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

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Coordinated Population Forecast



2017

Through

2067

Linn County

Urban Growth
Boundaries (UGB)
& Area Outside UGBs

Photo Credit: A footbridge in McDowell Creek Falls County Park (Photo No. linnDA0099). Gary Halvorson, Oregon State Archives <http://arcweb.sos.state.or.us/pages/records/local/county/scenic/linn/47.html>

**Coordinated Population Forecast for Linn 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

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How to Read this Report

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

Specifically, the reader should refer to the following documents:

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

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Executive Summary

Historical

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

Linn County's total population has grown steadily since 2000, with an average annual growth rate of 1.2 percent between 2000 and 2010 (Figure 1). However, some of its sub-areas experienced more rapid population growth while others experienced opposite trends during the 2000s. Millersburg and Harrisburg posted the highest average annual growth rates at 7.1 and 2.6 percent, respectively, during the 2000 to 2010 period. Concurrently, the Linn portions of Gates and Idanha, along with Waterloo, were the only sub-areas to experience negative average annual growth rates at -0.5, -3.9 and -0.4 percent, respectively.

Linn County's positive population growth in the 2000s was largely the result of substantial net in-migration. Meanwhile, an aging population not only led to an increase in deaths but also resulted in a smaller proportion of women in their childbearing years. This, along with more women choosing to have fewer children and having them at older ages has led to fewer births in recent years. The larger number of births relative to deaths caused a natural increase (more births than deaths) in every year from 2000 to 2015. While net in-migration far outweighed natural increase during the bulk of the last decade, as net in-migration has slowed, the gap between these two components has diminished in recent years—thus slowing total population growth in the county (Figure 12).

Forecast

Total population in Linn County as a whole and in 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 transition into a natural decrease. As deaths outpace births, population growth will become increasingly reliant on net in-migration.

Even so, Linn County's total population is forecast to increase by more than 22,800 over the next 18 years (2017-2035) and by more than 58,700 over the entire 50 year forecast period (2017-2067). Sub-areas that showed stronger population growth in the 2000s are generally expected to experience slower rates of population growth during the forecast period, while sub-areas that experienced negative growth rates are expected to experience very slight and steady positive growth rates. The area outside UGBs is the only sub-area that will experience a negative growth rate in the longer term.

Figure 1. Linn 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>Linn County</i>	103,069	116,672	1.2%	123,626	146,481	182,399	0.9%	0.7%
Albany UGB (Linn)	36,967	44,690	1.9%	46,469	58,134	77,255	1.3%	0.9%
Brownsville UGB	1,471	1,682	1.3%	1,740	2,084	2,567	1.0%	0.7%
Gates UGB (Linn)	42	40	-0.5%	40	42	47	0.3%	0.3%
Halsey UGB	724	906	2.3%	925	1,134	1,547	1.1%	1.0%
Harrisburg UGB	2,842	3,665	2.6%	3,770	4,332	5,077	0.8%	0.5%
Idanha UGB (Linn)	85	57	-3.9%	58	61	65	0.2%	0.2%
Lebanon UGB	15,981	18,308	1.4%	19,416	24,498	34,628	1.3%	1.1%
Lyons UGB (Linn)	1,065	1,215	1.3%	1,254	1,369	1,549	0.5%	0.4%
Mill City UGB (Linn)	1,376	1,680	2.0%	1,736	2,109	2,390	1.1%	0.4%
Millersburg UGB	670	1,329	7.1%	1,795	2,974	5,147	2.8%	1.7%
Scio UGB	719	884	2.1%	938	1,027	1,099	0.5%	0.2%
Sodaville UGB	288	308	0.7%	341	370	424	0.5%	0.4%
Sweet Home UGB	8,068	8,978	1.1%	9,250	10,733	13,300	0.8%	0.7%
Tangent UGB	1,066	1,233	1.5%	1,286	1,466	1,688	0.7%	0.4%
Waterloo UGB	238	229	-0.4%	232	257	297	0.6%	0.5%
Outside UGBs	31,467	31,468	0.0%	34,376	35,891	35,319	0.2%	-0.1%

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

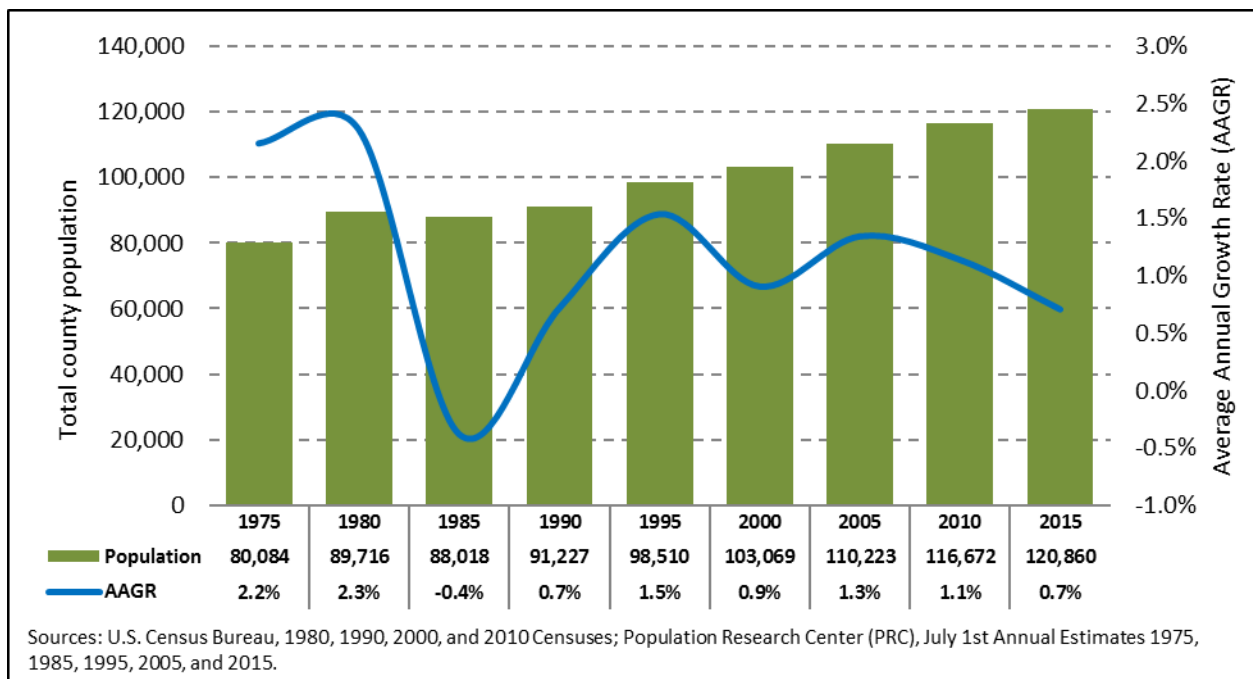
Historical Trends

Different growth patterns occur in different parts of Linn County. Each of the 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 that were analyzed include age composition of the population, race and ethnicity, births, deaths, migration, and number of *housing units* as well as the *occupancy rate* and *persons per household (PPH)*. It should be noted that population trends of individual sub-areas often differ from those of the county as a whole. However, in general, population growth rates for the county are collectively influenced by local trends within its sub-areas.

Population

Linn County’s total population grew from roughly 80,084 in 1975 to about 120,860 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 drastically slower population growth rates. During the early 1990s and mid-2000s, the county’s population growth rates again increased, but challenging economic conditions late in the decade yielded declines in that rate. Still, Linn County experienced positive population growth between 2000 and 2015—averaging at about one percent per year.

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



During the 2000s, Linn County’s average annual population growth rate stood at 1.2 percent (Figure 3). At the same time Millersburg and Harrisburg recorded average annual growth rates of 7.1 and 2.6 percent, respectively. All other sub-areas that experienced positive growth rates, except for Brownsville, Sodaville, and Sweet Home, grew at faster rates than the county as a whole. The portions of Gates and

Idanha within Linn County and Waterloo recorded population declines between 2000 and 2010. The area outside the UGBs experienced no population change.

Figure 3. Linn 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>Linn County</i>	103,069	116,672	1.2%	100.0%	100.0%
Albany UGB (Linn)	36,967	44,690	1.9%	35.9%	38.3%
Brownsville UGB	1,471	1,682	1.3%	1.4%	1.4%
Gates UGB (Linn)	42	40	-0.5%	0.0%	0.0%
Halsey UGB	724	906	2.3%	0.7%	0.8%
Harrisburg UGB	2,842	3,665	2.6%	2.8%	3.1%
Idanha UGB (Linn)	85	57	-3.9%	0.1%	0.0%
Lebanon UGB	15,981	18,308	1.4%	15.5%	15.7%
Lyons UGB (Linn)	1,065	1,215	1.3%	1.0%	1.0%
Mill City UGB (Linn)	1,376	1,680	2.0%	1.3%	1.4%
Millersburg UGB	670	1,329	7.1%	0.7%	1.1%
Scio UGB	719	884	2.1%	0.7%	0.8%
Sodaville UGB	288	308	0.7%	0.3%	0.3%
Sweet Home UGB	8,068	8,978	1.1%	7.8%	7.7%
Tangent UGB	1,066	1,233	1.5%	1.0%	1.1%
Waterloo UGB	238	229	-0.4%	0.2%	0.2%
Outside UGBs	31,467	31,468	0.0%	30.5%	27.0%

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

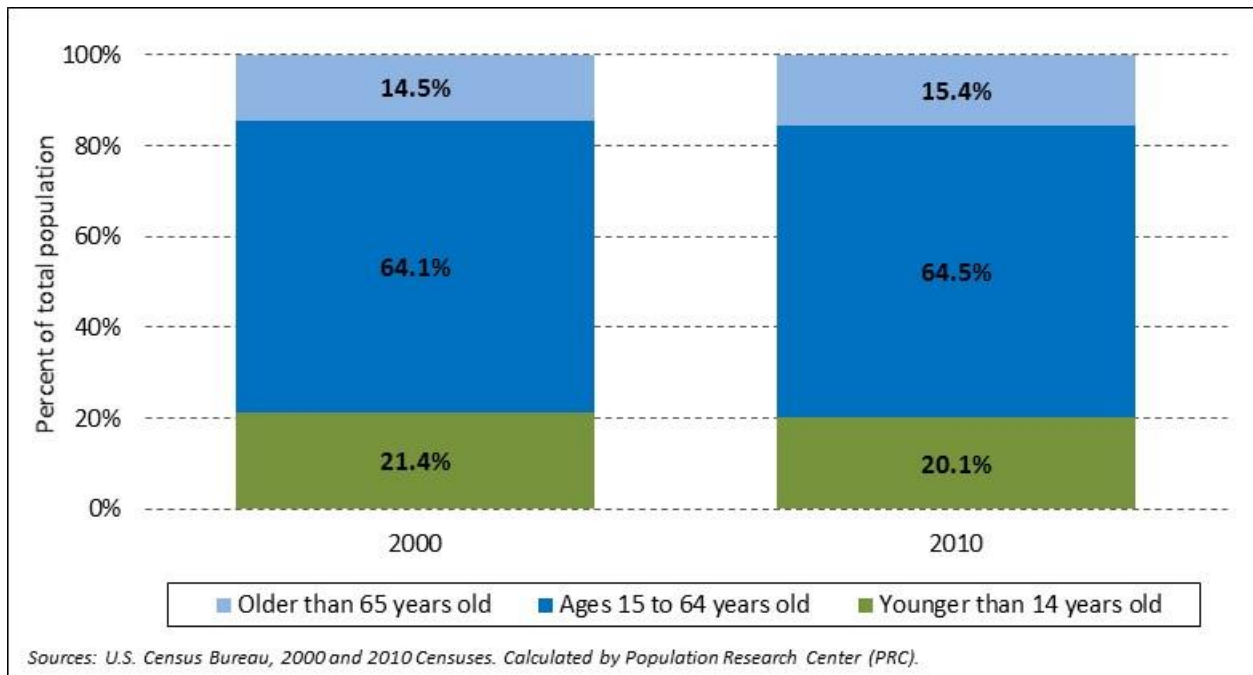
Age Structure of the Population

Linn County’s population is aging at a similar pace to other counties 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 Linn County this has not been true. Births increased, in spite of the slight rise in the proportion of county population 65 or older between 2000 and 2010 (**Figure 4**). Further underscoring Linn County’s modest trend in aging, the median age went from 37.4 in 2000 to 39.2 in 2010 and 39.5 in 2015, an increase that is smaller than that observed statewide and most other Region 3 counties over the same time period.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. Linn 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 Linn County increased from 2000 to 2010 (**Figure 5**), while the White, non-Hispanic population decreased as a share of the total population over the same time period. This increase in the Hispanic population and other minority populations brings with it several implications for future population change. First, both nationally and at the state level, fertility rates among Hispanic and minority women tend to be higher than among White, non-Hispanic women. However, it is important to note 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. Linn County—Hispanic or Latino and Race (2000 and 2010)

Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
<i>Total population</i>	103,069	100.0%	116,672	100.0%	13,603	13.2%
Hispanic or Latino	4,514	4.4%	9,127	7.8%	4,613	102.2%
Not Hispanic or Latino	98,555	95.6%	107,545	92.2%	8,990	9.1%
White alone	94,012	91.2%	101,579	87.1%	7,567	8.0%
Black or African American alone	285	0.3%	456	0.4%	171	60.0%
American Indian and Alaska Native alone	1,192	1.2%	1,268	1.1%	76	6.4%
Asian alone	789	0.8%	1,078	0.9%	289	36.6%
Native Hawaiian and Other Pacific Islander alone	125	0.1%	150	0.1%	25	20.0%
Some Other Race alone	92	0.1%	126	0.1%	34	37.0%
Two or More Races	2,060	2.0%	2,888	2.5%	828	40.2%

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

Births

Historical fertility rates for Linn County generally mirror the decreasing trend of fertility rates in Oregon as a whole (**Figure 6**). However, fertility for women over 34 years of age increased for Linn County, though rates for women under 30 years of age declined (**Figure 7** and **Figure 8**). As **Figure 7** and **Figure 8** demonstrate, fertility rates for younger women in Linn County and Oregon are lower in 2010 compared to earlier decades, explaining why total fertility rates have dropped in the county as a whole. Both Linn County and Oregon as a whole have fertility rates below replacement level fertility.

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

	2000	2010
Linn County	2.24	2.04
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. Linn County—Age Specific Fertility Rate (2000 and 2010)

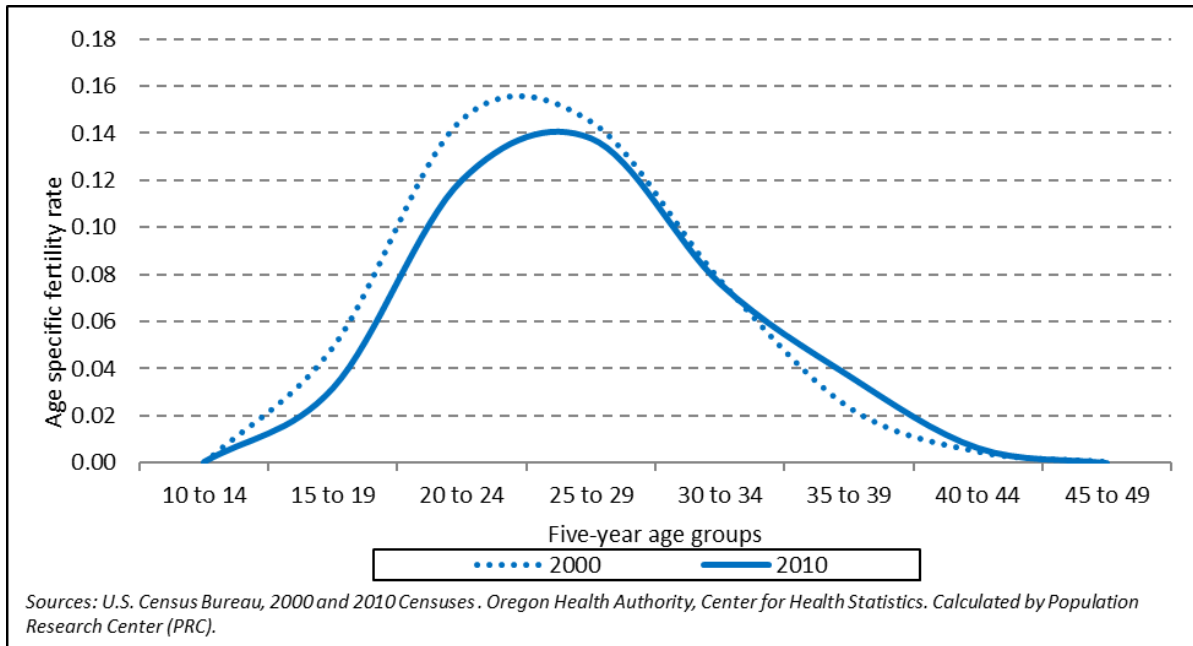


Figure 8. Oregon—Age Specific Fertility Rate (2000 and 2010)

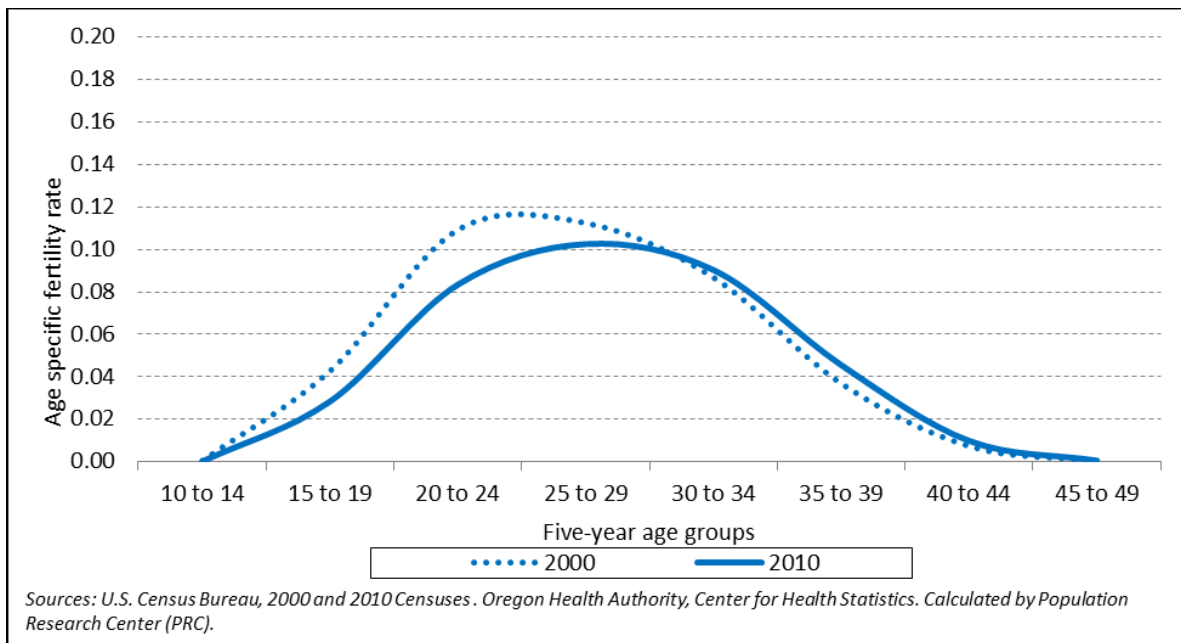


Figure 9 shows the number of births by the area in which the mother resides. Note that the number of births fluctuates from year-to-year. For example, a sub-area with an increase in births between two years could easily show a decrease for a different time period. The county and its sub-areas, except the portion of Albany within Linn County and Lebanon, recorded fewer births in 2010 than in 2000 (**Figure 9**).

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

	2000	2010	Absolute Change	Relative Change	Share of County 2000	Share of County 2010
<i>Linn County</i>	1442	1427	-15	-1.0%	100.0%	100.0%
Albany (Linn)	586	692	106	18.1%	40.6%	48.5%
Lebanon	249	258	9	3.6%	17.3%	18.1%
Sweet Home	114	105	-9	-7.9%	7.9%	7.4%
Outside UGBs	193	167	-26	-13.5%	13.4%	11.7%
Smaller UGBs	300	205	-95	-31.7%	20.8%	14.4%

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

Linn County's population is aging, but contrary to the statewide trend, life expectancy slightly declined during the 2000s.³ In 2000, life expectancy for males was 77 years and for females was 81 years. By 2010, life expectancy remained at 77 years for males but slightly decreased to 80 for females. For both Linn 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. As the county's population aged and grew, the total number of countywide deaths increased (Figure 10).

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

	2000	2010	Absolute Change	Relative Change	Share of County 2000	Share of County 2010
<i>Linn County</i>	965	1192	227	23.5%	100.0%	100.0%
Albany (Linn)	316	395	79	25.0%	32.7%	33.1%
Lebanon	156	239	83	53.2%	16.2%	20.1%
Sweet Home	85	112	27	31.8%	8.8%	9.4%
Outside UGBs	359	296	-63	-17.5%	37.2%	24.8%
Smaller UGBs	49	150	101	206.1%	5.1%	12.6%

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.

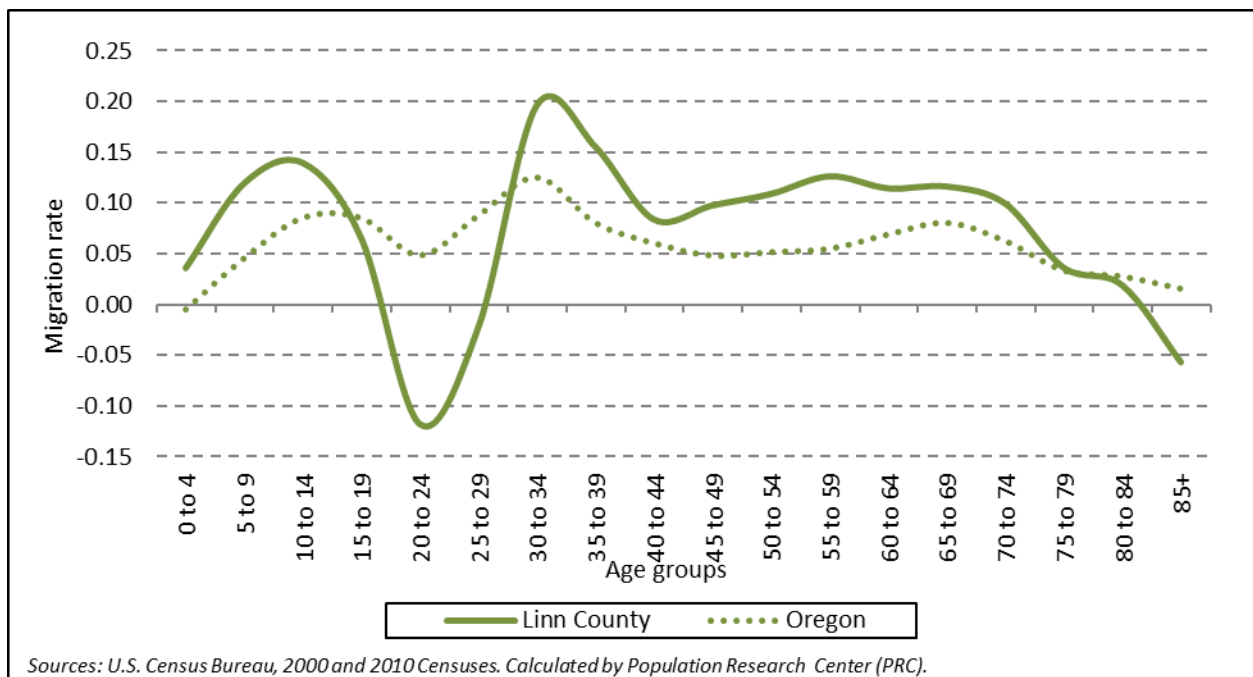
³ Researchers have found evidence for a widening rural-urban gap in life expectancy; life expectancy declined for some rural areas in Oregon during the 2000's. This gap is particularly apparent between race and income groups and may be one explanation for the decline in life expectancy in the 2000s. 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 Linn County and for 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, likely in search of employment and educational opportunities. This out-migration of young adults is a trend typical of most Oregon counties. At the same time however, Linn County attracted middle-aged migrants accompanied by their children as shown by the in-migration of persons under the age of 14.

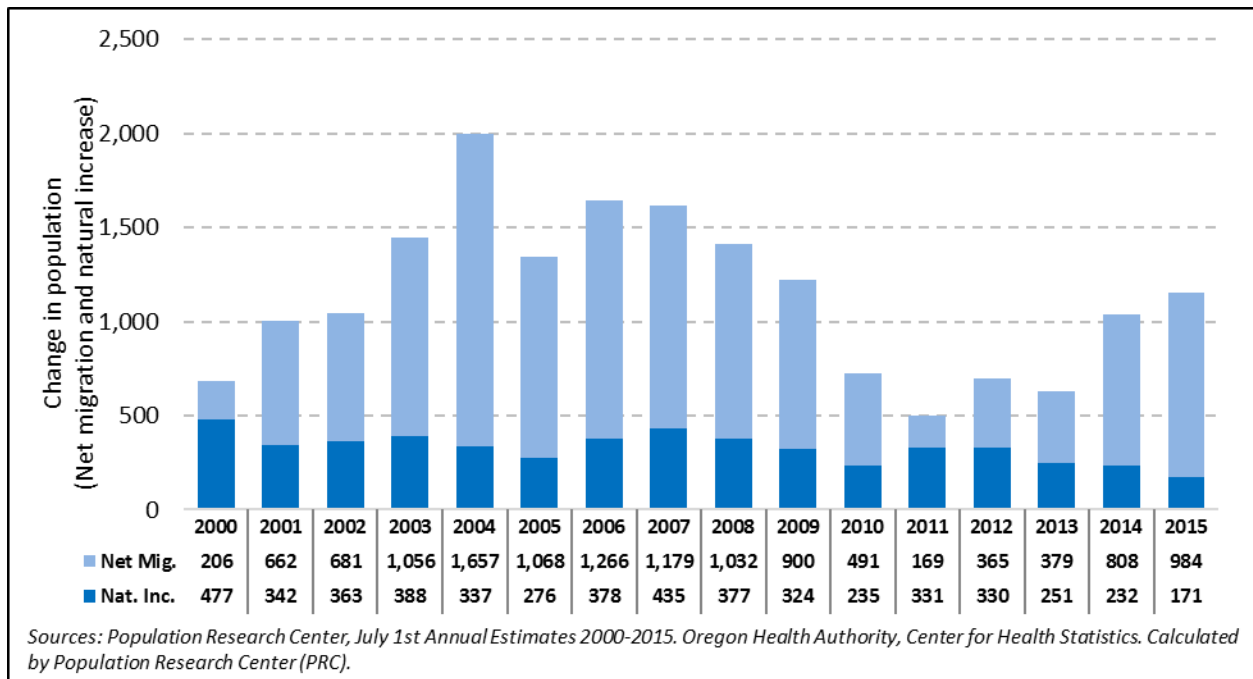
Figure 11. Linn County and Oregon—Age Specific Migration Rates (2000-2010)



Historical Trends in Components of Population Change

In summary, Linn County’s positive population growth in the 2000s was the result of steady but small natural increase and fluctuations in the number of in-migrants, followed by an extended 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, although the rate of natural increase has gradually declined from a year-2000 high, with year-to-year variation. After the substantial, sustained net in-migration of the mid- and late 2000s, the county recorded a slowdown of in-migration in the years following the recession. Despite this, net in-migration accounts for the majority of the county’s population change.

Figure 12. Linn County—Components of Population Change (2000-2014)



Housing and Households

The total number of housing units in Linn County increased rapidly during the middle years of this last decade (2000 to 2010), but this growth slowed with the onset of the Great Recession in 2008. Over the entire 2000 to 2010 period, the total number of housing units increased by about fifteen percent countywide; this amounted to 6,000 new housing units (**Figure 13**). The Linn County portion of Albany added over 2,800 housing units, slightly increasing its share of the county total in 2010 with Lebanon also recording an increase, while all other sub-areas held nearly identical shares compared to 2000. The only exception is the area outside the UGBs, which saw its share of the county total shrink in 2010 despite an increase in housing units. In terms of relative housing growth, Millersburg grew the most during the 2000s; its total housing unit stock increased more than 65 percent (213 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 number 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 Linn County are relatively similar.

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

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010
<i>Linn County</i>	42,521	48,821	1.4%	100.0%	100.0%
Albany (Linn)	15,953	18,834	1.7%	37.5%	38.6%
Brownsville	588	689	1.6%	1.4%	1.4%
Gates (Linn)	24	23	-0.4%	0.1%	0.0%
Idanha (Linn)	50	39	-2.5%	0.1%	0.1%
Halsey	267	335	2.3%	0.6%	0.7%
Harrisburg	1,060	1,366	2.6%	2.5%	2.8%
Lebanon	6,672	8,021	1.9%	15.7%	16.4%
Lyons (Linn)	413	493	1.8%	1.0%	1.0%
Mill City (Linn)	555	675	2.0%	1.3%	1.4%
Millersburg	325	538	5.2%	0.8%	1.1%
Scio	289	340	1.6%	0.7%	0.7%
Sodaville	114	121	0.6%	0.3%	0.2%
Sweet Home	3,370	3,789	1.2%	7.9%	7.8%
Tangent	414	456	1.0%	1.0%	0.9%
Waterloo	90	87	-0.3%	0.2%	0.2%
Outside UGBs	12,337	13,015	0.5%	29.0%	26.7%

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 Linn County decreased by under half a percent; this was most likely due to slack in demand for housing as individuals experienced the effects of the Great Recession (Figure 14). Most sub-areas experienced steady or similar declines in occupancy rates. Millersburg and the Linn County portion of Idanha experienced the most dramatic occupancy rate increases at 18.9 and 7.8 percent respectively.

Average household size, or PPH, in Linn County was 2.6 in 2010, the same as in 2000 (Figure 14). At 2.6, Linn County's PPH in 2010 was slightly higher than for Oregon as a whole, which had a PPH of 2.5. Average household size varied across the 15 UGBs, with nearly all of them falling between two and three PPH. In 2010, the highest PPH was in Halsey with 3 and the lowest in the Linn County portion of Idanha at 1.9.

Figure 14. Linn 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>Linn County</i>	2.6	2.6	0.0	93.0%	92.6%	-0.4%
Albany (Linn)	2.5	2.5	0.0	92.3%	93.7%	1.4%
Brownsville	2.7	2.6	-0.1	92.5%	93.3%	0.8%
Gates (Linn)	2.1	2.1	0.0	83.3%	82.6%	-0.7%
Idanha (Linn)	2.9	1.9	-1.0	58.0%	76.9%	18.9%
Halsey	2.9	3.0	0.1	94.4%	91.3%	-3.0%
Harrisburg	2.8	2.9	0.0	95.1%	93.8%	-1.3%
Lebanon	2.5	2.5	0.0	93.3%	90.1%	-3.2%
Lyons (Linn)	2.7	2.6	-0.1	94.4%	93.7%	-0.7%
Mill City (Linn)	2.7	2.7	0.0	93.2%	92.7%	-0.4%
Millersburg	2.4	2.6	0.2	85.8%	93.7%	7.8%
Scio	2.6	2.7	0.1	95.2%	94.7%	-0.4%
Sodaville	2.8	2.7	-0.1	91.2%	95.9%	4.6%
Sweet Home	2.6	2.6	0.0	91.5%	91.3%	-0.2%
Tangent	2.7	2.9	0.1	93.7%	94.5%	0.8%
Waterloo	2.9	2.9	0.0	91.1%	90.8%	-0.3%
Outside UGBs	2.7	2.6	-0.1	94.2%	92.5%	-1.6%

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. Our forecast period is 2017-2067.

Assumptions about fertility, mortality, and migration were developed for Linn 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 Linn County and its larger sub-areas. Linn County locations falling into this category include Sweet Home, Lebanon and the Linn County portion of Albany.

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. Linn County locations falling into this category include Brownsville, Halsey, Harrisburg, Millersburg, Scio, Sodaville, Tangent, Waterloo and the Linn County portions of Gates, Idanha, Lyons and Mill City.

Assumptions for the County and Larger Sub-Areas

During the forecast period, the population in Linn 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 Linn County is forecast to decrease from 2.01 children per woman during the 2010-15 period to 1.95 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. Linn 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 85.5 in 2060. However, in spite of increasing life expectancy and the corresponding increase in survival rates, Linn 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

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

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

We assume net migration rates will change in line with historical trends unique to Linn 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 2,643 net in-migrants in 2015 to 5,897 net in-migrants in 2020. Over the rest of forecast period, average annual net in-migration is expected to be more steady, remaining at just under 8,000 net in-migrants through 2065 (Figure 21). Net in-migration is expected to account for the majority of Linn 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 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 Linn County and its sub-areas.

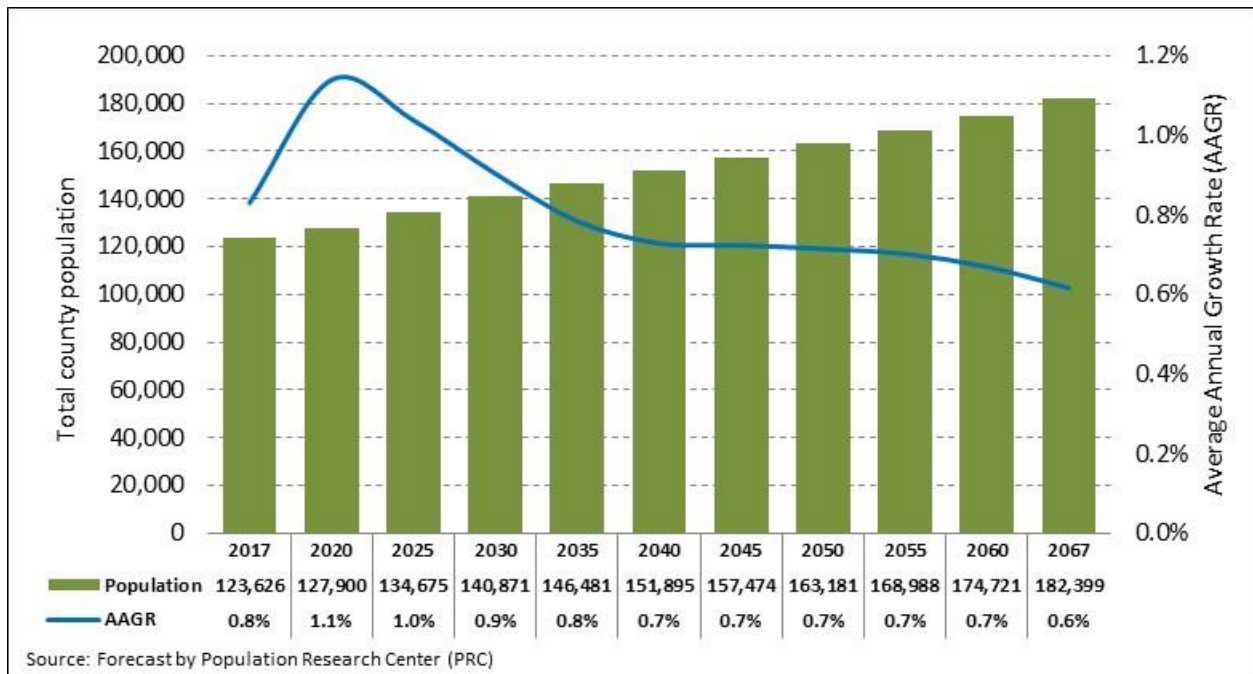
In addition, for sub-areas experiencing population growth we assume a higher growth rate in the near-term with growth stabilizing over the remainder of the forecast period. If planned housing units were reported in the surveys, then we account for them being constructed over the next 5-15 years (or as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

Linn County’s total population is forecast to grow by 58,773 persons (48 percent) from 2017 to 2067, which translates into a total countywide population of 182,399 in 2067 (Figure 15). The population is forecast to grow at the highest rate—around 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) Linn County’s economy will continue to strengthen in the next 10 years; (2) middle-aged 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. Over 2,000 more births than deaths are forecast for the 2017 to 2025 period. At the same time nearly 9,900 in-migrants are also forecast, combining with natural increase for strong near-term population growth.

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



Linn County’s three largest UGBs—the Linn County portion of Albany, Lebanon and Sweet Home—are forecast to experience a combined population growth of more than 18,200 from 2017 to 2035 and over 31,800 from 2035 to 2067 (Figure 16). The Linn portion of the Albany UGB is expected to increase by over 11,600 persons from 2017 to 2035, growing from a total population of 46,469 in 2017 to 58,134 in 2035. The Lebanon UGB is forecast to increase by the same rate as Linn County’s portion of the Albany UGB

(1.3% AAGR), growing from 19,416 persons in 2017 to a population of 24,498 in 2035. Sweet Home is expected to experience more moderate population growth (0.8% AAGR) over the next 18 years, closely mirroring Linn County’s growth. Growth is expected to occur more slowly for all larger sub-areas during the second part of the forecast period. The Linn County portion of Albany and Lebanon are both expected to grow as a share of total county population, while Sweet Home is forecast to slightly decrease then maintain a steady a share of total population.

Population outside UGBs is expected to grow by over 1,510 people from 2017 to 2035 but is expected to decline thereafter, losing roughly 570 people from 2035 to 2067. The population of the area outside UGBs is forecast to decline as a share of total countywide population as well, composing roughly 28 percent of the countywide population in 2017 to falling just over 19 percent in 2067.

Figure 16. Linn 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>Linn County</i>	123,626	146,481	182,399	0.9%	0.7%	100.0%	100.0%	100.0%
Albany UGB (Linn)	46,469	58,134	77,255	1.3%	0.9%	37.6%	39.7%	42.4%
Lebanon UGB	19,416	24,498	34,628	1.3%	1.1%	15.7%	16.7%	19.0%
Sweet Home UGB	9,250	10,733	13,300	0.8%	0.7%	7.5%	7.3%	7.3%
Outside UGBs	34,376	35,891	35,319	0.2%	-0.1%	27.8%	24.5%	19.4%
Smaller UGBs	14,115	17,225	21,896	1.1%	0.8%	11.4%	11.8%	12.0%

Source: Forecast by Population Research Center (PRC)

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

Lebanon, Sweet Home and the portion of Albany within Linn County, the county’s largest 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 are forecast to capture larger shares during the final 32 years of the forecast period from 2035 to 2067. The smaller UGBs and the areas outside of UGBs are all projected to see their share of countywide growth shrink between the two periods.

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

	2017-2035	2035-2067
<i>Linn County</i>	100.0%	100.0%
Albany UGB (Linn)	51.0%	52.4%
Lebanon UGB	22.2%	27.8%
Sweet Home UGB	6.5%	7.0%
Outside UGBs	6.6%	0.0%
Smaller UGBs	13.6%	12.8%

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 a combined number of 3,110 persons from 2017 to 2035, with a combined average annual growth rate of just over than 1.1 percent (Figure 16). This growth rate is

due to stable growth expected in many of the smaller UGBs (Figure 18). Average annual growth rates for Brownsville, Halsey, Mill City, Millersburg and Linn County’s portion of Mill City are the only smaller sub-areas expected to exceed the countywide growth rate for the first half of the forecast period. Similar to the larger UGBs and the county as a whole, population growth rates are forecast to decline for the second half of the forecast period (2035 to 2067). The smaller UGBs are expected to collectively add roughly 4,670 people from 2035 to 2067.

Figure 18. Linn 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>Linn County</i>	123,626	146,481	182,399	0.9%	0.7%	100.0%	100.0%	100.0%
Brownsville UGB	1,740	2,084	2,567	1.0%	0.7%	1.4%	1.4%	1.4%
Gates UGB (Linn)	40	42	47	0.3%	0.3%	0.0%	0.0%	0.0%
Halsey UGB	925	1,134	1,547	1.1%	1.0%	0.7%	0.8%	0.8%
Harrisburg UGB	3,770	4,332	5,077	0.8%	0.5%	3.0%	3.0%	2.8%
Idanha UGB (Linn)	58	61	65	0.2%	0.2%	0.0%	0.0%	0.0%
Lyons UGB (Linn)	1,254	1,369	1,549	0.5%	0.4%	1.0%	0.9%	0.8%
Mill City UGB (Linn)	1,736	2,109	2,390	1.1%	0.4%	1.4%	1.4%	1.3%
Millersburg UGB	1,795	2,974	5,147	2.8%	1.7%	1.5%	2.0%	2.8%
Scio UGB	938	1,027	1,099	0.5%	0.2%	0.8%	0.7%	0.6%
Sodaville UGB	341	370	424	0.5%	0.4%	0.3%	0.3%	0.2%
Tangent UGB	1,286	1,466	1,688	0.7%	0.4%	1.0%	1.0%	0.9%
Waterloo UGB	232	257	297	0.6%	0.5%	0.2%	0.2%	0.2%
Outside UGBs	34,376	35,891	35,319	0.2%	-0.1%	27.8%	24.5%	19.4%
Larger UGBs	75,135	93,365	125,183	1.2%	0.9%	60.8%	63.7%	68.6%

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.

Linn County’s smaller sub-areas are expected to compose 13.6 percent of countywide population growth during the first 18 years of the forecast period and 13 percent during the final 32 years (Figure 17). Millersburg, Halsey and Sodaville are expected to capture an increasing share of countywide population growth, while the share of growth for the other smaller UGBs is expected to remain stable or decline slightly throughout the forecast period (Figure 19).

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

	2017-2035	2035-2067
<i>Linn County</i>	<i>100.0%</i>	<i>100.0%</i>
Brownsville UGB	1.5%	1.3%
Gates UGB (Linn)	0.0%	0.0%
Halsey UGB	0.9%	1.1%
Harrisburg UGB	2.5%	2.0%
Idanha UGB (Linn)	0.0%	0.0%
Lyons UGB (Linn)	0.5%	0.5%
Mill City UGB (Linn)	1.6%	0.8%
Millersburg UGB	5.2%	6.0%
Scio UGB	0.4%	0.2%
Sodaville UGB	0.1%	0.1%
Tangent UGB	0.8%	0.6%
Waterloo UGB	0.1%	0.1%
Outside UGBs	6.6%	0.0%
Larger UGBs	79.8%	87.2%

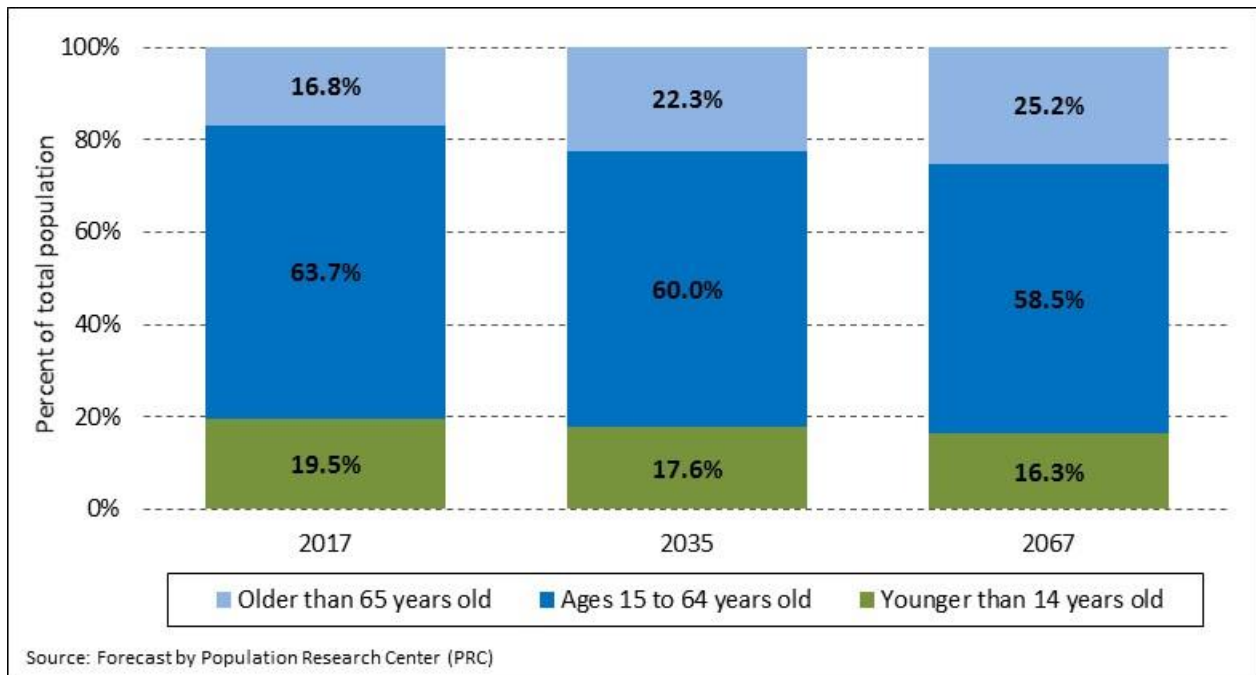
Source: Forecast by Population Research Center (PRC)

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 the county population 65 years of age or older is forecast to grow from roughly 17 percent to 22 percent and continue increasing from 2035 to 2067, ending the period at just over 25 percent (Figure 20). For a more detailed look at the age structure of Linn County’s population see the final forecast table published to the forecast program website (<http://www.pdx.edu/prc/opfp>).

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

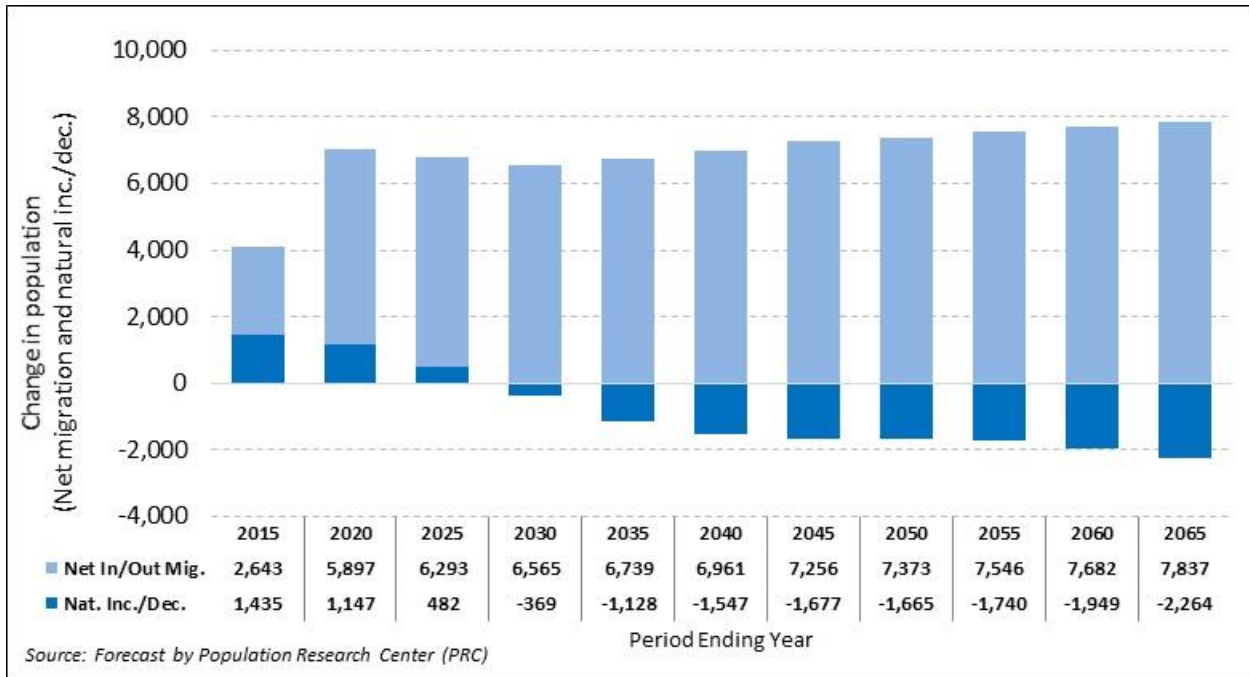


As the countywide population ages in the near-term—contributing to a slow-growing population of women in their years of peak fertility—and as more women choose to have fewer children and have them at older ages, the increase in average annual births is expected to slow. This, combined with the rise in the number of deaths, is expected to cause natural increase to transition into 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 middle-aged individuals and their children under the age of 14.

In summary, a transition from natural increase to natural decrease and increasing net in-migration are expected to lead to population growth remaining steady throughout the forecast period and reach its peak in 2065 (Figure 21). An aging population is expected to not only lead to an increase in deaths, but also a smaller proportion of women in their childbearing years, likely resulting in a long-term decline in birth rates. Net in-migration is expected to grow slightly throughout the forecast period after a somewhat larger initial increase.

Figure 21. Linn 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 Albany, Brownsville, Gates, Halsey, Harrisburg, Idanha, Lebanon, Millersburg, Sodaville and Sweet Home did not submit survey responses.

Albany — Linn 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
						Promos: Hinders:

Albany — Linn County—NO SURVEY RESPONSE

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

Brownsville — Linn 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>

Gates — Linn 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>

Halsey — Linn 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>

Harrisburg — Linn 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>

Idanha — Linn 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>

Lebanon — Linn 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>					

Lebanon — Linn 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>

Lyons — Linn County—1/20/2017

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
Population composition hasn't changed.	Residential construction has increased with seven new homes in 2016. Real estate sales have also picked up.	Construction 5 SFR units are underway. Square footage ranges from 2200 sq ft to 3900 sq ft. Prices range from \$99,000 to \$347,000.	None	One business is adding a new plant which isn't within the city limits. It may encourage housing development in Lyons.	Limited infrastructure.	Promos: Hinders: Lack of a sewer system hinders our growth.
Highlights or summary from planning documents of influences on or anticipation of population and housing growth (including any plans for UGB expansion and	The planning commission recently approved a partition application which divides one parcel into three separate parcels. Currently, we have a development parcel that is for sale with the potential of being subdivided into 12 lots.					

Lyons — Linn County—1/20/2017

<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>

Mill City — Linn County—11/1/2016

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
<p>Large section of retirees. More families with school age children moving to area. High percentage of Hispanic population.</p>	<p>Large portion of housing is old. Home sales have increased in last 12 months.</p>	<p>Potential for 50+ housing development within 5 years, property currently located outside UGB so annexation must first be done.</p>	<p>N/A</p>	<p>Recently Oregon Connections Academy (ORCA) moved to Mill City, Subway opened, Dollar General looking to open in 2017, 9 room hotel, restaurant, shopping complex coming in 2018.</p>	<p>Infrastructure capacity should be able to accommodate up to half (+/-) of the anticipated housing. However, large development or high use (restaurant) development would cause concern with sewer. Water and sewer both had upgrades within 10 years. Repairs needed on both and streets.</p>	<p>Promos:</p> <p>Hinders: Lack of industrial lands within city limits hinders growth. Rural location with little to no public transportation to needs (hospital, colleges, groceries, etc) hinders growth.</p>

Mill City — Linn County—11/1/2016

<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>
<p>Other information (e.g. planning documents, email correspondence, housing development survey)</p>	<p>According to PRC background research:</p> <ul style="list-style-type: none">- The Comp Plan and BLI report in 2015 concluded that Mill City has adequate supply of buildable land inside the Mill City Urban Growth Boundary to serve the needs of the community during the 20-year planning period from 2014 to 2035.

Millersburg — Linn 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>

Scio — Linn 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
		Thomas Creek Estates Subdivision - 10 lots remain, expected build-out is 3 years.	None		Sewer project expansion will be needed in 5 – 10 years.	Promos: Hinders: Flood plain throughout the city. Uncertain regulatory future and restrictions on development in the floodplain
Highlights or summary from planning documents of influences on or anticipation of population and housing growth (including any plans for UGB expansion and	No plans for UGB expansion at this time.					

Scio — Linn County—10/31/2016

<p>the stage in the expansion process)</p>	
<p>Other information (e.g. planning documents, email correspondence, housing development survey)</p>	<p>According to PRC background research:</p> <ul style="list-style-type: none">- The Comp Plan and BLI report concludes the City of Scio has an adequate supply of buildable land inside the Scio Urban Growth Boundary to serve the needs of the community during the 20-year planning period from 2015 to 2035 to serve a projected population of 1,052 by the year 2035.

Sodaville — Linn 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>

Sweet Home — Linn 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>

Tangent — Linn County—10/14/2016

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
<p>We have been finding that the elderly have been moving out of the city to be closer to needed facilities such as medical, dental and groceries. Many of our elderly are not driving and we do not have a grocery store or any medical or dental facilities located in the city limits. Nor do we have transit availabilities.</p>	<p>We do not currently have any subdivisions planned. The last two subdivisions that were developed have either had all their lots sold or are built out.</p>	<p>3 SFR units in the pipeline. Partition maps still need to be finalized.</p>	<p>None</p>	<p>None</p>	<p>We do not have a water system, but rely on wells, which appear to be adequate for the community. The sewer system is at about 70% capacity.</p>	<p>The City of Tangent does not have a tax base. It has not been determined if this is a hindrance or a promotions for the area.</p> <p>Promos:</p> <p>Hinders:</p>

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<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 anticipated expansion into the UGB. Our city has a smaller UGB than the city limits.</p>
<p>Other information (e.g. planning documents, email correspondence, housing development survey)</p>	<p>According to PRC background research:</p> <ul style="list-style-type: none">- Tangent is primarily an agricultural area- There do not seem to be readily identifiable land constraints in the City of Tangent. However, parts of the City’s comprehensive plan seem to have been updated at different times so some information may be out of date.

Waterloo — Linn County—10/11/2016

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
Large elderly population	Occupancy rates stable. No housing permits issued last year.				None, depending on outcome of 2016 election.	Promos: Hinders: City is at max capacity for growth with current UGB.
Highlights or summary from planning documents of influences on or anticipation of population and housing growth (including any plans for UGB expansion and	No growth expected due to UGB limits. Infrastructure is a possible alternative to allow for growth, depending on outcome of 2016 election and establishing a city wide property tax base/rate.					

Waterloo — Linn County—10/11/2016

<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>

Appendix B: Specific Assumptions

Albany

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 deviate from historical county patterns, with the sub-area experiencing a net in-migration of 20-29 year olds.

Brownsville

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 93.3 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.62 over the forecast period. There is no group quarters population in Brownsville.

Gates

The 5-year average annual housing unit growth rate is assumed to be steady at 0.3 percent throughout the forecast period. The occupancy rate is assumed to be steady at 83 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.1 over the forecast period. There is no group quarters population in Gates.

Lebanon

Total fertility rates are assumed to increase in the near-term, then follow a historical trend (observed from the 2000 to 2010 period) and gradually decline thereafter. 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 deviate from historical county patterns, with the sub-area experiencing a slight net in-migration of 20-29 year olds.

Halsey

The 5-year average annual housing unit growth rate is assumed to increase to 1.4 percent during the first 10 years and then slightly decline thereafter. The occupancy rate is assumed to be steady at 92.9 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.92 over the forecast period. There is no group quarters population in Halsey.

Harrisburg

The 5-year average annual housing unit growth rate is assumed to slightly increase to 0.9 percent during the first 10 years and then slightly decline thereafter. The occupancy rate is assumed to be steady at

94.4 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.84 over the forecast period. There is no group quarters population in Harrisburg.

Idanha

The 5-year average annual housing unit growth rate is generally very low and is assumed to slightly increase to 0.13 percent during the first 10 years and then very slightly decline to almost zero thereafter. The occupancy rate is assumed to be steady at 76.9 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2 over the forecast period. There is no group quarters population in Idanha.

Lyons

The 5-year average annual housing unit growth rate is assumed to be stable at 0.5 percent during the first three decades and then slightly decline thereafter. The occupancy rate is assumed to be steady at 94.1 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.68 over the forecast period. There is no group quarters population in Lyons.

Mill City

The 5-year average annual housing unit growth rate is assumed to increase to 2.08 percent during the first 10 years and then decline thereafter. The occupancy rate is assumed to be steady at 92.9 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.67 over the forecast period. Group quarters population is assumed to remain at 4.

Millersburg

The 5-year average annual housing unit growth rate is assumed to increase to 3.07 percent during the first 10 years and then decline thereafter. The occupancy rate is assumed to slightly decrease and then stabilize at 93.7 percent near the end of the 50 year horizon. PPH is assumed to be stable at 2.63 over the forecast period. Group quarters population is assumed to remain at zero.

Scio

The 5-year average annual housing unit growth rate is assumed to increase from zero to 0.9 percent during the first 15 years and then decline thereafter. The occupancy rate is assumed to be steady at 94.7 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.73 over the forecast period. Group quarters population is assumed to remain at 6.

Sodaville

The 5-year average annual housing unit growth rate is assumed to slowly decline throughout the forecast period. The occupancy rate is assumed to be steady at 93.5 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.71 over the forecast period. Group quarters population is assumed to remain at 5.

Sweet Home

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.

Tangent

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 94.5 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.85 over the forecast period. Group quarters population is assumed to remain at 3.

Waterloo

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 91 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.9 over the forecast period. There is no group quarters population in Waterloo.

Outside UGBs

The 5-year average annual housing unit growth rate is assumed to slowly decline throughout the forecast period. The occupancy rate is assumed to be steady at 92.5 percent throughout the 50 year horizon. PPH is also assumed to be stable at 2.6 over the forecast period. Group quarters population is assumed to remain at 113.

Appendix C: Detailed Population Forecast Results

Figure 22. Linn 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	8,004	8,262	8,435	8,519	8,648	8,886	9,191	9,447	9,623	9,757	9,908	9,981
05-09	7,834	8,204	8,657	8,834	8,927	9,067	9,325	9,634	9,896	10,072	10,207	10,268
10-14	8,062	8,105	8,760	9,239	9,433	9,537	9,695	9,961	10,285	10,556	10,738	10,794
15-19	7,785	7,895	7,974	8,615	9,092	9,287	9,400	9,544	9,800	10,109	10,370	10,439
20-24	7,017	7,046	7,218	7,285	7,873	8,314	8,503	8,595	8,722	8,947	9,225	9,317
25-29	7,455	7,655	7,717	7,902	7,980	8,629	9,121	9,319	9,415	9,547	9,789	9,908
30-34	7,603	7,704	8,062	8,123	8,319	8,407	9,096	9,606	9,810	9,904	10,039	10,139
35-39	7,951	8,383	8,580	8,977	9,052	9,276	9,384	10,145	10,711	10,931	11,034	11,093
40-44	7,389	7,765	8,492	8,692	9,102	9,184	9,422	9,524	10,291	10,858	11,080	11,121
45-49	7,623	7,680	8,356	9,141	9,368	9,820	9,923	10,173	10,283	11,106	11,720	11,816
50-54	7,804	7,753	7,853	8,537	9,340	9,573	10,043	10,135	10,385	10,486	11,320	11,563
55-59	8,220	7,995	7,918	8,016	8,719	9,545	9,792	10,262	10,353	10,601	10,701	11,033
60-64	8,057	8,257	7,893	7,815	7,924	8,630	9,464	9,706	10,172	10,257	10,501	10,541
65-69	7,301	7,745	8,079	7,720	7,649	7,763	8,466	9,277	9,513	9,962	10,043	10,136
70-74	5,901	6,723	7,432	7,759	7,423	7,363	7,489	8,168	8,955	9,185	9,623	9,656
75-79	4,183	4,829	6,028	6,684	7,006	6,726	6,698	6,832	7,474	8,216	8,453	8,621
80-84	2,847	3,196	4,093	5,143	5,744	6,065	5,868	5,877	6,031	6,636	7,340	7,441
85+	2,589	2,702	3,128	3,867	4,882	5,823	6,593	6,976	7,267	7,590	8,201	8,530
Total	123,626	127,900	134,675	140,871	146,481	151,895	157,474	163,181	168,988	174,721	180,294	182,399

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

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

Area / Year	2017	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2067
Linn County	123,626	127,900	134,675	140,871	146,481	151,895	157,474	163,181	168,988	174,721	180,294	182,399
Albany UGB (Linn)	46,469	48,406	51,721	54,985	58,134	61,136	64,118	67,152	70,192	73,211	76,137	77,255
Brownsville UGB	1,740	1,826	1,927	2,011	2,084	2,158	2,231	2,306	2,381	2,458	2,535	2,567
Gates UGB (Linn)	40	41	41	42	42	43	44	44	45	46	46	47
Halsey UGB	925	949	1,017	1,075	1,134	1,194	1,255	1,318	1,383	1,450	1,519	1,547
Harrisburg UGB	3,770	3,864	4,041	4,190	4,332	4,471	4,596	4,707	4,817	4,926	5,034	5,077
Idanha UGB (Linn)	58	58	59	60	61	61	62	63	63	64	65	65
Lebanon UGB	19,416	20,264	21,700	23,100	24,498	25,920	27,396	28,914	30,488	32,148	33,901	34,628
Lyons UGB (Linn)	1,254	1,273	1,305	1,338	1,369	1,403	1,439	1,468	1,497	1,520	1,543	1,549
Mill City UGB (Linn)	1,736	1,780	1,972	2,046	2,109	2,171	2,222	2,261	2,300	2,338	2,375	2,390
Millersburg UGB	1,795	1,957	2,274	2,610	2,974	3,289	3,645	3,987	4,331	4,676	5,016	5,147
Scio UGB	938	939	956	1,000	1,027	1,049	1,064	1,075	1,083	1,090	1,097	1,099
Sodaville UGB	341	347	356	363	370	378	387	396	404	413	421	424
Sweet Home UGB	9,250	9,485	9,909	10,331	10,733	11,115	11,489	11,873	12,276	12,697	13,126	13,300
Tangent UGB	1,286	1,320	1,374	1,422	1,466	1,507	1,544	1,580	1,614	1,646	1,676	1,688
Waterloo UGB	232	236	243	250	257	263	270	276	282	288	294	297
Outside UGB Area	34,376	35,156	35,778	36,048	35,891	35,738	35,713	35,762	35,831	35,752	35,510	35,319

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