

# Coordinated Population Forecast



**2021**

Through

**2071**

**Lincoln  
County**

Urban Growth

Boundaries (UGB)

& Area Outside UGBs

Photo Credit: Sandy Horvath-Dori, 8 January 2012.

[https://commons.wikimedia.org/wiki/File:Harbor Newport Oregon \(6676573747\).jpg](https://commons.wikimedia.org/wiki/File:Harbor_Newport_Oregon_(6676573747).jpg)

**Coordinated Population Forecast for Lincoln County, its Urban Growth  
Boundaries (UGB), and Area Outside UGBs**

**2021 – 2071**

**Prepared by**

**Population Research Center**

**College of Urban and Public Affairs**

**Portland State University**

**June 30, 2021**

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## How to Read this Report

This report should be read with reference to the documents listed below, which are downloadable on the Forecast Program website (<https://www.pdx.edu/population-research/population-forecasts>).

- *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 (2021-2071).

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# 1. Methodology

The cohort component model and housing unit method were used for the population forecast. Details are described in the methodology document posted on the Population Research Center's website.

## 1.1 Data and Assumptions

This section lists the source of data and assumptions applied to the forecast.

1. Fertility and mortality:
  - a) Deaths and survival rates were projected based on historical trends (2000-2019) and based on the methodology published by Clark and Sharrow 2011<sup>1</sup>. Mortality rates for the 85+ age group were further divided into 5-year age groups up to 100+.
  - b) We applied some constraints to ensure the number of deaths maintain in a reasonable range as the elderly populations grow, accounting for positive factors associated with life expectancy (e.g., advanced medical treatments, life-style changes).
  - c) Fertility rates were projected based on historical trend up to 2030 and remain constant afterwards.
  - d) Births and deaths were estimated for the year 2020 and 2021 to account for the events that take place between July 2019 and July 2022. The 2020 preliminary data from the Oregon Health Authority (OHA) was used at the time of this report.
2. Net migration rates were based on the data published by the University of Wisconsin-Madison for 2000-2010, with minor adjustments made based on the following assumptions:
  - a) In/out migration would gradually approach zero for populations over 65, assuming there is minimal moving for people as they approach the age of 85+.
  - b) Considered and mitigated the uncertainties of in/out migration among college students when applicable.
  - c) Considered the impacts associated with the COVID-19 pandemic that has been taking place since March 2020. Assumptions were made based on the differences between the 2019 and 2020 net migration data. Details are described in the methodology documentation.
3. Populations in sub-areas were forecasted using the housing unit method based on survey responses and historical pattern.
4. COVID-19 Impacts:
  - a) COVID-19 impacts on the components of population were not incorporated in the forecast because they are considered as short-term and temporary impacts that do not expect to post significantly influence the long-term population trends.
  - b) The impacts are reflected for the years 2020 and 2021 in some individual figures related to the population components (e.g., births and deaths, net migration) for illustration purpose. The 2020 and 2021 estimates shown in the historical figures are preliminary and may change when the data are finalized by the organizations that produce them.

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<sup>1</sup> <https://csss.uw.edu/research/working-papers/contemporary-model-life-tables-developed-countries-application-model-based>



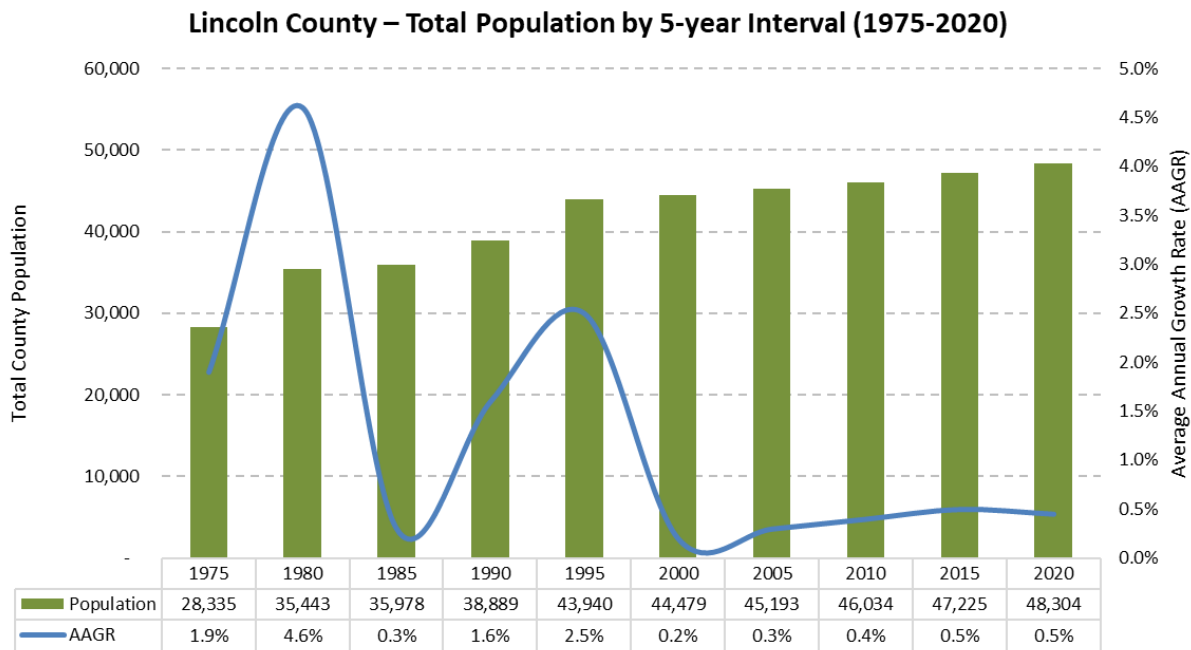
## 2. County Summary

Lincoln County’s seat, Newport, is Oregon's secondary fishing port after Astoria. Second home buying is an issue to consider when forecasting housing units. Survey response do not cite issues like low vacancy or a hot real-estate market, nor significant economic development activities. County-wide population is projected to reach a relatively slow growth after 2040. Information received through the general surveys suggest that coastal cities, such as Depoe Bay, attract more purchases of secondary homes.

## 3. Historical Trend and Population Forecast

### 3.1 County Population

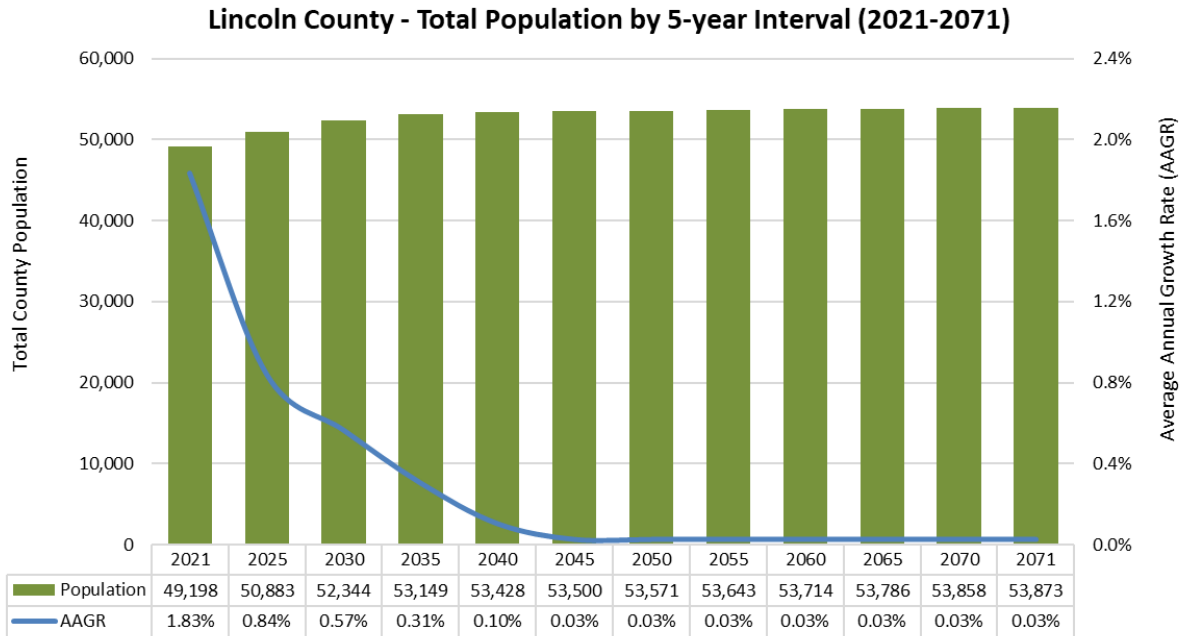
Lincoln County has experienced robust growth in the late 1970s and early 1990s. AAGR reached a peak of 4.6% in 1980 as the county population increased from 28,335 in 1975 to 35,443 in 1980 (Figure 1). The county-wide population growth has slowed after 1995 and the AAGR has remained at or below 0.5%. Lincoln County’s population is currently at 48,304 based on the 2020 population estimate from the Population Research Center.



Source: U.S. Census Bureau, 1980, 1990, 2000, and 2010 census; PRC Annual Estimates, 1975, 1985, 1995, 2005, 2015, and 2020.

**Figure 1. Historical total county population and AAGR, 1975-2020.**

The county’s population is projected to experience a growth rate of 1.83% in 2021, as shown in Figure 2. This gives Lincoln County a population of 50,883 in 2025. The population returns to a lower growth rate afterwards and by 2040, the AARG decreases to 0.05%. If this trend continues after 2045, the total population will be 53,873 in 2071. Between 2021 and 2045, there is an 8.7% growth in total county population. Under the assumption that the 2045 AAGR continues over the rest of the forecast timeframe, between 2045 and 2071, there is a 0.7% growth.



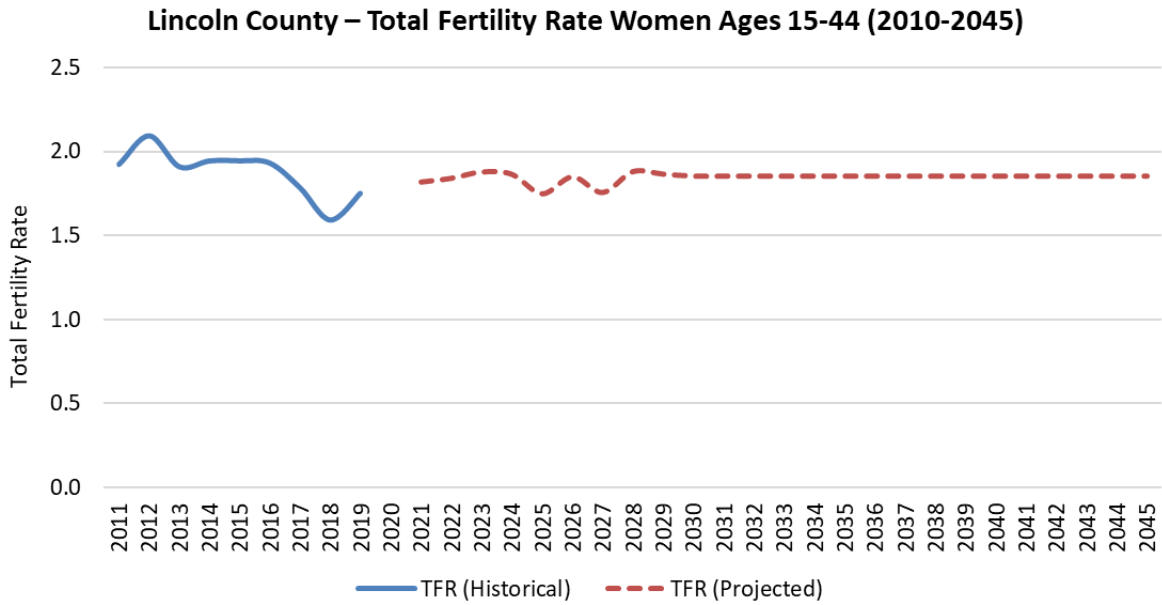
Source: Forecast by Population Research Center (PRC).

**Figure 2. Forecasted total county population and AAGR, 2021-2071.**

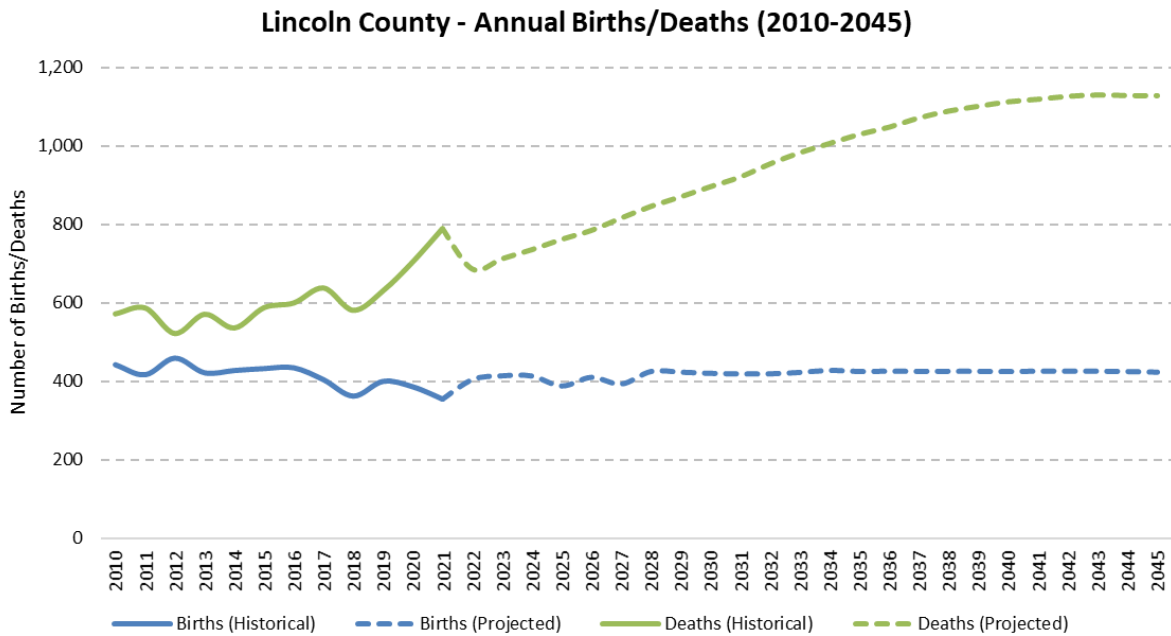
### 3.2 Births and Deaths

The total fertility rate (TFR) for women between the ages of 15 and 44 is projected to remain under 2.0 throughout the forecast timeframe (Figure 3). After reaching a peak TFR of 2.1 in 2012, Lincoln County’s TFR has experienced some decline. In 2018, the TFR was down to 1.6 but increased to 1.75 in 2019. Due to the COVID-19 pandemic in 2020, the fertility rate may have experienced short-term changes that does not follow the historical pattern. Therefore, without finalized 2020 birth data at the time of this report, the TFR in 2020 was intentionally left out of Figure 3. Nonetheless, uncertainties associated with COVID-19 is expected to diminish in the next several years.

As shown in Figure 4, the number of births is projected to remain relatively stable compared to the number of deaths. Historical data has shown that Lincoln County’s annual births were between 362 and 460 during the period of 2010-2019. Based on the preliminary 2020 and 2021 data, the COVID-19 pandemic did not appear to post significant impacts on the number of births in Lincoln County. In contrary, the number of deaths indicated an apparent increase in 2020, which may be associated with the COVID-19 pandemic. Annual deaths continue to growth throughout the forecast timeframe and reaches 1,128 in 2045, compared to the projected annual deaths of 686 in 2022. The increase in deaths can be attributed to the increase of older population county-wide.



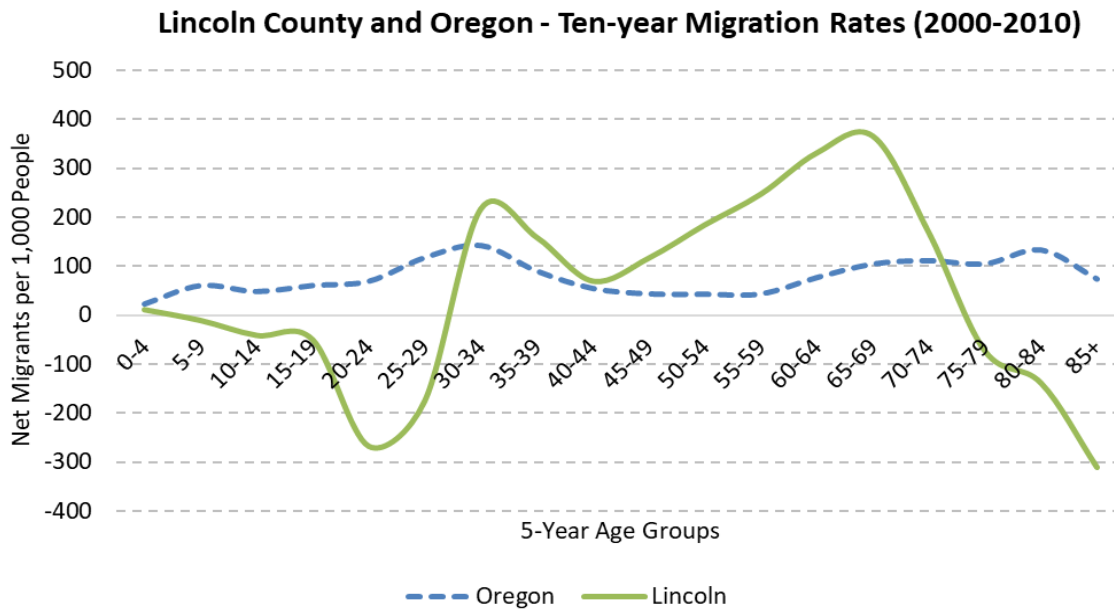
**Figure 3. Historical and projected total fertility rate (TFR), 2010-2045.**



**Figure 4. Historical and projected annual births/deaths trend, 2010-2045.**

### 3.3 Migration

Figure 5 shows the historical migration rate from 2000 to 2010 for each 5-year age group. Lincoln County has a significantly higher net migration in population aged over 50 and below 70. This implies that people at or near retirement age are more likely to move to Lincoln County, which explains the expected increase in older populations and higher annual death toll. Compared to the state-wide net migration rates, Lincoln County has a lower net migration in the younger ages, especially in the 20-24 and 25-29 age groups.

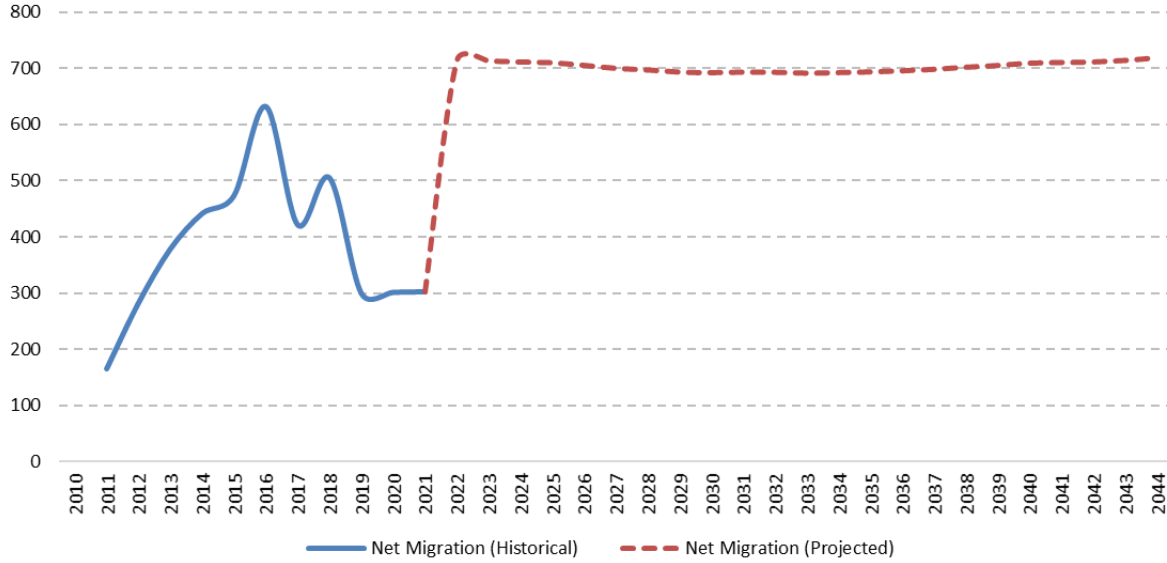


Sources: Center for Demography and Ecology, University of Wisconsin-Madison. Calculated by Population Research Center (PRC).

**Figure 5. Net migration rates by age in Lincoln County and Oregon, 2000-2010.**

Net migration is projected to increase compared to the historical pattern and the annual net migration is projected to remain at around 700 through 2045 (Figure 6). Net migration is estimated to experience a drop in 2020 and 2021 due to impacts associated with the COVID-19 pandemic. As seen in Figure 5, Lincoln County is likely to have higher net migration in the older age groups. As the population ages and life expectancy increases, there is expected to be more in-migration to Lincoln County.

### Lincoln County - Annual Net Migration (2011-2045)

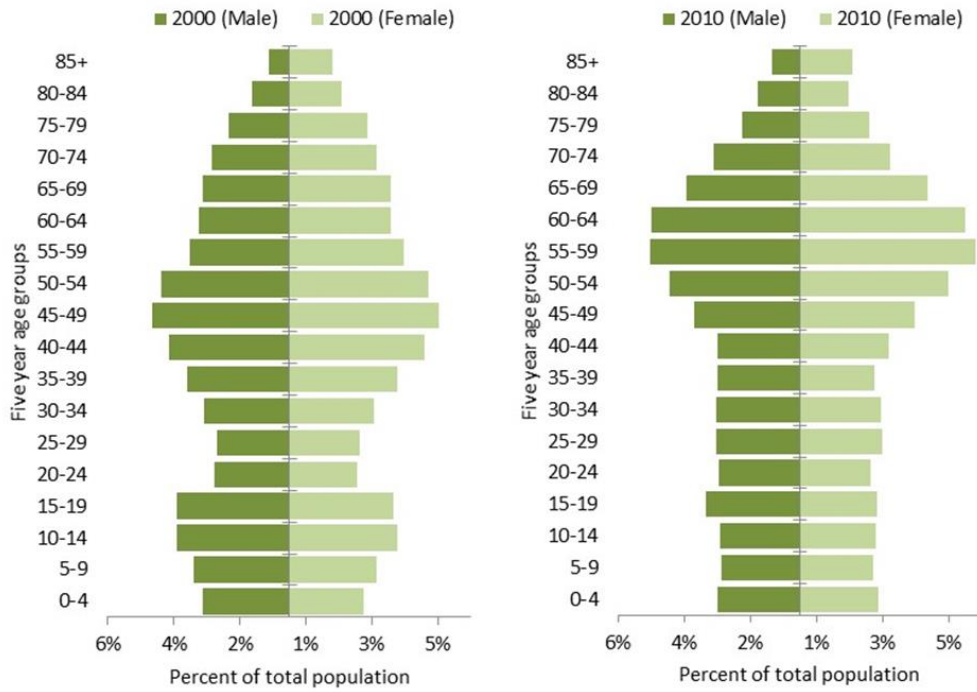


Sources: PRC Estimates. Calculated by Population Research Center (PRC).

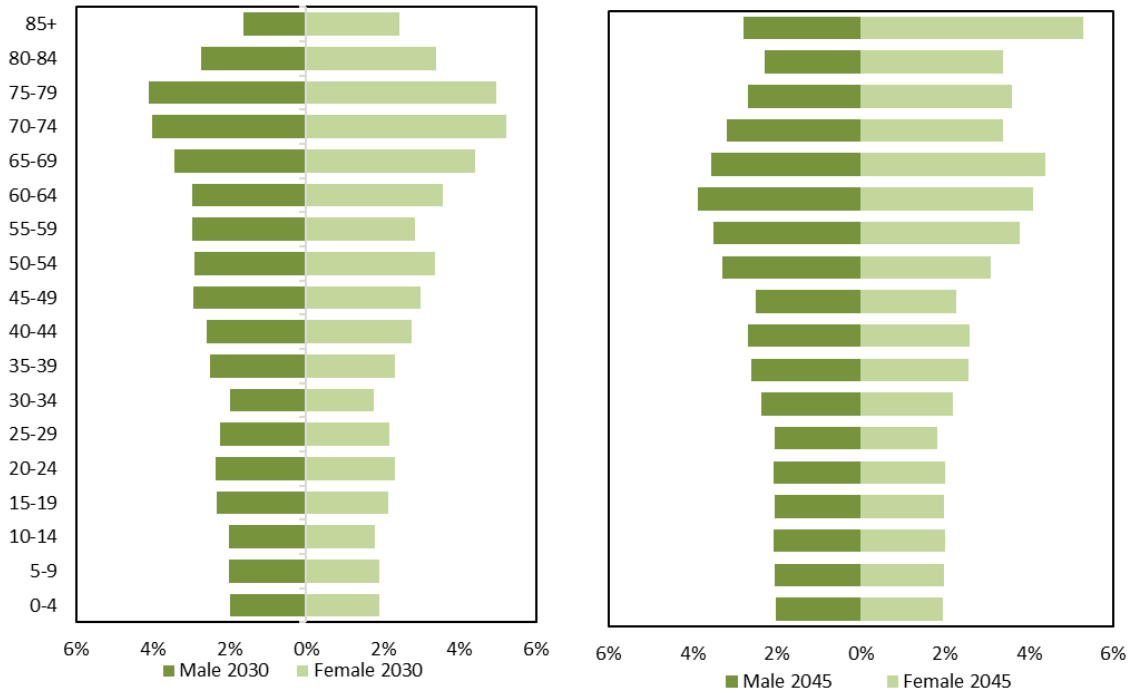
**Figure 6. Historical and projected total county net migration, 2011-2045.**

### 3.4 Age Structure

The 2010 census data showed that Lincoln County has a relatively larger population in the 55-59 and 60-65 age groups, which resulted from the 44-49 and 50-54 groups aging forward from the 2000 census. The proportion of the population in the 10-14 and 15-19 age groups declined in 2010 compared to the 2000 census (Figure 7). The increase in population share for the older age groups continues to increase as the share of the younger age groups decrease. In 2030, age groups under 35 each account for around 4% of the county population while age groups between 65 and 79 each account for at least 7% of the total population. In 2045, population over 65 continues to account for the largest proportion in the county and population 85 and over significantly increases its share to 8%.



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



Source: Forecast by Population Research Center (PRC)

Figure 7. Population structure by age and sex, 2000, 2010, 2030, and 2045.

### 3.5 Race/Ethnicity

Table 1 shows the race/ethnicity characteristics in Lincoln County based on the 2000 and 2010 census. The 2019 ACS estimate is also shown for comparison. Race factor was not included as a part of the forecast but is provided in this report for reference. The Hispanic/Latino population showed the largest increase in absolute number compared to other race/ethnicity groups. Between 2000 and 2019, there was an estimate of 2,328 increase in the Hispanic/Latino population, showing a 109.9% change. Between 2000 and 2019, population identified as American Indian/Alaska Native indicated a -7.9%. Data for population identified as “Some other race alone” was not available in the 2019 estimate.

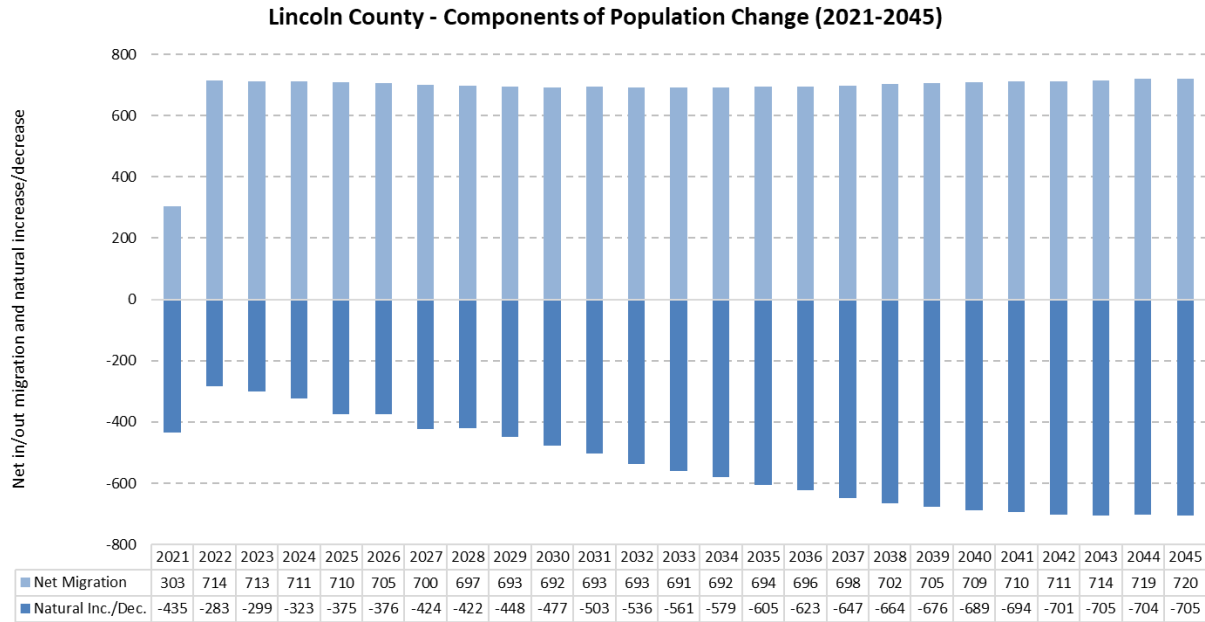
**Table 1. County population by race/ethnicity.**

	2000		2010		2019 Estimates		Absolute Change (2000-2019)	Relative Change (2000-2019)
<b>Total population</b>	44,479	100.0%	46,034	100.0%	48,547	100.0%		
<b>Hispanic or Latino (of any race)</b>	2,119	4.8%	3,655	7.9%	4,447	9.2%	2,328	109.9%
<b>Not Hispanic or Latino</b>	42,360	95.2%	42,379	92.1%	44,100	90.8%	1,740	4.1%
<b>White alone</b>	39,260	88.3%	38,863	84.4%	40,034	82.5%	774	2.0%
<b>Black or African American alone</b>	113	0.3%	159	0.3%	218	0.4%	105	92.9%
<b>American Indian and Alaska Native alone</b>	1,296	2.9%	1,433	3.1%	1,193	2.5%	-103	-7.9%
<b>Asian alone</b>	412	0.9%	482	1.0%	603	1.2%	191	46.4%
<b>Native Hawaiian and Other Pacific Islander alone</b>	66	0.1%	52	0.1%	96	0.2%	30	45.5%
<b>Some other race alone</b>	31	0.1%	36	0.1%	-	0.0%	-	-
<b>Two or more races</b>	1,182	2.7%	1,354	2.9%	1,956	4.0%	774	65.5%

Source: U.S. Census Bureau, 2000 and 2010 census, 2019 ACS Estimates; Calculated by Population Research Center (PRC).

### 3.6 Component of Change

The component of population changes up to 2045 is shown in Figure 8. The darker blue shade indicates the natural increase/decrease, while the lighter blue shade indicates the net migration. Positive net migration implies that in-migration is higher than out-migration, and vice versa. At the county level, net migration remains positive, while natural decrease continues to occur due to higher number of deaths than births. As the annual deaths toll increases, net migration and natural decrease balance out one another, leading to slow population growth by 2045. It is important to note the bar representing 2021 incorporates CONVID-19 related impacts. This short-term impact was not incorporated in the long-term population forecast.



Source: Forecast by Population Research Center (PRC).

**Figure 8. Components of population change, 2021-2045.**

### 3.7 Sub-Area Population

Sub-area populations within and outside the urban growth boundaries (UGBs) are forecasted using the housing unit method. In general, populations within Lincoln County’s UGBs increase over the 2020-2045 period. As shown in Table 2, Newport and Toledo are projected to experience some decline within their UGB between 2045 and 2070. Depoe Bay shows the most robust growth in UGB population, with a 3.6% AAGR between 2020 and 2045. The county share of the Lincoln City UGB is projected to remain slightly above 20%. By 2045, Lincoln City is projected to have 10,827 people within its UGB, compared to 9,671 people in 2020.

**Table 2. Historical and forecasted population and AAGR in Lincoln County and its sub-areas.**

	Historical			Estimates		Forecast			
	2000	2010	AAGR (2000-2010)	2020	AAGR (2010-2020)	2045	2070	AAGR (2020-2045)	AAGR (2045-2070)
<b>Lincoln County</b>	44,479	46,034	0.3%	48,304	0.5%	53,500	53,858	0.4%	0.0%
<b>Outside UGBs</b>	17,036	17,216	0.1%	17,064	-0.1%	17,649	16,041	0.1%	-0.4%
<b>Larger Sub-Areas</b>									
Lincoln City	8,752	8,987	0.3%	9,671	0.7%	10,827	10,835	0.5%	0.0%
Newport	9,971	10,431	0.5%	11,882	1.3%	12,223	11,082	0.1%	-0.4%
<b>Smaller Sub-Areas</b>									
Depoe Bay	1,017	1,337	2.7%	1,450	0.8%	3,602	6,602	3.6%	2.4%
Siletz	1,150	1,322	1.4%	1,302	-0.1%	1,542	1,676	0.7%	0.3%
Toledo	3,698	3,783	0.2%	3,782	0.0%	3,827	3,422	0.0%	-0.4%
Waldport	2,229	2,258	0.1%	2,373	0.5%	2,810	3,014	0.7%	0.3%
Yachats	626	701	1.1%	780	1.1%	1,020	1,187	1.1%	0.6%

Sources: U.S. Census Bureau; PRC Estimates; Forecast by Population Research Center (PRC).



### 3.7.1 Larger UGBs

UGBs that has a population of more than 8,000 in the 2010 census are considered larger UGBs. Lincoln City and Newport account for the largest share of county population. Although the population share of the Newport UGB is projected to decrease from 24.6% in 2020 to 22.8% in 2045, the Lincoln County UGB is likely to increase its population share. The two sub-areas accounts for around 43.0% of the county population. Population outside of the UGBs is projected to decrease from 35.3% in 2020 to 33.0% in 2045, and again to 29.8% in 2070.

**Table 3. Population forecast for larger sub-areas and their shares of county population.**

	Population			Share of County Population		
	Estimates	Forecast		Estimates	Forecast	
	2020	2045	2070	2020	2045	2070
<b>Lincoln County</b>	48,304	53,500	53,858	100%	100%	100%
<b>Outside UGBs</b>	17,064	17,649	16,041	35.3%	33.0%	29.8%
<b>Larger Sub-Areas</b>						
Lincoln City	9,671	10,827	10,835	20.0%	20.2%	20.1%
Newport	11,882	12,223	11,082	24.6%	22.8%	20.6%

Sources: PRC Population Estimates, 2020. Forecast by Population Research Center (PRC)  
 Note: Larger sub-areas refer to areas with populations over 8,000 by 2010.

### 3.7.2 Smaller UGBs

Among smaller sub-areas, Depoe Bay shows a significant increase in its share of the county population. The total population in the Depoe Bay UGB can reach 3,602 in 2045, a 148% increase over a 25-year period. Because of this rapid growth, the Depoe Bay UGB can account for 6.7% of the county population, compared to just 3.0% in 2020. With the exception of Toledo, all smaller sub-areas are projected to gain more shares of the county population by 2070.

**Table 4. Population forecast for smaller sub-areas and their shares of county population.**

	Population			Share of County Population		
	Estimates	Forecast		Estimates	Forecast	
	2020	2045	2070	2020	2045	2070
<b>Lincoln County</b>	48,304	53,500	53,858	100%	100%	100%
<b>Outside UGBs</b>	17,064	17,649	16,041	35.3%	33.0%	29.8%
<b>Smaller Sub-Areas</b>						
Depoe Bay	1,450	3,602	6,602	3.0%	6.7%	12.3%
Siletz	1,302	1,542	1,676	2.7%	2.9%	3.1%
Toledo	3,782	3,827	3,422	7.8%	7.2%	6.4%
Waldport	2,373	2,810	3,014	4.9%	5.3%	5.6%
Yachats	780	1,020	1,187	1.6%	1.9%	2.2%

Sources: Forecast by Population Research Center (PRC)  
 Note: Larger sub-areas refer to areas with populations over 8,000 by 2010.

## 4. 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.

## 5. Appendix A: General Survey and Responses for the Oregon Forecast Program

SUMMARY	Town of roughly 1000 people along the coast, 20 minutes north of Newport. Tourism is the main economic base in town, and second-home purchases are common.
County	Lincoln
Timestamp	11/23/2020 11:13
Email Address	recorder@cityofdepoebay.org
Jurisdiction	City of Depoe Bay
Name and Title	Barbara Chestler City Recorder
Observations about Population (e.g. birth rates, aging, immigration, racial and ethnic change)	
Observations about Housing (Vacancy rates, seasonal occupancy, demolitions, renovations)	There has been a lot of real estate transactions. People are making purchases. However a great deal of the transactions appear to be people that this is a second home.
Planned Housing Developments or Group Quarters Facilities (including number of units, occupancy, and estimated year of completion)	Final - 2034
Economic Development (e.g. new employers or facilities, including number of jobs and est. year of completion)	This is a small coastal tourist town. Driven by vacation rentals.
Infrastructure Projects (e.g. transportation and utilities)	Oregon Department of Transportation is doing an urbanization project on Highway 101 on the South of the Bridge. This will create more parking for tourist and sidewalks and crosswalks.
Other Factors Promoting Population or Housing Growth	It's the coast.
Other Factors Hindering Population or Housing Growth	

<p>Other findings, including, if not discussed above:</p> <p>(a) Summary of current or proposed policies affecting growth in your jurisdiction. (b) Findings related to growth or population change from studies conducted in your jurisdiction. (c) The effects of wildfires or other disasters in your jurisdiction on housing, employment/economics, and infrastructure. (d) The effects of the COVID-19 pandemic and policy measures on employment and current and planned developments.</p>	
<p>Comments?</p>	

SUMMARY	NA
County	Lincoln
Timestamp	11/5/2020 16:49
Email Address	
Jurisdiction	
Name and Title	
Observations about Population (e.g. birth rates, aging, immigration, racial and ethnic change)	
Observations about Housing (Vacancy rates, seasonal occupancy, demolitions, renovations)	
Planned Housing Developments or Group Quarters Facilities (including number of units, occupancy, and estimated year of completion)	
Economic Development (e.g. new employers or facilities, including number of jobs and est. year of completion)	
Infrastructure Projects (e.g. transportation and utilities)	
Other Factors Promoting Population or Housing Growth	
Other Factors Hindering Population or Housing Growth	

<p>Other findings, including, if not discussed above:  (a) Summary of current or proposed policies affecting growth in your jurisdiction. (b) Findings related to growth or population change from studies conducted in your jurisdiction. (c) The effects of wildfires or other disasters in your jurisdiction on housing, employment/economics, and infrastructure. (d) The effects of the COVID-19 pandemic and policy measures on employment and current and planned developments.</p>	
<p>Comments?</p>	<p>chsiletz@qwestoffice.net</p>

## 6. Appendix B: Detail Population Forecast Results

<b>Age</b>	<b>2020</b>	<b>2021</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045</b>
<b>0-4</b>	2,002	1,916	2,030	2,038	2,107	2,125	2,126
<b>5-9</b>	2,252	2,222	1,950	2,053	2,061	2,131	2,150
<b>10-14</b>	1,978	2,353	2,289	1,994	2,099	2,107	2,179
<b>15-19</b>	2,286	2,297	2,406	2,339	2,037	2,145	2,153
<b>20-24</b>	2,002	2,016	2,320	2,443	2,375	2,069	2,178
<b>25-29</b>	2,028	2,101	1,903	2,313	2,437	2,368	2,062
<b>30-34</b>	2,484	2,350	2,303	1,960	2,388	2,514	2,445
<b>35-39</b>	2,591	2,627	2,599	2,524	2,151	2,620	2,758
<b>40-44</b>	2,563	2,719	2,802	2,799	2,718	2,317	2,821
<b>45-49</b>	2,651	2,443	2,899	3,095	3,089	3,003	2,554
<b>50-54</b>	2,967	2,869	2,738	3,296	3,518	3,512	3,412
<b>55-59</b>	3,488	3,322	3,129	3,043	3,670	3,912	3,908
<b>60-64</b>	4,380	4,418	3,859	3,414	3,315	4,003	4,263
<b>65-69</b>	4,778	5,271	4,829	4,094	3,630	3,515	4,255
<b>70-74</b>	4,151	4,633	5,200	4,840	4,102	3,647	3,519
<b>75-79</b>	2,788	2,763	3,955	4,747	4,413	3,743	3,352
<b>80-84</b>	1,574	1,571	2,115	3,218	3,853	3,579	3,036
<b>85+</b>	1,341	1,309	1,557	2,133	3,187	4,118	4,329

Source: Forecast by Population Research Center (PRC).

## 7. Appendix C: Comparison of Current and Previous Forecast

To provide a better understanding of the changes since the last round of forecast for the Region 4 counties, this section compares the current 2021 total county population forecast to the population forecast published by the Population Research Center in 2017. The 2019 forecast of Lane County was used since Lane County was forecasted as part of the Region 1 counties in 2019.

