net in-migration is expected to result in population growth reaching its peak in 2020 and then tapering through the remainder of the forecast period (Figure 21). An aging population is forecast to not only lead to an increase in deaths, but a smaller proportion of women in their childbearing years will likely result in a long-term decline in births. Net migration is expected to slowly increase throughout the forecast period, but it will not fully offset the growth in natural decrease.

Figure 21. Josephine County—Components of Population Change, 2015-2065



	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065
Net Mig.	3,508	5,442	6,182	6,850	7,065	7,719	7,558	8,223	8,184	8,303	8,357
Nat. Inc.	-1,772	-1,734	-1,939	-2,439	-2,986	-4,004	-4,337	-4,925	-4,618	-4,428	-4,541
AAGR	0.3%	1.0%	0.9%	0.9%	0.8%	0.7%	0.6%	0.6%	0.6%	0.7%	0.6%

Source: Forecast 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.

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 occupancy.

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 quarter population counts.

Occupancy rate: The proportion of total housing units that are occupied by an individual or group 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 in the U.S. This is commonly estimated to be 2.1 children per woman.

Appendix A: 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. Josephine County did not submit a survey response.

Cave Junction—Josephine County

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**
Mix of elderly, young families and single households. High percentage Caucasian.	Occupancy rates stable. There is a need for better quality rentals for low income people. Currently have a lot of old single wide trailers being used for rentals.	No inquiries or application for housing developments this year.	None	Possible Dollar Store to be built that will employ several people.	No new infrastructure to be built. Water and Sewer Master Plans have been updated to reflect current growth and future growth potential.	**Promos:** Have over 400 vacant subdivision lots for residential growth. Several vacant commercial lots available for development and employment. **Hinders:** Lack of local employment.

Cave Junction—Josephine County	
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies	None at this time. Not much growth happening in area.
Other information (e.g. planning documents, email correspondence, housing development survey)	Two single family dwellings are being constructed/placed. One is a stick frame structure and the other is a manufactured structure. The stick frame structure is being built in a “senior development” and the manufactured structure is being purchased by a middle age couple.

Grants Pass—Josephine County						
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**
Population pyramids developed from the 2013 OEA forecast are included in the adopted forecast described below. The OEA forecast indicates deaths will continue to exceed births during the forecast period, but growth will result from net in-migration. Rural areas outside Grants Pass have more than half the county population in older age cohorts, except over 85. Grants Pass has more than half the county	Some key observations are noted on Page 5 of the Housing Element update adopted in November 2014. (see Pages 5-8).	See attached. In 2014, there were 3 new applications for partitions and 1 new application for a 9 lot PUD tentative plan approval (8 new housing units). There were no other land division applications in 2014. In 2014, there was a site plan application approval for 2 duplexes (4 units). Phases 2&3 of Summerfield MAY be revised from single-family detached to townhouse. No app yet for change. Some	An estimate of Group Quarters needs over the next 20 years is provided in the Housing Element update adopted in 2014. Page 2 of the updated Housing Element estimates an additional 650 GQ population through 2043, (with 477 GQ pop through 2033 and an additional 173 from 2033-2043).	Future employment was developed using a 'safe harbor' method based on population outlined in the Economic Element.		**Promos:** **Hinders:**

Grants Pass—Josephine County						
population aged 85 and over.		vacant lot inventory remains in subdivisions that were previously platted.				
Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies	Josephine County adopted a coordinated population forecast in December 2014 for Josephine County, the City of Grants Pass, and the City of Cave Junction. This didn't change in any substantive way from the draft forecast submitted to PSU PRC in July 2014. That document provides the methodology used for the forecast, and it provides the coordinated forecast. The County forecast was based on the OEA final forecast issued in March 2013, but it replaced OEA's forecast population for 2011 and 2012 with PSU estimates for 2011 and 2012, and applied OEA's growth rates starting from the adjusted base year population. Josephine County and Grants Pass adopted an amended UGB and new Urban Reserve for Grants Pass in December 2014. The adopted forecast provides an estimate of the population in those areas, separated out from the estimate of population in the former UGB. The methodology of estimating population in the different areas is included in the forecast document. (See other observations above in 'Observations about Population Composition). County-to-County migration patterns will likely continue, with retirement age population continuing to include migration from California, which doesn't require local employment opportunities, and with housing price and tax differentials that makes retirement to this location attractive without reliance on wage income.					

Grants Pass—Josephine County	
Other information (e.g. planning documents, email correspondence, housing development survey)	In 2014 81 building permits were issued—80 of these permits were for single family dwellings (i.e., single family or manufactured homes). The 81 permits in 2014 were slightly lower that the 94 permits issued in 2013, but still well above the 39 permits issued in 2013. As of December, 2014 there were five residential building permits under review—all of these were for single family dwellings. No applications for new subdivisions were received in 2014; however there was one application for a planned unit development—status of application was not listed— and three applications for partitions—again the status of the applications were not listed.

Email Communication

Comment from Grants Pass: March 23, 2015

FYI, we will be distributing this memo to the City Council in the near future. As we discussed earlier, for the '2014 adopted' forecast in the tables, the attached tables include the current Urban Reserve area population as part of the urban area population after 2035, assuming that area will be added to the UGB by then. I have also calculated some of the data for the 'adopted' forecast through 2050 with that population left as rural unincorporated. That is not attached, but I can provide that if you would like a copy. I think I may have sent it last week, too.

If you anticipate any significant changes to the preliminary forecast for Josephine County before the proposed forecast for Josephine County is issued on March 31, please let me know.

Response from PSU: March 25, 2015:

The proposed population forecasts for Josephine County and its sub-areas will not include any significant adjustments to the preliminary forecasts.

Appendix B: Specific Assumptions

Cave Junction

The annual housing unit growth rate is assumed to rapidly increase during the initial forecast years and then decline to a rate closer to a long term historical average by the end of the forecast period. The occupancy rate is assumed slightly increase during the initial years of the forecast and then decline over the forecast period, ending at a rate slightly lower than observed in 2010. Household size is assumed to moderately decrease over the forecast period. Group quarters population is assumed to gradually increase over the forecast period, but the total increase will be small.

Grants Pass

The total fertility rate (TFR) is assumed to decline over the forecast period—although more slowly than it has historically—from the rate observed in 2010. Survival rates for 2060 are assumed to be a little below those forecast for the county as a whole. Grants Pass has historically had slightly lower survival rates than observed countywide; this corresponds with a slightly shorter life expectancy. Age-specific net migration rates are assumed to generally follow countywide historical patterns, but at slightly higher rates over the forecast period.

Outside UGBs

The total fertility rate (TFR) is assumed to decline over the forecast period—although more slowly than it has historically—from the rate observed in 2010. Survival rates for 2060 are assumed to be a little above those forecast for the county as a whole. The area outside UGBs in Josephine County has historically had slightly higher survival rates than observed countywide; this corresponds with a slightly longer life expectancy. Age-specific net migration rates are assumed to generally follow countywide historical patterns, but at slightly higher rates over the forecast period.

Appendix C: Detailed Population Forecast Results

Figure 22. Josephine County—Population by Five-Year Age Group

Age Group	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065
00-04	4,075	4,103	4,206	4,317	4,413	4,434	4,460	4,504	4,525	4,584	4,580
05-09	4,432	4,334	4,347	4,455	4,581	4,679	4,703	4,725	4,733	4,779	4,842
10-14	4,630	4,901	4,777	4,791	4,919	5,055	5,165	5,186	5,169	5,203	5,255
15-19	5,073	4,789	5,061	4,933	4,958	5,086	5,229	5,336	5,312	5,323	5,359
20-24	4,027	4,311	4,178	4,481	4,390	4,416	4,535	4,658	4,726	4,678	4,670
25-29	3,690	3,859	4,078	3,935	4,206	4,104	4,124	4,228	4,317	4,357	4,298
30-34	4,169	4,217	4,464	4,757	4,544	4,844	4,728	4,748	4,890	4,994	5,040
35-39	4,105	4,614	4,747	5,079	5,364	5,111	5,449	5,314	5,360	5,520	5,636
40-44	4,151	4,478	5,116	5,318	5,636	5,938	5,659	6,030	5,908	5,961	6,137
45-49	4,709	4,591	4,995	5,746	5,902	6,239	6,578	6,269	6,713	6,583	6,643
50-54	5,907	5,237	5,134	5,616	6,376	6,531	6,909	7,285	6,978	7,480	7,337
55-59	6,742	6,452	5,755	5,678	6,135	6,951	7,132	7,552	8,012	7,689	8,252
60-64	7,365	7,717	7,363	6,577	6,395	6,893	7,825	8,040	8,569	9,115	8,764
65-69	7,130	8,012	8,505	8,198	7,257	7,056	7,628	8,673	8,976	9,594	10,233
70-74	5,510	6,905	7,742	8,400	8,477	7,579	7,412	8,030	9,085	9,395	10,057
75-79	3,739	4,833	6,046	6,943	7,668	8,091	7,062	7,145	7,709	8,719	9,041
80-84	2,628	2,998	3,885	4,989	6,035	6,768	7,194	6,300	6,369	6,877	7,805
85+	1,821	1,807	2,001	2,598	3,632	4,831	6,035	7,101	7,342	7,717	8,433
Total	*83,904*	*88,157*	*92,400*	*96,811*	*100,890*	*104,605*	*107,826*	*111,124*	*114,691*	*118,566*	*122,382*

Figure 23. Josephine County's Sub-Areas—Total Population

	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065
Cave Junction UGB	2,395	2,590	2,786	2,982	3,177	3,373	3,568	3,764	3,960	4,155	4,351
Grants Pass UGB	39,749	42,707	46,215	50,010	53,787	57,505	60,884	64,169	67,503	70,720	73,682
Outside UGBs	41,761	42,860	43,399	43,820	43,926	43,727	43,374	43,192	43,229	43,690	44,349

The Illinois River State Park on the East Fork Illinois River. (Photo No. josDA0086) Gary Halvorson, Oregon State Archives

http://arcweb.sos.state.or.us/pages/records/local/county/scenic/josephine/43.html