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


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Coordinated Population Forecast



2017

Through

2067

Clatsop County

Urban Growth
Boundaries (UGB)
& Area Outside UGBs

Photo Credit: The Astoria-Megler Bridge (Photo No. clatD0072). Gary Halvorson, Oregon State Archives <http://arcweb.sos.state.or.us/pages/records/local/county/scenic/clatsop/8.html>

**Coordinated Population Forecast for Clatsop 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**

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How to Read this Report

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

Specifically, the reader should refer to the following documents:

- *Methods and Data for Developing Coordinated Population Forecasts*—Provides a detailed description and discussion of the forecast methods employed. This document also describes the assumptions that feed into these methods and determine the forecast output.
- *Forecast Tables*—Provides complete tables of population forecast numbers by county and all sub-areas within each county for each five-year interval of the forecast period (2017-2067).

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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.

Clatsop County's total population has grown slowly since 2000, with an average annual growth rate of less than one half of one percent between 2000 and 2010 (**Figure 1**). However, some of its sub-areas experienced more rapid population growth. Warrenton, the third most populous UGB, and Gearhart, posted average annual growth rates of 2.0 percent and 1.4 percent, respectively.

Clatsop County's positive population growth in the 2000s was largely the result of net in-migration coupled with a small natural increase. An aging population not only led to an increase in deaths, but also in a smaller proportion of women in their childbearing years. While women in Clatsop County are choosing to have children at marginally older ages, they are also choosing to have slightly more children than in the near past, leading to a small increase in births. The larger number of births relative to deaths caused natural increase (more births than deaths) in most, but not all, years from 2000 to 2015. 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—greatly reducing population growth in the late 2000s and early 2010s. In more recent years (2013 to 2015) net in-migration has increased, bringing with it population growth (**Figure 12**).

Forecast

Total population in Clatsop County and within 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 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, Clatsop County's total population is forecast to increase by roughly 2,350 over the next 18 years (2017-2035) and by more than 4,480 over the entire 50-year forecast period (2017-2067). UGB sub-areas that showed positive population growth in the 2000s are expected to continue growing during the forecast period, with the exception of Astoria whose population is expected to decline in the longer term.

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

	Historical			Forecast				
	2000	2010	AAGR (2000-2010)	2017	2035	2067	AAGR (2017-2035)	AAGR (2035-2067)
<i>Clatsop County</i>	35,630	37,039	0.4%	38,123	40,474	42,611	0.3%	0.2%
Astoria UGB	10,345	9,782	-0.6%	10,064	10,665	10,431	0.3%	-0.1%
Cannon Beach UGB	1,603	1,693	0.5%	1,730	1,886	2,112	0.5%	0.4%
Gearhart UGB	1,318	1,508	1.4%	1,550	1,752	1,818	0.7%	0.1%
Seaside UGB	6,095	6,657	0.9%	6,872	7,884	8,571	0.8%	0.3%
Warrenton UGB	4,105	5,022	2.0%	5,373	7,410	9,616	1.8%	0.8%
Outside UGBs	12,164	12,377	0.2%	12,534	10,878	10,063	-0.8%	-0.2%

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

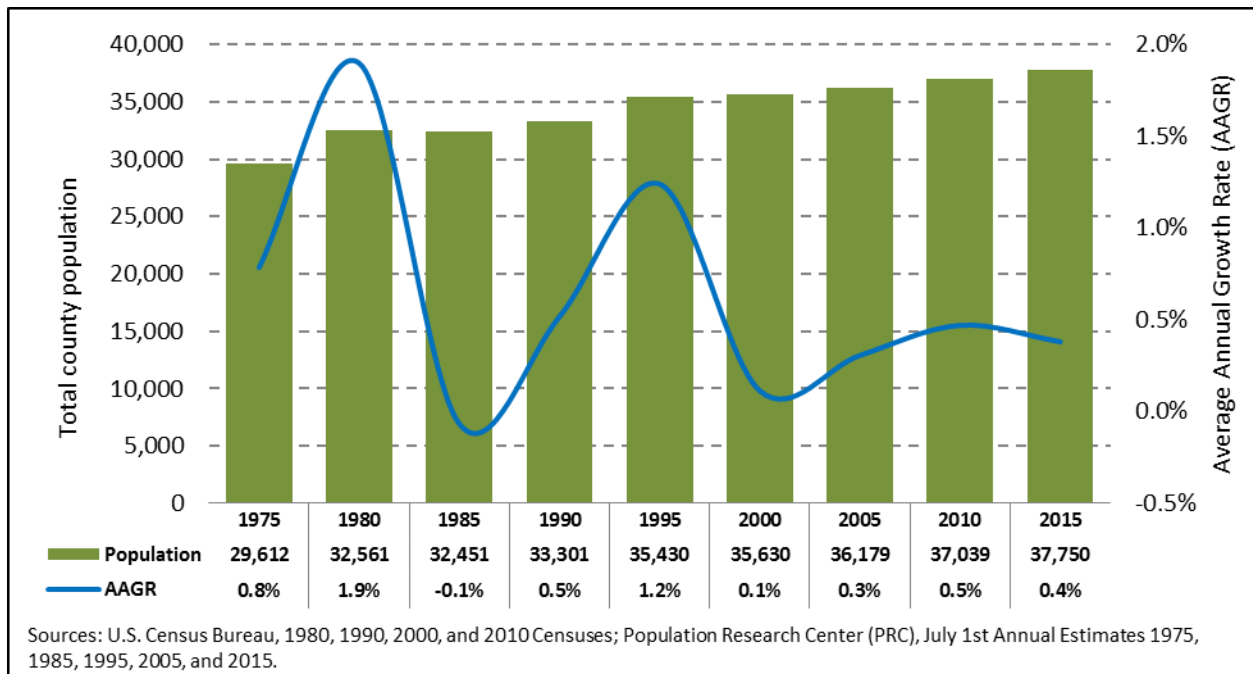
Historical Trends

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

Population

Clatsop County’s total population grew from roughly 30,000 in 1975 to nearly 38,000 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 (Figure 2). During the early 1980s, challenging economic conditions, both nationally and within the county, led to population decline. During the early 1990s population growth increased, but once again challenging economic conditions in the late 1990s yielded declines in population growth. Even so, Clatsop County experienced modest positive population growth over the last decade (2000 to 2010)—averaging a little less than a third of one percent per year. In recent years growth rates have slightly increased, leading to faster paced population growth between 2010 and 2015.

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



Clatsop County’s population change is the sum of its parts; the countywide population change is the combined population growth or decline within each sub-area. During the 2000s, Clatsop County’s

average annual population growth rate stood at a less than one half percent (Figure 3). At the same time, the county’s largest UGB, Astoria, experienced a population decline with an average annual growth rate of -0.6 percent. Warrenton and Gearhart saw the fastest growth over the decade at 2.0 and 1.4 percent, respectively. Seaside and Cannon Beach both experienced faster growth than the county at 0.9 and 0.5 percent annually. The area outside UGBs grew as well, registering an average annual growth rate of 0.9 percent. Warrenton, Seaside, Gearhart, and Cannon Beach saw small increases in their share of Clatsop County’s population between 2000 and 2010, while both Astoria and the area outside UGBs saw their share reduced over the same time period.

Figure 3. Clatsop County and Sub-areas—Total Population and Average Annual Growth Rate (AAGR) (2000 and 2010)¹

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010
<i>Clatsop County</i>	35,630	37,039	0.4%	100.0%	100.0%
Astoria UGB	10,345	9,782	-0.6%	29.0%	26.4%
Cannon Beach UGB	1,603	1,693	0.5%	4.5%	4.6%
Gearhart UGB	1,318	1,508	1.4%	3.7%	4.1%
Seaside UGB	6,095	6,657	0.9%	17.1%	18.0%
Warrenton UGB	4,105	5,022	2.0%	11.5%	13.6%
Outside UGBs	12,164	12,377	0.9%	34.1%	33.4%

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

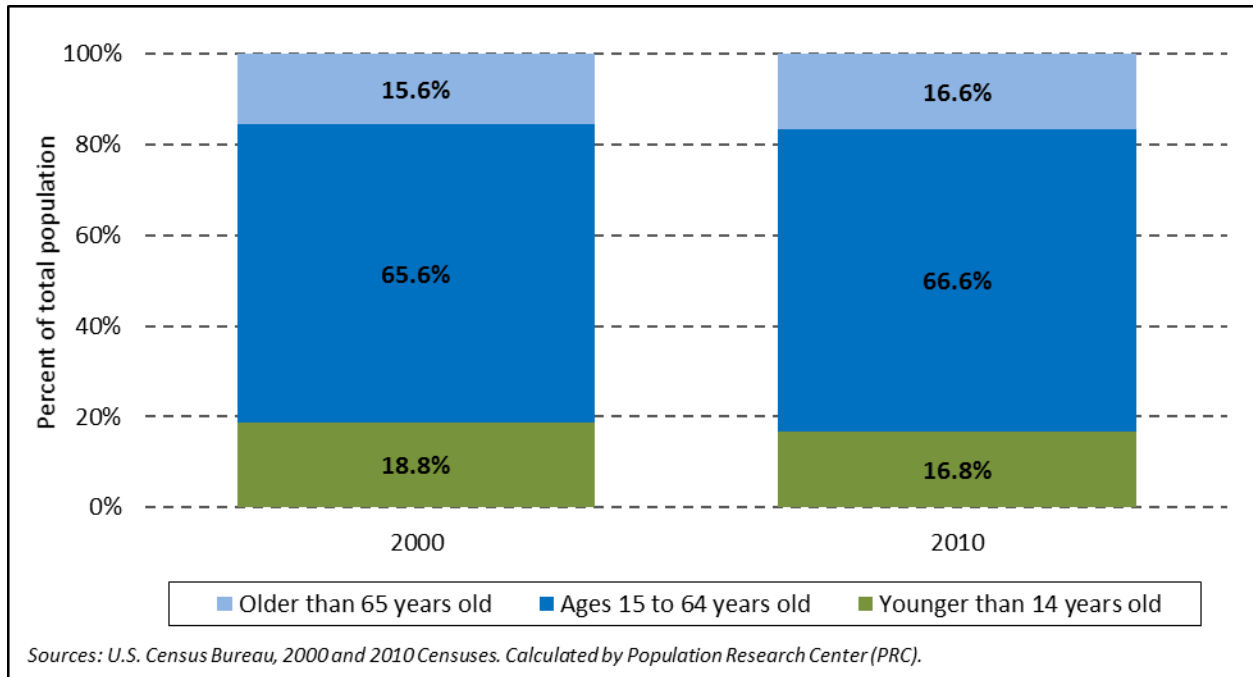
Age Structure of the Population

Clatsop County’s population is aging but at a much slower pace compared to most areas across Oregon. 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. For Clatsop County births have stabilized, while the populations of people aged 15 to 64 as well as 65 and over have increased (Figure 4). Underscoring Clatsop County’s trend in aging, the median age increased from 40 in 2000 to just over 43 in 2010 and 43.9 in 2015, a larger increase than what is observed statewide but more comparable to neighboring counties.²

¹ 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.

² Median age is sourced from the U.S. Census Bureau’s 2000 and 2010 Censuses and 2011-2015 ACS 5-year Estimates.

Figure 4. Clatsop 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 Clatsop County increased substantially from 2000 to 2010, recording the largest growth in absolute numbers of any group (Figure 5). The white, non-Hispanic population experienced modest decline over the same time period, while still composing over 87 percent of the population in Clatsop County. This increase in the Hispanic population and other minority populations brings with it several implications for future population change. First, both nationally and at the state level, fertility rates among Hispanic and minority women have tended to be higher than among white, non-Hispanic women. 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.

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

Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
<i>Total population</i>	35,630	100.0%	37,039	100.0%	1,409	4.0%
Hispanic or Latino	1,597	4.5%	2,838	7.7%	1,241	77.7%
Not Hispanic or Latino	34,033	95.5%	34,201	92.3%	168	0.5%
White alone	32,364	90.8%	32,295	87.2%	-69	-0.2%
Black or African American alone	156	0.4%	163	0.4%	7	4.5%
American Indian and Alaska Native alone	342	1.0%	308	0.8%	-34	-9.9%
Asian alone	423	1.2%	445	1.2%	22	5.2%
Native Hawaiian and Other Pacific Islander alone	50	0.1%	84	0.2%	34	68.0%
Some Other Race alone	14	0.0%	48	0.1%	34	242.9%
Two or More Races	684	1.9%	858	2.3%	174	25.4%

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

Births

Historical fertility rates for Clatsop County do not mirror trends in the state of Oregon as a whole. Total fertility rates increased in Clatsop County from 2000 to 2010, while they decreased for the state over the same time period (**Figure 6**). As **Figure 7** demonstrates, fertility rates for youngest age groups in Clatsop County are lower in 2010 compared to earlier decades largely because women are having children at older ages. These changes are mirrored in statewide trends (**Figure 8**). However, Clatsop County fertility changes are distinct from those of the state in three ways. First, fertility rates for 20-24 year old women are higher in 2010 than in 2000. Second, total fertility in Clatsop County increased slightly during the 2000s, which differed from the decrease observed statewide. Lastly, total fertility in the county remains just below *replacement fertility*, while for Oregon as a whole total fertility continues to fall below that.

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

	2000	2010
Clatsop County	1.90	1.99
Oregon	1.98	1.80

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

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

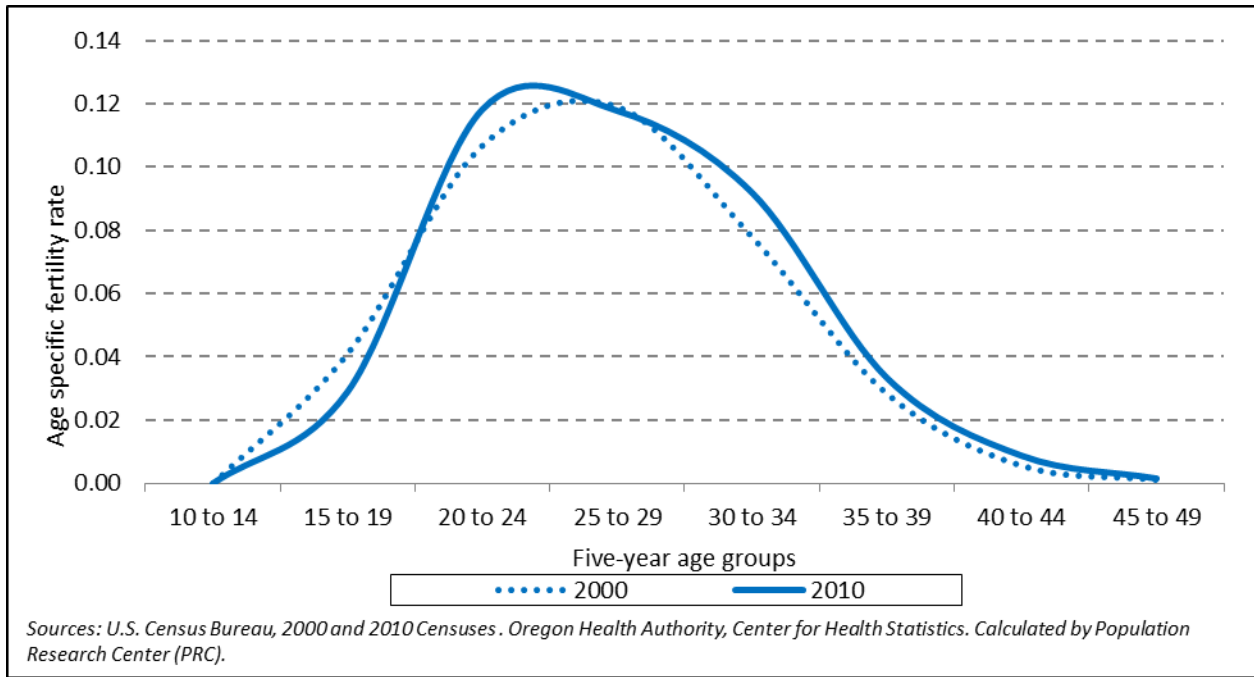
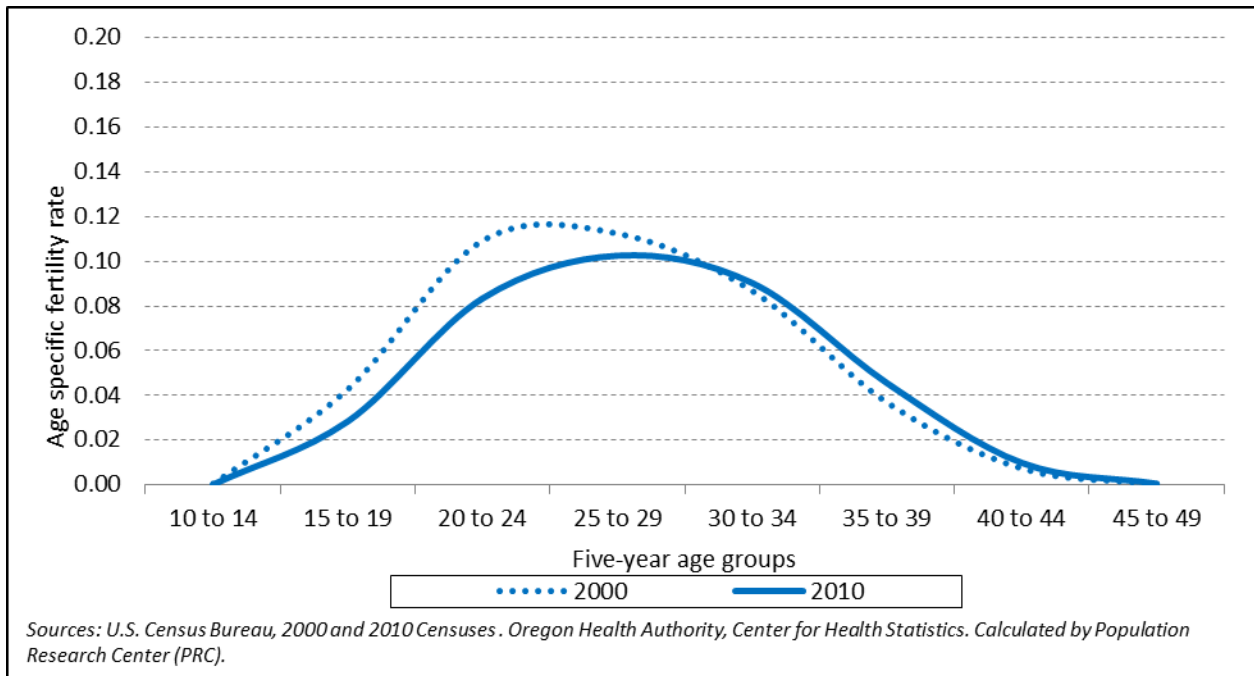


Figure 8. Oregon—Age Specific Fertility Rate (2000 and 2010)



The smaller sub-areas and the area outside UGBs all contributed to the increase in births across the county.

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 years may show a decrease during a different time period. For the 10- year period from 2000 to 2010, Astoria experienced a decline in births, while the county as a whole saw a small increase. The smaller sub-areas and the area outside UGBs all contributed to the increase in births across the county.

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

	2000	2010	Absolute Change	Relative Change	Share of County 2000	Share of County 2010
<i>Clatsop County</i>	379	415	36	9.5%	100.0%	100.0%
Astoria	126	109	-17	-13.5%	33.2%	26.3%
Outside UGBs	102	112	10	9.8%	26.9%	27.0%
Smaller UGBs	151	194	43	28.5%	39.8%	46.7%

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

Deaths

Though Clatsop County’s population is aging, life expectancy increased in the 2000s.³ For Clatsop County in 2000, life expectancy for males was 75 years and for females was 78 years. By 2010, life expectancy had remained relatively the same for males, but had increased for females to 81 years. For both Clatsop County and Oregon, the survival rates changed little between 2000 and 2010—underscoring the fact that mortality is the most stable component, relative to birth and migration rates, of population change. Even so, the total number of countywide deaths increased slightly (**Figure 10**).

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

	2000	2010	Absolute Change	Relative Change	Share of County 2000	Share of County 2010
<i>Clatsop County</i>	345	395	50	14.5%	100.0%	100.0%
Astoria	103	85	-18	-17.5%	29.9%	21.5%
Outside UGBs	239	113	-126	-52.7%	69.3%	28.6%
Smaller UGBs	3	197	194	6466.7%	0.9%	49.9%

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, thus PRC was unable to assign deaths to some UGBs.

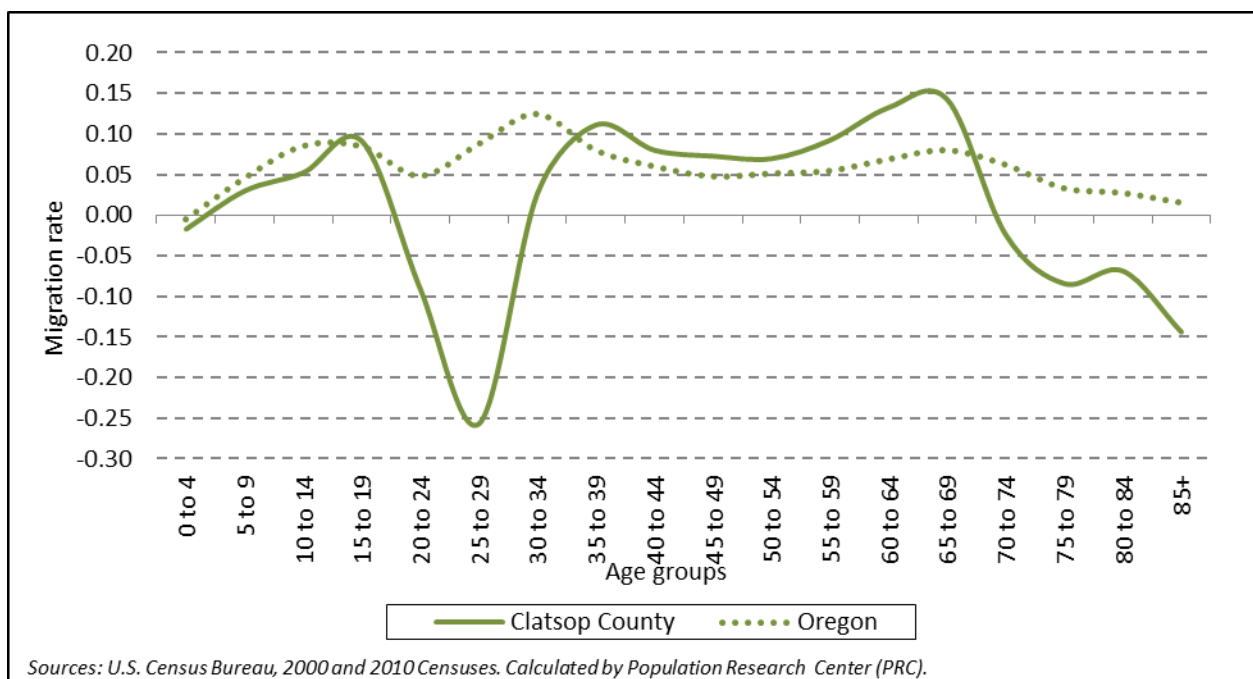
³ Researchers have found evidence for a widening rural-urban gap in life expectancy. This gap is particularly apparent between race and income groups and may be one explanation for the decline in life expectancy in the 2000s. See the following research article for more information. Singh, Gopal K., and Mohammad Siahpush. “Widening rural-urban disparities in life expectancy, US, 1969-2009.” *American Journal of Preventative Medicine* 46, no. 2 (2014): e19-e29.

Migration

The propensity to migrate is strongly linked to age and stage of life. As such, age-specific migration rates are critically important for assessing these patterns across five-year age cohorts. **Figure 11** shows the historical age-specific migration rates by five-year age group, both for Clatsop 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 Clatsop County in search of employment and educational opportunities. This outmigration of young adults is a trend typical of most Oregon counties. At the same time however, the county attracted a modest number of adults and retirees. Many in-migrants were accompanied by their children, as shown in the in-migration of persons under the age of 14. The age group with the highest in-migration rate are persons of retirement age (60-69 year olds), likely drawn to coastal communities in Clatsop County.

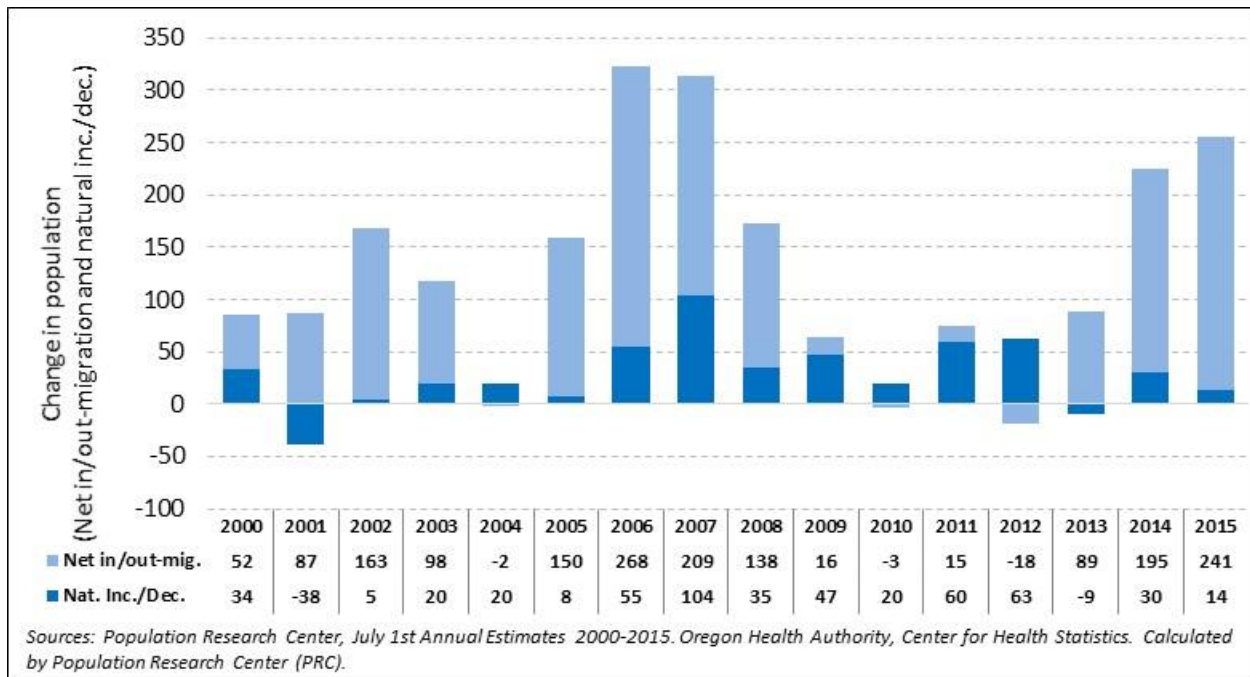
Figure 11. Clatsop County and Oregon—Age Specific Migration Rates (2000-2010)



Historical Trends in Components of Population Change

In summary, Clatsop County's modest population growth in the 2000s was primarily the result of fluctuating net in-migration to the county in concert with a small, though inconsistent natural increase (**Figure 12**). The early years of the decade witnessed minimal natural increase, with some years showing a decrease with a larger number of deaths relative to births. The middle and later years saw natural increase rebound to some degree, while more recent years (2011-2015) have seen a return of volatility to natural increase. While net in-migration was modest in the early 2000s, the county experienced a sharp increase of in-migrants in the middle of the decade, only to see net in-migration slow in the post-recession period, including some years showing net out-migration. More recently, increases in net in-migration have driven the county's population growth.

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



Housing and Households

The total number of housing units in Clatsop County increased rapidly during the middle years of this last decade (2000 to 2010), but this growth slowed with the onset of the Great Recession in 2008. Over the entire 2000 to 2010 decade, the total number of housing units increased by over nine percent countywide; this was nearly 1,900 new housing units (**Figure 13**). Seaside and Warrenton garnered the largest share of the growth in total housing units, with all sub-areas as well as the area outside UGBs recording modest gains in total housing units. Seaside, Warrenton, and Gearhart all grew their share of the county totals of housing units, while Cannon Beach remained flat and Astoria and the area outside UGBs saw small declines. In terms of relative housing growth, Warrenton grew the most during the 2000s, as its total housing stock increased more than 22 percent (406 housing units) by 2010.

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

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

	AAGR			Share of County 2000	Share of County 2010
	2000	2010	(2000-2010)		
<i>Clatsop County</i>	19,685	21,546	0.9%	100.0%	100.0%
Astoria	4,862	4,982	0.2%	24.7%	23.1%
Cannon Beach	1,651	1,814	0.9%	8.4%	8.4%
Gearhart	1,346	1,574	1.6%	6.8%	7.3%
Seaside	4,171	4,732	1.3%	21.2%	22.0%
Warrenton	1,802	2,208	2.1%	9.2%	10.2%
Outside UGBs	5,853	6,236	0.6%	29.7%	28.9%

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 changes—in relative terms—in occupancy rates. From 2000 to 2010 the occupancy rate in Clatsop County decreased; this was most likely due to slack in demand for housing as individuals experienced the effects of the Great Recession, plus increase in seasonal home share. All sub-areas in the county witnessed drops in occupancy rates, with Gearhart experiencing the largest change at -2.4 percent.

Average household size, or PPH, in Clatsop County was 2.3 in 2010, nearly identical to 2000 (Figure 14). Clatsop County's PPH in 2010 was slightly lower than for Oregon as a whole, which had a PPH of 2.5. PPH varied slightly across the sub areas, with all of them falling between 2.1 and 2.5 persons per household. In 2010 the highest PPH was 2.5 in both in Warrenton and the area, while the lowest was 2.1 in Cannon Beach.

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

	Persons Per Household (PPH)			Occupancy Rate		
	2000	2010	Change 2000-2010	2000	2010	Change 2000-2010
<i>Clatsop County</i>	2.3	2.3	-0.1	74.7%	73.1%	-1.6%
Astoria	2.3	2.2	-0.1	87.2%	86.1%	-1.1%
Cannon Beach	2.1	2.1	0.0	43.4%	42.0%	-1.5%
Gearhart	2.2	2.3	0.1	44.9%	42.5%	-2.4%
Seaside	2.2	2.2	0.0	65.6%	64.4%	-1.2%
Warrenton	2.5	2.5	0.0	90.1%	88.8%	-1.4%
Outside UGBs	2.5	2.5	-0.1	81.7%	80.4%	-1.3%

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

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

Assumptions for Future Population Change

Evaluating past demographic trends provides clues about what the future will look like, and helps determine the most likely scenarios for population change. Past trends also explain the dynamics of population growth specific to local areas. Relating recent and historical population change to events that influence population change serves as a gauge for what might realistically occur in a given area over the long-term. The forecast period is 2017-2067.

Assumptions about fertility, mortality, and migration were developed for Clatsop County's population forecast as well as for the forecasts of larger sub-areas.⁴ The assumptions are derived from observations based on life events, as well as trends unique to Clatsop County and its larger sub-areas. Astoria is the only sub-area that falls into this category.

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—for example the average age of householder. Clatsop County sub-areas falling into this category include: Cannon Beach, Gearhart, Seaside, and Warrenton.

Assumptions for the County and Larger Sub-Areas

During the forecast period, the population in Clatsop 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 Clatsop County is forecast to decrease from 2.03 children per woman in the 2010-15 period to 1.91 children per woman by 2065.

Changes in mortality and life expectancy are more stable compared to fertility and migration. Clatsop County and its larger sub-areas are projected to follow the statewide trend of increasing life expectancy throughout the forecast period—progressing from a life expectancy of 78 years in 2010 to 86 in 2060. However, in spite of increasing life expectancy and the corresponding increase in survival rates, Clatsop 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 population ages.

Migration is the most volatile and challenging demographic component to forecast due to the many factors influencing migration patterns. Economic, social, and environmental factors—such as employment, educational opportunities, housing availability, family ties, cultural affinity, climate change, and natural amenities—occurring both inside and outside the study area can affect both the direction and the volume of migration.

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

We assume net migration rates will change in line with historical trends unique to Clatsop 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 migration is expected to increase from 96 net in-migrants in 2015 to 210 net in-migrants in 2035. Over the last 30 years of the forecast period average annual net migration is expected to be more steady, remaining at 212 net in-migrants through 2065. Net in-migration is expected to account for nearly all of Clatsop County's population growth throughout the entire forecast period.

Assumptions for Smaller Sub-Areas

Rates of population growth for the smaller UGBs are determined via corresponding growth in the number of housing units, as well as by changes in housing occupancy rates and PPH. The change in housing unit growth is much more variable than change in housing occupancy rates or PPH.

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

In addition, for sub-areas experiencing population growth we assume a higher growth rate in the near-term, with growth stabilizing over the remainder of the forecast period. If planned housing units were reported in the surveys, then we account for them being constructed over the next 5-15 years (or as specified by local 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 Clatsop County, countywide and sub-area populations are expected to increase modestly over the forecast period. The countywide population growth rate is forecast to peak in 2020, and then steeply decline through 2040 before leveling out for the rest of the forecast period. A reduction in population growth rates is driven by both (1) an aging population, 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 through the forecast period.

Clatsop County’s total population is forecast to grow by more than 4,480 persons (roughly 12 percent) from 2017 to 2067, which translates into a countywide population of 42,611 in 2067 (Figure 15). The population is forecast to grow at the highest rate—at around half a percent per year—in the near-term (2017-2025). This anticipated population growth in the near-term is based on two core assumptions: (1) Clatsop County’s economy will continue to strengthen over the next 10 years; (2) middle-aged persons will continue migrating into the county — bringing their families or having more children. The largest component of growth in this initial period is net in-migration (Figure 21). Over 280 more deaths than births are forecast for the 2017 to 2025 period. At the same time over 1,800 in-migrants are also forecast, outweighing the expected natural decrease and producing modest population growth.

Figure 15. Clatsop County—Total Forecast Population by Five-year Intervals (2017-2067)



Astoria, Clatsop County’s largest UGB, is forecast to experience population growth of roughly 600 persons from 2017 to 2035, moving from 10,064 to 10,665 persons over the period (Figure 16). However, Astoria is projected to experience a population loss of over 230 persons between 2035 and 2067,

shrinking from 10,665 to 10,431. Astoria’s share of the county population is projected to decrease slightly over the period, from 26.4 percent in 2017 to 24.5 percent in 2067.

Population outside UGBs is expected to decrease by more than 1,650 people from 2017 to 2035, but is expected to decline at a slower rate during the second half of the forecast period, losing nearly 820 people from 2035 to 2067. The population of the area outside UGBs is also forecast to decline as a share of total countywide population over the forecast period, composing almost 33 percent of the countywide population in 2017 and nearly 24 percent in 2067.

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

	2017	2035	2067	AAGR (2017-2035)	AAGR (2035-2067)	Share of County 2017	Share of County 2035	Share of County 2067
<i>Clatsop County</i>	38,123	40,474	42,611	0.3%	0.2%	100.0%	100.0%	100.0%
Astoria UGB	10,064	10,665	10,431	0.3%	-0.1%	26.4%	26.3%	24.5%
Outside UGBs	12,534	10,878	10,063	-0.8%	-0.2%	32.9%	26.9%	23.6%
Smaller UGBs	15,525	18,931	22,117	1.1%	0.5%	40.7%	46.8%	51.9%

Source: Forecast by Population Research Center (PRC)

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

If we only include sub-areas that are expected to experience population growth, Astoria is expected to capture 15 percent of the countywide population growth between 2017 and 2035 (Figure 17); however, Astoria is forecast to decline in population over the period 2035-2067, capturing none of the growth during that time frame.

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

	2017-2035	2035-2067
<i>Clatsop County</i>	100.0%	100.0%
Astoria UGB	15.0%	0.0%
Outside UGBs	0.0%	0.0%
Smaller UGBs	85.0%	100.0%

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 are expected to grow by over 3,400 persons combined from 2017 to 2035, with a combined average annual growth rate of 1.1 percent (Figure 16). This growth rate is due to modest growth expected in all smaller UGBs, with the exception of Warrenton expecting a strong growth rate in the near-term (Figure 18). All of the county’s smaller UGBs are expected to grow at rates greater than that of the county between 2017 and 2035. Unlike Astoria and the area outside UGBs, the smaller UGBs in Clatsop County, while forecasted to experience slower growth in the period 2035-2067 compared to the previous period, are expected to experience positive population growth. The smaller UGBs are expected to collectively add over 3,180 people from 2035 to 2067.

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

	2017	2035	2067	AAGR (2017-2035)	AAGR (2035-2067)	Share of County 2017	Share of County 2035	Share of County 2067
<i>Clatsop County</i>	38,123	40,474	42,611	0.3%	0.2%	100.0%	100.0%	100.0%
Cannon Beach UGB	1,730	1,886	2,112	0.5%	0.4%	4.5%	4.7%	5.0%
Gearhart UGB	1,550	1,752	1,818	0.7%	0.1%	4.1%	4.3%	4.3%
Seaside UGB	6,872	7,884	8,571	0.8%	0.3%	18.0%	19.5%	20.1%
Warrenton UGB	5,373	7,410	9,616	1.8%	0.8%	14.1%	18.3%	22.6%
Outside UGBs	12,534	10,878	10,063	-0.8%	-0.2%	32.9%	26.9%	23.6%
Larger UGBs	10,064	10,665	10,431	0.3%	-0.1%	26.4%	26.3%	24.5%

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.

Including only sub-areas that are expected to experience population growth, Clatsop County’s smaller sub-areas are expected to compose roughly 85 percent of countywide population growth in the first 18 years of the forecast period and all of the growth in the final 32 years (Figure 17). Cannon Beach and Warrenton are both expected to increase their share of countywide growth between the two periods, while the shares of Seaside and Gerhart are projected to decline (Figure 19).

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

	2017-2035	2035-2067
<i>Clatsop County</i>	100.0%	100.0%
Cannon Beach UGB	3.9%	7.1%
Gearhart UGB	5.0%	2.1%
Seaside UGB	25.3%	21.6%
Warrenton UGB	50.8%	69.3%
Outside UGBs	0.0%	0.0%
Larger UGBs	15.0%	0.0%

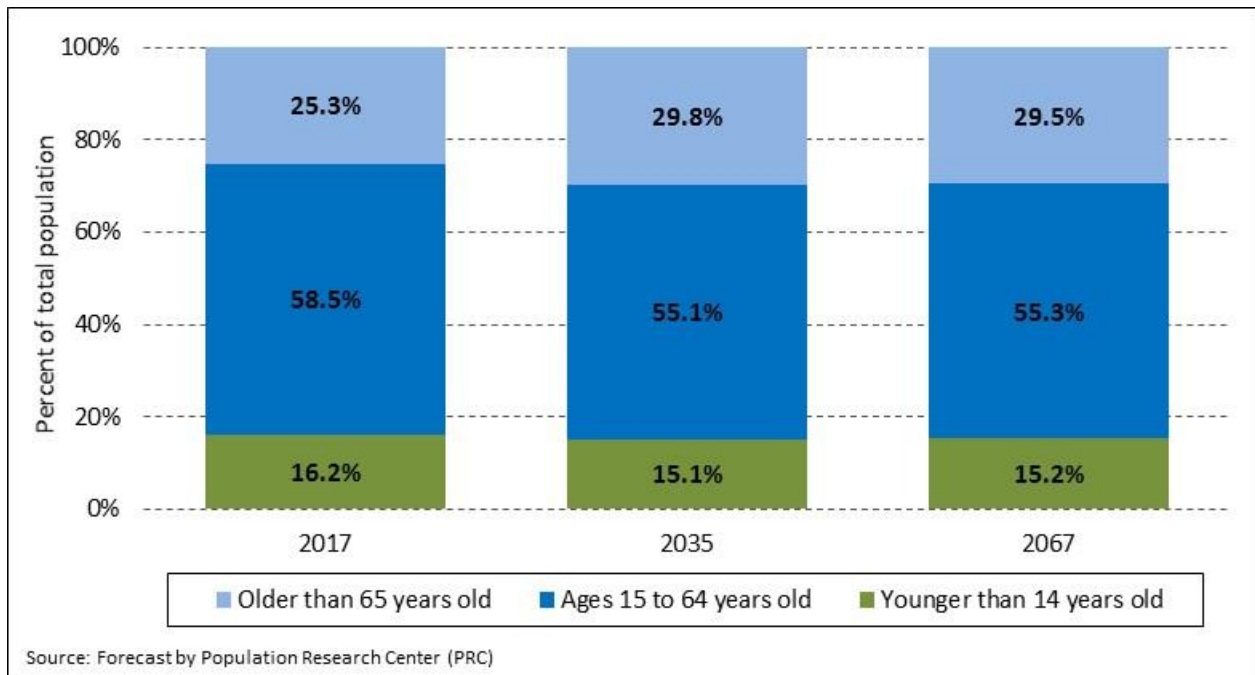
Source: Forecast by Population Research Center (PRC)

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 or older is forecast to grow from roughly 25 percent to about 30 percent; between 2035 and 2067, we expect the elderly proportion to stabilize at 29.5 percent (Figure 20). For a more detailed look at the age structure of Clatsop County’s population see the final forecast table published to the forecast program website (<http://www.pdx.edu/prc/opfp>).

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

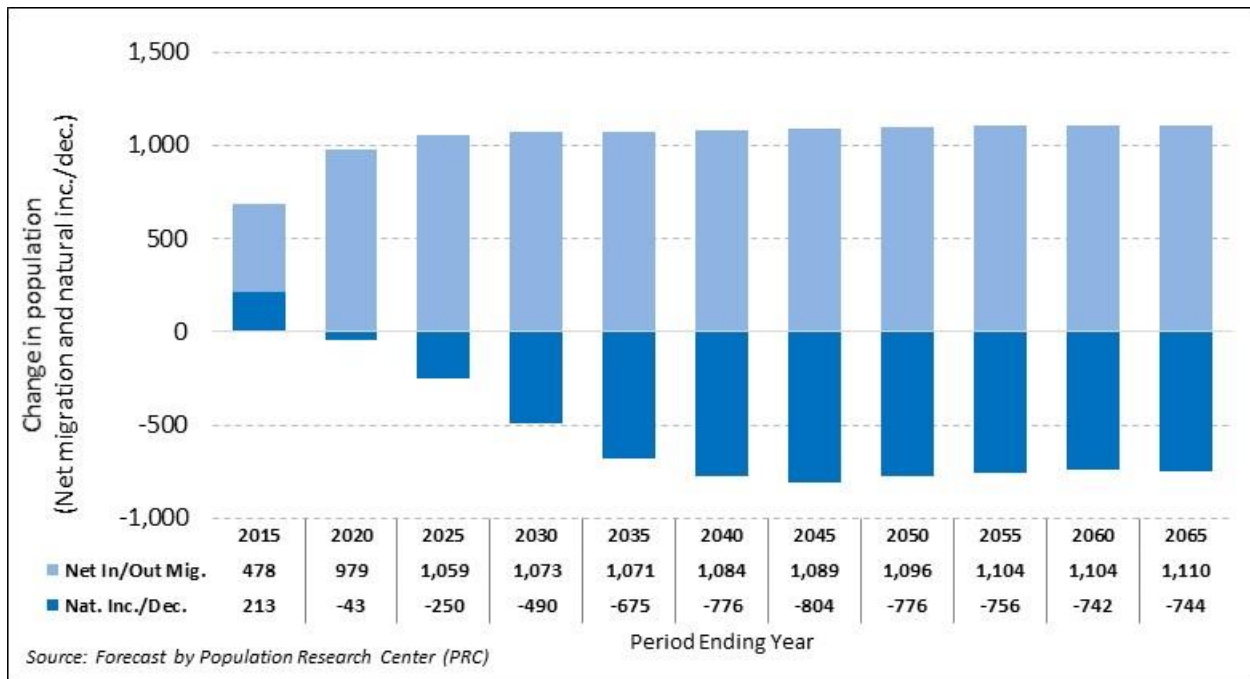


As the countywide population ages in the near-term, contributing to a slow-growing population of women in their years of peak fertility, and more women choose to have fewer children and have them at older ages, the increase in average annual births is expected to slow. This, combined with the rise in the number of deaths, is expected to result in a natural decrease beginning in 2020 and continuing through the end of the period (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 adults (30-69 years old) and their children under the age of 14.

In summary, a growing natural decrease and steady net in-migration are expected to lead to modest population growth reaching its peak in 2020, declining through 2040, and then stabilizing 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. Births will likely stabilize. Net migration is expected to remain relatively steady throughout the forecast period, offsetting a growing magnitude in natural decrease.

Figure 21. Clatsop 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 boundaries (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 intended for occupancy.

Housing-Unit Method: A method used to forecast future populations based on changes in housing unit counts, occupancy 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 Gearhart and Seaside did not submit survey responses.

Astoria — Clatsop County—10/31/2016						
Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est. Year Completion	Future Group quarters Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
Geographic constraints generally limit population growth. Astoria School District enrollment down about 200 students in last 10 years.	Increased demand for home-stay lodging (AirBnB)	Planned 40-45 unit multi-family development just finished the per-application stage.	Short-term: KLEAN treatment facility possibly. Coast Guard housing just completed.	Columbia Memorial Hospital's new Cancer Clinic in construction will add appx 35 new employees. Proposed Mo's restaurant to add appx 25 employees, 3 new pot shops appx 10	Major infrastructure developments limited by water treatment capacity. Bridge end repairs along the waterfront are in process, as well as CSO project recently complete.	Promos: Recent kick-off of 5 year economic development plan, proposed development code changes to allow flexibility for siting Accessory Dwelling Units Hinders:

Astoria — Clatsop County—10/31/2016

				<p>employees, new local brewery 1-5 employees, and new daycare centers 1-10 employees.</p>		
<p>Highlights or summary from planning documents of influences on or anticipation of population and housing growth (including any plans for UGB expansion and the stage in the expansion process)</p>	<p>No UGB expansion is proposed in the near future.</p>					

Astoria — Clatsop County—10/31/2016

**Other information
(e.g. planning
documents, email
correspondence,
housing
development
survey)**

School enrollments have decreased from 2024 children in 2005 to 1830 children in 2015.

According to PRC background research:

- A key finding from 2011 BLI is a surplus of employment land but a deficit of land zoned for commercial and retail uses. It also revealed an overall deficit in residential land.
- Increasing amount of second homes/short term rentals. Housing stock needed to accommodate this trend could change the amount of residentially zoned land needed to accommodate growth through 2027.

Cannon Beach — Clatsop County—1/23/2017

Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/ Est. Year Completion	Future Group quarters Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
	More than 10% of Cannon Beach’s housing stock is managed for short-term vacation rental.		None	Unknown	Condition: good. Water capacity: limited.	Promos: Hinders:
Highlights or summary from planning documents of influences on or anticipation of population and housing growth (including any plans for UGB expansion and	No planned UGB expansion at this time.					

Cannon Beach — Clatsop County—1/23/2017

<p>the stage in the expansion process)</p>	
<p>Other information (e.g. planning documents, email correspondence, housing development survey)</p>	<p>N/A</p>

Gearhart — Clatsop County—NO SURVEY RESPONSE

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

Gearhart — Clatsop County—NO SURVEY RESPONSE

<p>the stage in the expansion process)</p>	
<p>Other information (e.g. planning documents, email correspondence, housing development survey)</p>	<p>N/A</p>

Seaside — Clatsop County—NO SURVEY RESPONSE

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

Seaside — Clatsop County—NO SURVEY RESPONSE

<p>the stage in the expansion process)</p>	
<p>Other information (e.g. planning documents, email correspondence, housing development survey)</p>	<p>N/A</p>

Warrenton — Clatsop County—3/21/2017

Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/ Est. Year Completion	Future Group quarters Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
		<p>Forte Pointe is a large development in the pre-application phase with 10 duplexes/town homes, 216 SFR and 125 apts for seniors.</p> <p>95 additional SFR units are in the pipeline. 11 are expected to start construction Spring/Summer 2017.</p>				<p>Promos:</p> <p>Hinders:</p>

Warrenton — Clatsop County—3/21/2017

		<p>126 apts are in the pre-application phase and 28 duplexes, 14 of which, called the Waterfront Trail Landing, are expected to begin construction Spring/Summer 2017.</p>				
<p>Highlights or summary from planning documents of influences on or anticipation of population and housing growth (including any plans for UGB expansion and the stage in the expansion process)</p>	<p>N/A</p>					

Warrenton — Clatsop County—3/21/2017

Other information (e.g. planning documents, email correspondence, housing development survey)	N/A
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Appendix B: Specific Assumptions

Astoria

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.

Cannon Beach

The 5-year average annual housing unit growth rate is assumed to slightly decline throughout the forecast period. The occupancy rate is assumed to also slightly decrease from 41.9 percent throughout the 50 year horizon. PPH is assumed to also decline from 2.07 to 1.95 over the forecast period. Group quarters population is assumed to remain at 121.

Gearhart

The 5-year average annual housing unit growth rate is assumed to slightly decline throughout the forecast period. The occupancy rate is assumed to decrease by 0.1 percent every 5 years from 42.4 percent throughout the 50 year horizon. PPH is assumed to increase to 2.3 from 2016 to 2035 and then decrease for the rest of the forecast period. The group quarter population is assumed to remain at zero through the 50 year horizon.

Seaside

The 5-year average annual housing unit growth rate is assumed to decline throughout the forecast period. The occupancy rate is assumed to decrease by 0.1 percent every 5 years from 64.3 percent throughout the 50 year horizon. PPH is assumed to be stable at 2.17 over the forecast period. Group quarters population is assumed to remain at 47.

Warrenton

The 5-year average annual housing unit growth rate is assumed to decline throughout the forecast period. The occupancy rate is assumed to be steady at 88.8 percent throughout the 50 year horizon. PPH is assumed to be stable at 2.45 over the forecast period. Group quarters population is assumed to remain at 216.

Outside UGBs

The 5-year average annual housing unit growth rate is assumed to slightly decline throughout the forecast period. The occupancy rate is assumed to be steady at 81.1 percent throughout the 50 year horizon. PPH is assumed to be stable at 2.49 over the forecast period. Group quarters population is assumed to remain at 15.

Appendix C: Detailed Population Forecast Results

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

Population Forecasts by Age Group / Year	2017	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2067
00-04	2,104	2,032	2,021	2,021	2,083	2,140	2,177	2,175	2,186	2,201	2,246	2,262
05-09	2,030	2,130	2,021	2,013	2,015	2,078	2,132	2,168	2,169	2,180	2,197	2,214
10-14	2,111	2,085	2,275	2,161	2,155	2,157	2,221	2,278	2,319	2,321	2,334	2,342
15-19	2,267	2,252	2,213	2,413	2,295	2,288	2,288	2,356	2,418	2,463	2,467	2,472
20-24	2,097	2,048	2,037	2,007	2,192	2,085	2,077	2,076	2,140	2,199	2,241	2,242
25-29	1,976	1,902	1,839	1,835	1,812	1,984	1,885	1,877	1,879	1,938	1,992	2,008
30-34	2,213	2,206	2,076	2,009	2,005	1,979	2,162	2,054	2,047	2,051	2,117	2,141
35-39	2,293	2,344	2,344	2,212	2,145	2,143	2,116	2,313	2,201	2,195	2,201	2,229
40-44	2,243	2,377	2,479	2,484	2,347	2,276	2,273	2,244	2,457	2,339	2,336	2,338
45-49	2,332	2,259	2,500	2,612	2,620	2,477	2,401	2,398	2,370	2,597	2,475	2,474
50-54	2,475	2,429	2,315	2,566	2,683	2,691	2,541	2,461	2,460	2,431	2,664	2,613
55-59	2,850	2,617	2,550	2,433	2,699	2,823	2,829	2,673	2,592	2,593	2,566	2,662
60-64	3,057	3,134	2,733	2,668	2,549	2,831	2,959	2,966	2,806	2,724	2,728	2,716
65-69	2,858	3,002	3,147	2,752	2,692	2,574	2,858	2,990	3,002	2,847	2,770	2,773
70-74	2,114	2,501	2,729	2,868	2,512	2,459	2,351	2,612	2,737	2,753	2,613	2,584
75-79	1,373	1,557	2,076	2,276	2,400	2,107	2,065	1,978	2,204	2,317	2,336	2,290
80-84	907	975	1,213	1,632	1,805	1,913	1,686	1,661	1,600	1,792	1,894	1,904
85+	823	838	927	1,117	1,465	1,779	2,045	2,106	2,147	2,154	2,285	2,345
Total	38,123	38,687	39,496	40,079	40,474	40,782	41,067	41,387	41,734	42,096	42,462	42,611

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

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

Area / Year	2017	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2067
Clatsop County	38,123	38,687	39,496	40,079	40,474	40,782	41,067	41,387	41,734	42,096	42,462	42,611
Astoria UGB	10,064	10,208	10,435	10,581	10,665	10,687	10,669	10,631	10,578	10,527	10,463	10,431
Cannon Beach UGB	1,730	1,755	1,802	1,845	1,886	1,925	1,962	1,998	2,032	2,066	2,099	2,112
Gearhart UGB	1,550	1,591	1,654	1,708	1,752	1,770	1,782	1,792	1,801	1,809	1,815	1,818
Seaside UGB	6,872	7,055	7,379	7,654	7,884	8,069	8,206	8,298	8,382	8,464	8,541	8,571
Warrenton UGB	5,373	5,677	6,219	6,794	7,410	7,878	8,284	8,662	8,959	9,262	9,522	9,616
Outside UGB Area	12,534	12,401	12,007	11,498	10,878	10,453	10,165	10,006	9,981	9,968	10,021	10,063

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