6-30-2019

Coordinated Population Forecast for Morrow County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2019-2069

Portland State University. Population Research Center

Nicholas Chun
Portland State University

Kevin Rancik
Portland State University

Rhey Haggerty
Portland State University

Jason R. Jurjevich
Portland State University, jjason@email.arizona.edu

Coordinated Population Forecast

2019

Through

2069

Morrow County

Urban Growth Boundaries (UGB) & Area Outside UGBs

Population Research Center
PORTLAND STATE UNIVERSITY

Cover Photo: The Cutsforth Park fishing pond in the Blue Mountains, Morrow County. Gary Halvorson, Oregon State Archives.

Coordinated Population Forecast for Morrow County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2019-2069

Prepared by

Population Research Center

College of Urban and Public Affairs

Portland State University

June 30, 2019

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

Project Staff:

Nicholas Chun, Population Forecast Program Manager

Kevin Rancik, GIS & Research Analyst

Rhey Haggerty, Graduate Research Assistant

Jason Jurjevich, Associate Director of Population Research Center

Charles Rynerson, Research Consultant

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

How to Read this Report

This report should be read with reference to the documents listed below—downloadable on the Forecast Program website (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 (2019-2069).

Table of Contents

Table of Figures

Modified Methodology

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

For years 26-50, PRC projects the county population using the annual growth rate from the 24th-25th year. For example, if we forecast a county to grow 0.4 percent between the 24th and 25th year of the forecast, we would project the county population thereafter using a 0.4 percent AAGR. To allocate the projected county population to its sub-areas, we extrapolate the change in sub-area shares of county population observed in years 1-25 and apply them to the projected county population.

Comparison to Cycle 1 (2015-17)

To keep up to date with local trends and shifting demands, OPFP regularly updates coordinated population forecasts for Oregon's areas. Beyond the modification to our methodology and additional forecast region (from three regions to four), there are differences between the 2019 updated forecast for Morrow County and the 2016 version. Overall, the 2019 forecast is lower for Morrow County for the 25 year period (2019-2044). While our expectations of births and deaths have not changed drastically from last round, population decline in the outside UGB area produces a lower forecast for the County. The full breakdown of differences by county and sub-area is stored here: https://www.pdx.edu/prc/current-documents-and-presentations.

Executive Summary

Historical

Different parts of the County experience different growth patterns. Local trends within UGBs and the area outside them collectively influence population growth rates for the County as a whole. UGBs in Morrow County include Boardman, Heppner, Ione, Irrigon, and Lexington.

Morrow County's total population had minimal growth in the 2000s (**Figure 1**); however, some of its sub-areas experienced faster population growth during this period. Boardman, for example, posted the highest average annual growth rates at 1.0 percent during the 2000 to 2010 period.

The population growth in the 2000s was largely driven by a waning natural increase, more births than deaths. An aging population not only led to an increase in deaths but also resulted in a smaller proportion of women in their childbearing years. This, along with more women having fewer children and having them at older ages has led to births stagnating in recent years. Still, a larger number of births relative to deaths caused a natural increase (more births than deaths) in every year from 2001 to 2017. While net out-migration persisted during the 2000-10 period, in recent years (2013-16) net out-migration has slowed, leading to meager but steady population growth (**Figure 12**).

Forecast

Total population in Morrow County as a whole, as well as within its sub-areas, will likely increase at a quicker pace in the near-term (2019 to 2044) compared to the long-term (**Figure 1**). Population growth is largely driven by net in-migration, which is expected to outweigh declining natural increase. Morrow County's total population is forecast to increase by roughly 1,825 people over the next 25 years (2019-2044) and by more than 3,650 over the entire 50-year period (2019-2069).

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

	Historical			Forecast					
	2000	2010	AAGR (2000-2010)	2019	2044	2069	AAGR (2010-2019)	AAGR (2019-2044)	AAGR (2044-2069)
Morrow County	**10,995**	**11,173**	***0.2%***	**12,143**	**13,972**	**15,809**	***0.9%***	***0.6%***	***0.5%***
Boardman	3,221	3,555	*1.0%*	4,201	5,855	7,397	*1.8%*	*1.3%*	*0.9%*
Heppner	1,454	1,343	*-0.8%*	1,303	1,245	1,154	*-0.3%*	*-0.2%*	*-0.3%*
Ione	333	335	*0.1%*	332	346	357	*-0.1%*	*0.2%*	*0.1%*
Irrigon	1,977	2,081	*0.5%*	2,268	2,963	3,811	*0.9%*	*1.1%*	*1.0%*
Lexington	268	243	*-1.0%*	255	238	212	*0.5%*	*-0.3%*	*-0.5%*
Outside UGBs	3,742	3,616	*-0.3%*	3,784	3,324	2,877	*0.5%*	*-0.5%*	*-0.6%*

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

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

14-Year Population Forecast

In accordance with House Bill 2254, which streamlined the UGB process based on long-term housing and employment needs, **Figure 2** provides a 14-year population forecast (2019-2033) for the County and its sub-areas. Populations at the 14th year of the forecast were interpolated using the average annual growth rate between the 2030-2035 period. The population interpolation template is stored here: https://www.pdx.edu/prc/current-documents-and-presentations.

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

	2019	2033	14-Year Change	AAGR (2019-2033)
Morrow County	**12,143**	**13,190**	**1,047**	***0.6%***
Boardman	4,201	5,235	1,034	*1.6%*
Heppner	1,303	1,252	-51	*-0.3%*
Ione	332	339	8	*0.2%*
Irrigon	2,268	2,659	391	*1.1%*
Lexington	255	242	-13	*-0.4%*
Outside UGBs	3,784	3,462	-321	*-0.6%*

Sources: Forecast by Population Research Center (PRC).

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

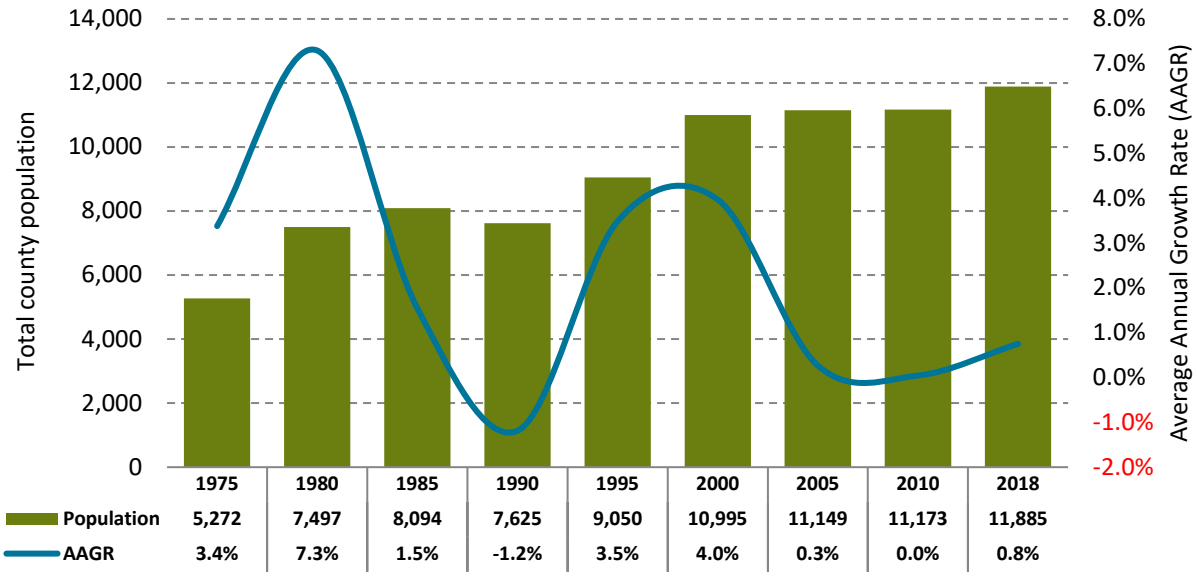
Historical Trends

Different growth patterns occur in different parts of Morrow County. Each of Morrow County's sub-areas were examined for any significant demographic characteristics or changes in population or housing growth that might influence their individual forecasts. Factors analyzed include age composition of the population, race and ethnicity, births, deaths, migration, the number of housing units, occupancy rate, and persons per household (PPH). It should be noted that population trends of individual sub-areas often differ from those of the County as a whole. However, population growth rates for the County are collectively influenced by local trends within its sub-areas.

Population

Morrow County's total population grew from roughly 5,275 in 1975 to about 11,900[1] in 2018 (**Figure 3**). During this 40-year period, the County experienced high growth rates during the late 1970s, which coincided with a period of relative economic prosperity. During the early 1980s, challenging economic conditions, both nationally and within the county, led to negative population growth rates. During the early 1990s population growth rates again increased but challenging economic conditions late in the decade again yielded growth rate declines. Following the turn of the century, Morrow County has experienced slow population growth between 2000 and 2018.

Figure 3. Morrow County—Total Population by Five-year Intervals (1975-2018)



Sources: U.S. Census Bureau, 1980, 1990, 2000, and 2010 Censuses; Population Research Center (PRC), July 1st Annual Estimates 1975, 1985, 1995, 2005 and 2018.

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

During the 2000s, Morrow County's average annual population growth rate stood at 0.2 percent (**Figure 4**). Boardman and Irrigon increased at rates well above that of the County as a whole, at average annual growth rates of 1.0 and 0.5 percent, respectively. The population of Ione remained stable from the 2000 to 2010 period, while Heppner, Lexington, and the outside UGB area experienced moderate population declines.

Figure 4. Morrow County and Sub-areas—Total Population and Average Annual Growth Rate (AAGR) (2000 and 2010)[2]

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010	Change (2000-2010)
Morrow County	*10,995*	*11,173*	*0.2%*	*100.0%*	*100.0%*	*0.0%*
Boardman	*3,221*	*3,555*	1.0%	29.3%	31.8%	2.5%
Heppner	*1,454*	*1,343*	-0.8%	13.2%	12.0%	-1.2%
Ione	*333*	*335*	0.1%	3.0%	3.0%	0.0%
Irrigon	*1,977*	*2,081*	0.5%	18.0%	18.6%	0.6%
Lexington	*268*	*243*	-1.0%	2.4%	2.2%	-0.3%
Outside UGBs	*3,742*	*3,616*	-0.3%	34.0%	32.4%	-1.7%

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

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

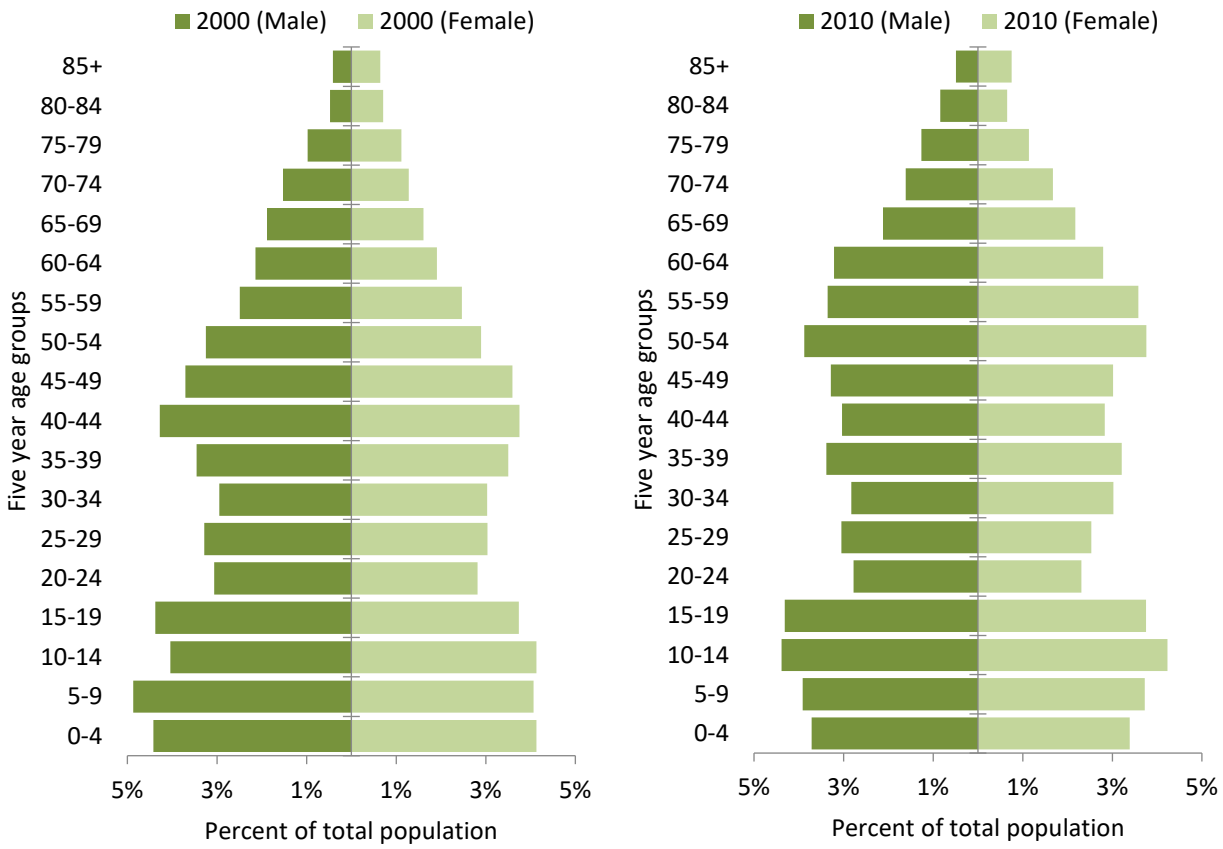
Age Structure of the Population

Similar to most areas across Oregon, Morrow County's population is aging. An aging population significantly influences the number of deaths but also yields a smaller proportion of women in their childbearing years, which may result in a slowdown or decline in births. The shift in the age structure from 2000 to 2010 illustrates this phenomenon (**Figure 5**). Further underscoring the countywide trend in aging, the median age went from about 33.3 in 2000 to 36.5 in 2010[3].

[2] 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.

[3] Median age is sourced from the U.S. Census Bureau's 2000 and 2010 Censuses.

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



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

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 Morrow County increased substantially from 2000 to 2010 (**Figure 6**), while the White; not Hispanic population decreased over the same time period. This increase in the Hispanic population and other minority populations brings with it several implications for future population change. First, both nationally and at the state level, fertility rates among Hispanic and minority women tend to be higher than among White; not Hispanic women. However, it is important to note more recent trends show these rates are quickly decreasing. Second, Hispanic and minority households tend to be larger relative to White; not Hispanic households.

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

Hispanic or Latino and Race	2000		2010		Absolute Change	Relative Change
Total population	10,995	100.0%	11,173	100.0%	178	1.6%
Hispanic or Latino	2,686	24.4%	3,497	31.3%	811	30.2%
Not Hispanic or Latino	8,309	75.6%	7,676	68.7%	-633	-7.6%
White alone	7,911	72.0%	7,218	64.6%	-693	-8.8%
Black or African American alone	14	0.1%	36	0.3%	22	157.1%
American Indian and Alaska Native alone	137	1.2%	112	1.0%	-25	-18.2%
Asian alone	45	0.4%	100	0.9%	55	122.2%
Native Hawaiian and Other Pacific Islander alone	9	0.1%	13	0.1%	4	44.4%
Some Other Race alone	39	0.4%	16	0.1%	-23	-59.0%
Two or More Races	154	1.4%	181	1.6%	27	17.5%

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

Births

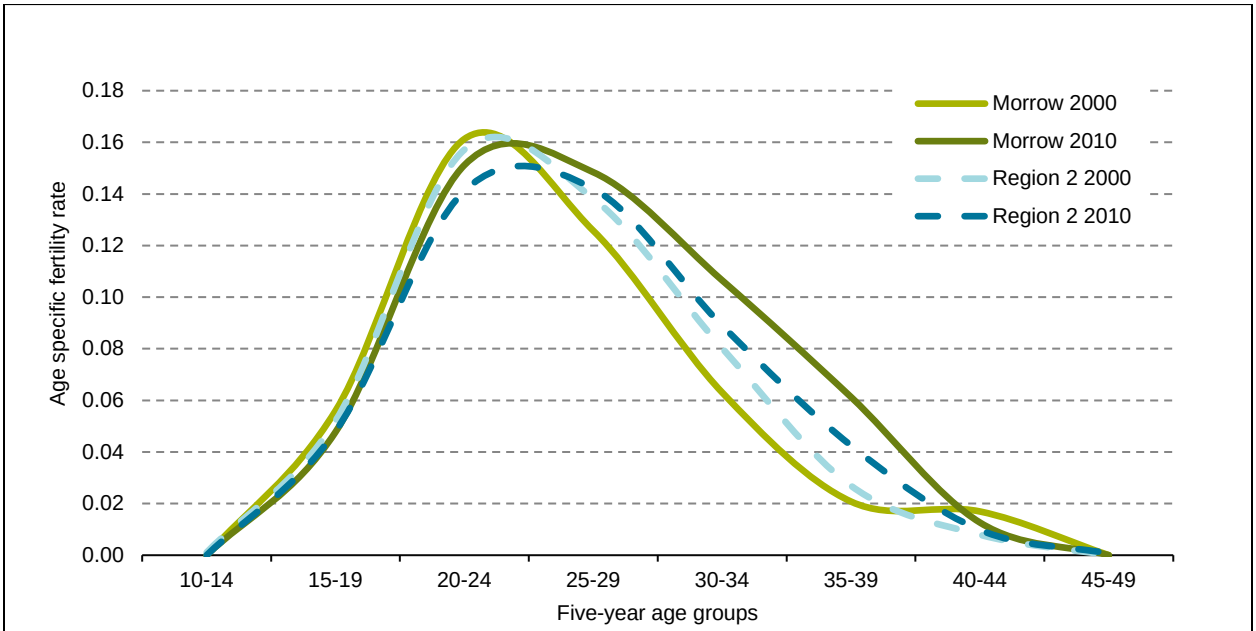
Historic total fertility rates (TFR)—or the average number of children that would be born to a woman over her lifetime—for Morrow County increased like eastern Oregon counties as a whole (Region 2) (**Figure 7**). At the same time, fertility for women over 30 increased in Morrow County but remained fairly stable in Region 2 (**Figure 8**). Total fertility in both the County and the state remain above replacement fertility (2.1), indicating that future cohorts of women in their birth-giving years will grow overtime, excluding the influence of net in/out-migration.

Figure 7. Morrow County and Region 2—Total Fertility Rates (2000 and 2010)

	2000	2010
Morrow County	2.22	2.64
Region 2	2.32	2.37

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

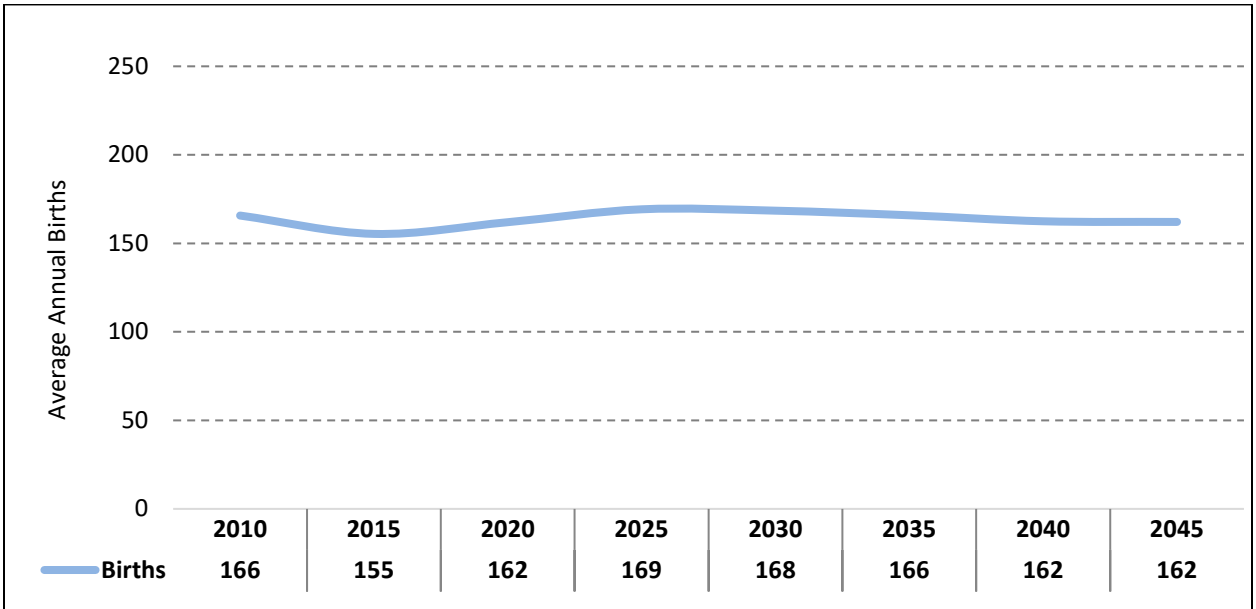
Figure 8. Morrow County and Region 2—Age Specific Fertility Rate (2000 and 2010)



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

Figure 9 shows the number of historic and forecasted births for the county. The number of annual births from 2000-10 to 2010-15 remained relatively unchanged. Due to a shrinking share of women in their birth giving years, births are expected to remain steady throughout the forecast period.

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

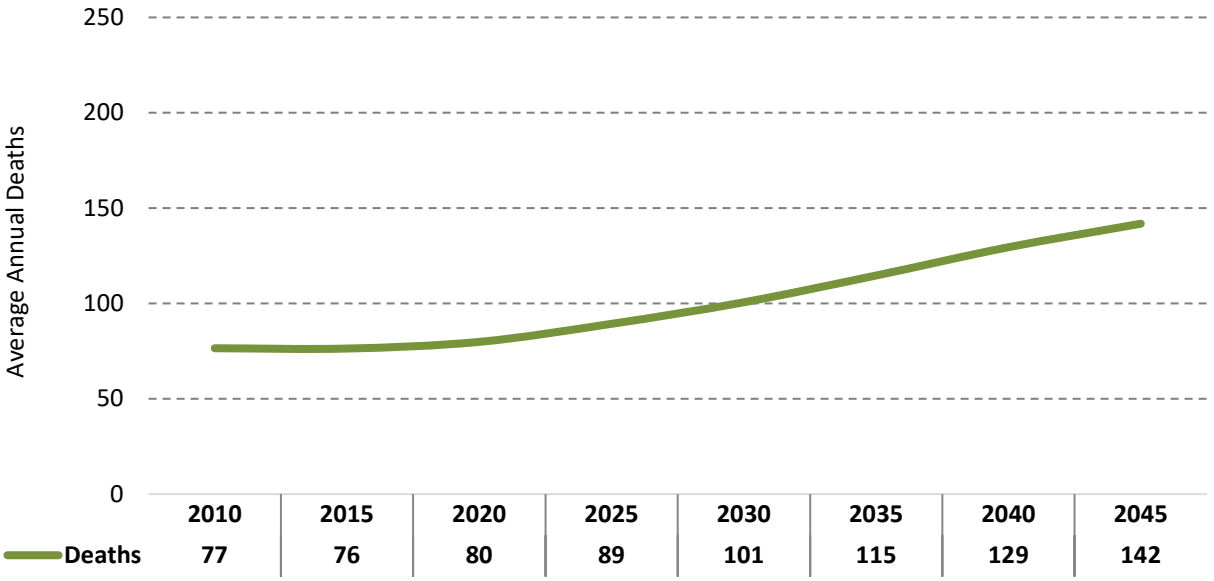


Sources: Oregon Health Authority, Center for Health Statistics. Calculations and Forecast by Population Research Center (PRC).
Note: The years signify the end of the period for which average annual numbers were calculated. The average annual numbers for "2010" were calculated for the 2000-2010 period, with the remaining years calculated for their preceding five-year periods.

Deaths

The population in the county, as a whole, is aging and contrary to the statewide trend, people of all ages are not necessarily living longer[4]. For both Morrow County and eastern Oregon the survival rates changed little between 2000 and 2010, underscoring the fact that mortality is the most stable component, relative to birth and migration rates, of population change. Average annual deaths head steady from 2000-10 and 2010-15 and are expected to increase steadily overtime (**Figure 10**).

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



	2010	2015	2020	2025	2030	2035	2040	2045
Deaths	77	76	80	89	101	115	129	142

Sources: Oregon Health Authority, Center for Health Statistics. Calculations and Forecast by Population Research Center (PRC).
Note: The years signify the end of the period for which average annual numbers were calculated. The average annual numbers for "2010" were calculated for the 2000-2010 period, with the remaining years calculated for their preceding five-year periods.

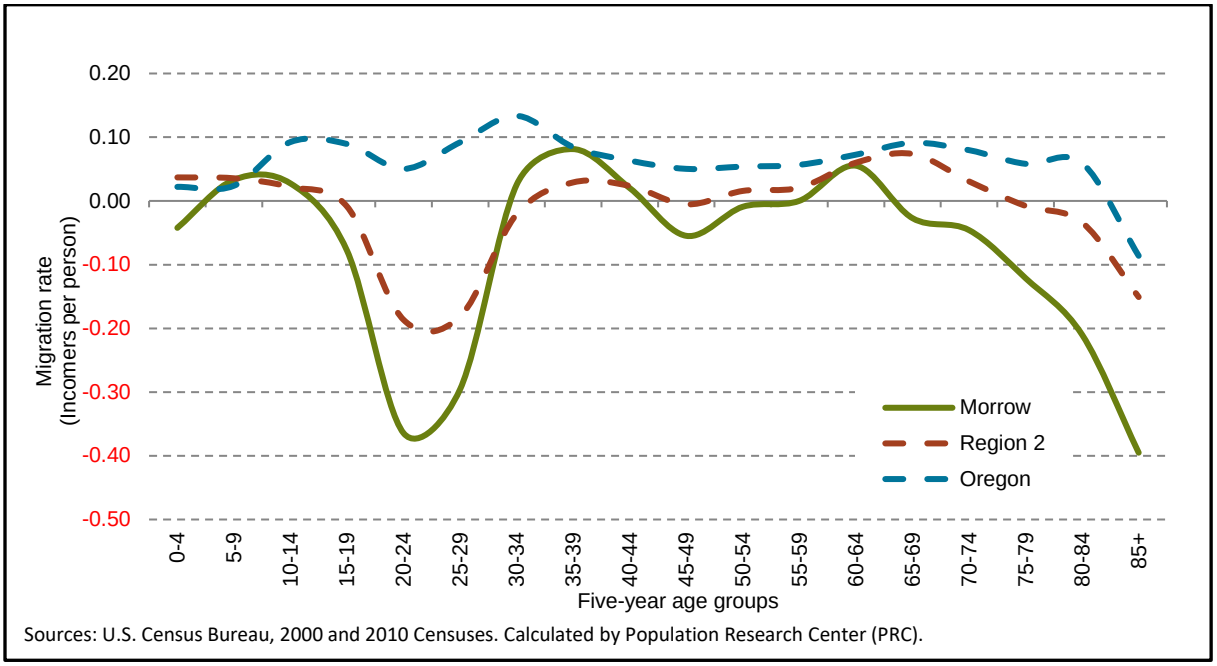
[4] Researchers have found evidence for a widening rural-urban gap in life expectancy. This gap is particularly apparent between race and income groups and may be one explanation for the decline in life expectancy in the 2000s. See the following research article for more information. *Singh, Gopal K., 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 for Morrow County, eastern Oregon (Region 2), and Oregon. The migration rate is shown as the number of net migrants per person by age group.

Morrow County's migration rates reflect the patterns of many other Oregon counties. Young adults (20-29) leave the County seeking higher education and employment opportunities, but return in their 30's and 40's with their children. Retirees moved in to the County in the 00s, but left the County shortly thereafter to areas with medical facilities and end-of-life care.

Figure 11. Morrow County, Region 2, and Oregon—Age Specific Migration Rates (2000-2010)

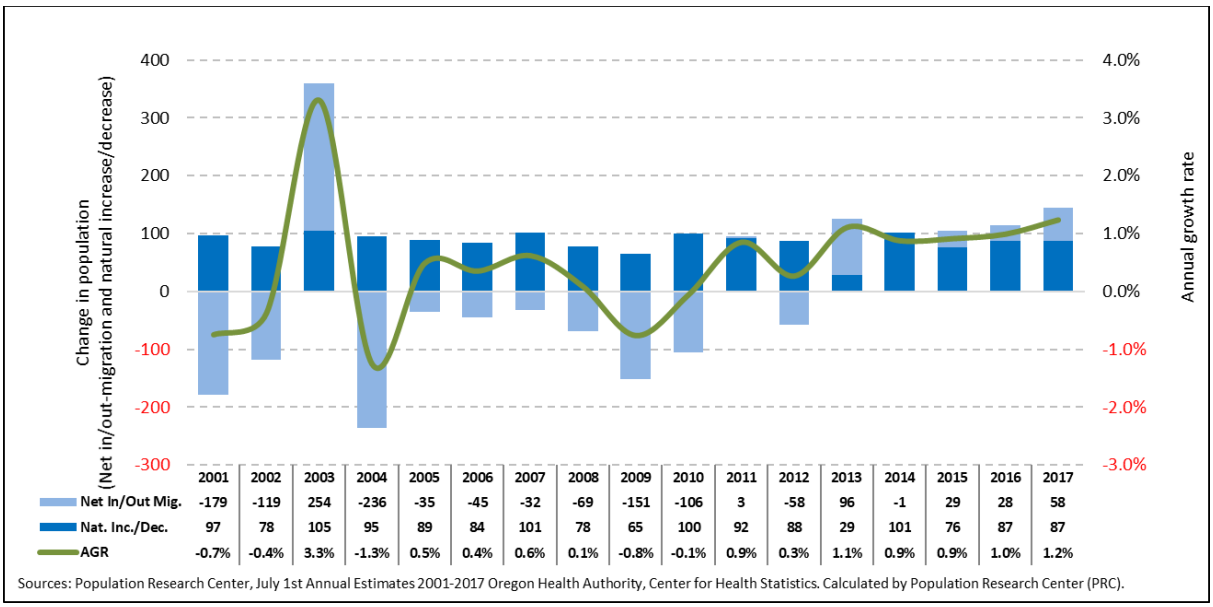


Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculated by Population Research Center (PRC).

Historical Trends in Components of Population Change

In summary, Morrow County's positive population growth during the 2000s was the result of steady natural increase and offset by net out-migration (**Figure 12**). In more recent years since 2010, net in-migration and natural increase have combined to produce steady population change.

Figure 12. Morrow County—Components of Population Change (2001-2017)[5]



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Net In/Out Mig.	-179	-119	254	-236	-35	-45	-32	-69	-151	-106	3	-58	96	-1	29	28	58
Nat. Inc./Dec.	97	78	105	95	89	84	101	78	65	100	92	88	29	101	76	87	87
AGR	-0.7%	-0.4%	3.3%	-1.3%	0.5%	0.4%	0.6%	0.1%	-0.8%	-0.1%	0.9%	0.3%	1.1%	0.9%	0.9%	1.0%	1.2%

Sources: Population Research Center, July 1st Annual Estimates 2001-2017 Oregon Health Authority, Center for Health Statistics. Calculated by Population Research Center (PRC).

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

Housing and Households

Housing unit growth in Morrow County slowed with the onset of the Great Recession in 2008. Over the entire 2000 to 2010 period, the total number of housing units increased by almost 4 percent countywide; this was more than 160 new housing units (**Figure 13**). Over half of the new housing units (91) were built in the outside UGB area at an average annual growth rate of 0.6 percent. Boardman also saw a large increase in new housing units (61), experience similar growth rates. Ione and Irrigon also saw small increases in total housing units (11 units and 27 units, respectively), while Heppner and Lexington experienced slight declines (15 units and 9 units, respectively).

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

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

	2000	2010	AAGR (2000-2010)	Share of County 2000	Share of County 2010	Change (2000-2010)
Morrow County	*4,276*	*4,442*	*0.4%*	*100.0%*	*100.0%*	*0.0%*
Boardman	1,066	1,127	0.6%	24.9%	25.4%	0.4%
Heppner	687	672	-0.2%	16.1%	15.1%	-0.9%
Ione	146	157	0.7%	3.4%	3.5%	0.1%
Irrigon	716	743	0.4%	16.7%	16.7%	0.0%
Lexington	112	103	-0.8%	2.6%	2.3%	-0.3%
Outside UGBs	1,549	1,640	0.6%	36.2%	36.9%	0.7%

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

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

Average household size, or persons per household (PPH), in Morrow County was 2.8 in 2010, down slightly from 2.9 in 2000 (**Figure 14**). Morrow County's PPH in 2010 was higher than Oregon's as a whole, which had a PPH of 2.5. PPH varied across the sub-areas; in 2010, the highest PPH was in Boardman with 3.3 and the lowest in Heppner at 2.3. In general, areas with an older or aging population will, more often than not, experience a decline in PPH over time

Occupancy rates tend to fluctuate more than PPH. This is particularly true in smaller UGBs where fewer housing units allow for larger relative changes in occupancy rates. From 2000 to 2010, the occupancy rate in Morrow County declined slightly (**Figure 14**). Heppner, Ione, and the outside UGB area experienced drops in occupancy rates that exceeded that of the County as a whole, while Boardman, Irrigon, and Lexington experienced marginal increases in their occupancy rates between 2000 and 2010.

Figure 14. Morrow 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
Morrow County	*2.9*	*2.8*	*-1.9%*	*88.3%*	*88.2%*	*-0.1%*
Boardman	*3.3*	*3.3*	*-0.4%*	*90.5%*	*94.9%*	*4.4%*
Heppner	*2.4*	*2.3*	*-2.7%*	*88.1%*	*86.5%*	*-1.6%*
Ione	*2.5*	*2.5*	*-2.4%*	*89.7%*	*86.0%*	*-3.7%*
Irrigon	*3.0*	*3.0*	*-0.3%*	*92.5%*	*94.1%*	*1.6%*
Lexington	*2.6*	*2.5*	*-2.7%*	*92.0%*	*93.2%*	*1.2%*
Outside UGBs	*2.9*	*2.7*	*-5.2%*	*84.6%*	*81.4%*	*-3.2%*

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

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

Assumptions for Future Population Change

Evaluating past demographic trends provides clues about what the future will look like and helps determine assumptions of likely scenarios for population change. Assumptions about fertility, mortality, and migration were developed for Morrow County's forecast and for each of its larger sub-areas[6]. Population change for smaller sub-areas is determined by the change in the number of total housing units, PPH, occupancy rates, and group quarters population. Assumptions around these components of growth are derived from observations of historic building patterns, current plans for future housing development, and household demographics.

Assumptions for the County and Sub-Areas

From 2000 to 2010, Morrow County experienced 892 more births than deaths, causing a natural increase. Some of this population growth was mitigated by net out-migration (714 persons), which resulted in a population increase of 178 people during the 2000 to 2010 period. We expect natural increase to shrink in magnitude over time, resulting in slowed population growth throughout the forecast period.

During the forecast period, the population in Morrow County is expected to age more quickly during the first half of the forecast period and then remain relatively stable over the forecast horizon. The total fertility rate is expected to decrease throughout the forecast period (2.46 in 2019 to 2.36 in 2044), though births will stagnate due to a net out-migration of young adults. Our assumptions of fertility for the county's larger sub-areas vary and are detailed in Appendix B.

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

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

We assume rates will change in line with historic trends unique to Morrow County. Net out-migration of young adults and net in-migration of families and retirees will persist throughout the forecast period. We assume that as deaths rise over time, the County will experience consistent net in-migration throughout the forecast period. Specifically, countywide average annual net in-migration is expected to shift from 99 migrants in 2019 to 48 net in-migrants in 2044. A diminishing natural increase is expected to curb net in-migration, which results in a steady population increase.

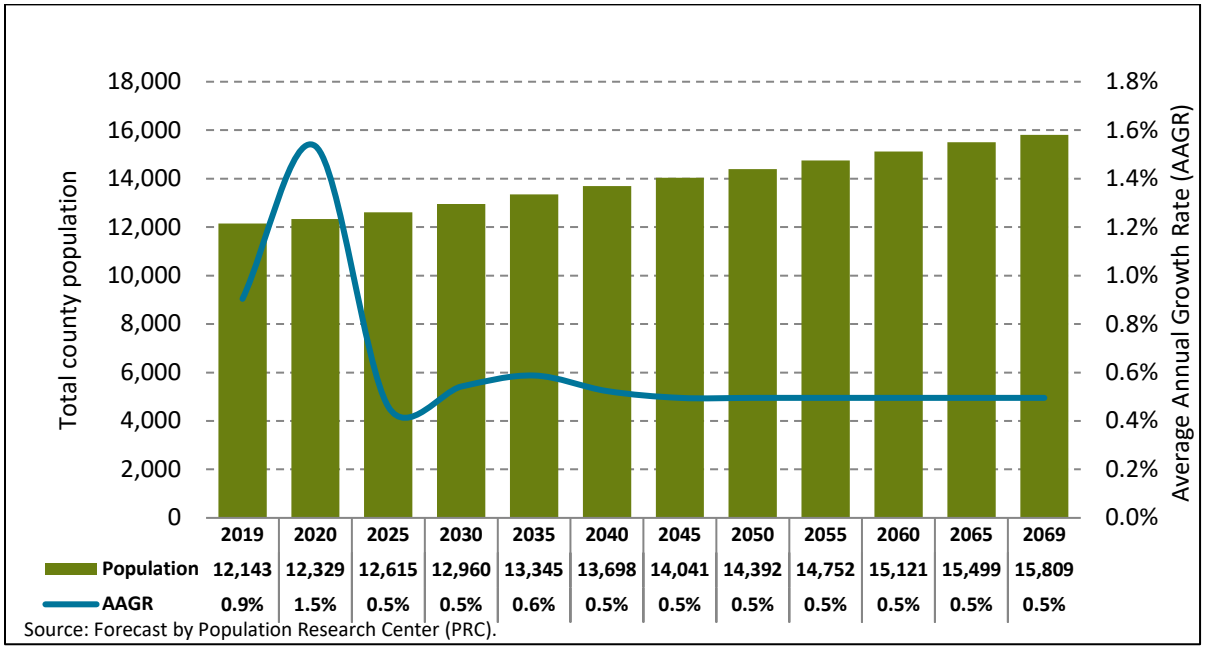
[6] County sub-areas with populations greater than 7,000 in the forecast launch year were forecast using the cohort-component method. County sub-areas with populations less than 7,000 in forecast launch year were forecast using the housing-unit method. See Glossary of Key Terms at the end of this report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

Forecast Trends

Under the most-likely population growth scenario for Morrow County, we expect steady population change to countywide and sub-area populations over the forecast period. The countywide population growth rate is forecast to peak in 2020 and then remain steady throughout the forecast period.

Morrow County's total population is forecast to increase by roughly 3,650 persons (30.2 percent) from 2019 to 2069, which translates into a total countywide population of 15,809 in 2069 (**Figure 15**). The population is forecast to grow at the highest rate—1.5 percent—during the near-term (2019-2020).

Figure 15. Morrow County—Total Forecast Population by Five-year Intervals (2019-2069)



	2019	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2069
Population	12,143	12,329	12,615	12,960	13,345	13,698	14,041	14,392	14,752	15,121	15,499	15,809
AAGR	0.9%	1.5%	0.5%	0.5%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%

Source: Forecast by Population Research Center (PRC).

Morrow County's two largest UGBs—Boardman and Irrigon—are forecast to experience a combined population growth of 2,350 people from 2019 to 2044 and nearly 2,400 from 2044 to 2069 (**Figure 16**). Forecasted growth in these two UGBs will result in a combined share of total county population of almost 71 percent by 2069. Ione is also expected to experience slight population growth of 25 persons throughout the entire forecast period.

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

	2019	2044	2069	AAGR (2019-2044)	AAGR (2044-2069)	Share of County 2019	Share of County 2044	Share of County 2069
Morrow County	**12,143**	**13,972**	**15,809**	***0.6%***	***0.5%***	--	--	--
Boardman	4,201	5,855	7,397	*1.3%*	*0.9%*	*34.6%*	*41.9%*	*46.8%*
Heppner	1,303	1,245	1,154	*-0.2%*	*-0.3%*	*10.7%*	*8.9%*	*7.3%*
Ione	332	346	357	*0.2%*	*0.1%*	*2.7%*	*2.5%*	*2.3%*
Irrigon	2,268	2,963	3,811	*1.1%*	*1.0%*	*18.7%*	*21.2%*	*24.1%*
Lexington	255	238	212	*-0.3%*	*-0.5%*	*2.1%*	*1.7%*	*1.3%*
Outside UGBs	3,784	3,324	2,877	*-0.5%*	*-0.6%*	*31.2%*	*23.8%*	*18.2%*

Source: Forecast by Population Research Center (PRC)

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

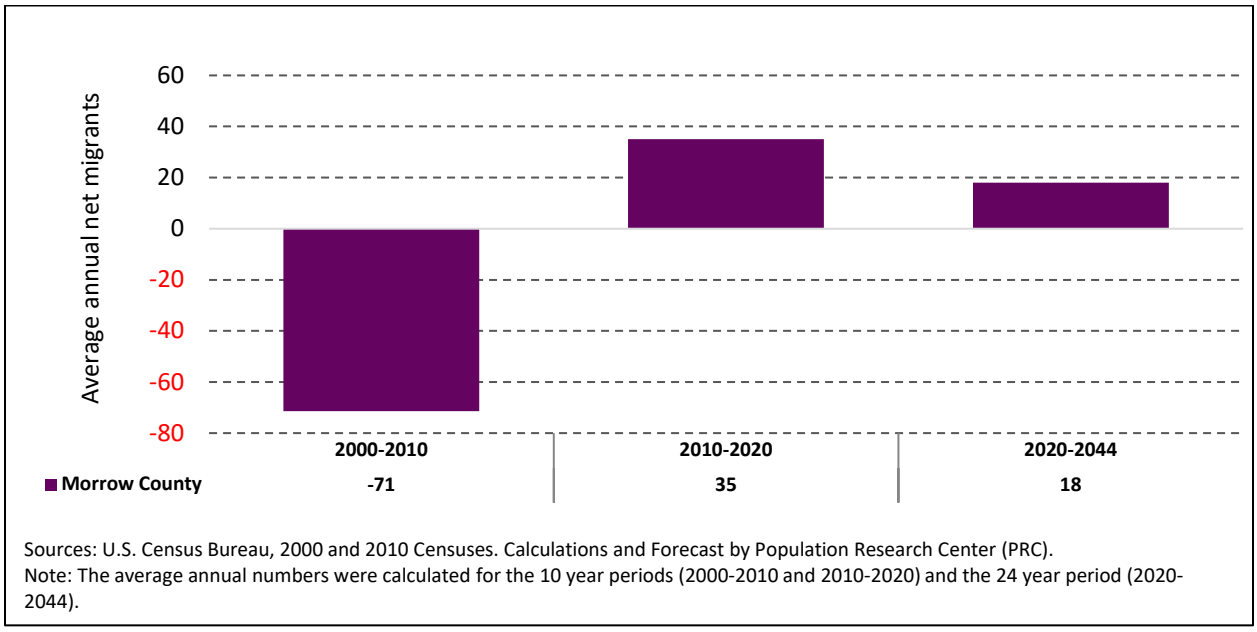
Heppner and Lexington are expected to experience slight population declines throughout the forecast period (149 people and 43 people, respectively). The outside UGB area, though, are expected to experience the largest population decline, at roughly 450 people from 2019 to 2044 and an additional 450 people from 2044 to 2069.

We forecast population decline in the outside UGB area as PPH and occupancy rates decline from an aging population. This, coupled with the growth of populations within the larger UGBs, is expected to create a slight redistribution of the population. While the countywide population shares for Boardman and Irrigon are forecast to increase substantially from 2019 to 2069 the countywide population share for the outside UGB area is forecast to decrease from over 31 percent in 2019 to roughly 18 percent in 2069.

Forecast Trends in Components of Population Change

As previously discussed, the number of in-migrants is forecast to outweigh the number of out-migrants in Morrow County, creating a positive net in-migration of new residents that is expected to persist throughout the forecast period as housing turnover increases with deaths. The anticipated completion of the 240-unit Port View Apartment complex is expected to attract a number of migrants to Boardman and the County as a whole at the turn of the 2020 decade. As such, average annual net in-migration is forecast to regress in the long term from 35 individuals (2010-2020) to 18 individuals later in the forecast (2020-2044) (**Figure 17**). The majority of these net in-migrants are expected to be families and older individuals.

Figure 17. **Morrow County—Average Annual Net In/Out-Migration (2000-2010, 2010-2020, and 2020-2044)**



Sources: U.S. Census Bureau, 2000 and 2010 Censuses. Calculations and Forecast by Population Research Center (PRC).
Note: The average annual numbers were calculated for the 10 year periods (2000-2010 and 2010-2020) and the 24 year period (2020-2044).

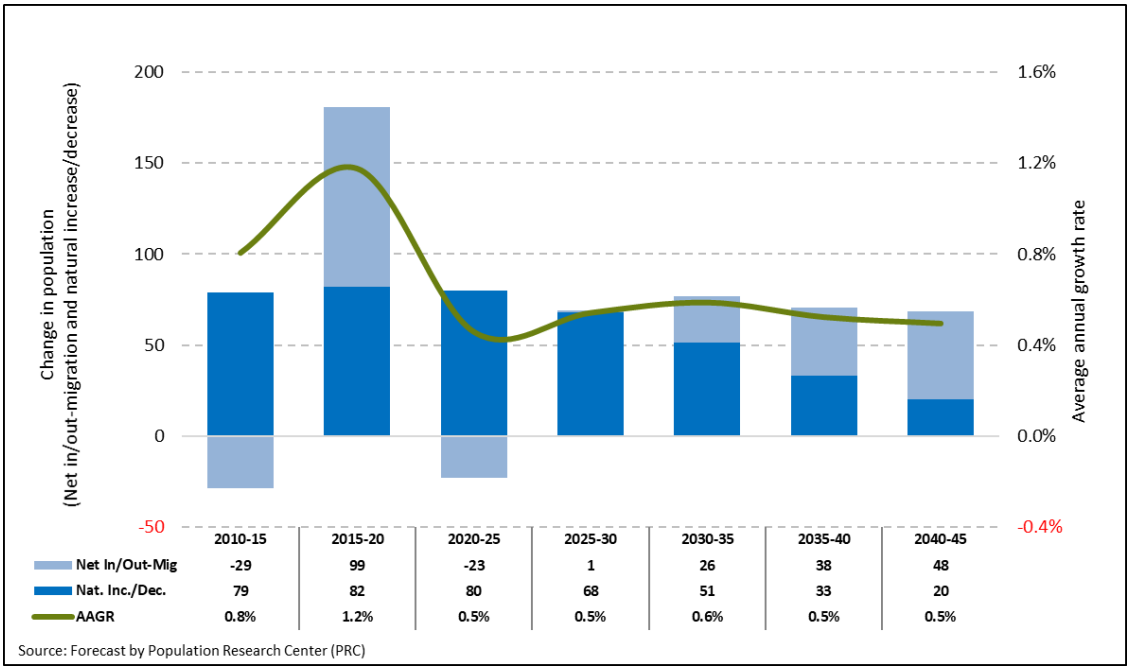
In addition to net in-migration, the other key component shaping Morrow County's forecasted population is the aging population. From 2019 to 2030, the proportion of the County population 65 years of age or older is forecast to grow from roughly 16.5 percent to 21 percent, and to maintain that proportion through 2044 (**Figure 18**). For a more detailed look at the age structure of Morrow County's population, see the final forecast table published to the forecast program website (https://www.pdx.edu/prc/current-documents-and-presentations).

Figure 18. Morrow County—Age Structure of the Population (2019, 2030, and 2044)

Source: Forecast by Population Research Center (PRC)

In summary, population growth is expected to peak around 2020 before the average annual growth rate begins to level out due to waning natural increase (**Figure 19**). However, this trend is offset by net in-migration that is expected to rise over time with home turnovers, resulting in steady population growth throughout the forecast period.

Figure 19. Morrow County—Components of Population Change (2015-2045)[7]



Source: Forecast by Population Research Center (PRC)

[7] 2010-15 components are based on population estimates from the Oregon Population Estimates Program. As such, natural increase/decrease and net in/out-migration for that period may not be consistent with the 2019 forecast assumptions.

Glossary of Key Terms

Cohort-Component Method: A method used to forecast future populations based on changes in births, deaths, and migration over time.

Coordinated population forecast: A population forecast prepared for the County along with population forecasts for its urban growth boundary (UGB) areas and non-UGB area.

Housing unit: A house, apartment, mobile home or trailer, group of rooms, or single room that is occupied or is intended for occupancy.

Housing-Unit Method: A method used to forecast future populations based on changes in housing unit counts, vacancy rates, the average numbers of persons per household (PPH), and group quarter population counts.

Occupancy rate: The proportion of total housing units that are occupied by an individual or group of persons.

Persons per household (PPH): The average household size (i.e. the average number of persons per occupied housing unit).

Replacement Level Fertility: The average number of children each woman needs to bear in order to replace the population (to replace each male and female) under current mortality conditions in the U.S. This is commonly estimated to be 2.1 children per woman.

Appendix A: Surveys and Supporting Information

Supporting information 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 Boardman and Lexington did not submit survey responses.

General Survey for Oregon Population Forecast Program	
Jurisdiction: Morrow County	Date: October 11 , 2018
Observations about Population Composition (e.g. children, the elderly, racial and ethnic groups)	Morrow County is a diverse county with a large Hispanic population in the northern cities with the southern portion of the County tending to be older. Ione has aggressively recruited families to their community and has seen recent development.
Observations about Housing	Morrow County is a diverse county with a large Hispanic population in the northern cities with the southern portion of the County tending to be older. Ione has aggressively recruited families to their community and has seen recent development.
Planned Housing Dev./Est. Year Completion (for detailed information submissions please use the Housing Development Survey)	Looking at just the county: Most development permits are for individual single family dwellings and are rarely speculative in nature. We are however experiencing an uptick in applications for subdivisions. Whereas over the past nearly 15 years only two have been approved and completed, in the last year we have had a five lot subdivision get to a completed plat, another 14 lot approved by the Planning Commission, and we are expecting another application for a 10 to 12 lot subdivision. Exciting times! From the Housing Development Survey: Subdivisions started this year are in the beginning stages. One subdivision has 5 parcels and the other has over 20 proposed parcels. No details on types of housing or prices yet.
Planned future construction of Group Quarters facilities	Not aware of any in the unincorporated part of the county.
Future Employers Locating to the Area	We see continued growth with data centers in and around Boardman. Within the unincorporated portion of the County I am not aware of any other new employers, but there are regularly new potential opportunities at the Port of Morrow, most of which is in the county.

Capacity and condition of infrastructure to accommodate growth.	Only currently known new infrastructure related to housing would be roads within subdivisions as they are completed.
Any Promotions (promos) and Hindrances (hinders) to Population Growth; Other notes	Current work in the County is focusing on completing the Buildable Lands Inventory and Housing Analysis to provide additional information and data to better implement housing strategies.
Highlights or summary from planning documents and studies on influences and anticipation of population and housing growth (including any plans for UGB expansion and the stage in the expansion process)	We can provide a variety of inputs to the BLI & HA currently underway.
Comments?	None at this time.

Carla McLane	Morrow County	Planning Director
Name	*Organization*	*Title*

General Survey for Oregon Population Forecast Program

Jurisdiction: City of Heppner Date: December 11, 2018

Observations about Population Composition (e.g. children, the elderly, racial and ethnic groups)	Our population is losing the younger generation who have difficulty finding jobs; older adult population is aging and not replaced
Observations about Housing	Housing shortage for new home buyers; duplex construction; housing rehab is helping provide options for home buyers
Planned Housing Dev./Est. Year Completion (for detailed information submissions please use the Housing Development Survey)	Duplex is currently being built and hope to build a second one.
Planned future construction of Group Quarters facilities	
Future Employers Locating to the Area	
Capacity and condition of infrastructure to accommodate growth.	Street infrastructure is being engineered including sewer main replacements; and engineering on wastewater upgrade options or lagoons.
Any Promotions (promos) and Hindrances (hinders) to Population Growth; Other notes	
Highlights or summary from planning documents and studies on influences and anticipation of population and housing growth (including any plans for UGB expansion and the stage in the expansion process)	
Comments?	

Edie Ball	City of Heppner	City Manager
Name	*Organization*	*Title*

General Survey for Oregon Population Forecast Program

Jurisdiction: City of Ione	Date: October 12 , 2018
Observations about Population Composition (e.g. children, the elderly, racial and ethnic groups)	yes
Observations about Housing	we don't have enough
Planned Housing Dev./Est. Year Completion (for detailed information submissions please use the Housing Development Survey)	our growth is limited at this point
Planned future construction of Group Quarters facilities	
Future Employers Locating to the Area	
Capacity and condition of infrastructure to accommodate growth.	
Any Promotions (promos) and Hindrances (hinders) to Population Growth; Other notes	
Highlights or summary from planning documents and studies on influences and anticipation of population and housing growth (including any plans for UGB expansion and the stage in the expansion process)	
Comments?	

Janette Eldrige	City of Ione	City Recorder
Name	*Organization*	*Title*

General Survey for Oregon Population Forecast Program

Jurisdiction: City of Irrigon Date: November 6 , 2018

Observations about Population Composition (e.g. children, the elderly, racial and ethnic groups)	We currently have a listed population of 1,997. However, we believe it to be higher around 2,019. 34 percent of our population is Hispanic and about 29 percent are seniors. Population has been stable and consistent with PSU growth percent but is beginning to see some upward movement because of housing need and opportunity. Projection for new home is estimated to be around 10 new homes per year. We are just now finalizing a new sub division.
Observations about Housing	Housing has been limited with a very high percent of manufactured housing inventory. This drives a certain population demographic which is not a healthy balance to the community. Code provisions have been made to encourage increased housing and levels (types) of housing that will meet a higher income levels in order to boost the economy and standard of living as well as provide for the increased demand. 3 and 4 BDRM homes are in the development stages.
Planned Housing Dev./Est. Year Completion (for detailed information submissions please use the Housing Development Survey)	Two to three sub-divisions are planned for this next year and more over the next 3-5 years. We are in the middle of a Buildable Land Inventory evaluation. The projected home opportunity of land developable is between 30 and 150 homes in the noted time frame. We continually see in-fill development for single lots (single family unit) at about 5 per year. From Housing Development Survey: 4 single family residential in various in-fill locations; 2 subdivisions could be built over next 2 years with 25 single family homes - both are going through plat approval process now, target price for 1800 square foot homes will range from $190,000-$203,000.
Planned future construction of Group Quarters facilities	None at this time.
Future Employers Locating to the Area	We are working with a four businesses (confidential at this time) who could see employment of 4-10 individuals each in the next year. The City's direction and emphasis for economic development is the high priority equal to housing. There is major infrastructure projects over the next year in Irrigon which ranges between 8 to 10 million dollars.

Capacity and condition of infrastructure to accommodate growth.	Sewer is a major issue for Irrigon and is slotted for a major upgrade in 2020. Streets continue to be an issue but with available funding there will be improvements over the next 3 years. This increases livability which is an important factor to seeing growth in our community.
Any Promotions (promos) and Hindrances (hinders) to Population Growth; Other notes	High utility rates continue to limit Irrigon. However, there is great opportunity and improvements to the public systems underway. Over the last three (3) years we have seen the population increase even with the perceived high utility rates.
Highlights or summary from planning documents and studies on influences and anticipation of population and housing growth (including any plans for UGB expansion and the stage in the expansion process)	We continue to convert our sewer system from liquid effluent to a standard conventional system. This type system has limited growth. New roads, pedestrian enhancements and developable land opportunities are beginning to have a positive impact on growth and increased population. We are adjacent to a major work center area (Port of Morrow) so great employment opportunities are available. Recently the Development Code was updated to simplify standards/requirements for ease of understanding and getting applicants to a faster yes. Continuing to streamline Irrigon's Municipal Code and place online will improve public's involvement.
Comments?	

Aaron Palmquist	City of Irrigon	City Manager
Name	*Organization*	*Title*

Appendix B: Specific Assumptions

Boardman

We assume strong housing unit growth rates will taper throughout the forecast period. We assume the occupancy rate will decline slightly from 93.9 percent to 92.9 percent and persons per household (PPH) will decline slightly from 3.11 to 3.03 for the 25-year horizon. We assume the group quarters population to remain at 58.

Heppner

We assume no change to the housing unit inventory for the forecast period. We assume the occupancy rate will decline slightly from 85.5 percent to 84.5 percent and persons per household (PPH) will decline slightly from 2.25 to 2.18 for the 25-year horizon. We assume the group quarters population to remain at 4.

Ione

We assume the housing unit growth to be slow, but stable throughout the forecast period. We assume the occupancy rate will decline slightly from 84.0 percent to 79.0 percent and persons per household (PPH) will decline slightly from 2.43 to 2.36 for the 25-year horizon. There is no group quarters population in this sub-area.

Irrigon

We assume strong housing unit growth rates will taper throughout the forecast period. We assume the occupancy rate to be stable at 94.1 percent while persons per household (PPH) will decline slightly from 2.96 to 2.91 for the 25-year horizon. We assume the group quarters population to remain at 6.

Lexington

We assume no change to the housing unit inventory for the forecast period. We assume the occupancy rate to be stable at 93.2 percent while persons per household (PPH) will decline slightly from 2.48 to 2.32 for the 25-year horizon. There is no group quarters population in this sub-area.

Outside UGBs

We assume steady housing unit growth rates will taper throughout the forecast period. We assume the occupancy rate will decline from 81.4 percent to 71.2 percent and persons per household (PPH) will decline from 2.71 to 2.22 for the 25-year horizon. There is no group quarters population in this sub-area.

Appendix C: Detailed Population Forecast Results

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

Population Forecasts by Age Group / Year	2019	2020	2025	2030	2035	2040	2044
00-04	769	778	772	775	772	761	763
05-09	869	856	876	876	888	889	882
10-14	937	955	865	893	902	920	925
15-19	879	872	888	812	847	861	879
20-24	784	802	686	707	654	688	701
25-29	689	738	731	631	658	612	641
30-34	653	642	831	831	724	758	719
35-39	814	840	709	909	918	804	838
40-44	764	767	873	744	962	976	882
45-49	734	762	749	862	742	965	980
50-54	662	653	766	761	873	756	937
55-59	756	731	668	790	786	905	810
60-64	841	860	733	676	799	799	899
65-69	704	726	814	700	651	775	779
70-74	540	572	667	755	656	613	708
75-79	354	367	485	574	656	573	546
80-84	214	222	273	374	457	526	475
85+	179	185	228	291	400	517	607
Total	**12,143**	**12,329**	**12,615**	**12,960**	**13,345**	**13,698**	**13,972**

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

Area / Year	2019	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2069
Morrow County	12,143	12,329	12,615	12,960	13,345	13,698	14,041	14,392	14,752	15,121	15,499	15,809
Boardman	4,201	4,574	4,797	5,068	5,348	5,631	5,912	6,221	6,583	6,888	7,167	7,397
Heppner	1,303	1,295	1,267	1,255	1,249	1,247	1,244	1,222	1,184	1,167	1,160	1,154
Ione	332	331	333	337	341	344	346	348	348	350	354	357
Irrigon	2,268	2,269	2,394	2,572	2,718	2,850	2,992	3,163	3,365	3,533	3,685	3,811
Lexington	255	254	249	244	241	239	238	232	222	217	214	212
Outside UGB Area	3,784	3,607	3,575	3,483	3,448	3,387	3,308	3,208	3,051	2,967	2,919	2,877