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# Coordinated Population Forecast for Jefferson County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2018-2068

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# Coordinated Population Forecast



**2018**

Through

**2068**

## Jefferson County

Urban Growth  
Boundaries (UGB)  
& Area Outside UGBs

Photo Credit: Lake Billy Chinook from Cove Palisades State Park. Gary Halvorson, Oregon State Archives.

**Coordinated Population Forecast for Jefferson County, its  
Urban Growth Boundaries (UGB), and  
Area Outside UGBs  
2018-2068**

**Prepared by**

**Population Research Center**

**College of Urban and Public Affairs**

**Portland State University**

**June 30, 2018**

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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 (2018-2068).

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## **Modified Methodology**

The Population Research Center, in consultation with DLCD, has identified cost savings associated with a modified methodology for the latter half of the 50-year forecast period (years 26 to 50). Based on feedback we have received, a 25-year forecast fulfills most requirements for local planning purposes and, in an effort to improve the cost effectiveness of the program; we will place more focus on years 1 through 25. Additionally, the cost savings from this move will allow DLCD to utilize additional resources for local government grants. To clarify, we use forecast methods to produce sub-area and county populations for the first 25 years and a modified projection method for the remaining 25 years. The description of our forecast methodology can be accessed through the forecast program website ([www.pdx.edu/prc/opfp](http://www.pdx.edu/prc/opfp)), while the summary of our modified projection method is below.

For years 26-50, PRC projects the county population using the annual growth rate from the 24<sup>th</sup>-25<sup>th</sup> year. For example, if we forecast a county to grow .4% between the 24th and 25th year of the forecast, we would project the county population thereafter using a .4% AAGR. To allocate the projected county population to its sub-areas, we extrapolate the change in sub-area shares of county population observed in years 1-25 and apply them to the projected county population.

## **Comparison to Cycle 1 (2015-17)**

To keep up to date with local trends and shifting demands, OPFP regularly updates coordinated population forecasts for Oregon's areas. Beyond the modification to our methodology and additional forecast region (from three regions to four), there are differences between the 2018 updated forecast for Jefferson County and the 2015 version. The 2018-68 forecast for Jefferson County is slightly lower than the 2015 forecast by 2043. Net in-migration is slightly lower than last round, but fewer forecasted births, which produce a more pronounced natural decrease, is the main factor for this difference. These county-level differences translate to the sub-areas. We expect the outside UGB area to capture a larger share of the county's population by 2043. The full breakdown of differences by county and sub-area is stored here: [www.pdx.edu/prc/cycle-2-region-1-documents](http://www.pdx.edu/prc/cycle-2-region-1-documents).

# Executive Summary

## Historical

Different parts of the county experience different growth patterns. Local trends within UGBs and the area outside them collectively influence population growth rates for the county as a whole.

Jefferson County's total population grew rapidly in the 2000s, with an average annual growth rate of 1.3 percent between 2000 and 2010 (**Figure 1**); however, some of its sub-areas experienced faster or slower population growth. The Culver UGB posted the highest average annual growth rates at 5.4 percent during the 2000 to 2010 period, while all other sub-areas experienced average annual growth rates at or below that of the county as a whole.

Jefferson County's positive population growth in the 2000s was the result of steady natural increase (more births than deaths), supplemented by periodic influxes of net in-migration. 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 having children at older ages has led to births stagnating in recent years. Still, a larger number of births relative to deaths created a natural increase (more births than deaths) in every year from 2000 to 2016, though it is diminishing. In recent years (2014-16), net in-migration has risen and overshadowed the declining natural increase, leading to strong population growth (**Figure 12**).

## Forecast

Total population in Jefferson County as a whole as well as within its sub-areas will likely grow at a faster pace in the near-term (2018 to 2043) compared to the long-term (**Figure 1**). The tapering of growth rates is largely driven by the county's transition to a natural decrease that will cut into population growth from net in-migration. Even so, Jefferson County's total population is forecast to increase by more than 5,000 over the next 18 years (2018-2043) and by more than 8,700 over the entire 50-year period (2018-2068).

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

	Historical			Forecast					
	2000	2010	AAGR (2000-2010)	2018	2043	2068	AAGR (2010-2018)	AAGR (2018-2043)	AAGR (2043-2068)
<b>Jefferson County</b>	<b>19,009</b>	<b>21,720</b>	<b>1.3%</b>	<b>23,447</b>	<b>28,553</b>	<b>32,191</b>	<b>0.9%</b>	<b>0.8%</b>	<b>0.2%</b>
Culver	802	1,357	5.4%	1,440	1,898	2,292	0.7%	1.1%	0.8%
Madras	6,470	6,987	0.8%	7,163	9,245	11,221	0.3%	1.0%	0.8%
Metolius	646	732	1.3%	1,076	1,349	1,500	4.8%	0.9%	0.4%
Outside UGBs	11,091	12,644	1.3%	13,767	16,060	17,178	1.0%	0.6%	0.3%

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

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

## 14-Year Population Forecast

In accordance with House Bill 2254, which streamlined the UGB process based on long-term housing and employment needs, **Figure 2** provides a 14-year population forecast (2018-2032) for the County and its sub-areas. Populations at the 14<sup>th</sup> year of the forecast were interpolated using the average annual growth rate between the 2030-2035 period. The population interpolation template is stored here: [www.pdx.edu/prc/cycle-2-region-1-documents](http://www.pdx.edu/prc/cycle-2-region-1-documents).

**Figure 2. Jefferson County and Sub-Areas—14-Year Population Forecast**

	2018	2032	14-Year Change	AAGR (2018-2032)
<b>Jefferson County</b>	<b>23,447</b>	<b>26,751</b>	<b>3,304</b>	<b>0.9%</b>
Culver	1,440	1,713	273	1.2%
Madras	7,163	8,423	1,260	1.2%
Metolius	1,076	1,265	189	1.2%
Outside UGBs	13,767	15,349	1,582	0.8%

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

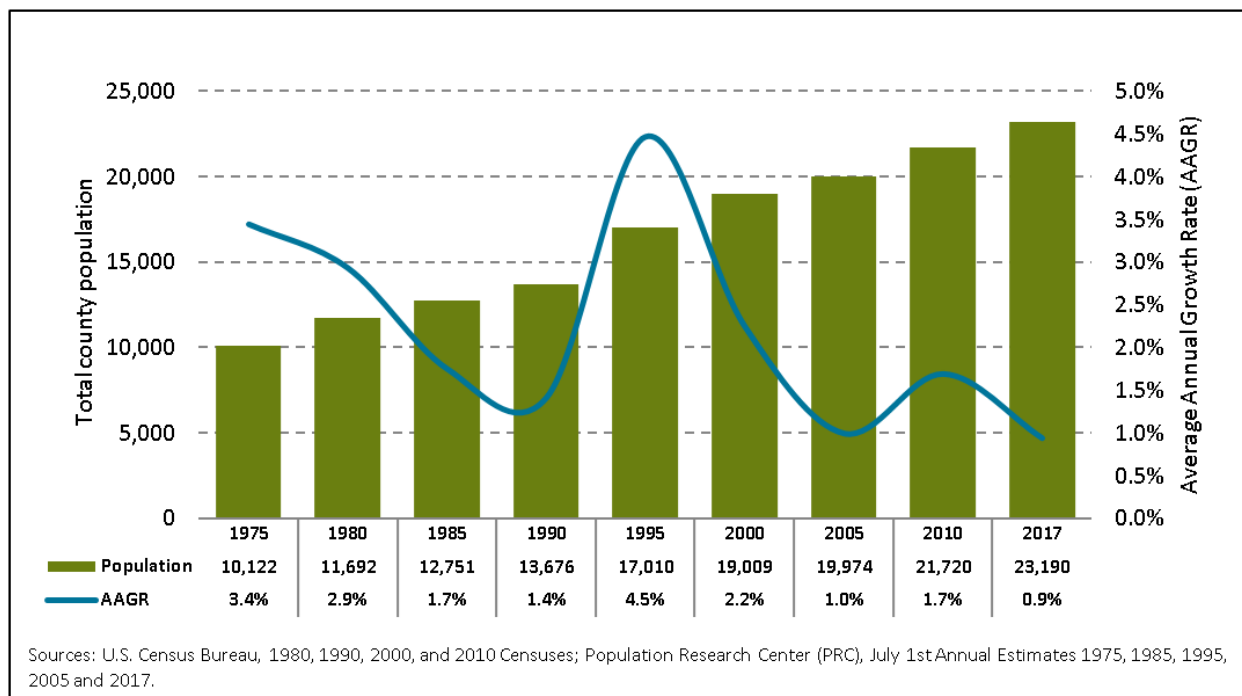
## Historical Trends

Different growth patterns occur in different parts of Jefferson County. Each of Jefferson County’s sub-areas were examined for any significant demographic characteristics or changes in population or housing growth that might influence their individual forecasts. Factors analyzed include age composition of the population, race and ethnicity, births, deaths, migration, the number of housing units, 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, population growth rates for the county are collectively influenced by local trends within its sub-areas.

## Population

Jefferson County’s total population grew from roughly 10,000 in 1975 to about 23,000 in 2017 (**Figure 3**). During this 40-year period, the county experienced high growth rates during the late 1970s, which coincided with a period of relative economic prosperity. During the early 1980s challenging economic conditions, both nationally and within the county, led to a decline in population growth rates. During the early 1990s population growth rates again increased but challenging economic conditions late in the decade again yielded declines. Following the turn of the century, Jefferson County experienced strong population growth between 2000 and 2017—averaging a 1.2 percent growth rate per year.

**Figure 3. Jefferson County—Total Population by Five-year Intervals (1975-2017)**



During the 2000s, Jefferson County’s average annual population growth rate stood at 1.3 percent (**Figure 4**). Culver saw the largest average annual growth rate (5.4 percent), increasing as a share of countywide population by 2 percent from 2000 to 2010. Madras, on the other hand, experienced slower

growth than the county average (0.8 percent) over the same time period, declining as a share of countywide population by almost 2 percent.

**Figure 4. Jefferson County and Sub-areas—Total Population and Average Annual Growth Rate (AAGR) (2000 and 2010)<sup>1</sup>**

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010	Change (2000-2010)
<i>Jefferson County</i>	19,009	21,720	1.3%	100.0%	100.0%	0.0%
Culver	802	1,357	5.4%	4.2%	6.2%	2.0%
Madras	6,470	6,987	0.8%	34.0%	32.2%	-1.9%
Metolius	646	732	1.3%	3.4%	3.4%	0.0%
Outside UGBs	11,091	12,644	1.3%	58.3%	58.2%	-0.1%

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

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

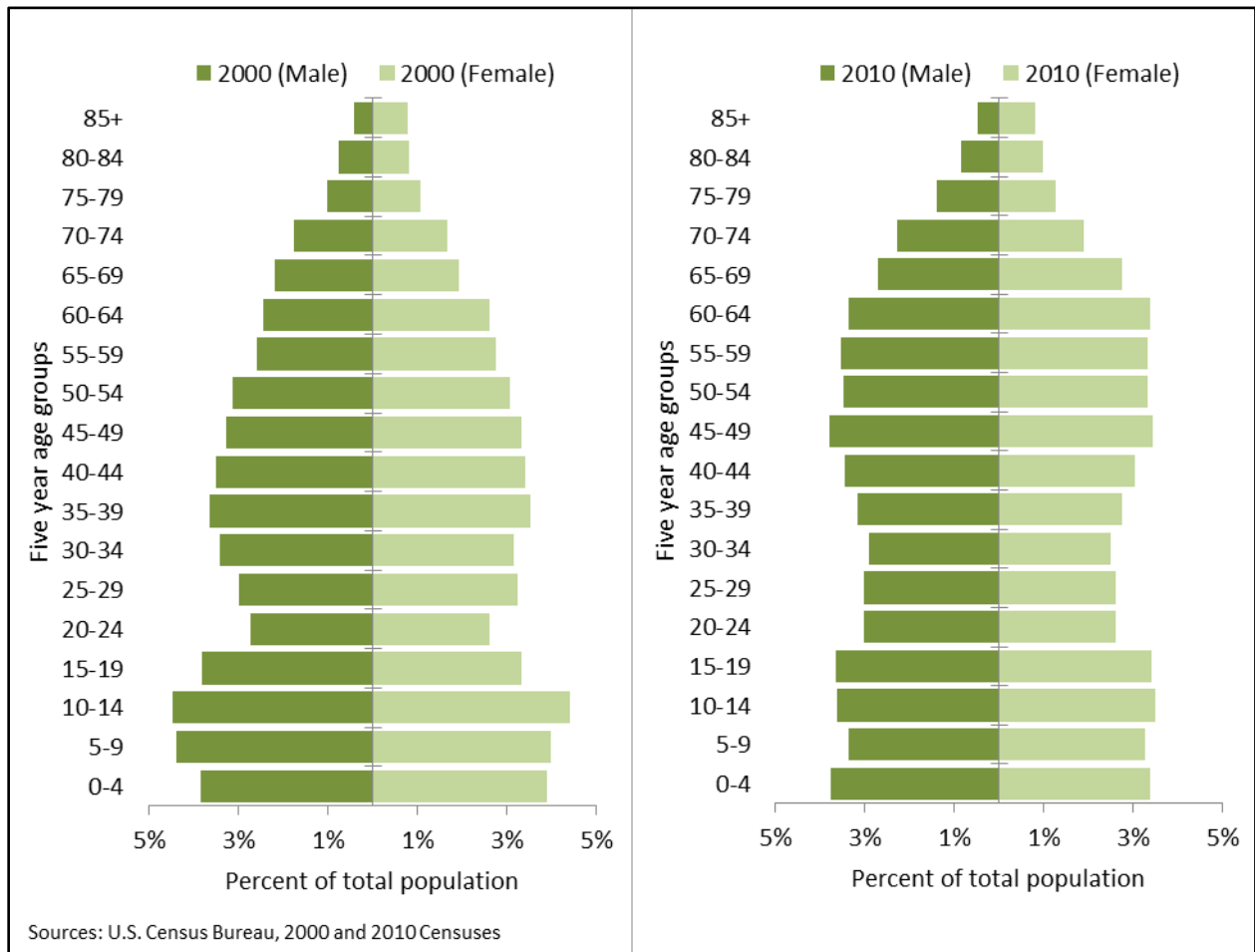
### Age Structure of the Population

Similar to most areas across Oregon, Jefferson 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 slowdown or decline in births. The shift in age structure from 2000 to 2010 illustrates this phenomenon (**Figure 5**). Further underscoring the countywide trend in aging, the median age in Jefferson County increased from 34.8 in 2000 to 39.6 in 2010<sup>2</sup>.

<sup>1</sup> When considering growth rates and population growth overall, it should be noted that a slowing of growth rates does not necessarily correspond to a slowing of population growth in absolute numbers. For example, if a UGB with a population of 100 grows by another 100 people, it has doubled in population. If it then grows by another 100 people during the next year, its relative growth is half of what it was before even though absolute growth stays the same.

<sup>2</sup> Median age is sourced from the U.S. Census Bureau's 2000 and 2010 Censuses.

**Figure 5. Jefferson 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 share of total population within Jefferson County increased from 2000 to 2010 (**Figure 6**), while the White, non-Hispanic share decreased 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 tend to be higher than among White, non-Hispanic women. However, it is important to note more recent trends show these rates are quickly decreasing. Second, Hispanic and minority households tend to be larger relative to White, non-Hispanic households.



**Figure 6. Jefferson County—Hispanic or Latino and Race (2000 and 2010)**

Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
<i>Total population</i>	19,009	100.0%	21,720	100.0%	2,711	14.3%
Hispanic or Latino	3,372	17.7%	4,195	19.3%	823	24.4%
Not Hispanic or Latino	15,637	82.3%	17,525	80.7%	1,888	12.1%
White alone	12,335	64.9%	13,429	61.8%	1,094	8.9%
Black or African American alone	43	0.2%	117	0.5%	74	172.1%
American Indian and Alaska Native alone	2,788	14.7%	3,360	15.5%	572	20.5%
Asian alone	54	0.3%	83	0.4%	29	53.7%
Native Hawaiian and Other Pacific Islander alone	28	0.1%	23	0.1%	-5	-17.9%
Some Other Race alone	11	0.1%	34	0.2%	23	209.1%
Two or More Races	378	2.0%	479	2.2%	101	26.7%

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

### Births

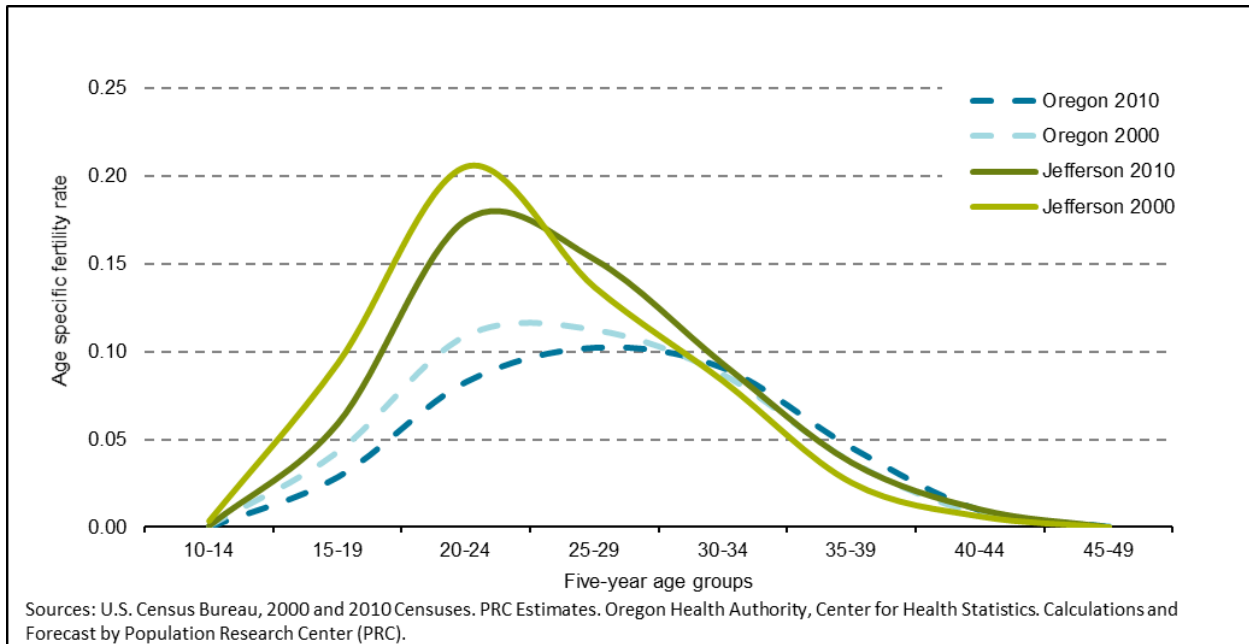
While higher, historic fertility rates for Jefferson County mirror statewide trends in Oregon as a whole. Total fertility rates decreased slightly in Jefferson County from 2000 to 2010, and more substantially for the state, because of delayed child bearing (**Figure 7**). At the same time fertility for women over 30 increased in both Jefferson County and Oregon (**Figure 8**). Total fertility in Jefferson County remain at replacement fertility (2.1), indicating that future cohorts of women in their birth-giving years will remain stable overtime without the influence of net in/out-migration.

**Figure 7. Jefferson County and Oregon—Total Fertility Rates (2000 and 2010)**

Total Fertility Rate (TFR)		
	2000	2010
<b>Jefferson County</b>	2.76	2.64
<b>Oregon</b>	1.98	1.81

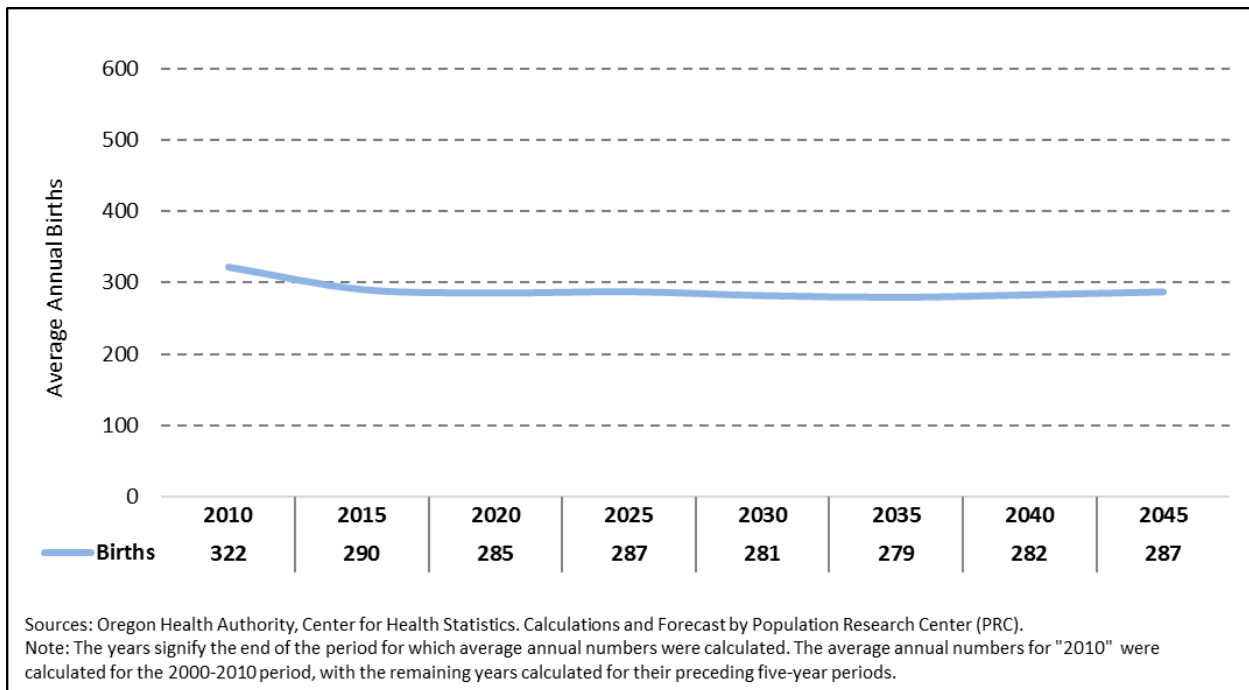
Sources: U.S. Census Bureau, 2000 and 2010 Censuses.  
Oregon Health Authority, Center for Health Statistics.  
Calculations by Population Research Center (PRC).

**Figure 8. Jefferson County—Age Specific Fertility Rate (2000 and 2010)**



**Figure 9** shows the historic and forecasted births for the county. The number of annual births from 2000-10 and 2010-15 decreased slightly. Due to a shrinking cohort of women in their birth giving years, births are expected to remain stable throughout the forecast period, despite population growth.

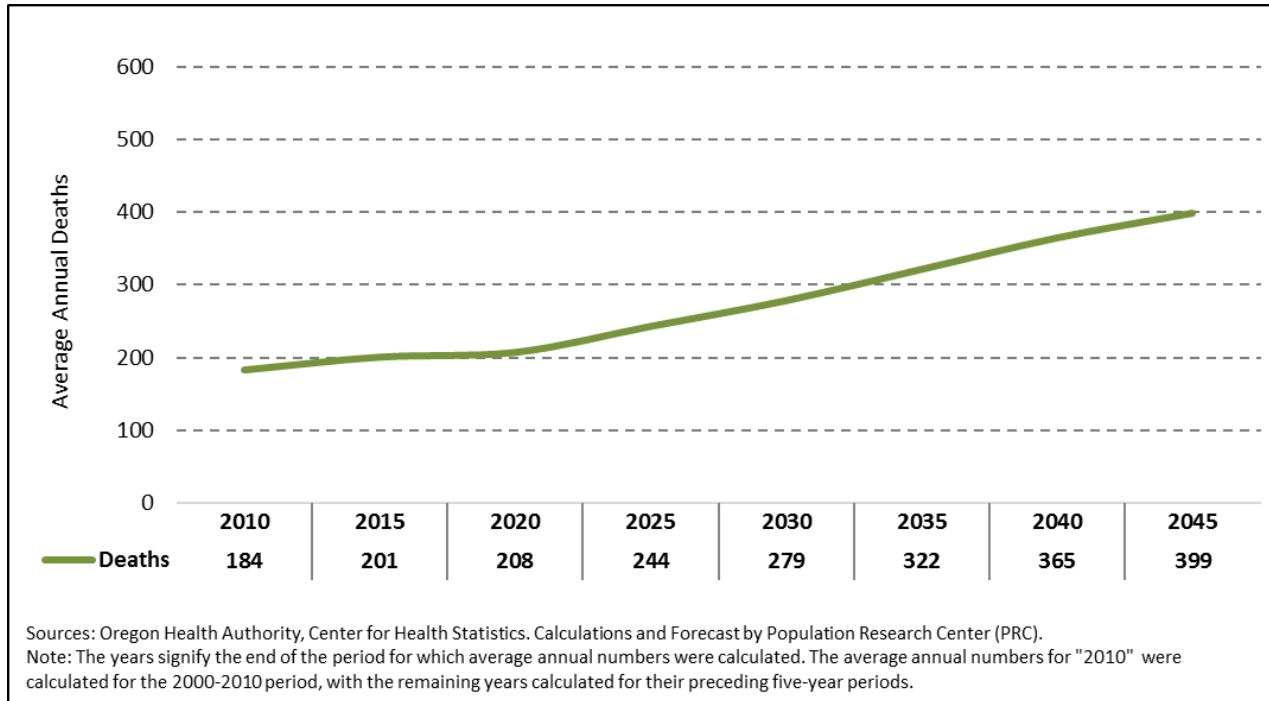
**Figure 9. Jefferson County—Average Annual Births (2010 and 2045)**



## Deaths

The population in the county, as a whole, is aging and contrary to the statewide trend, people of all ages are not necessarily living longer<sup>3</sup>. For both Jefferson County and Oregon the survival rates changed little between 2000 and 2010, underscoring the fact that mortality is the most stable component, relative to birth and migration rates, of population change. Average annual deaths increased slightly from 2000-10 and 2010-15 and are expected to increase steadily overtime (**Figure 10**).

**Figure 10. Jefferson County—Average Annual Deaths (2010-2045)**



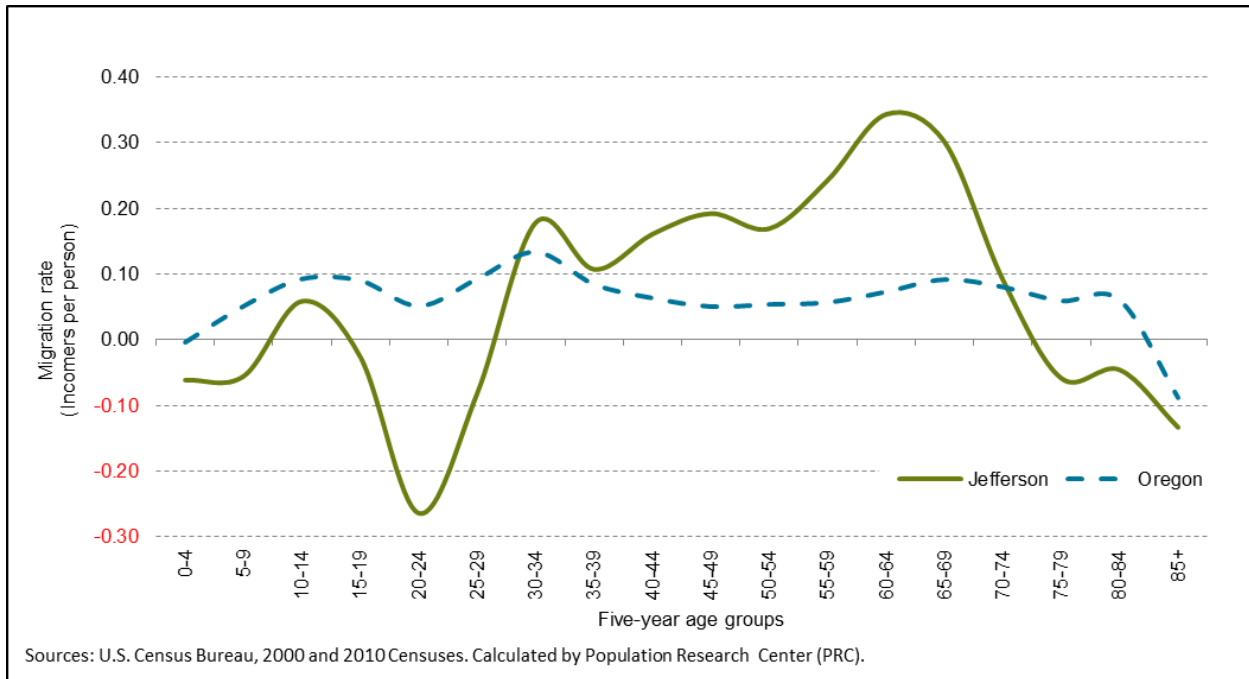
## Migration

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 Jefferson County and for Oregon. The migration rate is shown as the number of net migrants per person by age group.

Jefferson County’s migration rates reflect the patterns of man other Oregon counties. Young adults (20-29) leave the county seeking higher education and employment opportunities, but return in their 30’s and 40’s with their children. Retirees made up a large proportion of net in-migrants in the 00’s, but they left the county shortly thereafter to areas with medical facilities and end-of-life care.

<sup>3</sup> 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.*

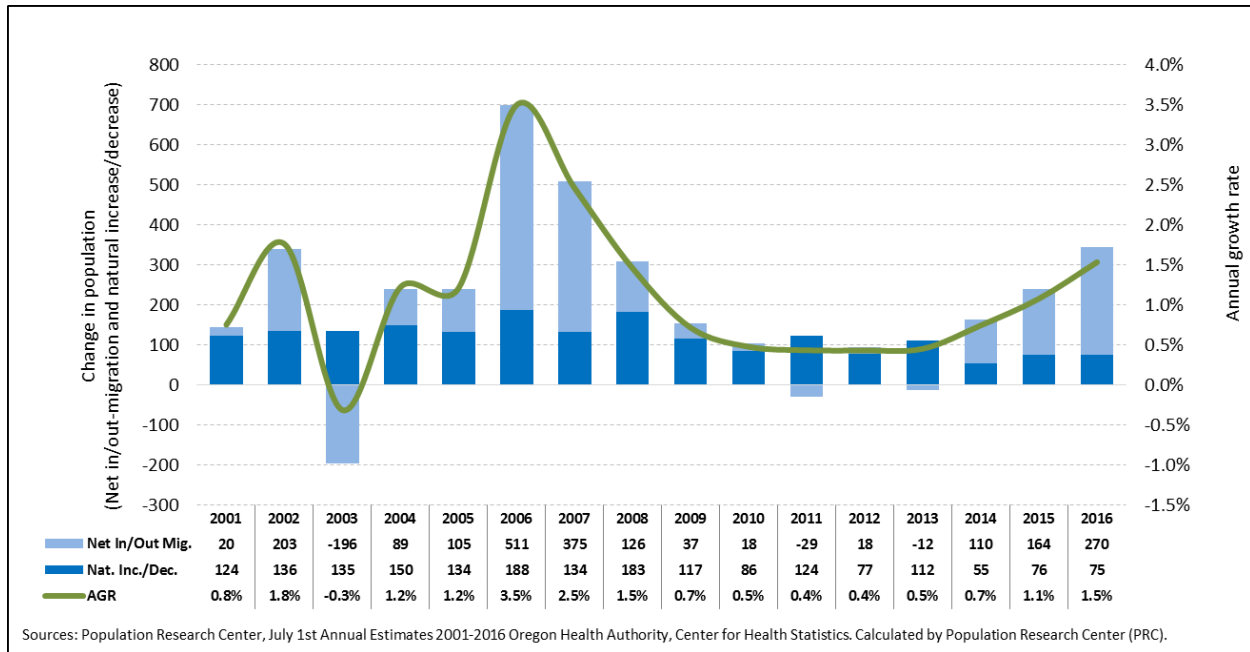
**Figure 11. Jefferson County and Oregon—Age Specific Migration Rates (2000-2010)**



**Historical Trends in Components of Population Change**

In summary, Jefferson County’s positive population growth during the 2000s was the result of steady natural increase and sporadic influxes of net in-migration (**Figure 12**). The larger number of births relative to deaths led to natural increase in every year from 2001 to 2016, though it is diminishing. In recent years, net in-migration has increased, overshadowing a declining natural increase and creating strong population growth.

**Figure 12. Jefferson County—Components of Population Change (2001-2016)**



## Housing and Households

The total number of housing units in Jefferson County increased rapidly during the middle years of this last decade (2000 to 2010), but this growth slowed with the onset of the Great Recession in 2008. Over the entire 2000 to 2010 period, the total number of housing units increased by 1.7 percent countywide; this was almost 1,500 new housing units (**Figure 13**). Madras captured the largest share of the growth in total housing units, adding 505 housing units and increasing its share of total countywide housing units to over 30 percent by 2010. In terms of relative housing growth, Culver had the highest growth rate; its total housing units increased over 75 percent (207 housing units) by 2010.

Housing growth rates may differ from population growth rates because (1) the numbers of total housing units are smaller than the numbers of people; (2) the UGB has experienced changes in the average number of persons per household; or (3) occupancy rates have changed (typically most pronounced in coastal locations with vacation-oriented housing). However, the patterns of population and housing change in Jefferson County are relatively similar.

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

	AAGR			Share of County 2000	Share of County 2010	Change (2000-2010)
	2000	2010	(2000-2010)			
<i>Jefferson County</i>	8,319	9,815	1.7%	100.0%	100.0%	0.0%
Culver	275	482	5.8%	3.3%	4.9%	1.6%
Madras	2,465	2,970	1.9%	29.6%	30.3%	0.6%
Metolius	224	304	3.1%	2.7%	3.1%	0.4%
Outside UGBs	5,355	6,059	1.2%	64.4%	61.7%	-2.6%

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

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

Average household size, or PPH, in Jefferson County was 2.7 in 2010, a slight decline from 2000 (**Figure 14**). Jefferson County's PPH in 2010 was higher than for Oregon as a whole, which had a PPH of 2.5. PPH varied somewhat across the county's UGBs in 2010, with Culver recording the highest PPH of 3.1.

Occupancy rates tend to fluctuate more than PPH. This is particularly true in smaller UGBs where fewer housing units allow for larger relative changes in occupancy rates. From 2000 to 2010 the occupancy rate in Jefferson County decreased slightly (**Figure 14**). A drop in occupancy rates was uniform across all sub-areas, with Madras and Metolius recording larger declines of 6.8 percent and 4.6 percent, respectively.

**Figure 14. Jefferson 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
<i>Jefferson County</i>	2.8	2.7	-4%	80.9%	79.4%	-1.5%
Culver	2.8	3.1	11%	92.4%	90.5%	-1.9%
Madras	3.2	2.7	-15%	92.7%	85.9%	-6.8%
Metolius	2.8	2.6	-7%	97.3%	92.8%	-4.6%
Outside UGBs	3.0	2.6	-11%	74.1%	74.6%	0.5%

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

Note: 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 assumptions of likely scenarios for population change. Assumptions about fertility, mortality, and migration were developed for Jefferson County's overall population forecast. Jefferson County did not contain any large sub-areas<sup>4</sup>; population change for smaller sub-areas is determined by the change in the number of total housing units, PPH, occupancy rates, and group quarters population. Assumptions around these components of growth are derived from observations of historic building patterns, current plans for future housing development, and household demographics. Our forecast period is 2018-2068.

### **Assumptions for the County**

During the forecast period the population in Jefferson County is expected to age more quickly during the first half of the forecast period and then remain relatively stable over the forecast horizon. Fertility rates are expected to slightly decline throughout the forecast period (2.43 in 2015 to 2.37 in 2043).

Changes in survival rates are more stable than fertility and migration; overall life expectancy is expected to increase slightly over the forecast period. In spite of this trend, Jefferson County's aging population 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.

We assume rates will change in line with historical trends unique to Jefferson County. Net out-migration of young adults and net in-migration of middle-aged individuals and retirees will persist throughout the forecast period. Countywide average annual net in-migration is expected to increase from 56 net in-migrants in 2015 to 249 net in-migrants in 2043. Net in-migration is expected to curb the results of a growing natural decrease, accounting for the majority of Jefferson County's population growth throughout the forecast period.

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<sup>4</sup>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.

### **Assumptions for Smaller Sub-Areas**

Rates of population growth for the smaller UGBs are 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 and PPH are assumed to stay relatively stable over the forecast period, with the exception of Metolius (see Appendix B). Smaller household size is associated with an aging population in Jefferson County and its sub-areas.

If planned housing units were reported in the surveys, we accounted for them being constructed over the next 5-15 years (or as specified by local officials). Finally, for sub-areas where population growth has been flat or declining, and there is no planned housing construction, we temper population change.

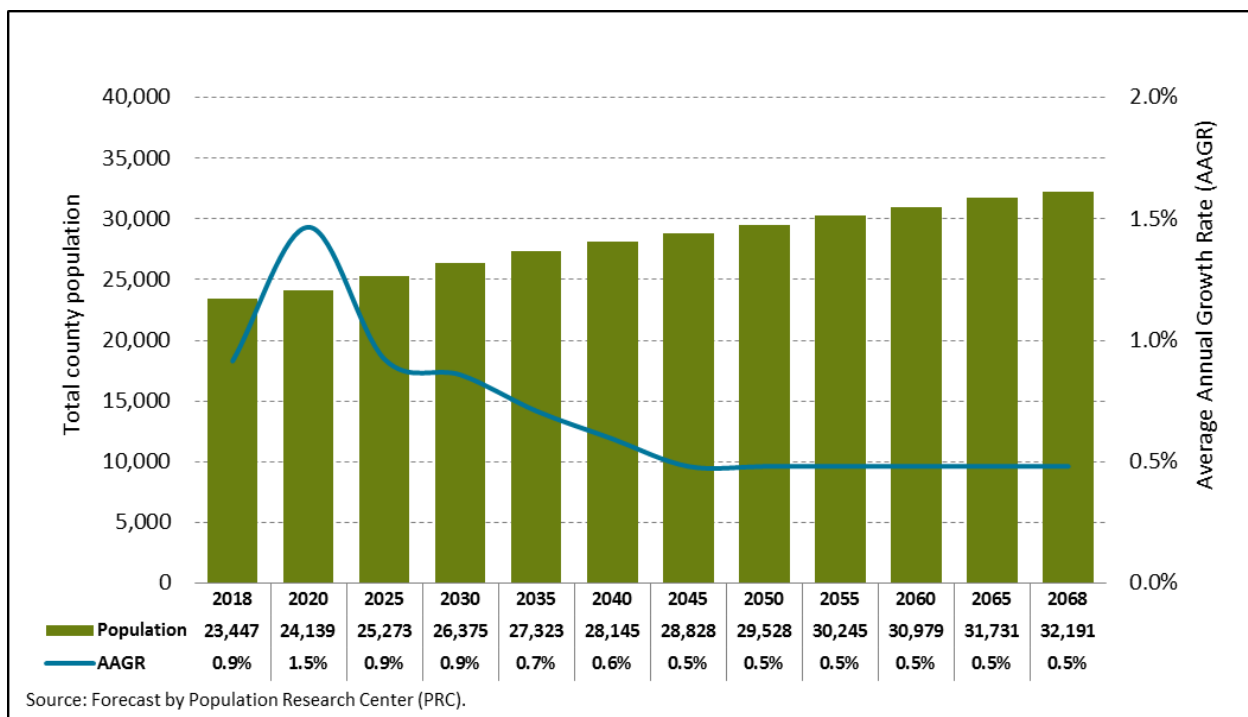


## Forecast Trends

Under the most-likely population growth scenario for Jefferson 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 slowly decline throughout the forecast period. A reduction in population growth rates is driven by both (1) an aging population—contributing to steady increase in deaths—as well as (2) net in-migration tapering in the long run to account for uncertainty.

Jefferson County’s total population is forecast to grow by 8,744 persons (37 percent) from 2018 to 2068, which translates into a total countywide population of 32,191 in 2068 (**Figure 15**). The population is forecast to grow at the highest rate—over 1 percent per year—during the near-term (2018-2025). This anticipated population growth in the near-term is based on two core assumptions: (1) strong net in-migration and housing construction will continue into 2020; (2) net in-migration of retirees will continue. Over 350 in-migrants are forecast in the near-term, leading to a continued population growth. This growth is bolstered by the nearly 150 more births than deaths forecast for the 2018 to 2025 period.

**Figure 15. Jefferson County—Total Forecast Population by Five-year Intervals (2018-2068)**



Jefferson County’s three UGBs—Culver, Madras, and Metolius—are forecast to experience a combined population growth of more than 2,800 from 2018 to 2043 and over 2,500 from 2043 to 2068 (**Figure 16**). The majority of forecasted growth is expected in Madras, where population is forecasted to grow by over 4,000 during the forecast period; the share of the county population in this UGB is expected to increase from 31 percent in 2018 to 35 percent in 2068. Culver and Metolius are expected to grow slightly more during the first half of the forecast period relative to the second half, totaling 852 additional persons in Culver and 424 additional persons in Metolius from 2018 to 2068.

The outside UGB area is expected to account for roughly half of total countywide growth from 2018 to 2043 and roughly a third of growth from 2043 to 2068. However, its share is forecasted to decline over the 50-year period from 59% in 2018 to 53% by 2068.

**Figure 16. Jefferson County and Sub-Areas—Forecast Population and AAGR**

	2018	2043	2068	AAGR (2018-2043)	AAGR (2043-2068)	Share of County 2018	Share of County 2043	Share of County 2068
<i>Jefferson County</i>	23,447	28,553	32,191	0.8%	0.5%	--	--	--
Culver	1,440	1,898	2,292	1.1%	0.8%	6.1%	6.6%	7.1%
Madras	7,163	9,245	11,221	1.0%	0.8%	30.6%	32.4%	34.9%
Metolius	1,076	1,349	1,500	0.9%	0.4%	4.6%	4.7%	4.7%
Outside UGBs	13,767	16,060	17,178	0.6%	0.3%	58.7%	56.2%	53.4%

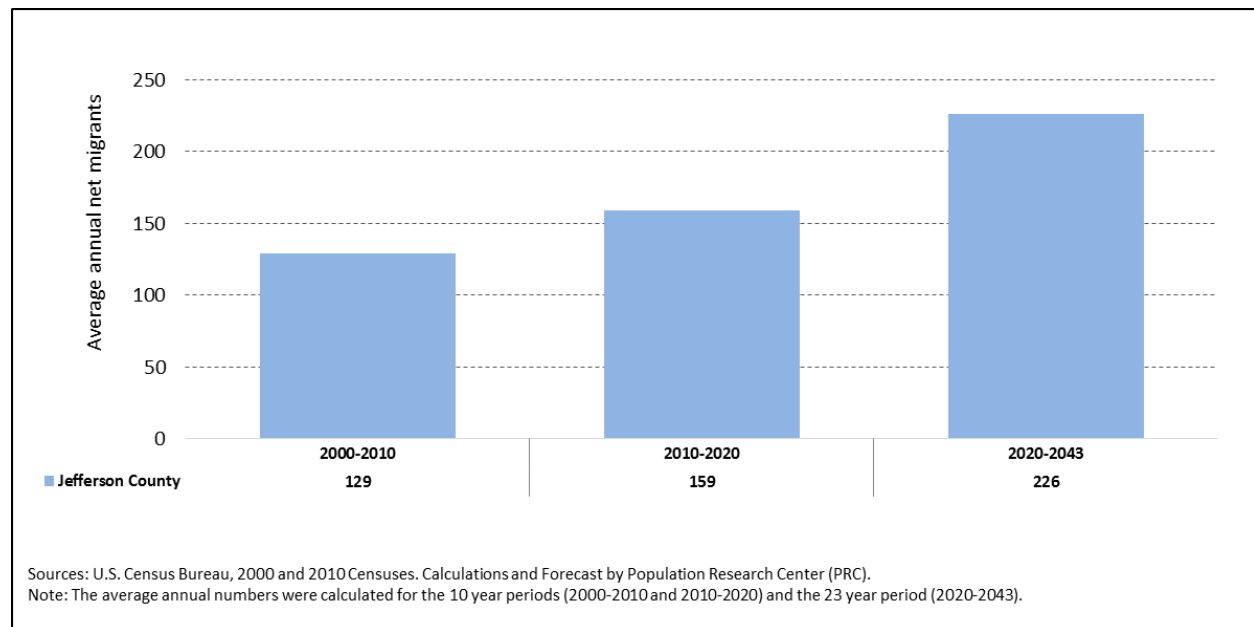
Source: Forecast by Population Research Center (PRC)

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

### Forecast Trends in Components of Population Change

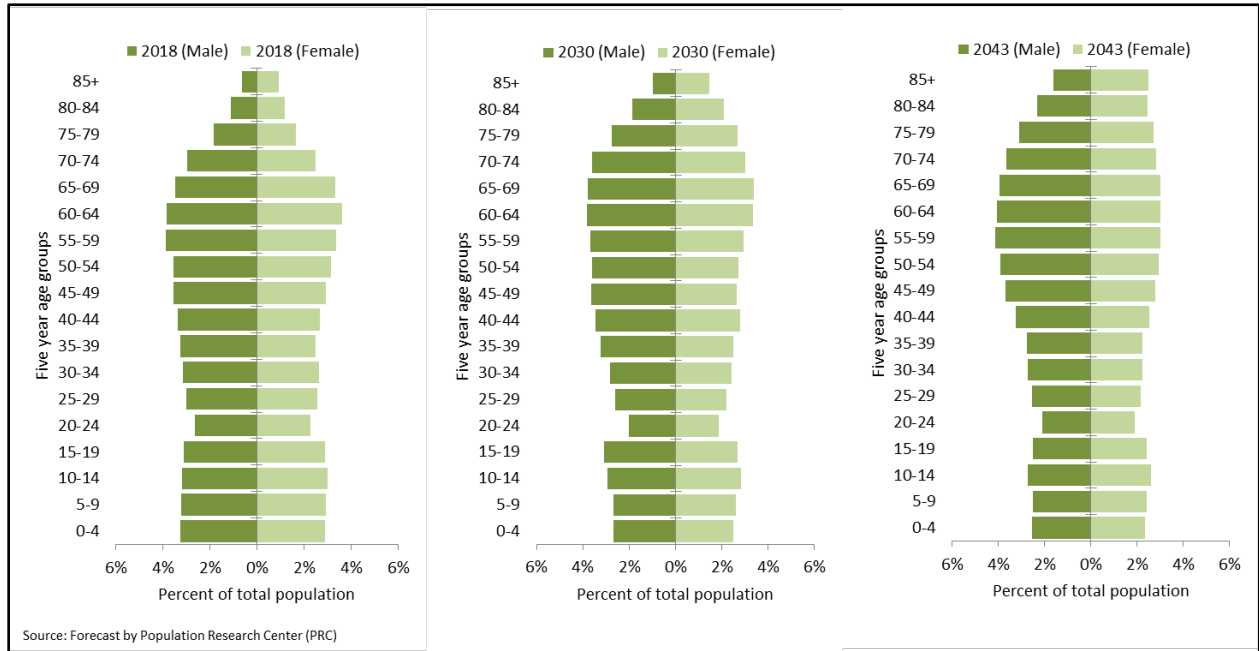
As previously discussed, the number of in-migrants is forecast to outweigh the number of out-migrants in Jefferson County, creating positive net in-migration of new residents that is expected to persist throughout the forecast period. Furthermore, annual net in-migration is forecast to increase from the near-rate term of 159 individuals from 2010-2020 to 226 from 2020-2043 (Figure 17).

**Figure 17. Jefferson County—Average Annual Net In/Out-Migration (2000-2010, 2010-2020, and 2020-2043)**



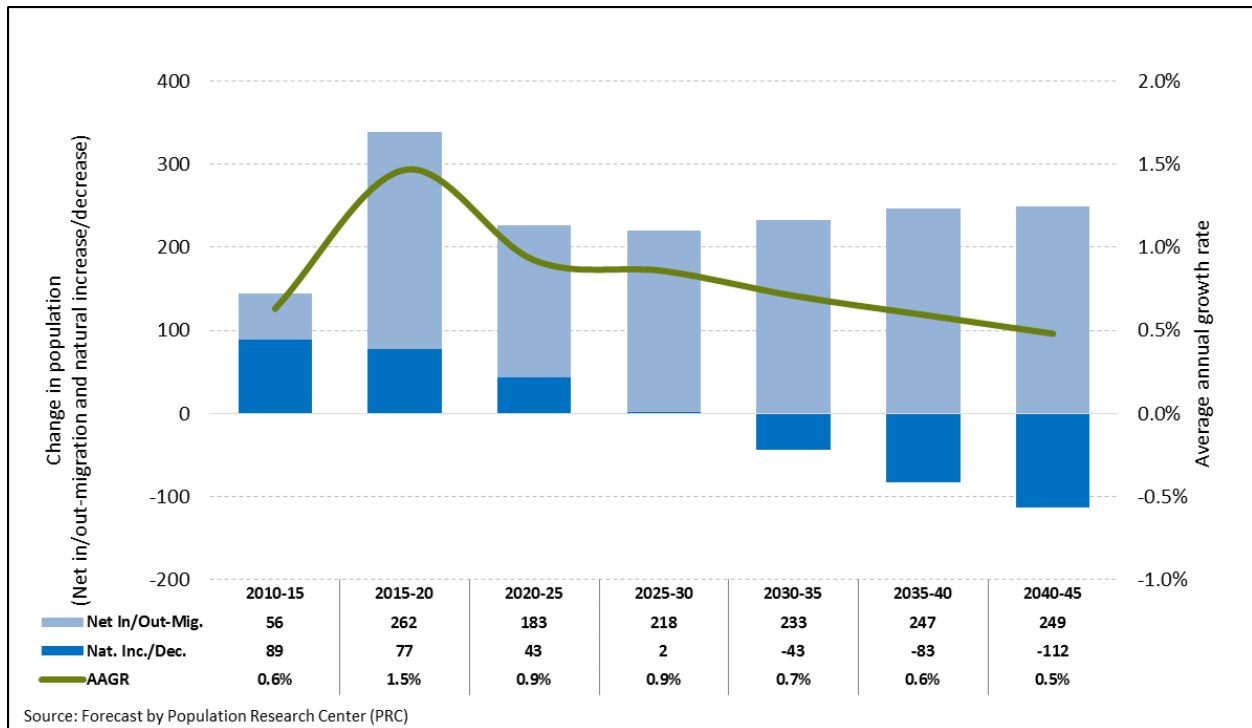
In addition to in-migration, a key factor shaping Jefferson County’s forecast is the county’s aging population. From 2018 to 2030 the proportion of the county population 65 years of age or older is forecast to grow from roughly 20 percent to 26 percent, and is forecast to reach more than 28 percent by 2043 (**Figure 18**). For a more detailed look at the age structure of Jefferson County’s population see the final forecast table published to the forecast program website ([www.pdx.edu/prc/cycle-2-region-1-documents](http://www.pdx.edu/prc/cycle-2-region-1-documents)).

**Figure 18. Jefferson County—Age Structure of the Population (2018, 2030, and 2043)**



In summary, population growth is expected to peak in 2020 and then slightly taper through the remainder of the forecast period (**Figure 19**). A waning natural increase is expected to transition to a natural decrease and cut into net in-migration over time, leading to moderate growth.

**Figure 19. Jefferson County—Components of Population Change (2015-2045)**



## 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 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).

**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: 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. Madras indicated there were no updates from the 2015 survey.

General Survey for Oregon Population Forecast Program	
Jurisdiction: <b>City of Culver</b>	Date: <b>Sept 26, 2017</b>
Observations about Population Composition (e.g. children, the elderly, racial and ethnic groups)	It seems retired folks are moving to the city but there <u>isn't</u> much change in the other areas of the population.
Observations about Housing	There is a small increase in new home starts.
Planned Housing Dev./Est. Year Completion (for detailed information submissions please use the Housing Development Survey)	No development plans <u>have been submitted</u> .
Planned future construction of Group Quarters facilities	None planned.
Future Employers Locating to the Area	There is one small company planning to come to the city but no major changes are projected.
Capacity and condition of infrastructure to accommodate growth.	Great capacity, little to no interest from businesses.
Any Promotions (promos) and Hindrances (hinders) to Population Growth; Other notes	Participate in the Jefferson County Econ. Development, but promotion is limited. Nothing hindering that I am aware of.
Do you have a buildable lands inventory for your area/UGB? If yes, it would be helpful if you could please share it with our center in GIS format.	Not a current one. Have lots of buildable land and no plans to expand UGB at this time.
Highlights or summary from planning documents and studies on influences and anticipation of population and housing growth (including any plans for UGB expansion and the stage in the expansion process)	I <u>don't</u> expect much change, slow residential growth and even slower commercial and industrial growth.



General Survey for Oregon Population Forecast Program	
Jurisdiction: <i>City of Medford, Oregon</i>	Date: <i>1/5/2018</i>
Observations about Population Composition (e.g. children, the elderly, racial and ethnic groups)	<i>7% increase in students since 2013</i>
Observations about Housing	<i>subdivision of 41 lots is starting to build SFR- currently 7 permits issued plus 4 other SFR</i>
Planned Housing Dev./Est. Year Completion	<i>unknown.</i>
Future Group Quarters Facilities	<i>none</i>
Future Employers	<i>one new business</i>
Infrastructure	<i>repaving of 3 streets</i>
Promotions (promos) and Hindrances (hinders) to Population Growth; Other notes	<i>none</i>
Highlights or summary from planning documents and studies on influences and anticipation of population and housing growth.	<i>unknown.</i>

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## **Appendix B: Specific Assumptions**

### **Culver**

We assume the 5-year average annual housing unit growth rate to taper throughout the forecast period. We assume the occupancy rate and persons per household (PPH) to be steady at 90.5% percent and 3.1 for the 25-year horizon, respectively. We assume the group quarters population to remain at 6.

### **Madras**

We assume the 5-year average annual housing unit growth rate to taper throughout the forecast period. We assume the occupancy rate to increase to 90.9% and persons per household (PPH) to decline to 2.59 for the 25-year horizon. We assume the group quarters population to remain at 137.

### **Metolius**

We assume the 5-year average annual housing unit growth rate to taper throughout the forecast period. We assume the occupancy rate to be steady at 92.8% and persons per household (PPH) to increase to 3.23 for the 25-year horizon, respectively. There is no group quarters population in this sub-area.

### **Outside UGBs**

We assume the 5-year average annual housing unit growth rate to remain stable throughout the forecast period. We assume the occupancy rate and persons per household (PPH) to be steady at 74.6% percent and 2.64 for the 25-year horizon, respectively. We assume the group quarters population to remain at 710.



## Appendix C: Detailed Population Forecast Results

Figure 20. Jefferson County—Population by Five-Year Age Group

<b>Population Forecasts by Age</b>							
<b>Group / Year</b>	<b>2018</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2043</b>
00-04	1,444	1,397	1,377	1,362	1,359	1,378	1,391
05-09	1,446	1,556	1,409	1,401	1,394	1,392	1,405
10-14	1,453	1,411	1,669	1,523	1,522	1,516	1,516
15-19	1,410	1,406	1,281	1,529	1,404	1,405	1,403
20-24	1,152	1,150	1,119	1,029	1,240	1,138	1,139
25-29	1,307	1,318	1,294	1,268	1,173	1,415	1,344
30-34	1,347	1,392	1,398	1,382	1,362	1,260	1,412
35-39	1,347	1,379	1,497	1,517	1,506	1,487	1,418
40-44	1,411	1,449	1,500	1,642	1,673	1,662	1,650
45-49	1,516	1,519	1,583	1,653	1,818	1,855	1,848
50-54	1,570	1,605	1,586	1,666	1,748	1,924	1,949
55-59	1,693	1,718	1,771	1,748	1,831	1,923	2,038
60-64	1,744	1,821	1,845	1,899	1,867	1,955	2,014
65-69	1,599	1,718	1,851	1,891	1,958	1,927	1,982
70-74	1,283	1,402	1,603	1,748	1,797	1,864	1,849
75-79	821	907	1,240	1,437	1,576	1,622	1,658
80-84	538	594	750	1,045	1,223	1,339	1,363
85+	366	399	498	636	872	1,082	1,175
<b>Total</b>	<b>23,447</b>	<b>24,139</b>	<b>25,273</b>	<b>26,375</b>	<b>27,323</b>	<b>28,145</b>	<b>28,553</b>

Figure 21. Jefferson County's Sub-Areas—Total Population

<b>Area / Year</b>	<b>2018</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045</b>	<b>2050</b>	<b>2055</b>	<b>2060</b>	<b>2065</b>	<b>2068</b>
Jefferson County	23,447	24,139	25,273	26,375	27,323	28,145	28,828	29,528	30,245	30,979	31,731	32,191
Culver UGB	1,440	1,511	1,572	1,678	1,768	1,850	1,931	2,008	2,094	2,171	2,243	2,292
Madras UGB	7,163	7,302	7,683	8,249	8,689	9,035	9,388	9,777	10,222	10,610	10,975	11,221
Metolius UGB	1,076	1,158	1,200	1,249	1,289	1,328	1,364	1,392	1,419	1,449	1,481	1,500
Outside UGB Area	13,767	14,168	14,818	15,199	15,577	15,932	16,145	16,352	16,509	16,748	17,031	17,178