

Portland State University

PDXScholar

Oregon Population Forecast Program

Population Research Center

6-30-2020

Coordinated Population Forecast for Columbia County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2020-2070

Portland State University. Population Research Center

Nicholas Chun

Portland State University

Kevin Rancik

Portland State University

Paul Runge

Portland State University

Mac Cunningham

Portland State University

Follow this and additional works at: <https://pdxscholar.library.pdx.edu/opfp>



Part of the [Demography, Population, and Ecology Commons](#), and the [Urban Studies and Planning Commons](#)

See next page for additional authors

Let us know how access to this document benefits you.

Recommended Citation

Portland State University. Population Research Center; Chun, Nicholas; Rancik, Kevin; Runge, Paul; Cunningham, Mac; Loftus, Deborah; and Rynerson, Charles, "Coordinated Population Forecast for Columbia County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2020-2070" (2020). *Oregon Population Forecast Program*. 69.

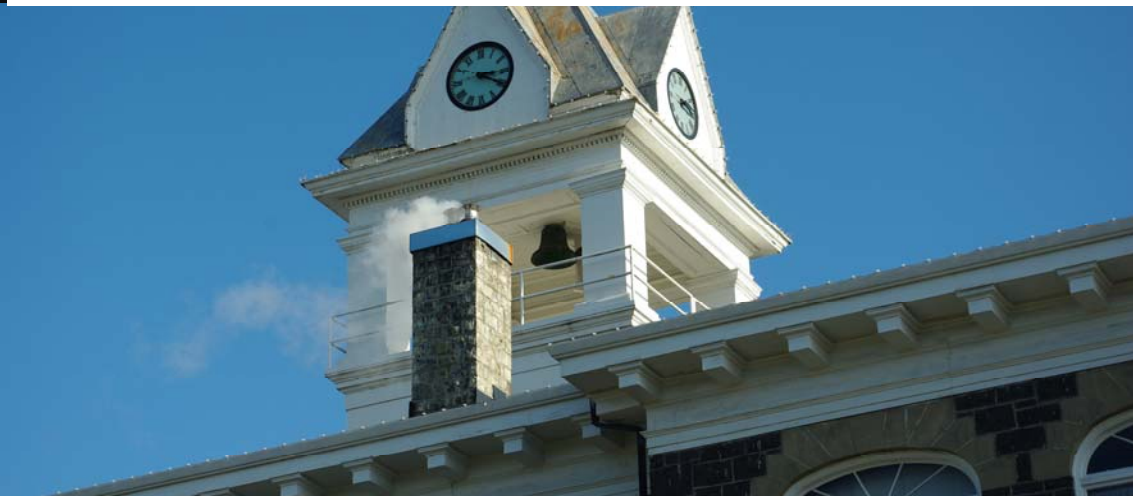
<https://pdxscholar.library.pdx.edu/opfp/69>

This Report is brought to you for free and open access. It has been accepted for inclusion in Oregon Population Forecast Program by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: pdxscholar@pdx.edu.

Authors

Portland State University. Population Research Center, Nicholas Chun, Kevin Rancik, Paul Runge, Mac Cunningham, Deborah Loftus, and Charles Rynerson

Coordinated Population Forecast



2020

Through

2070

**Columbia
County**

Urban Growth

Boundaries (UGB)

& Area Outside UGBs



Population Research Center
PORTLAND STATE UNIVERSITY

Photo Credit: M. O. Stevens. Columbia County Courthouse. November 23, 2015.
[https://commons.wikimedia.org/wiki/File:Columbia County Courthouse cupola -
_St. Helens, Oregon.JPG](https://commons.wikimedia.org/wiki/File:Columbia_County_Courthouse_cupola_-_St._Helens,_Oregon.JPG)

**Coordinated Population Forecast for Columbia County, its
Urban Growth Boundaries (UGB), and Area Outside UGBs
2020-2070**

**Prepared by
Population Research Center
College of Urban and Public Affairs
Portland State University**

June 30, 2020

This project is funded by the State of Oregon through the Department of Land Conservation and Development (DLCD). The contents of this document do not necessarily reflect the views or policies of the State of Oregon.

Population Research Center (PRC) Project Staff

Nicholas Chun, Population Forecast Program Manager

Kevin Rancik, GIS & Research Analyst

Paul Runge, Graduate Research Assistant

Mac Cunningham, Graduate Research Assistant

Deborah Loftus, Accounting Technician

Charles Rynerson, Interim Director

The PRC project staff wish to acknowledge and express gratitude for support from the Forecast Advisory Committee (DLCD) and the hard work of many people who contributed to the development of these forecasts by answering questions, lending insight, providing data, or giving feedback.

How to Read this Report

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

- *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 (2020-2070).

Table of Contents

Modified Methodology	8
Comparison to Cycle 1 (2015-17).....	9
Executive Summary.....	10
Historical.....	10
Forecast	11
14-Year Population Forecast.....	12
Historical Trends	13
Population	14
Age Structure of the Population	16
Race and Ethnicity	17
Births	18
Deaths	21
Migration.....	22
Historical Trends in Components of Population Change	23
Housing and Households.....	25
Assumptions for Future Population Change.....	26
Assumptions for the County.....	28
Assumptions for Smaller Sub-Areas	29
Forecast Trends.....	30
Forecast Trends in the County	30
Forecast Trends in Sub-Areas.....	31
Forecast Trends in Components of Population Change.....	33
Glossary of Key Terms.....	37
Appendix A: Surveys and Supporting Information	38
Appendix B: Specific Assumptions	48
Clatskanie	48
Columbia City	48
Prescott	48

Rainier	48
Scappoose	48
St. Helens.....	49
Vernonia	49
Outside UGBs	49
Appendix C: Detailed Population Forecast Results.....	50

Table of Figures

Figure 1. Columbia County and Sub-Areas—Historical and Forecast Populations, and Average Annual Growth Rates (AAGR)	11
Figure 2. Columbia County and Sub-Areas—14-Year Population Forecast.....	12
Figure 3. Columbia County—Total Population by Five-year Intervals (1975-2019).....	14
Figure 4. Columbia County and Sub-Areas—Total Population and Average Annual Growth Rate (AAGR) (2000 and 2010)	15
Figure 5. Columbia County—Age Structure of the Population (2000 and 2010)	16
Figure 6. Columbia County—Hispanic or Latino and Race (2000 and 2010).....	17
Figure 7. Columbia County and Oregon—Total Fertility Rates (2000 and 2010).....	18
Figure 8. Columbia County—Age-Specific Fertility Rates (2000 and 2010).....	19
Figure 9. Columbia County—Average Annual Births (2010-2045)	20
Figure 10. Columbia County—Average Annual Deaths (2010-2045)	21
Figure 11. Columbia County and Oregon—Age-Specific Migration Rates (2000-2010).....	22
Figure 12. Columbia County—Components of Population Change (2001-2018).....	24
Figure 13. Columbia County and Sub-Areas—Total Housing Units (2000 and 2010)	25
Figure 14. Columbia County and Sub-Areas—Persons per Household (PPH) and Occupancy Rate (2000 and 2010).....	26
Figure 15. Columbia County—Total Forecast Population by Five-year Intervals (2020-2070)	30
Figure 16. Columbia County and Larger Sub-Areas—Forecast Population and AAGR.....	31
Figure 17. Columbia County and Smaller Sub-Areas—Forecast Population and AAGR.....	32
Figure 18. Columbia County—Average Annual Net In/Out-Migration (2000-2010, 2010-2020, and 2020-2045).....	33
Figure 19. St. Helens—Average Annual Net In/Out-Migration (2000-2010, 2010-2020, and 2020-2045)	34

Figure 20. Columbia County—Age Structure of the Population (2020, 2030, and 2045) 35

Figure 21. Columbia County—Components of Population Change (2010-2045)..... 36

Figure 22. Columbia County—Forecasted Population by Five-Year Age Group 50

Figure 23. Columbia County’s Sub-Areas—Forecasted Total Population 51

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). Fortunately, stakeholder feedback has indicated that a 25-year forecast fulfills most requirements for local planning purposes. Thus, we focus on years 1 through 25 to improve the cost effectiveness of the program. The cost savings from this change will allow DLCD to direct additional resources toward local government grants.

For the modified methodology, the Population Research Center continues to use forecast methods when estimating county and sub-area populations for the first 25 years of the 50-year forecast period. We then use a modified projection method for the remaining 25 years. A description of the forecast methodology can be accessed through the forecast program website (www.pdx.edu/prc/opfp). A summary of our modified projection method is below.

For years 26-50, PRC projects the county population using the annual growth rate from the 24th-25th year. For example, if we were to forecast a county to grow by 0.4 percent between the 24th and 25th year of the forecast, we would project the county population thereafter using a 0.4 percent annual growth rate. 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 the resulting shares to the projected county population.

Comparison to Cycle 1 (2015-17)

To keep up to date with local trends and shifting demands, the Oregon Population Forecast Program (OPFP) regularly updates its coordinated population forecasts for Oregon's counties and their sub-areas. The 2020 forecast for Columbia County is an update of the 2017 version, and it differs from the prior iteration in several ways. Overall, we forecast slower population growth in Columbia County for the 25-year forecast period (2020-2045). We expect fewer births and more deaths, ultimately translating to greater natural population decrease. Though we continue to expect net in-migration to Columbia County, we expect lower levels of net in-migration in the near term relative to the previous forecast. In the long-term we expect slightly stronger net in-migration than previously forecasted.

County-level differences relative to the previous forecast reflect differences at the sub-area level. Most notably, in this forecast we reduce growth expectations for Scappoose and areas outside of UGBs between 2020 and 2045. This especially lowers the forecasted share of the total county population that will live outside of UGB areas by 2045. For other sub-areas, we forecast growth patterns similar to—though slightly lower than—those in the previous forecast. This holds sub-areas' shares of the total county population roughly consistent with the previous forecast. The full breakdown of differences between the current and previous forecasts by county and sub-area can be accessed at the following website:

<https://www.pdx.edu/prc/current-documents-and-presentations>.

Executive Summary

Historical

Different areas within Oregon counties experience different growth patterns. Those patterns combine to collectively determine county-level demographic changes. Columbia County is comprised of two types of areas: its urban-growth boundary (UGB) areas (Clatskanie, Columbia City, Prescott, Rainier, Scappoose, St. Helens, and Vernonia) and areas outside those UGBs.

Columbia County's total population steadily increased in the 2000s, growing at 1.3 percent annually (see **Figure 1**). Some sub-areas—such as Columbia City, Scappoose, and St. Helens along the Columbia River Highway—experienced faster population growth than the county, averaging between two and three percent growth annually. In contrast, Prescott and Vernonia lost population, and Clatskanie and Rainier grew less than one percent annually.

The population growth that occurred in Columbia County between 2000 and 2010 resulted primarily from strong net in-migration of adults older than 30 and their children. Though population growth due to natural increase (births minus deaths) was positive during the decade, it tended to represent a smaller proportion of total growth. By 2010, Columbia County's natural increase began to dip, ultimately turning into natural decrease in 2018. This is due to several factors. Most notably, between 2000 and 2010, Columbia County's total fertility rate fell over 50 percent faster than the statewide rate. The effects of this trend were compounded by net out-migration of adults in their twenties, a migration pattern common in areas without a major university or city. These factors—combined with nationwide population aging—led to fewer births and more deaths each year and thus overall natural decrease.

Forecast

The Population Research Center forecasts that Columbia County will continue to steadily add population throughout the forecast period, gaining more than 8,000 residents by 2045 and another 8,000 residents by 2070 (**Figure 1**). Population will grow fastest in St. Helens and Scappoose, the Columbia County sub-areas closest to Portland. Despite faster growth than other sub-areas, we forecast that St. Helens and Scappoose will grow at slower annual rates than observed between 2000 and 2010. Population growth will be driven largely by net in-migration outpacing natural decrease as the population continues to age.

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

Area	2000	2010	AAGR (2000- 2010)	Population (2020)	Population (2045)	Population (2070)	AAGR (2010- 2020)	AAGR (2020- 2045)	AAGR (2045- 2070)
Columbia County	43,560	49,351	1.3%	51,623	59,786	68,365	0.4%	0.6%	0.5%
Clatskanie	1,755	1,867	0.6%	1,822	2,044	2,272	-0.2%	0.5%	0.4%
Columbia City	1,578	1,950	2.1%	1,871	2,140	2,429	-0.4%	0.5%	0.5%
Prescott	71	57	-2.2%	53	51	46	-0.7%	-0.2%	-0.4%
Rainier	2,237	2,430	0.8%	2,378	2,620	2,855	-0.2%	0.4%	0.3%
Scappoose	5,517	7,269	2.8%	8,025	11,009	14,440	1.0%	1.3%	1.1%
St. Helens	11,857	14,839	2.3%	15,503	20,246	25,649	0.4%	1.1%	1.0%
Vernonia	2,297	2,191	-0.5%	2,039	2,126	2,182	-0.7%	0.2%	0.1%
Outside UGBs	18,248	18,748	0.3%	19,933	19,551	18,492	0.6%	-0.1%	-0.2%

Figure 1 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

Figure 2 provides a 14-year population forecast (2020-2034) for the county and its sub-areas, as required by House Bill 2254. Populations at the 14th year of the forecast were interpolated using the average annual growth rate during the 2030-2035 period. The population interpolation template can be accessed at the following website: <https://www.pdx.edu/prc/current-documents-and-presentations>.

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

Area	2020	2034	14-Year Change	AAGR (2020-2034)
Columbia County	51,623	56,116	4,493	0.6%
Clatskanie	1,822	1,922	100	0.4%
Columbia City	1,871	2,017	146	0.5%
Prescott	53	51	-2	-0.2%
Rainier	2,378	2,510	132	0.4%
Scappoose	8,025	9,633	1,608	1.3%
St. Helens	15,503	18,145	2,643	1.1%
Vernonia	2,039	2,082	43	0.2%
Outside UGBs	19,933	19,755	-178	-0.1%

Figure 2 Source: Forecast by Population Research Center (PRC). Note: For simplicity each UGB is referred to by its primary city's name.

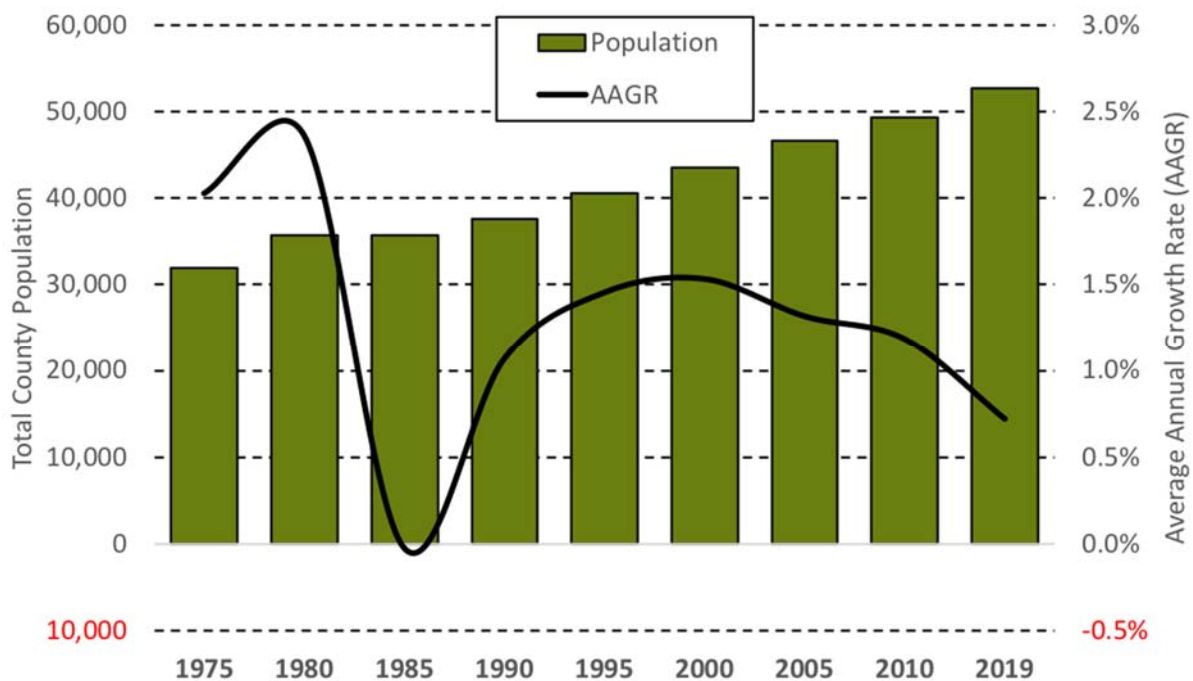
Historical Trends

We examined Columbia County and its sub-areas to identify important demographic characteristics and trends that might influence those areas' population forecasts. Factors analyzed include historical population levels, age composition of the population, race and ethnicity, births, deaths, migration, the number of housing units, occupancy rate, and persons per household (PPH). As the coming pages demonstrate, population trends within individual sub-areas often differ from those of the overall county, while population growth rates for the county are influenced by local sub-area trends collectively.

Population

Figure 3 graphs Columbia County’s historical population and growth rates in 5-year increments from 1975 to 2019. Columbia County’s total population grew from 31,992 in 1975 to 52,750 in 2019. During the 1980s, challenging economic conditions both nationally and in Oregon led to a brief period in which the average annual population growth rate was zero. During the early 1990s, annual population growth rates recovered to between 1 and 1.5 percent. They remained that way until the 2010s, when they fell below one percent but remained positive. **Figure 3** includes a table below the chart that contains the exact values plotted above, a format applied to many charts throughout this report.

Figure 3. Columbia County—Total Population by Five-year Intervals (1975-2019)



Year	1975	1980	1985	1990	1995	2000	2005	2010	2019
Population	31,992	35,744	35,704	37,557	40,520	43,560	46,663	49,351	52,750
AAGR	2.0%	2.4%	0.0%	1.1%	1.5%	1.5%	1.3%	1.2%	0.7%

Figure 3 Sources: U.S. Census Bureau, 1980, 1990, 2000, and 2010 Censuses; Population Research Center (PRC), July 1st Annual Estimates 1975, 1985, 1995, 2005 and 2019.

Note: Population Estimates from the Oregon Population Estimates Program (OPEP) may not be consistent with the 2019 population forecast due to different methodologies and data sources.

Between 2000 and 2010, Columbia County’s average annual population growth rate was 1.3 percent (see **Figure 4**), but not all the county’s sub-areas grew. Prescott and Vernonia shed population, exhibiting the lowest observed annual growth rates among the county’s sub-areas: -2.2 and -0.5 percent, respectively. On the other hand, UGBs along the Columbia River Highway north of the Portland metropolitan area grew the fastest of Columbia County’s sub-areas. Those UGBs include Scappoose, St. Helens, and Columbia City, which grew at 2.8, 2.3, and 2.1 percent, respectively.

Figure 4. Columbia County and Sub-Areas—Total Population and Average Annual Growth Rate (AAGR) (2000 and 2010)

Area	Population (2000)	Population (2010)	AAGR (2000-2010)	Share of County 2000	Share of County 2010	Change (2000-2010)
<i>Columbia County</i>	<i>43,560</i>	<i>49,351</i>	<i>1.3%</i>	<i>100.0%</i>	<i>100.0%</i>	<i>0.0%</i>
Clatskanie	1,755	1,867	0.6%	4.0%	3.8%	-0.2%
Columbia City	1,578	1,950	2.1%	3.6%	4.0%	0.3%
Prescott	71	57	-2.2%	0.2%	0.1%	0.0%
Rainier	2,237	2,430	0.8%	5.1%	4.9%	-0.2%
Scappoose	5,517	7,269	2.8%	12.7%	14.7%	2.1%
St. Helens	11,857	14,839	2.3%	27.2%	30.1%	2.8%
Vernonia	2,297	2,191	-0.5%	5.3%	4.4%	-0.8%
Outside UGBs	18,248	18,748	0.3%	41.9%	38.0%	-3.9%

Figure 4 Source: U.S. Census Bureau, 2000 and 2010 Censuses. Note: For simplicity each UGB is referred to by its primary city's name.

Note: When considering growth rates and population growth overall, it should be noted that slowing growth rates do not necessarily correspond with slowing population growth in absolute terms. 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 has stayed the same.

Age Structure of the Population

Like most areas across Oregon, Columbia County’s population is aging. This means the county’s older age cohorts are growing as a share of the county’s total population. As the population ages, the number of deaths may increase and the proportion of women in their childbearing years may decrease, resulting in fewer births.

Figure 5 illustrates this phenomenon by showing how Columbia County’s age structure has changed over time. The figure contains two “population pyramids,” one for 2000 and one for 2010. Each pyramid shows the percentage of the total county population that falls within each five-year age and gender cohort (e.g. female 35-39-year-olds). The oldest age cohort shown is 85 years and older. Between 2000 and 2010, the county’s largest cohorts—Baby Boomers in their 40s and 50s—aged into their 50s and 60s. As a result, the proportion of the population aged 65 or older increased from 11.6 to 14.0 percent. Over the same time period, females between ages 15 and 49—considered childbearing years—declined as a proportion of the total population from 24.2 to 21.6 percent. Together, these two facts create the overall aging effect described above, where older residents come to comprise a greater share of all residents.

Figure 5. Columbia County—Age Structure of the Population (2000 and 2010)

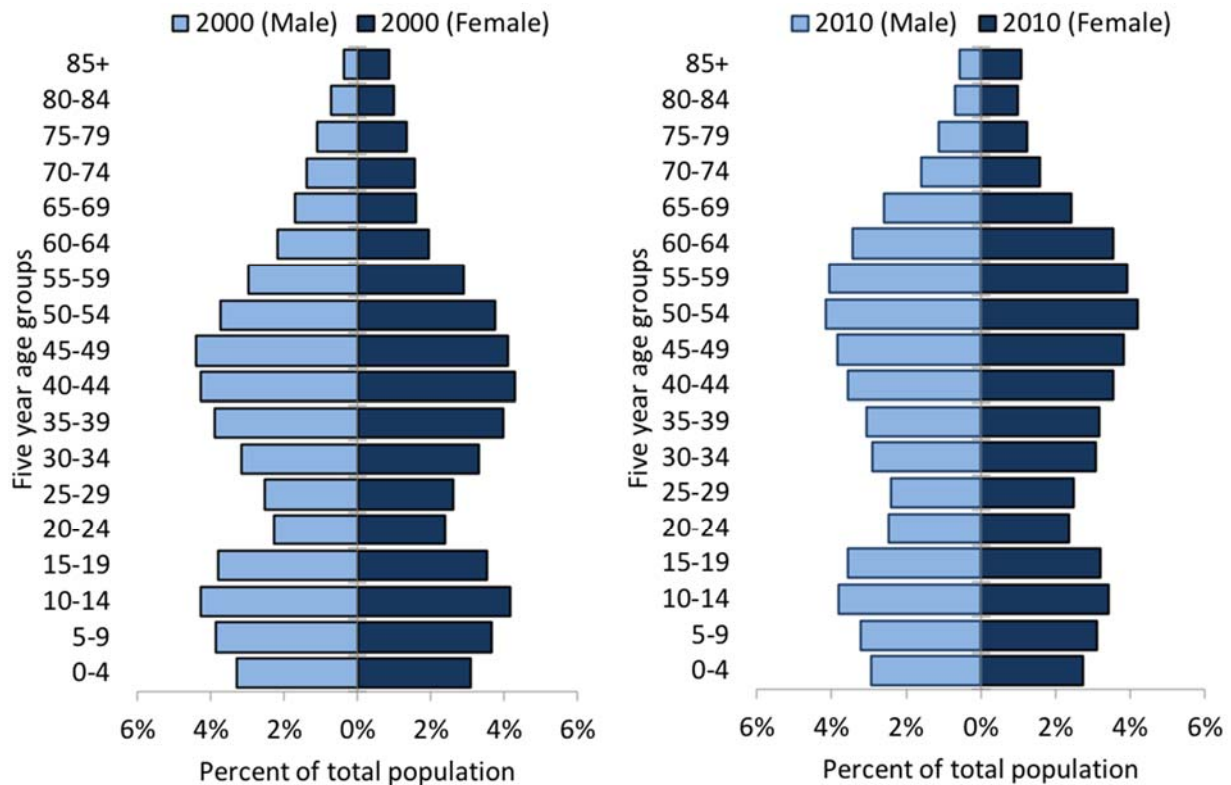


Figure 5 Source: U.S. Census Bureau, 2000 and 2010 Censuses.

Race and Ethnicity

In addition to statewide aging, another demographic shift is occurring across Oregon: growing racial and ethnic diversity. Between 2000 and 2010, Columbia County primarily saw this shift in an increase in the Latino population, though Asian, Black, and Native Hawaiian and Pacific Islander populations grew significantly on a percentage basis, too. These shifts are noteworthy on their own, but also for their impact on the components of population change. The increase in Latino population, in particular, has important effects. First, fertility rates among Latinas have tended to be higher than those among White, non-Latinas. Although recent data shows that Latina fertility rates are quickly declining in some areas, the population is younger and thus still contributes more births. Second, Latino households have tended to be larger, on average, than White, non-Latino households. Thus, growth of Latino populations in Oregon has the potential to raise average household sizes.

Between 2000 to 2010, the Latino population in Columbia County nearly doubled, growing from 2.5 percent of the total population to 4 percent (see **Figure 6**). Meanwhile, the White, non-Latino population declined as a share of the overall population, decreasing from 93.1 to 90.3 percent.

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

Race and Ethnicity	Pop. (2000)	Pop. Share (2000)	Pop. (2010)	Pop. Share (2010)	Absolute Change	Relative Change
<i>Total population</i>	43,560	100.0%	49,351	100.0%	5,791	13.3%
Hispanic or Latino	1,093	2.5%	1,987	4.0%	894	81.8%
Not Hispanic or Latino	42,467	97.5%	47,364	96.0%	4,897	11.5%
White alone	40,576	93.1%	44,563	90.3%	3,987	9.8%
Black or African American alone	97	0.2%	195	0.4%	98	101.0%
American Indian and Alaska Native alone	540	1.2%	590	1.2%	50	9.3%
Asian alone	246	0.6%	446	0.9%	200	81.3%
Native Hawaiian/Other Pacific Islander alone	39	0.1%	95	0.2%	56	143.6%
Some Other Race alone	43	0.1%	43	0.1%	0	0.0%
Two or More Races	926	2.1%	1,432	2.9%	506	54.6%

Figure 6 Source: U.S. Census Bureau, 2000 and 2010 Censuses.

Births

In Oregon, the total fertility rate (TFR), or the average number of children a woman would have over her childbearing years based on age-specific rates at a point in time, declined from 1.98 in 2000 to 1.79 in 2010 (see **Figure 7**). Over that same time period Columbia County's TFR declined more dramatically (though from a higher starting point): from 2.15 to 1.83. In contrast, while Oregon's TFR has continued to fall since 2010, we have not observed a decline in Columbia County rates. Therefore, we forecast that Columbia County's TFR will remain steady through 2045, roughly maintaining its current level. Meanwhile, we forecast that Oregon's TFR will continue its decline to 1.51.

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

Area	Total Fertility Rate (2000)	Total Fertility Rate (2010)	Total Fertility Rate (2045)
Columbia County	2.15	1.83	1.89
Oregon	1.98	1.79	1.51

Figure 7 Sources: U.S. Census Bureau, 2000 and 2010 Censuses; Oregon Health Authority, Center for Health Statistics. Calculations and forecast by Population Research Center (PRC).

Figure 8 provides more detail on fertility trends by presenting a graph of Columbia County’s historical fertility rates by female age cohort. It shows that, between 2000 to 2010, Columbia County’s fertility declined among females between the ages of 15 and 29. Through fertility rates rose for females between 30 and 34 years old, those increases did not offset the collective decline seen in other age cohorts.

Figure 8. Columbia County—Age-Specific Fertility Rates (2000 and 2010)

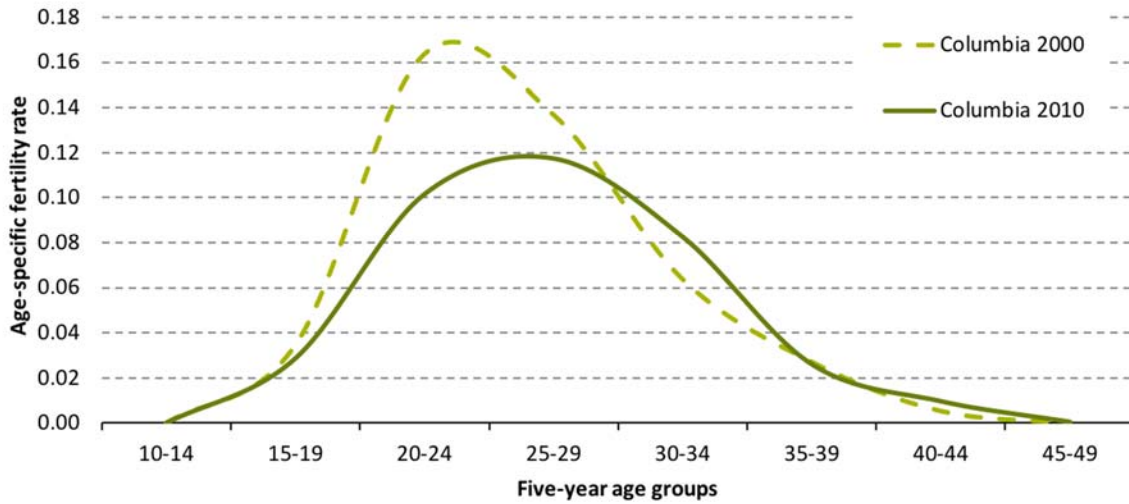
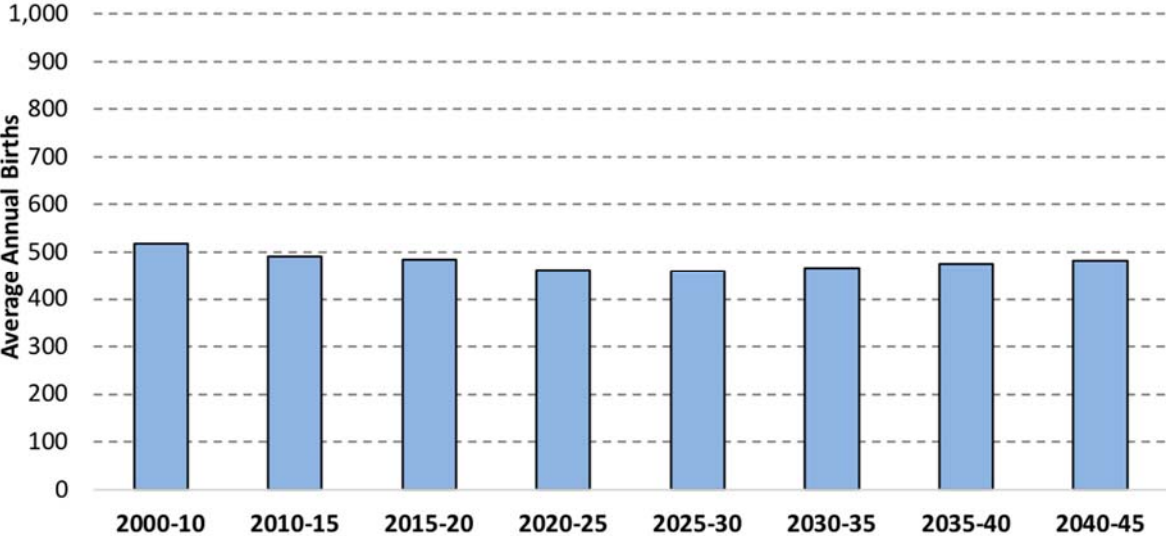


Figure 8 Sources: U.S. Census Bureau, 2000 and 2010 Censuses; Oregon Health Authority, Center for Health Statistics. Calculations by Population Research Center (PRC).

Figure 9 unites the concepts explored in **Figures 5 through 8** by showing the number of historical and forecasted births to residents of Columbia County. We expect Columbia County’s average annual number of births to decline from around 510 in the 2000s to roughly 460 between 2025 and 2030. We expect births to slowly recover after 2030, reaching roughly 480 births per year by 2045. Compared with other Oregon counties, Columbia County’s forecasted births remain relatively stable over the forecast period.

Figure 9. Columbia County—Average Annual Births (2010-2045)



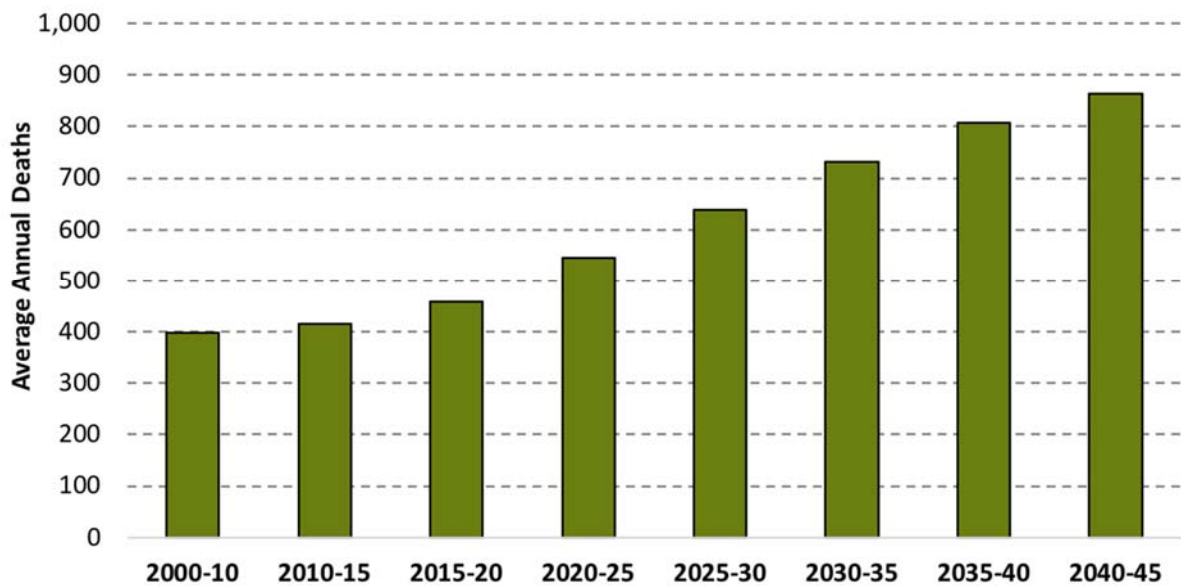
Year	2000-10	2010-15	2015-20	2020-25	2025-30	2030-35	2035-40	2040-45
Births	519	490	485	461	458	466	476	482

Figure 9 Sources: Oregon Health Authority, Center for Health Statistics. Calculations and forecast by Population Research Center (PRC).

Deaths

The population in Columbia County is aging, yet the county’s survival rates changed very little between 2000 and 2010. This underscores the fact that mortality is a relatively stable component of population change when compared with birth and migration rates. Average annual deaths in Columbia County changed only slightly between the 2000-10 and 2010-15 time periods, growing from around 400 to 420 per year. Due to population aging, deaths are expected to increase more quickly in the coming years. **Figure 10** depicts that forecasted increase, showing that average annual deaths will grow from roughly 460 during the 2015-20 period to over 860 during the 2040-45 period.

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



Year	2000-10	2010-15	2015-20	2020-25	2025-30	2030-35	2035-40	2040-45
Deaths	397	416	460	545	638	731	808	865

Figure 10 Sources: Oregon Health Authority, Center for Health Statistics. Calculations and forecast by Population Research Center (PRC).

Migration

Age and stage of life strongly influence people’s likelihood of migrating from one city or county to another. As such, age-specific migration rates are critical in assessing migration patterns. Age-specific migration rates are the number of net migrants per person for an age group.

Figure 11 graphs Oregon’s and Columbia County’s historical age-specific migration rates by five-year age group (e.g. ages 35-39). In general, between 2000 and 2010, Oregon attracted migrants across all age cohorts, especially individuals in their late 20s and early 30s. Oregon only experienced out-migration among individuals older than 85 years.

Columbia County’s migration patterns were more nuanced, though they resembled patterns found in other Oregon counties without major cities or universities. Young adults (20-29) left the county seeking higher education and employment opportunities. Some returned (or were replaced by newcomers) in their 30s and 40s, often with children in tow. Some individuals in their 50s and 60s moved to Columbia County, perhaps leaving more urban areas to retire or semi-retire. This trend switched to net out-migration for individuals in their 80s, who were perhaps seeking more abundant medical facilities and end-of-life care.

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

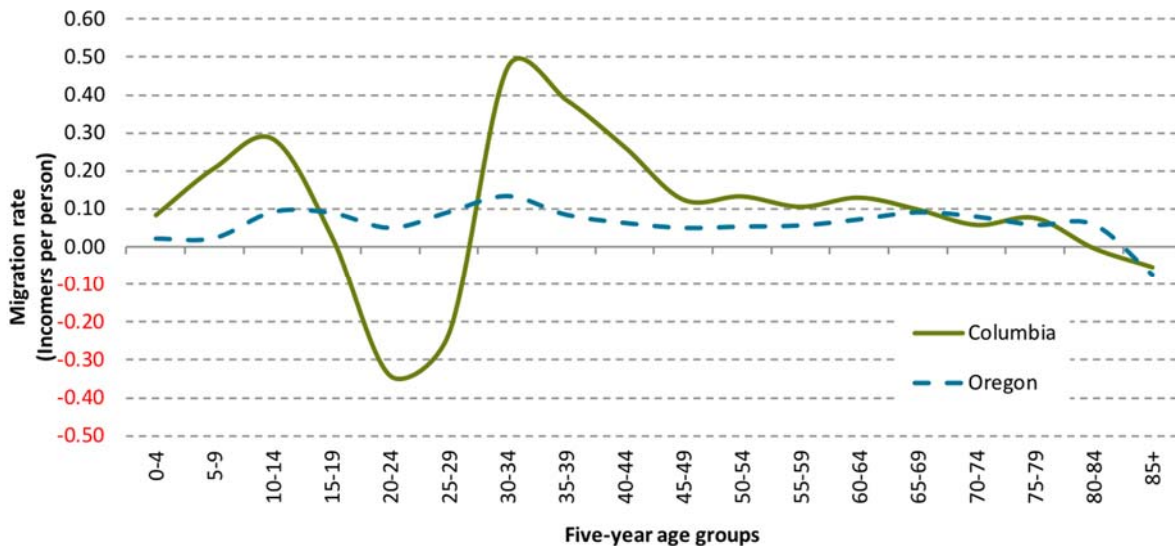
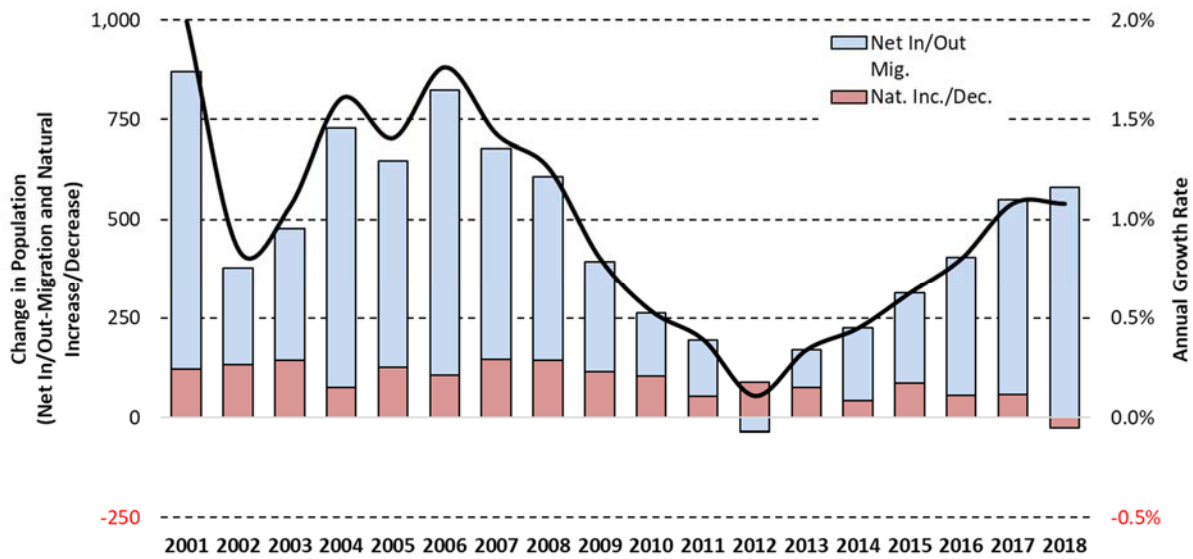


Figure 11 Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).

Historical Trends in Components of Population Change

In this subsection, we summarize many of the demographic trends described above. First, we integrate birth and death trends by calculating natural increase (births minus deaths). Second, we translate migration rates from **Figure 11** into absolute net in- or out-migration. Finally, we graph annual net migration, natural increase, and the resulting population growth rate for each year from 2001 to 2018 in **Figure 12**. The figure reveals that Columbia County experienced natural increase—more births than deaths—in every year except 2018. Natural increase remained roughly consistent between 2001 and 2008, then began to decline until becoming negative (and turning into natural decrease) in 2018. This shift resulted from a combination of factors, especially the county’s relatively strong but declining total fertility rate and the fact that, over two decades, the county’s largest age cohorts steadily aged toward life stages with significant declines in survival (see **Figure 5**). Despite these changes in natural population growth, a reliable trend of net in-migration assisted in creating consistently positive population growth rates. Between 2001 and 2011, the annual population growth rate hovered between 0.5 and 2 percent, with the strongest growth rates in 2001, 2004, and 2006. Growth rates then slowed heading into and during the Great Recession, bottoming out at no growth in 2012. That year was also the only year in which the county experienced net out-migration. Since 2012, annual growth has steadily risen to roughly 1 percent in 2018.

Figure 12. Columbia County—Components of Population Change (2001-2018)



Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Net Mig.	748	244	333	652	521	716	532	465	277
Nat. Inc./Dec.	121	134	145	76	127	107	146	143	116
AGR	2.0%	0.9%	1.1%	1.6%	1.4%	1.8%	1.4%	1.3%	0.8%

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Net Mig.	160	141	-34	94	183	228	349	492	580
Nat. Inc./Dec.	104	54	89	76	42	87	56	58	-25
AGR	0.5%	0.4%	0.1%	0.3%	0.5%	0.6%	0.8%	1.1%	1.1%

Figure 12 Sources: Population Research Center, July 1st Annual Estimates 2001-2018 Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).

Note: Annual net in/out-migration estimates are based on population estimates from the Oregon Population Estimates Program. As such, migration assumptions for the 2019 population forecast may not be consistent with assumptions from OPEP.

Housing and Households

The number of housing units in Columbia County increased from 2000 to 2010. During this period, the total number of housing units increased by roughly 18 percent countywide, or 3,100 new units (see **Figure 13**). Over half of new housing units built in this time period were built in Scappoose and St. Helens. Fewer than one quarter of all new units were built outside of UGB areas. Scappoose added housing at the fastest annual rate of the sub-areas examined (2.9 percent), adding 741 units between 2000 and 2010. This amounted to an increase of roughly 33%, spread over 10 years. Columbia City grew at the second fastest rate (2.7 percent), adding 193 units or a 30% increase to overall supply, spread over 10 years. All other county sub-areas experienced housing unit growth too, though at slower rates. Prescott and Vernonia exemplify this trend, having averaged growth below 1 percent annually. Housing unit counts from the ongoing 2020 Census will clarify whether these trends have continued since 2010.

Housing growth rates may differ from population growth rates because (1) the numbers of total housing units are fewer 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.

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

Area	2000	2010	AAGR (2000- 2010)	Share of County 2000	Share of County 2010	Change (2000- 2010)
<i>Columbia County</i>	17,572	20,698	1.7%	100.0%	100.0%	0.0%
Clatskanie	755	863	1.3%	4.3%	4.2%	-0.1%
Columbia City	642	835	2.7%	3.7%	4.0%	0.4%
Prescott	32	35	0.9%	0.2%	0.2%	0.0%
Rainier	958	1,108	1.5%	5.5%	5.4%	-0.1%
Scappoose	2,222	2,963	2.9%	12.6%	14.3%	1.7%
St. Helens	4,817	5,947	2.1%	27.4%	28.7%	1.3%
Vernonia	908	981	0.8%	5.2%	4.7%	-0.4%
Outside UGBs	7,238	7,966	1.0%	41.2%	38.5%	-2.7%

Figure 13 Source: 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 persons per household (PPH)—in Columbia County declined from 2.6 in 2000 to 2.5 in 2010 (see **Figure 14**). This reflects the fact that all sub-areas in the county experienced decreases in PPH, especially Prescott, which dropped from 2.6 to 2.1. In general, areas with an older or aging population are likely to experience a decline in PPH over time.

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 Columbia County decreased from 93.2 to 92.7 percent (see **Figure 14**). Occupancy declined fastest in Prescott and Vernonia, by 7 and 4 percent, respectively. Those sub-areas already featured the county’s lowest occupancy rates (in the 80s rather than the 90s seen elsewhere). In contrast, St. Helens and Columbia City experienced modest increases in occupancy rates of around 1.5 percent.

Figure 14. Columbia County and Sub-Areas—Persons per Household (PPH) and Occupancy Rate (2000 and 2010)

Area	Persons Per Household (2000)	Persons Per Household (2010)	Change 2000-2010	Occupancy Rate (2000)	Occupancy Rate (2010)	Change 2000-2010
<i>Columbia County</i>	2.6	2.5	-3.7%	93.2%	92.7%	-0.5%
Clatskanie	2.5	2.4	-4.7%	92.5%	90.7%	-1.7%
Columbia City	2.6	2.5	-6.4%	93.0%	94.5%	1.5%
Prescott	2.6	2.1	-19.7%	84.4%	77.1%	-7.2%
Rainier	2.6	2.4	-6.5%	91.3%	91.8%	0.5%
Scappoose	2.6	2.6	-1.7%	94.5%	94.3%	-0.2%
St. Helens	2.6	2.6	-1.2%	92.8%	94.2%	1.4%
Vernonia	2.8	2.6	-7.9%	89.4%	85.5%	-3.9%
Outside UGBs	2.7	2.6	-4.7%	93.9%	92.0%	-1.9%

Figure 14 Source: 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. This helps us establish reasonable assumptions for likely scenarios of population change.

In order to make population forecasts, we rely on two methods and two corresponding sets of assumptions. Please see the 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.

- We forecast county sub-areas with populations greater than 8,000 in the forecast launch year using the cohort-component method. This method requires assumptions about fertility, mortality, and migration.
- We forecast county sub-areas with populations less than 8,000 in the forecast launch year using the housing-unit method. This method requires assumptions about changes in the number of total housing units, PPH, occupancy rates, and group quarters population.

We used the cohort-component method to generate Columbia County's forecast as well as the forecast for St. Helens and the area outside UGBs. We used the housing-unit method to generate forecasts for all other sub-areas.

The assumptions involved in those forecasts are described below. Unfortunately, we cannot accurately predict the timing and course of some key phenomena that will influence demographic change in Oregon, such as economic recessions, climate change, or a major earthquake. We update our forecasts according to our scheduled multi-year cycle in order to enable us to correct our course as information about those and other unpredictable factors becomes available. The global outbreak of COVID-19 is an example of an unpredictable, yet important event that will influence demographic patterns around the world. It offers a fresh reminder of several key forecasting dynamics that we must consider alongside the assumptions and forecast numbers below. First, we cannot predict the timing of exogenous events such as pandemics or recessions. Second, future developments ranging from national immigration policies to state and local economic, housing, and land use strategies may alter the trajectory of population change.

Assumptions for the County

The cohort-component model used for counties and large sub-areas requires assumptions about fertility, mortality, and migration.

1. We expect Columbia County to continue its decades-long trend of steady growth, led by cities along Highway 30 close to Portland area job centers.
2. Net in-migration will increase steadily over the forecast period (2020-45).
3. We incorporate state and local trends into our assumptions for fertility and mortality.
 - a. Deaths will increase throughout the forecast period due to aging Baby Boomers.
 - b. Fertility rates will fall slightly for most age cohorts. In spite of population growth, births will hold steady over the period, in part due to out-migration of residents in their 20s.
 - c. Growth due to natural increase (births minus deaths) will decline, becoming consistently negative at the county level by the late 2020s and negative in St. Helens by the early 2040s.
4. We expect Columbia County's and St. Helens' total populations to increase as net in-migration outweighs waning natural increase.

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.

1. If planned housing units were reported in the surveys, we expect that they will be built within roughly 5 years, followed by a return to long-range historic patterns.
2. If no planned housing units were reported, we assume future housing construction will follow historic patterns.
3. Where population has historically declined or stayed flat and there is no planned housing construction, we do not expect major losses of housing stock. Household turnover will create opportunities for new households, preventing significant decline in population.
4. We expect persons per household (PPH) to continue to slightly decline, resulting from observed declines in fertility rates and population aging.

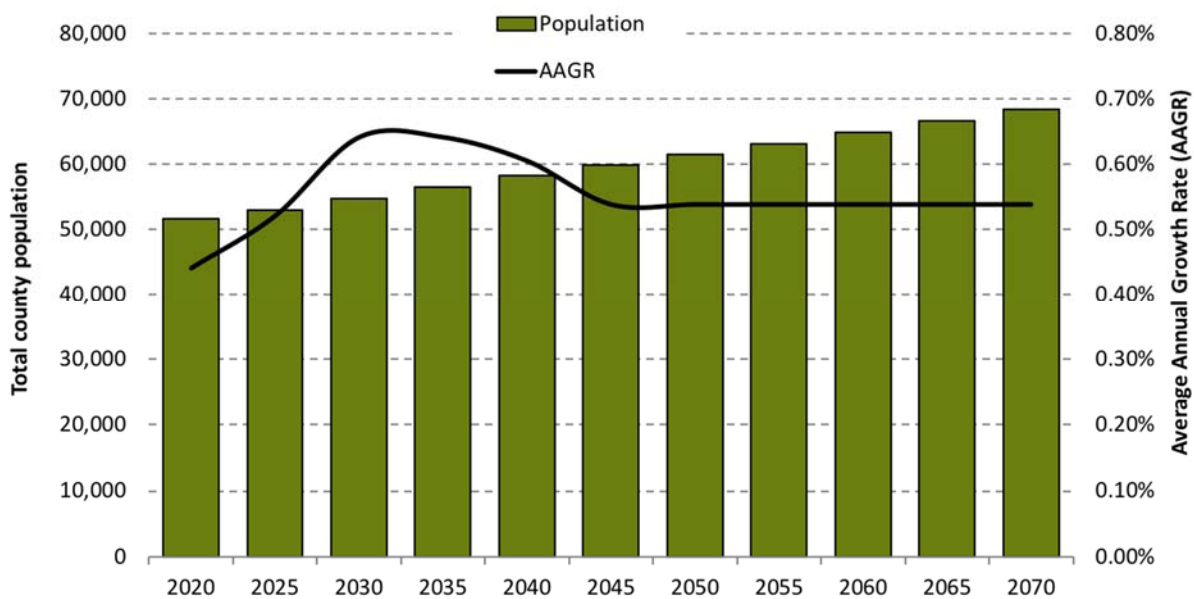
Forecast Trends

Forecast Trends in the County

We expect steady growth in Columbia County over the forecast period.

Figure 15 plots forecasted population and average annual growth rate in five-year intervals, starting in 2020 and ending in 2070. The countywide average annual population growth rate is forecast to hold steady between 0.4 and 0.6 percent over the period. Given this steady growth rate, Columbia County’s total population is forecast to increase by roughly 17,000 people (32 percent) between 2020 and 2070. This will translate into a total countywide population of 68,365 in 2070.

Figure 15. Columbia County—Total Forecast Population by Five-year Intervals (2020-2070)



Year	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
Pop.	51,623	52,981	54,701	56,476	58,204	59,786	61,411	63,080	64,795	66,556	68,365
AAGR	0.4%	0.5%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%

Figure 15 Source: Forecast by Population Research Center (PRC).

Forecast Trends in Sub-Areas

We expect Columbia County’s largest UGB—St. Helens—to grow, on average, around 1 percent annually. This will raise the population from roughly 15,000 people in 2020 to over 25,000 people in 2070. In correspondence with these increases, we forecast that St. Helens’ share of the county’s total population will grow as well, up from 30 percent in 2020 to 37 percent in 2070. (see **Figure 16**).

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

Area	Population (2020)	Population (2045)	Population (2070)	AAGR (2020-2045)	AAGR (2045-2070)	Share of County 2020	Share of County 2045	Share of County 2070
Columbia County	51,623	59,786	68,365	0.6%	0.5%	--	--	--
St. Helens	15,503	20,246	25,649	1.1%	1.0%	30.0%	33.9%	37.5%
Outside UGBs	19,933	19,551	18,492	-0.1%	-0.2%	38.6%	32.7%	27.0%

Figure 16 Source: Forecast by Population Research Center (PRC). Note: For simplicity each UGB is referred to by its primary city's name.

We forecast that—apart from Prescott—Columbia County’s small sub-areas will also grow between 2020 and 2070 (see **Figure 17**). We forecast that Scappoose will grow fastest, averaging an annual growth rate at or above 1 percent. Likewise, we expect steady population growth averaging around 0.5 percent annually in Clatskanie, Columbia City, and Rainier. We forecast the area outside Columbia County’s UGBs to slightly decline in population over the course of the forecast period, from about 19,933 in 2020 to about 18,492 people in 2070. This slowdown is due to the existing limitations in housing construction outside of UGBs paired with decreases in PPH and occupancy rates accompanying the aging population. With growing population within UGBs and declining population outside of them, we forecast a redistribution of the population. Specifically, we forecast that the county’s population share outside UGB areas will gradually drop from 39 to 27 percent by 2070, with that share absorbed throughout Columbia County’s growing sub-areas.

Figure 17. Columbia County and Smaller Sub-Areas—Forecast Population and AAGR

Area	Population (2020)	Population (2045)	Population (2070)	AAGR (2020-2045)	AAGR (2045-2070)	Share of County 2020	Share of County 2045	Share of County 2070
Columbia County	51,623	59,786	68,365	0.6%	0.5%	--	--	--
Clatskanie	1,822	2,044	2,272	0.5%	0.4%	3.5%	3.4%	3.3%
Columbia City	1,871	2,140	2,429	0.5%	0.5%	3.6%	3.6%	3.6%
Prescott	53	51	46	-0.2%	-0.4%	0.1%	0.1%	0.1%
Rainier	2,378	2,620	2,855	0.4%	0.3%	4.6%	4.4%	4.2%
Scappoose	8,025	11,009	14,440	1.3%	1.1%	15.5%	18.4%	21.1%
Vernonia	2,039	2,126	2,182	0.2%	0.1%	3.9%	3.6%	3.2%
Outside UGBs	19,933	19,551	18,492	-0.1%	-0.2%	38.6%	32.7%	27.0%

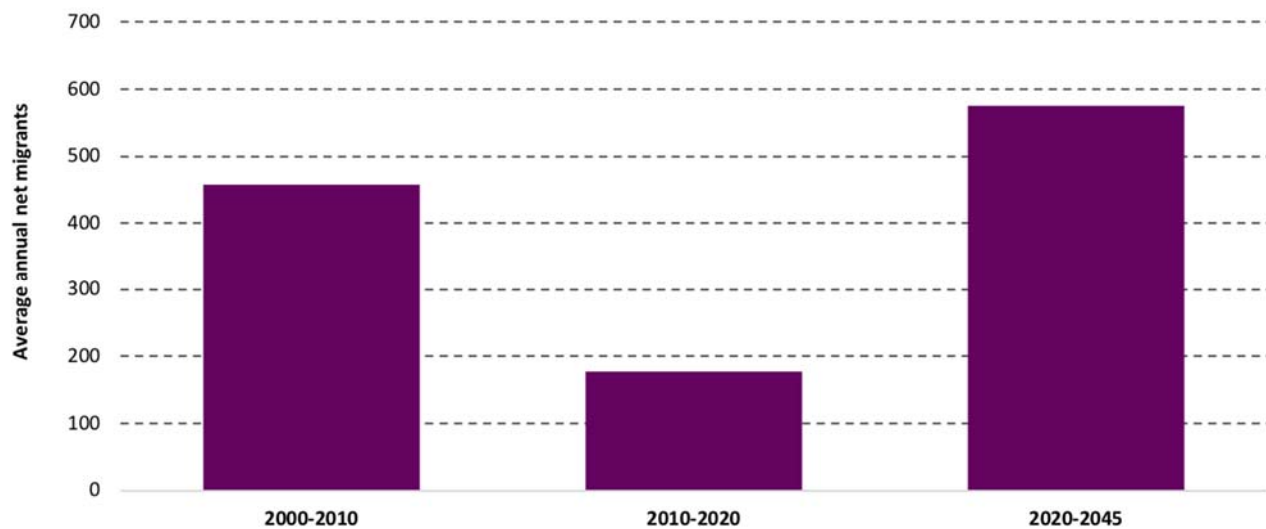
Figure 17 Source: Forecast by Population Research Center (PRC). Note: For simplicity each UGB is referred to by its primary city's name.

Forecast Trends in Components of Population Change

As previously discussed, we forecast that in-migrants will outnumber out-migrants in Columbia County, creating positive net in-migration of new residents throughout the forecast period. Important drivers of this dynamic are the forecasted aging of the population and increase in the county’s number of deaths. As aging occurs and the large existing cohort of older residents passes away or retires, we assume that housing and jobs will become available, attracting new residents who migrate to the county to fill essential roles in the community.

Figure 18 shows that Columbia County’s annual net in-migration averaged over 450 people between 2000 and 2010. During the following decade—concurrent with the recovery from the Great Recession—net in-migration remained positive but occurred at a slower pace. Between 2020 and 2045, we forecast that net in-migration will rise above levels observed in the 2000s to roughly 575 people annually. **Figure 19** shows that we forecast St. Helens to experience a similar trend: a recovery of in-migration between 2020 and 2045 reaching the levels observed during the 2000s.

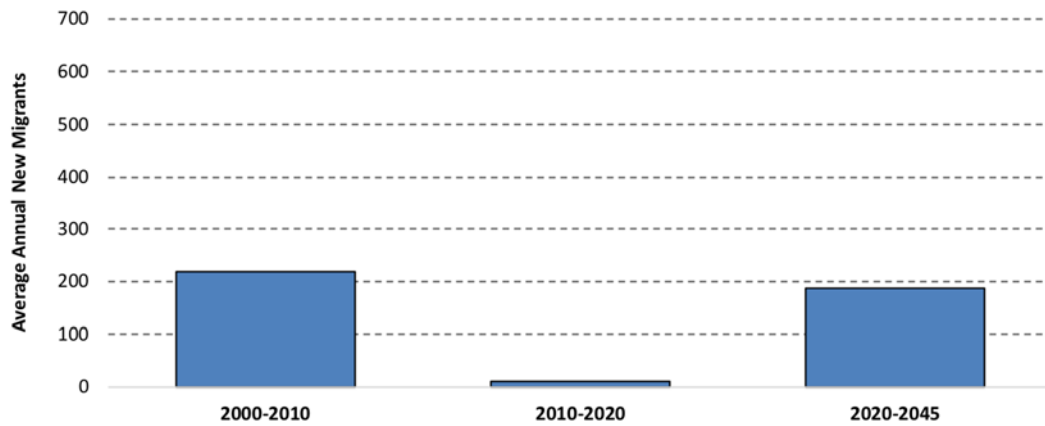
Figure 18. Columbia County—Average Annual Net In/Out-Migration (2000-2010, 2010-2020, and 2020-2045)



Year	2000-10	2010-20	2020-45
Columbia County	457	178	575

Figure 18 Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculations and Forecast by Population Research Center (PRC). Note: The average annual numbers were calculated for the 10-year periods (2000-2010 and 2010-2020) and the 25-year period (2020-2045).

Figure 19. St. Helens—Average Annual Net In/Out-Migration (2000-2010, 2010-2020, and 2020-2045)



Year	2000-10	2010-20	2020-45
Columbia County	219	10	187

Figure 19 Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculations and Forecast by Population Research Center (PRC). Note: The average annual numbers were calculated for the 10-year periods (2000-2010 and 2010-2020) and the 25-year period (2020-2045).

As mentioned above, a key factor shaping Columbia County’s forecasted population is population aging. **Figure 20** plots Columbia County’s population pyramids for three years: 2020, 2030, and 2045. Each pyramid graphs the percentage of the total population that falls within each five-year age and gender cohort (e.g. female 35-39-year-olds). The oldest age cohort shown is 85 years and older. **Figure 20** shows that, between 2020 and 2045, the proportion of the county’s population 65 years of age or older is forecast to grow from 21 to 26 percent. These changes represent the large Baby Boomer generation continuing to age through the population pyramid. Another key dynamic to note in **Figure 20** is that for all years plotted—2020, 2030, and 2045—individuals in their 20s are under-represented in the county. This aligns with Columbia County’s age-specific migration rates, shown in **Figure 11**. For a more detailed look at the age structure of Columbia County’s population, see the final forecast table published on the forecast program website (<https://www.pdx.edu/prc/current-documents-and-presentations>).

Figure 20. Columbia County—Age Structure of the Population (2020, 2030, and 2045)

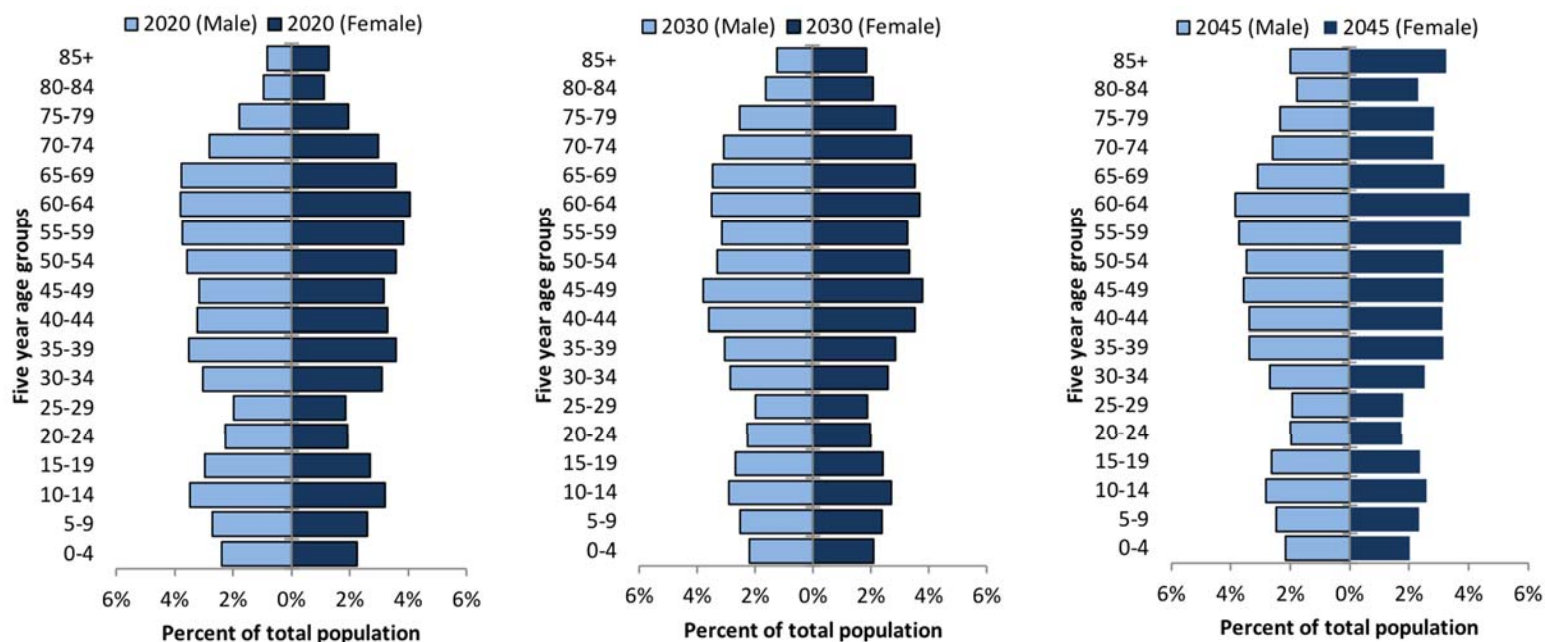
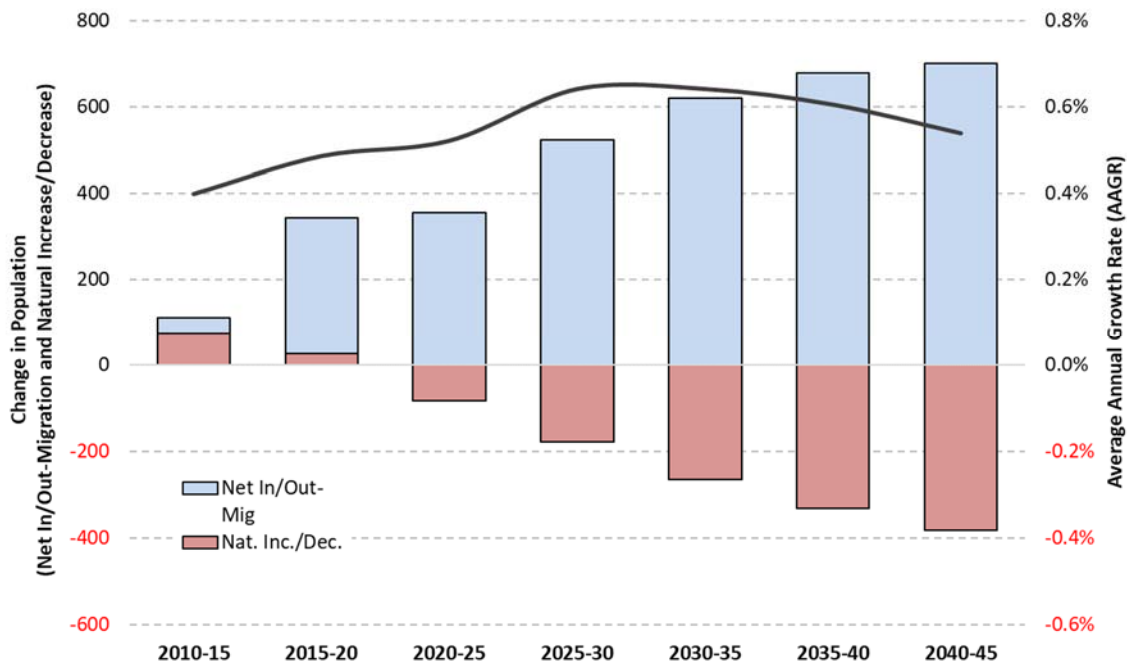


Figure 20 Source: Forecast by Population Research Center (PRC)

Figure 21 summarizes the forecasts described above by graphing the key components of population change: annual net migration, natural increase (births minus deaths), and the resulting population growth rate. The figure plots those components in five-year intervals, starting in the 2010-15 period and ending in the 2040-45 period. **Figure 21** reiterates that we forecast population growth around 0.5 percent annually in Columbia County, with growth due to annual net in-migration outweighing annual natural population decrease due to more deaths than births. The graph shows that we expect natural decrease to occur throughout the 2020-2045 period and result in incrementally larger losses as time passes. This will culminate in a nearly 400-person average annual natural decrease in 2040-45. We expect natural decreases will be offset by corresponding increases in net in-migration, culminating in a roughly 700-person gain in migrants in 2040-45.

Figure 21. Columbia County—Components of Population Change (2010-2045)



Year	2010-15	2015-20	2020-25	2025-30	2030-35	2035-40	2040-45
Net Mig.	37	318	356	523	620	677	699
Nat. Inc./Dec.	74	25	-84	-179	-265	-331	-383
AAGR	0.4%	0.5%	0.5%	0.6%	0.6%	0.6%	0.5%

Figure 21 Source: Forecast by Population Research Center (PRC)

Note: 2010-15 components are based on population estimates from the Oregon Population Estimates Program. Thus, natural increase and net in-migration for the period may not align with the 2020 forecast assumptions.

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 pertains to characteristics of each city area, and to changes thought to occur in the future. The PRC gathers supporting information by soliciting responses to the OPFP General Survey in the fall prior to the forecast. Representatives from Columbia County, Clatskanie, Scappoose, and St. Helens completed the OPFP General Survey. Their responses are included below.

General Survey for the Oregon Population Forecast Program – Columbia County

Questions	Answers
Timestamp	10/21/2019
Jurisdiction	Columbia County
Name and Title	Matt Laird, Planning Manager
Observations about population composition (e.g. children, the elderly, racial and ethnic groups)	Appears we have an aging population (Baby Boomers) all retiring.
Observations about housing	Occupancy Rate is very high in Columbia County with a low supply.
Planned housing development and estimate of project(s) completion date	Most new housing is being developed inside the cities.
Future Group Quarters facilities	There will likely be additional demand for Assisted Living facilities as the population continues to age.
Future employers	OMIC, PCC, Perry Trade Schools
Infrastructure	Water and sewer infrastructure is located primarily within urban growth boundaries. The Warren Water District in Warren, Oregon has been able to keep up with growth and continues to supply domestic water to a large rural residential unincorporated area located between Scappoose and Saint Helens.
Promotions and hindrances to population growth	78% of the County is zoned Primary Forest. It is very difficult to get an exception to change any of this zoning to Rural Residential. This is a hindrance to development in the County and limits the Counties ability to provide new opportunities for a rural life style.

Highlights or summary from planning documents and studies on influences and anticipation of population and housing growth.	Columbia County continues to be a desirable place to locate within a commutable distance from Portland. We expect to see increased demand for housing and increased economic development as new employers move to the area.
Comments?	

General Survey for the Oregon Population Forecast Program – Clatskanie

Questions	Answers
Timestamp	12/4/2019
Jurisdiction	City of Clatskanie
Name and Title	Greg Hinkelman, City Manager
Observations about population composition (e.g. children, the elderly, racial and ethnic groups)	Small population growth within the City. Population is primarily older population. Generally we don't have young people stay upon graduation from High School. Limited opportunities for post-high school employment/careers.
Observations about housing	Small growth in housing. We do need work-force housing but no developer will come in unless there is a compelling reason
Planned housing development and estimate of project(s) completion date	No new housing developments planned. Last development was 2007 with lots still available
Future Group Quarters facilities	None
Future employers	Possible big project with NEXT Energy, a renewable diesel manufacturing plant, being located at Port Westward north of town. This will be 200 permanent family wage jobs.
Infrastructure	Infrastructure is good. We would like to build a water tank on the north side of town. We may have to construct some redundancy for the sewer plant
Promotions and hindrances to population growth	Lack of jobs
Highlights or summary from planning documents and studies on influences and anticipation of population and housing growth.	None.

Comments?	
-----------	--

General Survey for the Oregon Population Forecast Program – Scappoose

Questions	Answers
Timestamp	11/6/2019
Jurisdiction	City of Scappoose
Name and Title	Laurie Oliver
Observations about population composition (e.g. children, the elderly, racial and ethnic groups)	NA
Observations about housing	We are seeing a slow down in single family construction and an increase in multi-family housing since new development code language was adopted in 2018 to remove barriers to the construction of multi-family housing of more than 4 units. We still have small subdivisions of single family housing being developed; however, large vacant tracts of land for larger subdivisions are becoming harder to find.
Planned housing development and estimate of project(s) completion date	Please see Housing Development Survey
Future Group Quarters facilities	None
Future employers	OSG Metals, Devinaire, PCC campus
Infrastructure	We have recently upgraded water, sewer, and storm drainage infrastructure in the City to accommodate increased availability of employment land adjacent to the airport.
Promotions and hindrances to population growth	Promotions: In early 2020, the City will have a new Light Industrial subdivision final plat recorded which will open up over 100 acres of new employment land. We have recently removed barriers in the development code to the construction of multi family housing, and have added a new chapter to the

	development code to allow Cottage Housing Development. We are seeing increased interest in the development of apartments as a result and have a new Cottage Housing Development application under review now.
Highlights or summary from planning documents and studies on influences and anticipation of population and housing growth.	N/A
Comments?	

General Survey for the Oregon Population Forecast Program – St. Helens

Questions	Answers
Timestamp	10/29/2019
Jurisdiction	City of St. Helens
Name and Title	Jenny Dimsho, Associate Planner
Observations about population composition (e.g. children, the elderly, racial and ethnic groups)	Mostly white families who commute into the metro area (Hillsboro, Beaverton, Portland). We act as the metro area’s affordable housing
Observations about housing	Low vacancy rates, rental costs increasingly substantially
Planned housing development and estimate of project(s) completion date	See Housing Development Survey for detailed information. Lots of multi-family units coming online and in the pipeline. Lots of subdivision activity as well.
Future Group Quarters facilities	Columbia Community Mental Health is expanding their residential treatment/detox facilities into a former Legacy Health Clinic building. 16-bed medical detox for 5-7 day treatment and a 16-bed residential facility that provides a 90-day drug and alcohol treatment.
Future employers	We may see a new 100-unit boutique hotel redevelop on our waterfront.
Infrastructure	Huge water and sewer capacity for more housing. No anticipated challenges for capacity of utilities.
Promotions and hindrances to population growth	Lack of local jobs could hinder growth. City is working on re-purposing over 250 acres of former industrial property into a portion with mixed use-type development and the other portion into a St. Helens Industrial Business Park. 5-10 years out from seeing ground break though.

<p>Highlights or summary from planning documents and studies on influences and anticipation of population and housing growth.</p>	<p>Yes - We just completed one this year. I will share our BLI layer.</p>
<p>Comments?</p>	<p>Housing Needs Analysis did not predict the need for a UGB expansion for the purposes of accommodating needed housing. We have a 397 acre surplus of buildable residential lands within our UGB for the next 20 years of growth.</p>

Appendix B: Specific Assumptions

Clatskanie

We assume housing unit growth will remain at or below 1 percent annually throughout the forecast period, starting with a continuance of recent slow growth (0.3 percent) during the 2020-25 period. We assume the occupancy rate will hold steady at 90.7 percent and persons per household (PPH) will decline from 2.22 to 2.13 over the 25-year forecast period. We assume group quarters population will remain constant.

Columbia City

We assume housing unit growth will remain at or below 1 percent annually throughout the forecast period, starting with a continuance of recent slow growth (0.3 percent) during the 2020-25 period. We assume the occupancy rate will hold steady at 94.5 percent and persons per household (PPH) will decline from 2.32 to 2.23 over the 25-year forecast period. We assume group quarters population will remain constant.

Prescott

We assume no housing unit growth yet declining persons per household (from 1.96 in 2020 to 1.87 in 2045), continuing recent trends. We assume the occupancy rate will hold steady at 77.1 percent. We assume no change to group quarters population in this sub-area.

Rainier

We assume housing unit growth will remain at or below 1 percent annually throughout the forecast period, starting with a continuance of recent slow growth (0.3 percent) during the 2020-25 period. We assume the occupancy rate will hold steady at 91.8 percent and persons per household (PPH) will decline from 2.27 to 2.13 over the 25-year forecast period. We assume group quarters population will remain constant.

Scappoose

We assume housing unit growth rates will range between 1 and 1.5 percent annually, slightly higher than patterns observed between 2010 and 2019 and in line with new local development code facilitating multifamily housing construction. We assume occupancy rates remain high at 94.3 percent and persons per household holds steady at between 2.52 and 2.54 throughout the forecast period. We assume group quarters population will remain constant.

St. Helens

Fertility rates fell precipitously from 2000 to 2010, with a TFR of 2.76 in 2000 and 1.94 in 2010. Smaller future declines in fertility rates result in TFR reaching 1.78 in 2030 and beyond. Survival rates for the oldest age groups are slightly higher than for the county, and change very little throughout the forecast period. Age-specific net migration rates differ from county patterns; while net out-migration occurs for young adults age 20-24, the losses are not as steep as in the county overall, and net in-migration of adults age 25-29 years old outpaces the county. Conversely, net in-migration rates for children under age 15 and adults age 30 and older fall short of county rates.

Vernonia

We assume housing unit growth rates remain around 0.5 percent, in line with patterns observed between 2000 and 2020. We assume occupancy rates will hold steady at 85.5 percent while persons per household will decline from 2.36 to 2.25 over the 25-year forecast period. We assume group quarters population will remain unchanged.

Outside UGBs

In contrast to moderate declines in the county overall, fertility rates have recently fallen sharply in areas outside of UGBs, with continued declines forecast, from a TFR of 1.99 in 2010 to 1.62 in 2030 and beyond. Survival rates for the oldest age groups are slightly higher than for the county and change very little throughout the forecast period. Age-specific net migration rates differ from county patterns; we assume a steeper net out-migration of those 20-29 years old and higher in-migration of those age 35 and older.

Appendix C: Detailed Population Forecast Results

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

Population Forecasts by Age Group	Population (2020)	Population (2025)	Population (2030)	Population (2035)	Population (2040)	Population (2045)
00-04	2,405	2,334	2,349	2,392	2,453	2,485
05-09	2,727	2,719	2,669	2,737	2,795	2,868
10-14	3,436	3,045	3,071	3,073	3,160	3,229
15-19	2,930	3,116	2,800	2,891	2,903	2,988
20-24	2,164	2,147	2,323	2,149	2,228	2,239
25-29	1,978	2,090	2,103	2,325	2,158	2,239
30-34	3,169	2,799	2,984	3,028	3,355	3,116
35-39	3,669	3,581	3,226	3,476	3,536	3,921
40-44	3,368	3,972	3,886	3,542	3,827	3,895
45-49	3,257	3,405	4,144	4,063	3,713	4,016
50-54	3,686	3,385	3,649	4,408	4,334	3,965
55-59	3,917	3,770	3,505	3,750	4,543	4,470
60-64	4,061	3,958	3,927	3,624	3,889	4,714
65-69	3,788	3,897	3,843	3,820	3,502	3,760
70-74	2,977	3,373	3,556	3,514	3,503	3,215
75-79	1,944	2,576	2,950	3,127	3,098	3,093
80-84	1,072	1,528	2,022	2,315	2,465	2,444
85+	1,076	1,286	1,694	2,241	2,742	3,127
Total	51,623	52,981	54,701	56,476	58,204	59,786

Figure 23. Columbia County’s Sub-Areas—Forecasted Total Population

Area	Pop. (2020)	Pop. (2025)	Pop. (2030)	Pop. (2035)	Pop. (2040)	Pop. (2045)	Pop. (2050)	Pop. (2055)	Pop. (2060)	Pop. (2065)	Pop. (2070)
<i>Columbia County</i>	51,623	52,981	54,701	56,476	58,204	59,786	61,411	63,080	64,795	66,556	68,365
Clatskanie	1,822	1,817	1,875	1,934	1,993	2,044	2,085	2,124	2,170	2,219	2,272
Columbia City	1,871	1,899	1,953	2,033	2,096	2,140	2,194	2,249	2,306	2,366	2,429
Prescott	53	53	52	51	51	51	50	48	47	47	46
Rainier	2,378	2,414	2,448	2,526	2,579	2,620	2,661	2,694	2,741	2,795	2,855
Scappoose	8,025	8,511	9,146	9,758	10,406	11,009	11,704	12,534	13,221	13,846	14,440
St. Helens	15,503	16,338	17,327	18,354	19,347	20,246	21,330	22,600	23,682	24,684	25,649
Vernonia	2,039	2,037	2,054	2,089	2,113	2,126	2,130	2,120	2,131	2,153	2,182
Outside UGB Area	19,933	19,911	19,844	19,731	19,619	19,551	19,257	18,712	18,498	18,446	18,492