# Coordinated Population Forecast





Through

2067

# Columbia County

Urban Growth Boundaries (UGB) & Area Outside UGBs



Photo Credit: Mt. St. Helens with Mt. Adams to the right from Highway 47 (Photo No. colDB1241). Gary Halvorson, Oregon State Archives http://arcweb.sos.state.or.us/pages/records/local/county /scenic/columbia/98.html

# Coordinated Population Forecast for Columbia County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2017-2067

Prepared by

## **Population Research Center**

## **College of Urban and Public Affairs**

## **Portland State University**

## June 30, 2017

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.

## **Project Staff:**

Jason R. Jurjevich, PhD. Assistant Director, Population Research Center & Acting Program Manager

Nicholas Chun, Population Forecast Program Analyst

Kevin Rancik, GIS & Research Analyst

Risa S. Proehl, Population Estimates Program Manager

Julia Michel, Graduate Research Assistant

Matt Harada, Undergraduate Research Assistant

Charles Rynerson, Census State Data Center Coordinator

Randy Morris, Research Analyst

The Population Research Center and project staff wish to acknowledge and express gratitude for support from the Forecast Advisory Committee (DLCD), the hard work of our staff Deborah Loftus and Emily Renfrow, data reviewers, and 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—downloadable on the Forecast Program website (<u>http://www.pdx.edu/prc/opfp</u>).

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 subareas within each county for each five-year interval of the forecast period (2017-2067).

# **Table of Contents**

| Executive Summary                                      |
|--|
| Historical Trends                                      |
| Population   |
| Age Structure of the Population9                       |
| Race and Ethnicity10                                   |
| Births   |
| Deaths13   |
| Migration13  |
| Historical Trends in Components of Population Change14 |
| Housing and Households15                               |
| Assumptions for Future Population Change18             |
| Assumptions for the County and Larger Sub-Areas18      |
| Assumptions for Smaller Sub-Areas19                    |
| Forecast Trends  |
| Forecast Trends in Components of Population Change23   |
| Glossary of Key Terms                                  |
| Appendix A: Surveys and Supporting Information27       |
| Appendix B: Specific Assumptions                       |
| Appendix C: Detailed Population Forecast Results45     |

# Table of Figures

# **Executive Summary**

## Historical

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

Columbia County's total population has grown modestly since 2000, with an average annual growth rate of above one percent between 2000 and 2010 (**Figure 1**). However, some of its sub-areas experienced more rapid population growth during the 2000s. The most populous UGB, St. Helens, along with the second most populous, Scappoose, posted the highest average annual growth rates at 2.3 and 2.8 percent, respectively, during the 2000 to 2010 period.

Columbia County's positive population growth in the 2000s was largely the result of substantial net inmigration paired with modest natural increase. An aging population led to an increase in deaths but also resulted in a smaller proportion of women in their childbearing years. This, along with more women choosing to have fewer children and having them at older ages led births to stagnate in the last decade. Despite this trend, the large number of births relative to deaths caused a natural increase (more births than deaths) in all years from 2000 to 2015, except 2012. While net in-migration outweighed declining natural increase during the early and middle years of the last decade, the gap between these two numbers shrank during the later years—slowing population growth considerably. In more recent years (2013 to 2015) population growth has rebounded slightly, primarily through net in-migration (**Figure 12**).

## Forecast

Total population in Columbia County as a whole and its sub-areas will likely grow at a slightly faster pace in the near-term (2017 to 2035) compared to the long-term (**Figure 1**). The tapering of growth rates is largely driven by an aging population—a demographic trend which is expected to contribute to natural decrease (more deaths than births). As natural decrease occurs, population growth will become increasingly reliant on net in-migration.

Even so, Columbia County's total population is forecast to increase by nearly 9,000 over the next 18 years (2017-2035) and by more than 17,000 over the entire 50 year forecast period (2017-2067). Subareas that showed strong population growth in the 2000s are expected to experience slower rates of population growth during the forecast period due to potential land constraints and an aging population.

|                   |        | Historical |             |        | Forecast |        |             |             |
|-------------------|--------|------------|-------------|--------|----------|--------|-------------|-------------|
|                   |        |            | AAGR        |        |          |        | AAGR        | AAGR        |
|                   | 2000   | 2010       | (2000-2010) | 2017   | 2035     | 2067   | (2017-2035) | (2035-2067) |
| Columbia County   | 43,560 | 49,351     | 1.3%        | 51,500 | 60,716   | 71,988 | 0.9%        | 0.5%        |
| Clatskanie UGB    | 1,755  | 1,867      | 0.6%        | 1,890  | 2,044    | 2,296  | 0.4%        | 0.4%        |
| Columbia City UGB | 1,578  | 1,950      | 2.1%        | 1,987  | 2,151    | 2,371  | 0.4%        | 0.3%        |
| Prescott UGB      | 71     | 57         | -2.2%       | 54     | 61       | 64     | 0.6%        | 0.2%        |
| Rainier UGB       | 2,237  | 2,430      | 0.8%        | 2,450  | 2,835    | 3,314  | 0.8%        | 0.5%        |
| Scappoose UGB     | 5,517  | 7,269      | 2.8%        | 7,610  | 10,461   | 15,521 | 1.8%        | 1.2%        |
| St. Helens UGB    | 11,857 | 14,839     | 2.3%        | 15,371 | 18,641   | 23,629 | 1.1%        | 0.7%        |
| Vernonia UGB      | 2,297  | 2,191      | -0.5%       | 2,106  | 2,251    | 2,620  | 0.4%        | 0.5%        |
| Outside UGBs      | 18,248 | 18,748     | 0.3%        | 20,031 | 22,272   | 22,173 | 0.6%        | 0.0%        |

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

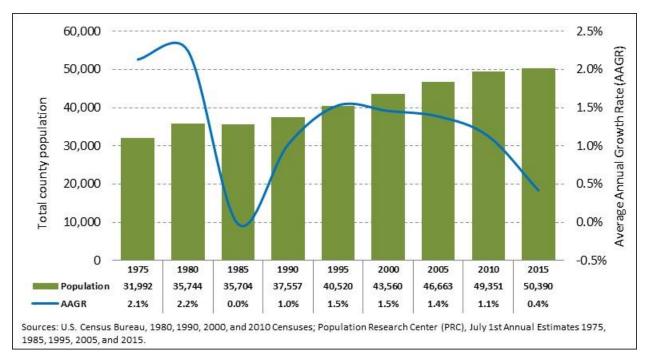
Sources: U.S. Census Bureau, 2000 and 2010 Censuses; Forecast by Population Research Center (PRC).

# **Historical Trends**

Different growth patterns occur in different parts of the County. Each of Columbia 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, housing occupancy rate, and persons per household (PPH). It should be noted that population trends of individual sub-areas often differ from those of the county as a whole. However, in general, population growth rates for the county are collectively influenced by local trends within its sub-areas.

## Population

Columbia County's total population grew from roughly 32,000 in 1975 to about 50,000 in 2015 (Figure 2). During this 40-year period, the county experienced the highest 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 the stagnation of population growth. During the early 1990s population growth increased, but soon after population growth again plateaued. Even so, Columbia County experienced positive but slowing population growth over the last decade (2000 to 2010)—averaging a little more than one percent per year. In recent years growth rates have continued to decrease, leading to slower paced population growth between 2010 and 2015.



#### Figure 2. Columbia County—Total Population by Five-year Intervals (1975-2015)

Columbia County's population change is the sum of its parts: the combined population growth or decline within each sub-area. During the 2000s, Columbia County's average annual population growth rate stood at a little more than one percent (**Figure 3**). At the same time, St. Helens, the largest UGB in the county, as well as Scappoose and Columbia City, grew at rates well above the county as a whole (2.3,

2.8, and 2.1 percent, respectively). Rainier at 0.8 percent, and Clatskanie, at 0.6 percent, each grew less rapidly than Columbia County as a whole. Two UGBs, Vernonia and Prescott, saw population decline during that time period, at -0.5 percent and -2.2 percent, respectively. The area outside UGBs experienced slower growth than the county as a whole, increasing by 0.8 percent per year. St. Helens, Scappoose, and Columbia City all saw their share of the total county population increase between 2000 and 2010. Vernonia, Rainier, Clatskanie, and Prescott all experienced a decrease in their share of the total county population. While the area outside UGBs maintained a plurality of Columbia County's population, this sub-area also saw its share diminish.

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

Figure 3. Columbia County and Sub-areas—Total Population and Average Annual Growth Rate (AAGR) (2000 and 2010)<sup>1</sup>

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

#### Age Structure of the Population

Columbia County's population is aging at a faster pace than in most Oregon counties. An aging population significantly influences the number of deaths but also yields a smaller proportion of women in their childbearing years, which may result in a decline in births. While births in Columbia County remained stable in the 2000s, fertility rates sharply declined while deaths increased slightly during the period (**Figure 4**). Underscoring Columbia County's trend in aging, the median age increased from almost 38 in 2000 to more than 41 in 2010 and to 42.9 in 2015, an increase greater than what is observed statewide but which is comparable to changes in neighboring counties.<sup>2</sup>

<sup>&</sup>lt;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>&</sup>lt;sup>2</sup> Median age is sourced from the U.S. Census Bureau's 2000 and 2010 Censuses and 2011-2015 ACS 5-year Estimates.

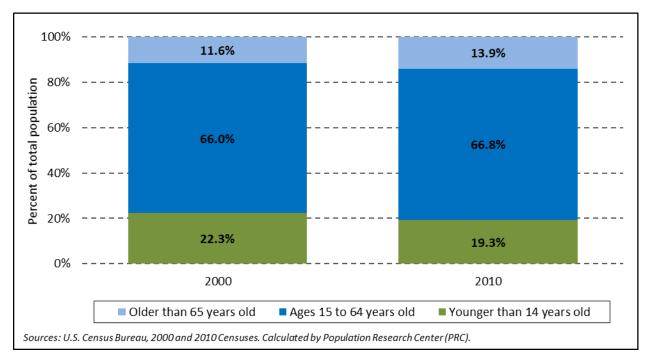


Figure 4. Columbia County—Age Structure of the Population (2000 and 2010)

## **Race and Ethnicity**

While the statewide population is aging, another demographic shift is occurring across Oregon: minority populations are growing as a share of total population. A growing minority population affects both the number of births and average household size. The Hispanic population within Columbia County increased substantially in relative terms from 2000 to 2010 (**Figure 5**), while the white, non-Hispanic population grew at a slower rate over the same time period. Despite this slower growth, the white, non-Hispanic population still accounts for 90 percent of the population in Columbia County. This increase in the Hispanic population, along with that of other minority populations, brings with it several implications for future population change. First, both nationally and at the state level, fertility rates among Hispanic and minority women have tended to be higher than among white, non-Hispanic women. However, it is important to note recent trends show these rates are quickly decreasing. Second, Hispanic and minority households tend to be larger relative to white, non-Hispanic households.

|  |        |        |        |        | Absolute | Relative |
|--|--------|--------|--------|--------|----------|----------|
| Hispanic or Latino and Race                      | 200    | 00     | 201    | LO     | Change   | Change   |
| Total population                                 | 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 and 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 5. Columbia County—Hispanic or Latino and Race (2000 and 2010)

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

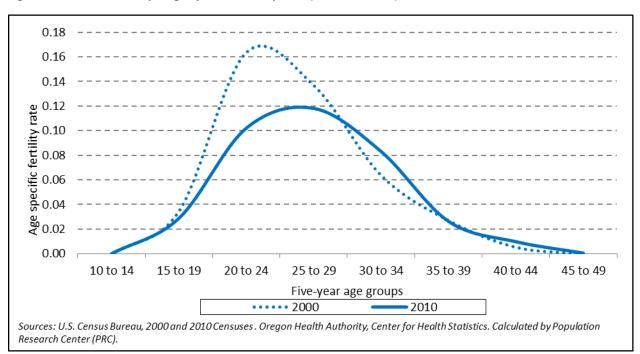
#### **Births**

Historical fertility rates for Columbia County mirror trends in Oregon as a whole. Total fertility rates decreased notably in Columbia County from 2000 to 2010, while they also decreased at a slower rate for the state as a whole over the same time period (**Figure 6**). Fertility for older women marginally increased in both Columbia County and Oregon largely because women are having children at older ages (**Figure 7** and **Figure 8**). As **Figure 7** demonstrates, fertility rates for younger women in Columbia County are lower in 2010 compared to 2000, with this age group accounting for the significant decrease in the total fertility rate. The direction of Columbia County's fertility changes is comparable to that of the state as a whole, but the magnitude was greater for Columbia County. In 2000, Columbia County's TFR was approximately at the level of *replacement fertility*, while Oregon as a whole was below that level. Oregon continues to fall further below replacement fertility, while Columbia County's larger decrease in TFR brought it nearly in line with the rate of the state in 2010.

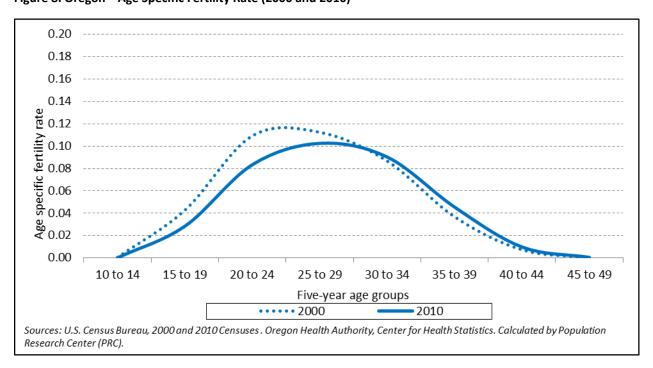
| Figure 6. Columbia Co | inty and Oregon—Tota | al Fertility Rates | (2000 and 2010) |
|-----------------------|----------------------|--------------------|-----------------|
|                       |                      |                    | (               |

|                 | 2000 | 2010 |
|-----------------|------|------|
| Columbia County | 2.15 | 1.84 |
| Oregon          | 1.98 | 1.80 |

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



#### Figure 8. Oregon—Age Specific Fertility Rate (2000 and 2010)



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

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

years may show a decrease during a different time period. With the exception of Scappoose and St. Helens, the county and its sub-areas recorded fewer births in 2010 than they had in 2000.

|                 |      |      | Absolute | Relative | Share of    | Share of    |
|-----------------|------|------|----------|----------|-------------|-------------|
|                 | 2000 | 2010 | Change   | Change   | County 2000 | County 2010 |
| Columbia County | 553  | 485  | -68      | -12.3%   | 100.0%      | 100.0%      |
| Scappoose       | 79   | 88   | 9        | 11.4%    | 14.3%       | 18.1%       |
| St. Helens      | 175  | 178  | 3        | 1.7%     | 31.6%       | 36.7%       |
| Outside UGBs    | 156  | 150  | -6       | -3.8%    | 28.2%       | 30.9%       |
| Smaller UGBs    | 143  | 69   | -74      | -51.7%   | 25.9%       | 14.2%       |

| Figure 9. Columbia | County and Sub-Areas— | Total Births (2000 and 2010) |
|--------------------|-----------------------|------------------------------|
| 0                  |                       |                              |

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

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

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

#### Deaths

Though Columbia County's population is aging, life expectancy increased during the 2000s.<sup>3</sup> In 2000, life expectancy for males was 74 years and for females was 79 years. By 2010, life expectancy had increased for both males and females to 76 and 82 years, respectively. For both Columbia County and Oregon the survival rates changed little between 2000 and 2010—underscoring the fact that mortality is the most stable component of population change. Even so, the total number of countywide deaths in 2010 were higher relative to 2000 as the elderly population increased in number (Figure 10).

| Figure 10. Columbia County and Sub-Areas—Total Deaths (2000 | and 2010) |
|---|-----------|
|---|-----------|

| -               |      |      | Absolute | Relative | Share of    | Share of    |
|-----------------|------|------|----------|----------|-------------|-------------|
|                 | 2000 | 2010 | Change   | Change   | County 2000 | County 2010 |
| Columbia County | 364  | 374  | 10       | 2.7%     | 100.0%      | 100.0%      |
| Scappoose       | N/A  | 52   | -        | -        | -           | 13.9%       |
| St. Helens      | 85   | 97   | 12       | 14.1%    | 23.4%       | 25.9%       |
| Outside UGBs    | 206  | 110  | -96      | -46.6%   | 56.6%       | 29.4%       |
| Smaller UGBs    | 73   | 115  | 42       | 57.5%    | 20.1%       | 30.7%       |

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

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

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

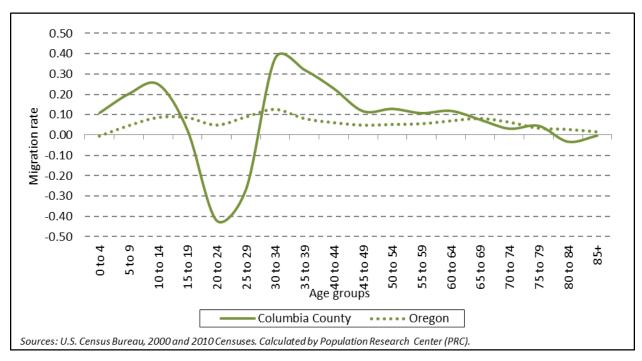
#### Migration

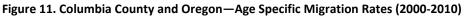
The propensity to migrate is strongly linked to age and stage of life. As such, age-specific migration rates are critically important for assessing these patterns across five-year age cohorts. **Figure 11** shows the

<sup>&</sup>lt;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 rural life expectancy in the 2000s. See the following research article for more information. *Singh, Gopal K., and Mohammad Siahpush. "Widening rural-urban disparities in life expectancy, US, 1969-2009." American Journal of Preventative Medicine 46, no. 2 (2014): e19-e29.* 

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

From 2000 to 2010, younger individuals (ages with the highest mobility levels) moved out of the county in search of employment and educational opportunities. At the same time however, the county attracted a substantial number of middle aged migrants and their children as shown with the inmigration of persons under the age of 14.





#### **Historical Trends in Components of Population Change**

In summary, Columbia County's positive population growth in the 2000s was the result of small but steady natural increase and a mid-decade period of substantial net in-migration (Figure 12). The larger number of births relative to deaths has led to natural increase (more births than deaths) in every year from 2000 to 2015 except for 2012, although the rate of natural increase has fluctuated slightly in recent years. While net in-migration fluctuated during the early years of the last decade and diminished in the years after the recession, the number of in-migrants has been increasing once again. Net in-migration has accounted for most of the county's population growth.

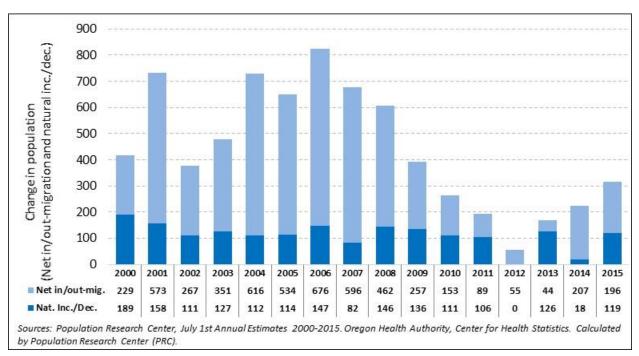


Figure 12. Columbia County—Components of Population Change (2000-2015)

### Housing and Households

The total number of housing units in Columbia County increased rapidly during the middle years of the 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 almost eighteen percent countywide; this totaled more than 3,000 new housing units (**Figure 13**). St. Helens, with 1,130 units, captured the largest share of the county's growth in total housing units, with Scappoose and Columbia City claiming significant shares as well. In terms of relative housing growth Scappoose grew the most during the 2000s, increasing its total housing stock by 33 percent (more than 740 housing units).

The rates of increase in the number of total housing units in the county, UGBs, and area outside UGBs are similar to the growth rates of their corresponding populations. Housing growth rates may differ slightly 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 Polk County are relatively similar.

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

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

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

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

Occupancy rates tend to fluctuate more than PPH. This is particularly true in smaller UGB areas where fewer housing units allow for larger relative changes in occupancy rates. From 2000 to 2010 the occupancy rate in Columbia County decreased slightly (**Figure 14**); this was most likely due to slack in demand for housing as individuals experienced the effects of the Great Recession. The largest UGB, St. Helens, along with Columbia City and Rainier saw increases in occupancy rates at 1.4 percent, 1.5 percent, and 0.5 percent, respectively. Prescott, at -7.2 percent, and Vernonia, at -3.9 percent, saw the largest decreases in occupancy rate, along with the remaining sub-areas.

Average household size, or PPH, in Columbia County was 2.5 in 2010, a modest decline from 2000 (**Figure 14**). Columbia County's PPH in 2010 was equal to that of Oregon as a whole, which also had a PPH of 2.5. PPH varied across the county's sub-areas, with each falling between 2.1 and 2.6. In 2010, St. Helens, Scappoose, Vernonia, and the area outside UGBs had the highest PPH of 2.6 while Prescott, at 2.1, had the lowest.

|                 | Persons | Per Housel | nold (PPH) | Occupancy Rate |       |           |  |
|-----------------|---------|------------|------------|----------------|-------|-----------|--|
|                 |         |            | Change     |                |       | Change    |  |
|                 | 2000    | 2010       | 2000-2010  | 2000           | 2010  | 2000-2010 |  |
| Columbia County | 2.6     | 2.5        | -0.1       | 93.2%          | 92.7% | -0.5%     |  |
| Clatskanie      | 2.5     | 2.4        | -0.1       | 92.5%          | 90.7% | -1.7%     |  |
| Columbia City   | 2.6     | 2.5        | -0.2       | 93.0%          | 94.5% | 1.5%      |  |
| Prescott        | 2.6     | 2.1        | -0.5       | 84.4%          | 77.1% | -7.2%     |  |
| Rainier         | 2.6     | 2.4        | -0.2       | 91.3%          | 91.8% | 0.5%      |  |
| Scappoose       | 2.6     | 2.6        | 0.0        | 94.5%          | 94.3% | -0.2%     |  |
| St. Helens      | 2.6     | 2.6        | 0.0        | 92.8%          | 94.2% | 1.4%      |  |
| Vernonia        | 2.8     | 2.6        | -0.2       | 89.4%          | 85.5% | -3.9%     |  |
| Outside UGBs    | 2.7     | 2.6        | -0.1       | 93.9%          | 92.0% | -1.9%     |  |

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

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

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 the most likely scenarios for population change. Past trends also explain the dynamics of population growth specific to local areas. Relating recent and historical population change to events that influence population change serves as a gauge for what might realistically occur in a given area over the long-term. The forecast period is 2017-2067.

Assumptions about fertility, mortality, and migration were developed for Columbia County's population forecast as well as for the forecasts of larger sub-areas.<sup>4</sup> The assumptions are derived from observations based on life events, as well as from trends unique to Columbia County and its larger sub-areas. Columbia County locations falling into this category include: Scappoose and St. Helens.

Population change for smaller sub-areas is determined by the change in the number of total housing units, occupancy rates, and PPH. Assumptions around housing unit growth as well as occupancy rates are derived from observations of historical building patterns and current plans for future housing development. In addition, assumptions for PPH are based on observed historical patterns of household demographics — the average age of householder, for example. Columbia County locations falling into this category include: Clatskanie, Columbia City, Prescott, Rainier, and Vernonia.

## Assumptions for the County and Larger Sub-Areas

The population in Columbia 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. Total fertility in Columbia County is forecast to decrease from 1.82 children per woman during the 2010-15 period to 1.72 children per woman by 2065. Similar patterns of declining total fertility are expected within the county's larger sub-areas.

Changes in mortality and life expectancy are more stable compared to fertility and migration. The county and larger sub-areas are projected to follow the statewide trend of increasing life expectancy throughout the forecast period—progressing from a life expectancy of 79 years in 2010 to 86 in 2060. However, in spite of increasing life expectancy and the corresponding increase in survival rates, Columbia County's aging population will increase the overall number of deaths throughout the forecast period. Larger sub-areas within the county will experience a similar increase in deaths as their populations age.

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

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

change, and natural amenities—occurring both inside and outside the study area affect both the direction and volume of migration.

We assume net migration rates will change in line with historical trends unique to Columbia County. Net out-migration of younger persons and net in-migration of middle-aged individuals will persist throughout the forecast period. Countywide average annual net in-migration is expected to increase from 122 net in-migrants in 2015 to about 610 net in-migrants in 2030. Over the last 35 years of the forecast period, average annual net in-migration is expected to become steadier, remaining at about 606 net in-migrants through 2065. Net in-migration is expected to account for nearly all of Columbia County's population growth throughout the entire forecast period.

## **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.

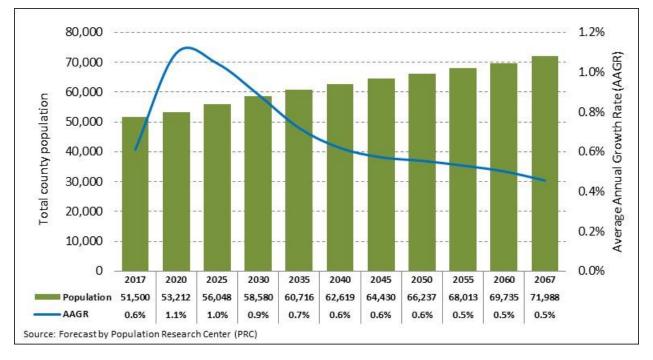
Occupancy rates and PPH are assumed to stay relatively stable during the forecast period. Smaller household size is associated with an aging population in Columbia County and its sub-areas.

In addition, for sub-areas experiencing population growth we assume a higher growth rate in the nearterm, with growth stabilizing over the remainder of the forecast period. If planned housing units were reported in the surveys, then we account for them being constructed over the next 5-15 years (or as specified by city officials). Finally, for county sub-areas where population growth has been flat or declining and there is no planned housing construction, we hold population growth mostly stable with little to no change.

# **Forecast Trends**

Under the most-likely population growth scenario for Columbia County, countywide and sub-area populations are expected to increase over the forecast period. The countywide population growth rate is forecast to peak in 2025 and then slowly decline throughout the forecast period. A reduction in population growth rates is driven by both (1) an aging population — contributing to a steady increase in deaths — as well as (2) the expectation of relatively stable in-migration over the second half of the forecast period. The combination of these factors will likely result in population growth rates slowing as time progresses.

Columbia County's total population is forecast to grow by roughly 20,000 persons (40 percent) from 2017 to 2067, which translates into a total countywide population of 71,988 in 2067 (Figure 15). The population is forecast to grow at the highest rate—approximately one percent per year—in the near-term (2017-2025). This anticipated population growth in the near-term is based on two core assumptions: (1) Columbia County's economy will continue to strengthen in the next 8 years; (2) middle-age persons will continue to migrate into the county—bringing their families or having more children. The largest component of growth in this initial period is net in-migration. More births than deaths are forecast for the 2017 to 2025 period. At the same time roughly 5,000 in-migrants are also forecast, combining with natural increase for modest population growth. In the periods following 2025, we expect deaths to outpace births, creating a natural decrease, and leaving the county's population growth thereafter to net in-migration.





Columbia County's two largest UGBs—St. Helens and Scappoose—are forecast to experience a combined population growth of 6,120 from 2017 to 2035 and just over 10,000 from 2035 to 2067 (Figure

**16**). The St. Helens UGB is expected to increase by more than 3,200 persons from 2017 to 2035, growing from a total population of 15,371 in 2017 to 18,641 in 2035. The Scappoose UGB is forecast to increase at a faster rate than St. Helens (1.8% AAGR), growing from 7,610 persons in 2017 to a population of 10,461 in 2035 for an expansion of over 2,800 persons. Both the St. Helens UGB and Scappoose UGB are forecast to grow at slower rates between 2035 and 2067. The St. Helens UGB is projected to add just shy of 5,000 persons for a total population of 23,629, while the Scappoose UGB is forecast to add over 5,000 persons for a total population in 2067 of 15,521. Both the St. Helens and Scappoose UGBs are expected to grow as a share of total county population over the 50 year forecast, ending the period accounting for nearly 33 percent and nearly 22 percent, respectively, of total county population.

Population outside UGBs is expected to grow by 2,200 people from 2017 to 2035 but is expected to experience a slight population decline during the second half of the forecast period, losing nearly 100 persons between 2035 and 2067. The area is forecast to decline as a share of total countywide population over the forecast period, composing nearly 39 percent of the countywide population in 2017 but diminishing to 31 percent in 2067.

|                 |        |        |               | AAGR        | AAGR        | Share of    | Share of    | Share of    |
|-----------------|--------|--------|---------------|-------------|-------------|-------------|-------------|-------------|
|                 | 2017   | 2035   | 2067          | (2017-2035) | (2035-2067) | County 2017 | County 2035 | County 2067 |
| Columbia County | 51,500 | 60,716 | <i>71,988</i> | 0.9%        | 0.5%        | 100.0%      | 100.0%      | 100.0%      |
| Scappoose UGB   | 7,610  | 10,461 | 15,521        | 1.8%        | 1.2%        | 14.8%       | 17.2%       | 21.6%       |
| St. Helens UGB  | 15,371 | 18,641 | 23,629        | 1.1%        | 0.7%        | 29.8%       | 30.7%       | 32.8%       |
| Outside UGBs    | 20,031 | 22,272 | 22,173        | 0.6%        | 0.0%        | 38.9%       | 36.7%       | 30.8%       |
| Smaller UGBs    | 8,488  | 9,342  | 10,665        | 0.5%        | 0.4%        | 16.5%       | 15.4%       | 14.8%       |

| Figure 16. Columbia Count | y and Larger Sub-Areas—Forecast Po | pulation and AAGR |
|---------------------------|------------------------------------|-------------------|
| - Saic zoi colambia count |                                    |                   |

Source: Forecast by Population Research Center (PRC)

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

St. Helens, Columbia County's largest UGB, and the Scappoose UGB are expected to capture the largest share of total countywide population growth during the initial 18 years of the forecast period from 2017 to 2035 (Figure 17), and both sub-areas are forecast to capture a larger share during the final 32 years of the forecast period from 2035 to 2067. While the area outside UGBs is forecast to capture nearly a quarter of the total population growth between 2017 and 2035, this sub-area will see population decline between 2035 and 2067.

|                 | 2017-2035 | 2035-2067 |
|-----------------|-----------|-----------|
| Columbia County | 100.0%    | 100.0%    |
| Scappoose UGB   | 30.9%     | 44.5%     |
| St. Helens UGB  | 35.5%     | 43.9%     |
| Outside UGBs    | 24.3%     | 0.0%      |
| Smaller UGBs    | 9.3%      | 11.6%     |

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

Source: Forecast by Population Research Center (PRC)

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

The smaller UGBs in Columbia County are expected to grow by a combined number over 800 persons from 2017 to 2035, with a combined average annual growth rate of one half percent (**Figure 16**). This growth rate is due to expected modest growth in all smaller UGBs (**Figure 18**). Most smaller UGBs will have comparable rates of growth in this period, with the Rainier UGB experiencing the most rapid growth at 0.8 percent per year. Similar to the larger UGBs and the county as a whole, population growth rates are forecast to decline for the second part of the forecast period (2035 to 2067) with the exception of Vernonia. The smaller UGBs are expected to collectively add over 1,300 people from 2035 to 2067.

|                   |        |        |        | AAGR        | AAGR        | Share of    | Share of    | Share of    |
|-------------------|--------|--------|--------|-------------|-------------|-------------|-------------|-------------|
|                   | 2017   | 2035   | 2067   | (2017-2035) | (2035-2067) | County 2017 | County 2035 | County 2067 |
| Columbia County   | 51,500 | 60,716 | 71,988 | 0.9%        | 0.5%        | 100.0%      | 100.0%      | 100.0%      |
| Clatskanie UGB    | 1,890  | 2,044  | 2,296  | 0.4%        | 0.4%        | 3.7%        | 3.4%        | 3.2%        |
| Columbia City UGB | 1,987  | 2,151  | 2,371  | 0.4%        | 0.3%        | 3.9%        | 3.5%        | 3.3%        |
| Prescott UGB      | 54     | 61     | 64     | 0.6%        | 0.2%        | 0.1%        | 0.1%        | 0.1%        |
| Rainier UGB       | 2,450  | 2,835  | 3,314  | 0.8%        | 0.5%        | 4.8%        | 4.7%        | 4.6%        |
| Vernonia UGB      | 2,106  | 2,251  | 2,620  | 0.4%        | 0.5%        | 4.1%        | 3.7%        | 3.6%        |
| Outside UGBs      | 20,031 | 22,272 | 22,173 | 0.6%        | 0.0%        | 38.9%       | 36.7%       | 30.8%       |
| Larger UGBs       | 22,982 | 29,102 | 39,150 | 1.3%        | 0.9%        | 44.6%       | 47.9%       | 54.4%       |

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

Source: Forecast by Population Research Center (PRC)

Note: Larger UGBs are those with populations equal to or greater than 7,000 in forecast launch year.

Columbia County's smaller sub-areas are expected to compose 9 percent of countywide population growth in the first 18 years of the forecast period and about 12 percent in the final 32 years (Figure 17). Clatskanie, Columbia City, and Vernonia are expected to capture an increasing share of the county's population growth. Conversely, Rainier's share will remain stable while Prescott's will decline (Figure 19).

|                   | 2017-2035 | 2035-2067 |
|-------------------|-----------|-----------|
| Columbia County   | 100.0%    | 100.0%    |
| Clatskanie UGB    | 1.7%      | 2.2%      |
| Columbia City UGB | 1.8%      | 1.9%      |
| Prescott UGB      | 0.1%      | 0.0%      |
| Rainier UGB       | 4.2%      | 4.2%      |
| Vernonia UGB      | 1.6%      | 3.2%      |
| Outside UGBs      | 24.3%     | 0.0%      |
| Larger UGBs       | 66.4%     | 88.4%     |

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

Source: Forecast by Population Research Center (PRC)

Note: Larger UGBs are those with populations equal to or greater than 7,000 in forecast launch year.

#### **Forecast Trends in Components of Population Change**

As previously discussed, a key factor in increasing deaths is an aging population. From 2017 to 2035 the proportion of county population 65 and older is forecast to grow from over 18 percent to nearly 24 percent, and the proportion of the population 65 and older is expected to increasing, albeit at a slower rate, from 2035 to 2067, to just over 25 percent (**Figure 20**). For a more detailed look at the age structure of Columbia County's population see the final forecast table published to the forecast program website (<u>http://www.pdx.edu/prc/opfp</u>).

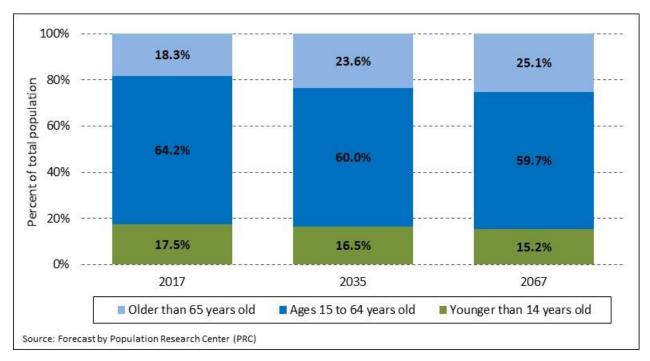


Figure 20. Columbia County—Age Structure of the Population (2017, 2035, and 2067)

As the countywide population ages in the near-term—contributing to a slow-growing population of women in their years of peak fertility—and more women choose to have fewer children and have them at older ages, the increase in average annual births is expected to slow. This, combined with the rise in the number of deaths, is expected to cause natural increase to decrease in magnitude and then become a natural decrease (**Figure 21**).

Net in-migration is forecast to increase rapidly in the near-term and then remain relatively stable over the remainder of the forecast period. The majority of these net in-migrants are expected to be middleaged individuals and their children under the age of 14.

In summary, an initial decline in the magnitude of natural increase shifting to a natural decrease, plus steady net in-migration are expected to lead to population growth reaching its peak in 2025 and then tapering down through the remainder of the forecast period (**Figure 21**). An aging population is expected to not only lead to an increase in deaths, but a smaller proportion of women in their childbearing years, causing long-term decline in births. Net in-migration is expected to remain relatively steady throughout the forecast period, offsetting impacts of natural decrease.

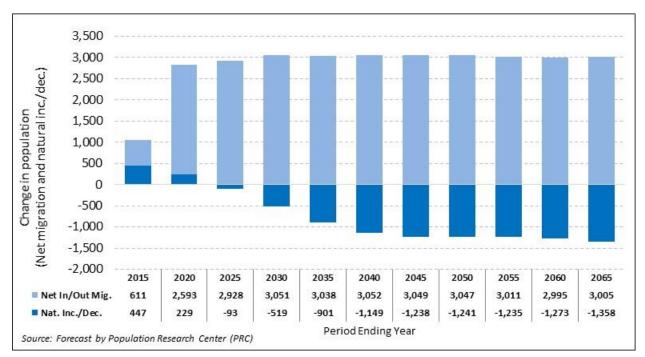


Figure 21. Columbia County—Components of Population Change, 2015-2065

# **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. The cities of Clatskanie Prescott, Rainier and Vernonia did not submit survey responses.

## Clatskanie — Columbia County—NO SURVEY RESPONSE

| <b>Observations about</b> |                |              |              |                  |                |                                |
|---------------------------|----------------|--------------|--------------|------------------|----------------|--------------------------------|
| Population                | Observations   | Planned      |              |                  |                |                                |
| Composition (e.g.         | about          | Housing      |              |                  |                | Promotions (Promos) and        |
| about children, the       | Housing        | Development/ | Future Group |                  |                | Hindrances (Hinders) to        |
| elderly, racial ethnic    | (including     | Est. Year    | quarters     |                  |                | Population and Housing Growth; |
| groups)                   | vacancy rates) | Completion   | Facilities   | Future Employers | Infrastructure | Other notes                    |
|                           |                |              |              |                  |                | Promos:                        |
|                           |                |              |              |                  |                |                                |
|                           |                |              |              |                  |                | Hinders:                       |
|                           |                |              |              |                  |                |                                |
|                           |                |              |              |                  |                |                                |
|                           |                |              |              |                  |                |                                |
|                           |                |              |              |                  |                |                                |
|                           |                |              |              |                  |                |                                |

| Clatskanie — Colur   | nbia County—NO SURVEY RESPONSE |
|--|--------------------------------|
| Highlights or summary<br>from planning<br>documents of<br>influences on or<br>anticipation of<br>population and<br>housing growth<br>(including any plans<br>for UGB expansion and<br>the stage in the<br>expansion process) | N/A                            |
| Other information<br>(e.g. planning<br>documents, email<br>correspondence,<br>housing development<br>survey)   | N/A                            |

| Columbia City — Columbia County—10/6/2016   |  |  |  |  |                |  |  |  |
|---|--|--|--|--|----------------|--|--|--|
| Observations about<br>Population<br>Composition (e.g.<br>about children, the<br>elderly, racial ethnic<br>groups) | Observations<br>about<br>Housing<br>(including<br>vacancy rates)   | Planned<br>Housing<br>Development/<br>Est. Year<br>Completion  | Future Group<br>quarters<br>Facilities | Future Employers                                   | Infrastructure | Promotions (Promos) and<br>Hindrances (Hinders) to<br>Population and Housing Growth;<br>Other notes  |  |  |
| Not aware of any<br>significant changes   | Occupancy<br>rates<br>improving<br>steadily since<br>the end of the<br>recession.<br>Many bank<br>owned houses<br>that have<br>been vacant<br>for years are<br>now being<br>purchased<br>and/or are<br>advertised for<br>sale. 8 new | A 13-unit<br>subdivision<br>application was<br>approved in<br>2016. This<br>is the first<br>subdivision<br>activity we<br>have seen<br>since prior to<br>the<br>Recession. | Not aware of<br>any plans.             | Not aware of any<br>plans within<br>Columbia City. | Good.          | <ul> <li>Promos: Existing water capacity can accommodate projected UGB build out for residential development.</li> <li>Close and easy commute to Scappoose, which expects development activities to add 6,000 new jobs in the next few years.</li> <li>Hinders: Growth limitations associated with physical boundaries - Columbia River to the east, steep hillside to the west, industrial uses to the north, City of St. Helens UGB immediately to the south.</li> </ul> |  |  |

| Columbia City — Co                            | olumbia Coun   | ty—10/6/201           | 6                 |                        |                     |                       |
|---|----------------|-----------------------|-------------------|------------------------|---------------------|-----------------------|
|   | housing starts |                       |                   |                        |                     |                       |
|   | during 2016    |                       |                   |                        |                     |                       |
|   | (the highest   |                       |                   |                        |                     |                       |
|   | level since    |                       |                   |                        |                     |                       |
|   | 2007).         |                       |                   |                        |                     |                       |
|   |                |                       |                   |                        |                     |                       |
|   |                |                       |                   |                        |                     |                       |
|   |                |                       |                   |                        |                     |                       |
|   |                |                       |                   |                        |                     |                       |
|   |                |                       |                   |                        |                     |                       |
| Highlights or summary                         | We do not have | the ability to expa   | and our UGB. We e | expect a lot of growth | pressure due to the | e 6,000 new jobs that |
| from planning                                 | development w  | ill bring to the City | of Scappoose dur  | ing the next few year  | S.                  |                       |
| documents of                                  |                |                       |                   |                        |                     |                       |
| influences on or                              |                |                       |                   |                        |                     |                       |
| anticipation of                               |                |                       |                   |                        |                     |                       |
| population and                                |                |                       |                   |                        |                     |                       |
| housing growth                                |                |                       |                   |                        |                     |                       |
| (including any plans<br>for UGB expansion and |                |                       |                   |                        |                     |                       |
| the stage in the                              |                |                       |                   |                        |                     |                       |
| expansion process)                            |                |                       |                   |                        |                     |                       |
|   |                |                       |                   |                        |                     |                       |

| Columbia City — Columbia County—10/6/2016 |   |  |  |  |  |  |
|---|---|--|--|--|--|--|
| Other information                         | According to PRC background research:   |  |  |  |  |  |
| (e.g. planning                            | - it appears that Columbia City is slightly limited in terms of developable land based on this description of the   |  |  |  |  |  |
| documents, email                          | area  |  |  |  |  |  |
| correspondence,                           | - After the 2003 UGB expansion, the City was unable to include properties that would be appropriate for   |  |  |  |  |  |
| housing development<br>survey)            | multi-family development and for manufactured home parks because of the topographical constraints on all properties surrounding the City. Those constraints remain. |  |  |  |  |  |
|   | - the City permits and encourages dwelling units on the second story of commercial structures in the  |  |  |  |  |  |
|   | commercial and industrial zones as a method of increasing multi family dwelling units.  |  |  |  |  |  |

| Prescott — Columb  | Prescott — Columbia County—NO SURVEY RESPONSE                    |   |  |                  |                |   |  |  |  |
|--|--|---|--|------------------|----------------|---|--|--|--|
| Observations about<br>Population<br>Composition (e.g.<br>about children, the<br>elderly, racial ethnic<br>groups)  | Observations<br>about<br>Housing<br>(including<br>vacancy rates) | Planned<br>Housing<br>Development/<br>Est. Year<br>Completion | Future Group<br>quarters<br>Facilities | Future Employers | Infrastructure | Promotions (Promos) and<br>Hindrances (Hinders) to<br>Population and Housing Growth;<br>Other notes |  |  |  |
|  |  |   |  |                  |                | Promos:   |  |  |  |
|  |  |   |  |                  |                | Hinders:  |  |  |  |
| Highlights or summary<br>from planning<br>documents of<br>influences on or<br>anticipation of<br>population and<br>housing growth<br>(including any plans<br>for UGB expansion and | N/A  |   |  |                  |                |   |  |  |  |

| Prescott — Columbia County—NO SURVEY RESPONSE  |     |  |  |  |  |  |  |  |  |
|--|-----|--|--|--|--|--|--|--|--|
| the stage in the<br>expansion process)   |     |  |  |  |  |  |  |  |  |
| Other information<br>(e.g. planning<br>documents, email<br>correspondence,<br>housing development<br>survey) | N/A |  |  |  |  |  |  |  |  |

| Rainier — Columbi  | a County—N   | D SURVEY RES  | PONSE                                  |                  |                |  |
|--|--|---|--|------------------|----------------|--|
| Observations about<br>Population<br>Composition (e.g.<br>about children, the<br>elderly, racial ethnic<br>groups)  | Observations<br>about<br>Housing<br>(including<br>vacancy rates) | Planned<br>Housing<br>Development/<br>Est. Year<br>Completion | Future Group<br>quarters<br>Facilities | Future Employers | Infrastructure | Promotions (Promos) and<br>Hindrances (Hinders) to<br>Population and Housing Growth;<br>Other notes<br>Promos:<br>Hinders: |
| Highlights or summary<br>from planning<br>documents of<br>influences on or<br>anticipation of<br>population and<br>housing growth<br>(including any plans<br>for UGB expansion and | N/A  |   |  |                  |                |  |

| Rainier — Columbi  | a County—NO SURVEY RESPONSE |
|--|-----------------------------|
| the stage in the<br>expansion process)   |                             |
| Other information<br>(e.g. planning<br>documents, email<br>correspondence,<br>housing development<br>survey) | N/A                         |

| Scappoose — Colu  | mbia County—11/   | 1/2016   |   |   |  |   |
|---|---|--|---|---|--|---|
| Observations about<br>Population<br>Composition (e.g.<br>about children, the<br>elderly, racial ethnic<br>groups) | Observations about<br>Housing (including<br>vacancy rates)  | Planned<br>Housing<br>Development/E<br>st. Year<br>Completion  | Future<br>Group<br>quarters<br>Facilities | Future Employers  | Infrastructure   | Promotions (Promos)<br>and Hindrances<br>(Hinders) to Population<br>and Housing Growth;<br>Other notes  |
| N/A   | We have a shortage<br>of housing. Prices<br>are climbing, and<br>available units are<br>quickly<br>rented/bought<br>when they become<br>available. We are<br>seeing more infill<br>development. The<br>City will be<br>conducting a<br>Housing Needs<br>Analysis starting<br>11/2016 and<br>concluding by<br>5/2017 (to be<br>adopted<br>7/2017 to allow<br>time for the PSU<br>Population Forecast<br>to be official).<br>There is a possibility<br>of needing a UGB | Currently there<br>are 4<br>subdivisions<br>under<br>construction<br>(total lots in<br>each); 9 lots, 35<br>lots, 39 lots, 88<br>lots. We expect<br>all houses to be<br>completed by<br>12/2017. There<br>is also a<br>subdivision still<br>going through<br>land use<br>approval, which<br>we expect will<br>be completed<br>and homes<br>occupied by<br>8/2018. Multi-<br>family housing<br>projects: 16 | N/A                                       | Cascade Tissue has a<br>600,000 sf building<br>under construction,<br>to be<br>completed by<br>3/2017 (75 jobs),<br>The Oregon<br>Manufacturing<br>Innovation<br>Center (OMIC) will<br>open in 2017 (they<br>are estimating 30<br>jobs initially,<br>200 jobs within 5<br>years, 1000 jobs<br>within 10 years).<br>PCC is opening a<br>campus here in<br>2018 (estimated 10<br>FTE jobs initially,<br>with up to 50 full<br>time and part time<br>jobs within 5 years).<br>We also have a 350 | The City is doing a<br>Wastewater<br>Master Plan<br>update to assess<br>conditions. The<br>City recently<br>rehabbed several<br>of its wells to<br>improve water<br>capacity. We will<br>need an additional<br>water source,<br>which we expect<br>will come as part<br>of the<br>infrastructure<br>associated with<br>the industrial<br>growth east of the<br>airport. We<br>recently updated<br>our TSP, which<br>shows 3-5 hours<br>of congestion | Promos: Close to metro<br>region with an easy<br>commute, more<br>affordable housing costs<br>than in metro region,<br>close to Intel, Nike, etc.<br>The OMIC is the first of<br>its kind in Oregon and in<br>the US. It is based off of<br>a successful model out<br>of Sheffield, England.<br>The City will be<br>processing an<br>annexation application<br>for 350 acres of<br>employment land in<br>12/2016.<br><b>Hinders:</b> Not enough<br>housing. |

| Scappoose — Colu  | mbia County—11/                                   | 1/2016  |                                     |   |  |  |
|---|---|---|-------------------------------------|---|--|--|
|   | expansion for<br>residential lands.               | units to be<br>completed by<br>11/2016.<br>Upcoming<br>multi-family<br>units: 44 units,<br>to be completed<br>by 7/2017, and<br>an additional 27<br>multi-family<br>units to be<br>completed by<br>12/2018. |                                     | acre light industrial<br>subdivision/campus<br>that will begin<br>construction in<br>8/2017, to be<br>completed by<br>6/2020 (best<br>estimate). Our<br>adopted EOA<br>projects<br>8,000 new jobs<br>(mainly in this new<br>350 acre light<br>industrial<br>subdivision<br>area east of the<br>airport) by 2030,<br>although we think it<br>could be sooner<br>based on the OMIC<br>locating here | along Hwy 30 and<br>through our town<br>by 2036. New<br>alternative<br>mobility targets<br>were established<br>so that growth is<br>not limited based<br>on traffic impacts<br>of development.<br>The TSP took into<br>account the<br>projected 8,000<br>new jobs by 2030. |  |
| Highlights or summary<br>from planning<br>documents of<br>influences on or<br>anticipation of<br>population and<br>housing growth<br>(including any plans | we get results back fro<br>to work closely with y | om the Buildable La<br>ou to ensure the m   | inds Inventory a<br>ost complete an | nd Housing Needs Anal<br>d accurate population e  | ysis we will forward th<br>estimate is made in re  | rmation on the OMIC. As<br>nat to you. We would like<br>gards to Scappoose. The<br>dential lands is warranted. |

| for UGB expansion and<br>the stage in the<br>expansion process)  |  |
|--|--|
| Other information<br>(e.g. planning<br>documents, email<br>correspondence,<br>housing development<br>survey) | <ul> <li>According to PRC research background:</li> <li>The recent UGB expansion in 2011 would suggest that Scappoose has sufficient buildable employment lands for the time being.</li> </ul> |

| Observations about<br>Population<br>Composition (e.g.<br>about children, the<br>elderly, racial ethnic<br>groups)   | Observations<br>about Housing<br>(including vacancy<br>rates)   | Planned<br>Housing<br>Development/<br>Est. Year<br>Completion  | Future Group<br>quarters<br>Facilities | Future<br>Employers | Infrastructure  | Promotions (Promos) and<br>Hindrances (Hinders) to<br>Population and Housing Growth;<br>Other notes |
|---|---|--|--|---------------------|---|---|
| Mostly white, families,<br>and aging populations.<br>Over 80% residents<br>commute out of<br>County. SH is a<br>bedroom community<br>for Hillsboro and<br>Portland. | 58 SFR units in the<br>pipeline. Overall<br>housing shortage:<br>shortage of rentals<br>and shortage of<br>affordable housing.<br>We have acted as<br>Portland's<br>"overflow"<br>affordable housing,<br>but development is<br>not keeping pace<br>with demand. | We are seeing<br>an increase in<br>infill<br>development<br>on vacant lots<br>within already<br>platted/develo<br>ped<br>subdivisions or<br>partitions. We<br>are not seeing<br>massive<br>developments. |  |                     | Oversized<br>wastewater<br>treatment<br>facility, plenty of<br>water and sewer<br>capacity. | Promos:<br>Hinders:   |
| Highlights or summary<br>from planning<br>documents of<br>influences on or<br>anticipation of<br>population and<br>housing growth                                   | No plans for UGB exp  | pansion in the futu  | ıre.                                   |                     |   |   |

| (including any plans<br>for UGB expansion and<br>the stage in the<br>expansion process)                      |   |
|--|---|
| Other information<br>(e.g. planning<br>documents, email<br>correspondence,<br>housing development<br>survey) | <ul> <li>According to PRC background research:         <ul> <li>The city is currently working on a Waterfront Redevelopment Project with the aim of redeveloping part of the former<br/>Boise Veneer Mill site. The intentions are to expand public access to the waterfront with a riverfront trail and<br/>boardwalk, create a transportation connection to Hwy 30, and provide a platform for private investment and economic<br/>and development. A second focus area includes 200+ acres of the former Boise White Paper Mill site, directly adjacent<br/>to the Veneer site. As a result, it seems that there is a supply of redevelopable land in St. Helens.</li> </ul> </li> </ul> |

| Vernonia — Colum   | bia County—  | NO SURVEY RI  | ESPONSE                                |                  |                |   |
|--|--|---|--|------------------|----------------|---|
| Observations about<br>Population<br>Composition (e.g.<br>about children, the<br>elderly, racial ethnic<br>groups)  | Observations<br>about<br>Housing<br>(including<br>vacancy rates) | Planned<br>Housing<br>Development/<br>Est. Year<br>Completion | Future Group<br>quarters<br>Facilities | Future Employers | Infrastructure | Promotions (Promos) and<br>Hindrances (Hinders) to<br>Population and Housing Growth;<br>Other notes |
|  |  |   |  |                  |                | Promos:   |
|  |  |   |  |                  |                | Hinders:  |
| Highlights or summary<br>from planning<br>documents of<br>influences on or<br>anticipation of<br>population and<br>housing growth<br>(including any plans<br>for UGB expansion and | N/A  |   |  |                  |                |   |

| Vernonia — Columbia County—NO SURVEY RESPONSE  |     |  |  |  |  |  |  |  |  |
|--|-----|--|--|--|--|--|--|--|--|
| the stage in the<br>expansion process)   |     |  |  |  |  |  |  |  |  |
| Other information<br>(e.g. planning<br>documents, email<br>correspondence,<br>housing development<br>survey) | N/A |  |  |  |  |  |  |  |  |

# **Appendix B: Specific Assumptions**

#### Clatskanie

The 5-year average annual housing unit growth rate is assumed to increase to 0.5 percent during the first 10 years and then slightly decline thereafter. The occupancy rate is assumed to be steady at 90.7 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.36 over the forecast period. Group quarters population is assumed to remain at 41.

#### Columbia

The 5-year average annual housing unit growth rate is assumed to increase to 0.5 percent during the first 10 years and then slightly decline thereafter. The occupancy rate is assumed to be steady at 95.5 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.47 over the forecast period. Group quarters population is assumed to remain at 5.

#### Prescott

The 5-year average annual housing unit growth rate is assumed to slowly decline from 0.78 to 0.1 by the end of the forecast period. The occupancy rate is assumed to be steady at 77.1 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.11 over the forecast period. There is no group quarters population in Prescott.

#### Rainier

The 5-year average annual housing unit growth rate is assumed to increase to 1 percent from 0.5 percent during the first 10 years and then decline thereafter. The occupancy rate is assumed to be steady at 91.6 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.39 over the forecast period. There is no group quarters population in Rainier.

#### Scappoose

Total fertility rates are assumed to remain relatively stable over the forecast period. Survival rates are assumed to be the same as those forecast for the county as a whole; these rates are expected to gradually increase over the 50-year period. Age specific net migration rates are assumed to follow historical county patterns.

#### St. Helens

Total fertility rates are assumed to follow a historical trend (observed from the 2000 to 2010 period) and gradually decline over the forecast period. Survival rates are assumed to be the same as those forecast for the county as a whole; these rates are expected to gradually increase over the 50-year period. Age specific net migration rates are assumed to follow historical county patterns.

#### Vernonia

The 5-year average annual housing unit growth rate is assumed to slowly decline throughout the forecast period. The occupancy rate is assumed to decline over the next two decades and then stabilize at 80.5 percent throughout the rest of the 50 year horizon. PPH is also assumed to be stable at 2.61 over the forecast period. Group quarters population is assumed to remain at zero.

#### **Outside UGBs**

The 5-year average annual housing unit growth rate is assumed to decline throughout the forecast period. The occupancy rate is assumed to steadily increase over the next 25 years and then stabilize at 93 percent throughout the rest of the 50 year horizon. PPH is also assumed to be stable at 2.56 over the forecast period. Group quarters population is assumed to remain at 18.

# **Appendix C: Detailed Population Forecast Results**

| Population<br>Forecasts by Age |        |        |        |        |        |        |        |        |        |        |        |        |
|--------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Group / Year                   | 2017   | 2020   | 2025   | 2030   | 2035   | 2040   | 2045   | 2050   | 2055   | 2060   | 2065   | 2067   |
| 00-04                          | 2,721  | 2,788  | 2,868  | 2,884  | 2,901  | 2,935  | 2,988  | 3,051  | 3,098  | 3,125  | 3,142  | 3,150  |
| 05-09                          | 2,971  | 3,068  | 3,225  | 3,338  | 3,382  | 3,432  | 3,496  | 3,554  | 3,623  | 3,675  | 3,706  | 3,714  |
| 10-14                          | 3,336  | 3,248  | 3,431  | 3,596  | 3,719  | 3,768  | 3,817  | 3,883  | 3,940  | 4,014  | 4,070  | 4,083  |
| 15-19                          | 3,157  | 3,124  | 2,990  | 3,148  | 3,296  | 3,409  | 3,447  | 3,486  | 3,538  | 3,587  | 3,652  | 3,672  |
| 20-24                          | 2,463  | 2,446  | 2,467  | 2,412  | 2,537  | 2,657  | 2,741  | 2,767  | 2,792  | 2,831  | 2,868  | 2,889  |
| 25-29                          | 2,656  | 2,798  | 2,768  | 2,834  | 2,769  | 2,912  | 3,045  | 3,139  | 3,163  | 3,190  | 3,233  | 3,251  |
| 30-34                          | 3,285  | 3,493  | 3,813  | 3,765  | 3,853  | 3,764  | 3,954  | 4,131  | 4,253  | 4,284  | 4,319  | 4,342  |
| 35-39                          | 3,251  | 3,428  | 3,802  | 4,139  | 4,085  | 4,181  | 4,079  | 4,280  | 4,464  | 4,592  | 4,625  | 4,640  |
| 40-44                          | 3,439  | 3,462  | 3,787  | 4,191  | 4,563  | 4,505  | 4,606  | 4,489  | 4,705  | 4,906  | 5,048  | 5,062  |
| 45-49                          | 3,453  | 3,467  | 3,509  | 3,830  | 4,237  | 4,614  | 4,549  | 4,646  | 4,522  | 4,737  | 4,940  | 4,997  |
| 50-54                          | 3,739  | 3,600  | 3,626  | 3,658  | 3,986  | 4,408  | 4,790  | 4,713  | 4,802  | 4,668  | 4,885  | 4,966  |
| 55-59                          | 3,810  | 3,757  | 3,529  | 3,544  | 3,572  | 3,893  | 4,297  | 4,662  | 4,579  | 4,661  | 4,529  | 4,612  |
| 60-64                          | 3,818  | 3,825  | 3,736  | 3,498  | 3,509  | 3,535  | 3,843  | 4,232  | 4,579  | 4,492  | 4,567  | 4,513  |
| 65-69                          | 3,306  | 3,652  | 3,662  | 3,568  | 3,338  | 3,348  | 3,368  | 3,658  | 4,023  | 4,352  | 4,268  | 4,297  |
| 70-74                          | 2,420  | 2,804  | 3,313  | 3,314  | 3,225  | 3,017  | 3,021  | 3,033  | 3,286  | 3,609  | 3,899  | 3,868  |
| 75-79                          | 1,718  | 2,014  | 2,578  | 3,040  | 3,015  | 2,936  | 2,744  | 2,746  | 2,755  | 2,984  | 3,279  | 3,382  |
| 80-84                          | 1,002  | 1,190  | 1,562  | 2,005  | 2,352  | 2,324  | 2,271  | 2,132  | 2,141  | 2,157  | 2,347  | 2,442  |
| 85+                            | 955    | 1,051  | 1,383  | 1,814  | 2,377  | 2,977  | 3,374  | 3,633  | 3,749  | 3,872  | 4,007  | 4,108  |
| Total                          | 51,500 | 53,212 | 56,048 | 58,580 | 60,716 | 62,619 | 64,430 | 66,237 | 68,013 | 69,735 | 71,382 | 71,988 |

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

Population Forecasts prepared by: Population Research Center, Portland State University, June 30, 2017.

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

| Area / Year       | 2017   | 2020   | 2025   | 2030   | 2035   | 2040   | 2045   | 2050   | 2055   | 2060   | 2065   | 2067   |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Columbia County   | 51,500 | 53,212 | 56,048 | 58,580 | 60,716 | 62,619 | 64,430 | 66,237 | 68,013 | 69,735 | 71,382 | 71,988 |
| Clatskanie UGB    | 1,890  | 1,915  | 1,964  | 2,005  | 2,044  | 2,084  | 2,123  | 2,162  | 2,201  | 2,240  | 2,280  | 2,296  |
| Columbia City UGB | 1,987  | 2,015  | 2,066  | 2,112  | 2,151  | 2,186  | 2,219  | 2,253  | 2,287  | 2,322  | 2,357  | 2,371  |
| Prescott UGB      | 54     | 56     | 58     | 59     | 61     | 61     | 62     | 62     | 63     | 63     | 64     | 64     |
| Rainier UGB       | 2,450  | 2,488  | 2,613  | 2,730  | 2,835  | 2,928  | 3,007  | 3,085  | 3,165  | 3,229  | 3,294  | 3,314  |
| Scappoose UGB     | 7,610  | 7,996  | 8,782  | 9,617  | 10,461 | 11,291 | 12,087 | 12,859 | 13,646 | 14,437 | 15,217 | 15,521 |
| St. Helens UGB    | 15,371 | 15,839 | 16,757 | 17,738 | 18,641 | 19,511 | 20,342 | 21,131 | 21,879 | 22,615 | 23,351 | 23,629 |
| Vernonia UGB      | 2,106  | 2,156  | 2,183  | 2,206  | 2,251  | 2,316  | 2,381  | 2,438  | 2,496  | 2,553  | 2,603  | 2,620  |
| Outside UGB Area  | 20,031 | 20,748 | 21,625 | 22,113 | 22,272 | 22,242 | 22,209 | 22,246 | 22,275 | 22,276 | 22,216 | 22,173 |

Population Forecasts prepared by: Population Research Center, Portland State University, June 30, 2017.