## Coordinated Population Forecast



# Jefferson 

## County

Urban Growth
Boundaries (UGB)
\& Area Outside UGBs

㭆 Population Research Center
PORTLAND STATE UNIVERSITY

## 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 subareas within each county for each five-year interval of the forecast period (2022-2072).


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# Coordinated Population Forecast for Jefferson County, its Urban Growth Boundaries (UGB), and Area Outside UGBs <br> 2022-2072 

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## 1. Methodology

Counties were forecast using the cohort component method. Deaths and survival rates were projected based on historical trends (2000-2020) and based on the methodology published by Clark and Sharrow 2011 ${ }^{1}$. Mortality rates for the 85+ age group were further divided into 5-year age groups up to 100+ (i.e., 85-89, 90-94, 95-99, and 100+) using the proportion of each age group calculated from the single-year age group data in the 2010 decennial census. Age specific fertility rates were projected based on historical trends up to 2035 and held constant afterwards. The 2021 births data was not included in the projection model for two reasons: 1) the 2021 vital statistics were not finalized at the time of this report, and 2) due to uncertainties related to COVID-19 impacts on births and deaths, incorporating the 2021 births data into births and fertility rate projection may lead to errors such as underestimation. Nonetheless, the 2021 births and deaths numbers are included in Figures 3 and 4 to provide a more consistent visualization. Since the 2020 deaths data may be impacted by COVID-19, deaths were adjusted based on CDC's estimated excess deaths when forecasting future mortality rates to ensure these rates were not affected by short-term pandemic-related deaths.

Annual net migrants were calculated based on published data gathered from the IRS and the U.S. Census Bureau's American Community Survey (ACS) Public Use Microdata Sample (PUMS) and Population Estimates Program (PEP). Historical county level in-, out-, and net migration (domestic and foreign) were obtained from IRS and PEP (1991 - 2020). IRS provides domestic in- and out- while PEP provides domestic and foreign net. Age structures of gross migrants by direction (domestic in- and out- and foreign in-migration) were calculated for ACS Public Use Microdata Areas (PUMAs) which were used for migration to or from constituent counties. Future total net migrants were projected by applying an ARIMA model appropriate for each individual county.

The PRC estimate formed the baseline of the forecast for individual UGBs, with the difference in population between incorporated city and UGB boundaries estimated based on assignment of population in individual census blocks in each county into a UGB area and or city area, or balance of county. Populations in individual UGBs or in the balance of county were forecast by projections of individual components of the housing unit method of population estimation. Historical rates of population and housing unit change since 1990 were used to generate a weighted average annual rate of change. Jurisdiction-level vacancy rates and average household size were held constant from the 2020 decennial census. Population forecasts for sub-areas were then controlled by the county-level forecasts, e.g., sub-area populations were allocated using the county total (top-down approach), and the population summation of the sub-areas does not exceed the county population.

Forecast Program surveys were used to make adjustments to the baseline results for counties and UGB areas. Recent development and plans obtained from surveys were generally implemented in the first 510 years of the forecast, except where they indicate a change in long-run outlook. For the immediate period (2022-2030), the development rate derived from the surveys or received reports was applied before 2030. If no planned housing units were reported, recent development rate (2010-2020) or the overall county rate was used. For the later period (2030-2047), housing unit growth was based on either

[^2]a weighted average or an extrapolation of historic trend (1990-2020). Assumptions were made for individual cities based on knowledge obtained from the general surveys, housing surveys, as well as documentations (e.g., housing needs assessment, comprehensive development plans) received from the cities.

Many uncertainties still remain in understanding the climate change impacts on migration. Thus, specific scenarios of climate change, political unrest, or other shocks were not reflected in the current forecast. The forecast program methodology is described in further detail in an accompanying report available on the Population Research Center's website.

## 2. County Overview

According to the 2020 census, Jefferson County has a population of 24,502 . Its county seat, Madras city, has 7,456 people as recorded by the 2020 census. Jefferson County's population has maintained a population AAGR of at least $1 \%$ in the last eight censuses. Most recently, the county has an AAGR of $1.2 \%$ between the 2010 and 2020 censuses. The county population is projected to continue to grow at AAGRs between $0.7 \%$ and $0.8 \%$ for the next 50 years. Madras is the county's most populated city and absorbs many people seeking lower housing prices and living expenses. Based on the general survey responses received from Madras, the city has multiple housing projects completed in the past several years and plans to add more construction projects to accommodate people moving from cities with higher housing prices, for instance, Bend and Redmond. Culver city also suggested potential growth with several housing development projects under review.

## 3. Historical Trend and Population Forecast

### 3.1 County Population

As illustrated in the Figure 1, Jefferson County experienced a peak growth in the 1950 census in which the AAGR reached $10 \%$. Growth rate has declined since the 1950s but still remain above $1.0 \%$ in the past seven decennial censuses. Both the 1980 and 2000 censuses indicated an AAGR of over 3.0\%. The 2020 census recorded a county population of 24,502 , which indicates a $29 \%$ growth from the 2000 census. During the forecast period, the county population is projected to have an AAGR between $0.7 \%$ and $0.8 \%$. The county's population is projected to have a slightly higher AAGR in the second half of the 50 -year forecast time horizon, which may be associated with future shifts in age structure and changes in components such as the number of births.

Historical Census Population


Sources: US Census Bureau, 1950, 1060, 1970, 1980, 1990, 2000, 2010, and 2020 Decennial Census.
Figure 1. Historical total county population and AAGR, 1950-2020.


Sources: Forecasted by Population Research Center (PRC).
Figure 2. Forecasted total county population and AAGR, 2022-2072.

### 3.2 Births and Deaths

The total fertility rate (TFR) is shown in Figure 3. Jefferson County's TFR has declined from a high point of 3.1 in 2008 to 2.1 in 2020. Compared to Oregon state, which experienced a TFR drop from 1.7 to 1.4 between 2014 and 2020, Jefferson County's TFR has been higher than the state average. According to the preliminary 2021 births data, the county's TFR dropped to 2.0, but it is uncertain whether this drop is associated with COVID-19 or if it was a continuation of the historic pattern of varying TFR shown in the past 20 years. The TFR projection used data up to 2020 and was not significantly affected by any COVID19. The county TFR is projected to be around 2.0 throughout the forecast.

The actual number of births can follow a different trend than TFR if there are unusually high or low numbers of women of childbearing age in a given year. Figure 4 includes historical and projected births (and deaths) in the county. Annual births in the county has outnumbered annual deaths for most of the past two decades, except in 2020, which may be related to excess deaths associated with COVID-19. Annual births are projected to gradually increase over time, reaching 365 by 2047. Compared to 277 projected in 2022, this is an increase of 78 annual births.

In comparison, annual deaths are projected to grow in a pattern similar to that of births. The sudden increase in deaths shown in the 2021 OHA preliminary data may mainly be associated with excess deaths related to COVID-19. The impacts of COVID-19 was considered to be short-term in our forecast and the county annual deaths are expected to return to continue the pre-pandemic trend. Annual deaths are projected to outnumber annual births around 2030 as the older population increases. Toward the end of the first 25 years of the 50-year forecast time horizon, annual deaths appear to show signs of slower growth. These dynamics are due to aging in the population, with the aging of the large baby boom cohort accounting for most of the increases in death counts during 2020-2040.

Total Fertility Rate (TFR) for Women Age 15-44


Note: OHA's vital statistics for 2021 are preliminary at the time of this report.
Sources: Oregon Health Authority (OHA), Center for Health Statistics. Calculations and forecast by Population Research Center (PRC).

Figure 3. Historical and projected total fertility rate (TFR), 2000-2047.


Note: OHA's vital statistics for 2021 are preliminary at the time of this report.
Sources: Oregon Health Authority (OHA), Center for Health Statistics. Calculations and forecast by Population Research Center (PRC).

Figure 4. Historical and projected annual births/deaths trend, 2000-2047.

### 3.3 Migration

Age-specific migration was estimated based on the 2006-2010, 2011-2015, and 2015-2019 5-year ACS. The age patterns were used from the ACS but controlled to the number of total migrants by direction (in or out) and domestic (inter-state or between counties in Oregon) or foreign. The overall net migrants for each county were adjusted for consistency with annual PRC population estimates. Figure 5 illustrates the percentage each 10-year age group accounts for among total county net migration calculated based on the 2015-2019 ACS migration flow. Most age groups account for a positive share of net migration in the county, with the exception of the 10-19 and 85+ age groups. Many factors can impact the age-specific migration rates. For instance, college-age population may leave the county for education while population in the 20-39 age groups may move to the county with children. Older age groups are less likely to move in or out of the county.

Average Annual Net Migration Percentage by Broad Age Groups (2015-2019)


Sources: American Community Survey (ACS); Internal Revenue Services (IRS); US Census Bureau Population Estimated Program (PEP); Calculated by Population Research Center (PRC).

Figure 5. Percentage of net migrations by broad age groups in Jefferson County, 2015-2019.

As shown in Figure 6, the historic annual net migration in Jefferson County varied significantly between 2000 and 2020. County-wide net migration experienced some downturns in the late 2000s and early 2010s, which may be associated with the impacts of the economic recession during that period. The county experienced the highest number of net migrations in 2017, in which the annual net migration reached over 500. Annual net migration is projected to remain in the mid-range compared to historic data and gradually increase over time.

Annual Net Migration (2000-2047)


Sources: Internal Revenue Service (IRS) Tax Stats (1990-2020); American Community Survey (ACS); Population Estimates Program (PEP) 1990-2020. Calculations and forecast by Population Research Center (PRC).

Figure 6. Historical and projected total county net migration, 2000-2047.

### 3.4 Age Structure

As shown in Figure 7, the 2000 and 2010 censuses showed the population aging forward in the 10-year period. Population aged 5-14 accounted for the largest share of population in the 2000 census, which reflected the relatively higher county TFR compared to the state average. In the 2010 census, the share of the 5-14 age group declined along with the 30-44 age group. Among adults, the 45-49 age group accounted for the largest share of population in 2010, which is the 35-39 population aging forward from the 2000 census. In 2022, the share of the $25-34$ age group increased compared to the 2010 census, which indicates a possible higher in-migration for that age group. Older ae groups also increased their share as the population continued to age forward from 2010. The age pyramids for 2035 and 2047 indicates a shift in age structure as the population share for the middle age groups increase. The county is projected to have more younger populations over time as births number is projected to increase, as indicated in Figure 4.



## Sources: Calculations and forecast by Population Research Center (PRC).

Figure 7. Population structure by age and sex, historical (2000 and 2010) and forecast (2022, 2035, and 2047).

### 3.5 Race/Ethnicity

Table 1 shows the race/ethnicity characteristics in the county from the 2010 and 2020 censuses. Race/ethnicity was not included as a component in the current forecast model but is provided in this report for reference. Population identified as "two or more races" has the most relative gain compared to other race/ethnicity groups, followed by population of some other races alone. Among non-Hispanic and non-White alone populations, population identified as "Native Hawaiian and Other Pacific Islander alone" in the 2020 census experienced the highest percent loss. Hispanic or Latino remains as the largest non-white alone population in the county.

Table 1. County population by race/ethnicity.

| Hispanic or Latino and Race | 2010 |  | 2020 |  | Absolute Change | Relative Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Population | 21,720 |  | 24,502 |  | 2,782 | 12.8\% |
| Hispanic or Latino (of any race) | 4,195 | 19.3\% | 5,002 | 20.4\% | 807 | 19.2\% |
| Not Hispanic or Latino | 17,525 | 80.7\% | 19,500 | 79.6\% | 1,975 | 11.3\% |
| White alone | 13,429 | 61.8\% | 15,005 | 61.2\% | 1,576 | 11.7\% |
| Black or African American alone | 117 | 0.5\% | 134 | 0.5\% | 17 | 14.5\% |
| American Indian and Alaska Native alone | 3,360 | 15.5\% | 2,981 | 12.2\% | -379 | -11.3\% |
| Asian alone | 83 | 0.4\% | 131 | 0.5\% | 48 | 57.8\% |
| Native Hawaiian and Other Pacific Islander alone | 23 | 0.1\% | 18 | 0.1\% | -5 | -21.7\% |
| Some Other Race alone | 34 | 0.2\% | 66 | 0.3\% | 32 | 94.1\% |
| Two or More Races | 479 | 2.2\% | 1,165 | 4.8\% | 686 | 143.2\% |

Sources: US Census Bureau, 2010 and 2020 Decennial Census. Calculated by PRC.

### 3.6 Component of Change

The component of population changes up to 2072 is shown in Figure 8. The darker blue shade indicates the natural increase/decrease, while the lighter blue shade indicates the net migration. At the county level, natural decrease is expected to occur as annual deaths outnumbers annual births around 2030. Natural decrease is projected to continue afterwards for the rest of the forecast period. In the meantime, positive net migration is projected to continue and gradually increase over time, which promotes population growth in the forecast. Higher positive migration shown in 2020 reflects an average calculated from the 2016-2020 data, however, net migration is not projected to maintain the same level throughout the forecast period, which is why lower net migration is shown after 2020.

Components of Population Change by 5-year Intervals (2015-2072)


Figure 8. Historical and forecast components of population change, 2015-2072.

### 3.7 Sub-Area Population

Sub-area populations within and outside the urban growth boundaries (UGBs) are forecasted using the housing unit method, and then adjusted to be consistent with the county level forecast. As shown in Table 2, Jefferson County has three UGBs, Culver, Madras, and Metolius. Among all UGBs, Madras has the largest population, followed by the Culver UGB. The 2010 and 2020 censuses showed that the smallest UGB, Metolius, experienced the highest AAGR in the 2010s. Other sub-areas, including the area outside of UGBs, have also experienced at least 1.0\% AAGR between 2010 and 2020. As the largest UGB in the county, Madras is projected to maintain an AAGR similar to the 2010-2020 rate throughout the forecast period. In comparison, population outside of UGBs is expected to grow at a slower rate in the next 50 years.

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

|  | Historical |  |  | Forecast |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2010 | 2020 | $\begin{gathered} \text { AAGR } \\ (2010-2020) \\ \hline \end{gathered}$ | 2022 | 2047 | 2072 | $\begin{gathered} \text { AAGR } \\ (2022-2047) \\ \hline \end{gathered}$ | $\begin{gathered} \text { AAGR } \\ (2047-2072) \\ \hline \end{gathered}$ |
| Jefferson County | 21,720 | 24,502 | 1.2\% | 25,068 | 29,909 | 36,535 | 0.7\% | 0.8\% |
| Culver | 1,361 | 1,602 | 1.6\% | 1,664 | 2,128 | 2,632 | 1.0\% | 0.9\% |
| Madras | 7,000 | 7,964 | 1.3\% | 9,069 | 12,776 | 17,150 | 1.4\% | 1.2\% |
| Metolius | 732 | 1,015 | 3.3\% | 1,050 | 1,498 | 2,090 | 1.4\% | 1.3\% |
| Outside UGBs | 12,627 | 13,921 | 1.0\% | 13,284 | 13,506 | 14,662 | 0.1\% | 0.3\% |

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

### 3.7.1 UGBs Shares

As shown in Table 3, the Madras UGB continues to account for most of the population shares among all UGBs, reaching 46.9\% of the county population by 2072. The two smaller UGBs, Culver and Metolius, are also projected to increase their population share over time, especially Metolius, which increases its share by 1.5 percent points between 2022 and 2072. Toward the end of the forecast period, the Madras UGB is expected to replace non-UGB area as the most populated sub-area in the county. The larger population shares projected for the UGBs imply that more people are likely to move to the cities from rural areas.

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

|  |  | Population |  | Share of County Population |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{2 0 2 2}$ | $\mathbf{2 0 4 7}$ | $\mathbf{2 0 7 2}$ | $\mathbf{2 0 2 2}$ | $\mathbf{2 0 4 7}$ |
| Jefferson County | 25,068 | 29,909 | 36,535 |  |  |
| Culver | 1,664 | 2,128 | 2,632 | $6.6 \%$ | $7.1 \%$ |
| Madras | 9,069 | 12,776 | 17,150 | $36.2 \%$ | $42.7 \%$ |
| Metolius | 1,050 | 1,498 | 2,090 | $4.2 \%$ | $5.0 \%$ |
| Outside UGBs | 13,284 | 13,506 | 14,662 | $53.0 \%$ | $45.2 \%$ |

[^3]
## 4. Glossary of Key Terms

Average Annual Growth Rate (AAGR): The average rate of growth over a specific period of time. The AAGR is calculated using natural logarithm of the end-year value and the starting-year value, divided by the number of years.

Cohort-Component Method: A method used to forecast future populations based on a baseline or starting population, and cumulative changes in births, deaths, and migration.

Coordinated population forecast: A population forecast prepared for the county and sub-county jurisdictions including urban growth boundary (UGB) areas and all non-UGB area in the balance of county.

Group quarters: The US Census Bureau defines group quarters as places where "people live or stay in a group living arrangement that is owned or managed by an organization providing housing and/or services for the residents". Examples of a group quarter may include college dorms, skilled nursing facilities, groups homes, prison, etc.

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 estimate current populations or forecast future populations based on changes in housing units, vacancy rates, the average numbers of persons per household (PPH), and group quarters population counts.

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

Total Fertility Rate (TFR): The number of children a woman would have by the end of a defined childbearing age. In this report, child-bearing age is from 15 to 44.

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

Each year, the jurisdictions in the region that is to be forecast is surveyed. The following are transcripts of what was received from jurisdictions who responded to the OPFP survey.

| County | Jefferson |
| :--- | :--- |
| Date\|Time | City of Culver |
| Jurisdiction | Donna McCormack, City Recorder/Manager |
| Name and Title | We have a near zero vacancy rate. Any current vacancy is a <br> Observations about Population (e.g. <br> birth rates, aging, immigration, racial <br> and ethnic change) <br> Observations about Housing <br> (Vacancy rates, seasonal occupancy, of one renter leaving and another preparing to move <br> in. <br> demolitions, renovations) <br> Alanned Housing Developments or <br> process. They are proposing single family homes. <br> Group Quarters Facilities (including <br> number of units, occupancy, and <br> estimated year of completion) <br> Economic Development (e.g. new <br> employers or facilities, including <br> number of jobs and est. year of <br> completion) <br> No significant changes have been obvious. <br> Infrastructure Projects (e.g. <br> transportation and utilities) <br> No significant differences, the businesses are operating and <br> we have no vacant store fronts. <br> or Housing Growth |
| There are ongoing projects with the majority currently <br> focusing on street repairs and park improvements. |  |
| Other Factors Hindering Population <br> or Housing Growth | Culver is a "bedroom" community reflecting the growth of all <br> of Central Oregon. |
| 8a. Summary of current or proposed <br> policies affection growth in your <br> jurisdiction. | None I am aware of. |
| 8b. Findings related to growth or <br> population change from studies <br> conducted in you jurisdiction. | None, the wildfires created smoke but no direct impact to the <br> city. <br> 8c. The effects of wildfires or other <br> disasters in your jurisdiction on |


| housing, employment/economics, <br> and infrastructure. |  |
| :--- | :--- |
| 8d. The effects of the COVID-19 <br> pandemic and policy measure on <br> employment and current and <br> planned developments. | Again, no direct impact to the community was noted. |
| 9. For representatives from counties <br> only: we invite you to provide tax lot <br> data if available. These may be sent <br> via email to askprc@pdx.edu |  |
| Comments? |  |


| County | Jefferson |
| :---: | :---: |
| Date \|Time | 11.29.21 |
| Jurisdiction | City of Madras |
| Name and Title | Nicholas Snead, Community Development Director |
| Observations about Population (e.g. birth rates, aging, immigration, racial and ethnic change) | There is a very low vacancy rate. There is a housing shortage. New housing units are being constructed. Monthly lease rates are increasing as a result of the shortage. |
| Observations about Housing (Vacancy rates, seasonal occupancy, demolitions, renovations) | GIS shapefile will be provide with this information. |
| Planned Housing Developments or Group Quarters Facilities (including number of units, occupancy, and estimated year of completion) | I have no basis for such observations other than the 2020 Census. |
| Economic Development (e.g. new employers or facilities, including number of jobs and est. year of completion) | Erickson Aero Tanker (existing business) is looking to hire 12 new people, Daimler Trucks North America is making significant facility improvements which will result in additional truck testing and thereby 5-10 additional employees. |
| Infrastructure Projects (e.g. transportation and utilities) | 3 very large City sewer projects are being designed and constructed to accommodate the Sun Ridge, Park Place, Juniper Crossings, and Willow Heights residential developments. |
| Other Factors Promoting Population or Housing Growth | The City has enacted: 1) SDC reductions for housing; 2) a TIF Housing Urban Renewal District for key residential lands; 3) made significant Development Code changes to accommodate needed housing. |
| Other Factors Hindering Population or Housing Growth |  |
| 8a. Summary of current or proposed policies affection growth in your jurisdiction. |  |
| 8b. Findings related to growth or population change from studies conducted in you jurisdiction. |  |
| 8 c . The effects of wildfires or other disasters in your jurisdiction on |  |


| housing, employment/economics, <br> and infrastructure. |  |
| :--- | :--- |
| 8d. The effects of the COVID-19 <br> pandemic and policy measure on <br> employment and current and <br> planned developments. | 1) people fleeing urban areas to live in areas with a higher <br> quality of life (Madras has a urban/rural lifestyle); 2) Retirees! <br> They are a budget conscious group. Most want to retire in a <br> desirable place, that is cost-effective, and near family and <br> medical. Madras has that. Housing costs here are low <br> relatively to larger markets in Bend, Redmond, and Portland. |
| 9. For representatives from counties <br> only: we invite you to provide tax lot <br> data if available. These may be sent <br> via email to askprc@pdx.edu |  |
| Comments? |  |


| County | Jefferson |
| :--- | :--- |
| Date \|Time |  |
| Jurisdiction | Jefferson County |
| Name and Title | County Administrative Officer |
| Observations about Population <br> (e.g. birth rates, aging, <br> immigration, racial and ethnic <br> change) |  |
| Observations about Housing <br> (Vacancy rates, seasonal <br> occupancy, demolitions, <br> renovations) |  |
| Planned Housing Developments or <br> Group Quarters Facilities (including <br> number of units, occupancy, and <br> estimated year of completion) | Census Block 9400 (Warm Springs) indicates a 500 person drop. <br> Seems that would be impossible. (about 3,100 to 2,600??) |
| Economic Development (e.g. new <br> employers or facilities, including <br> number of jobs and est. year of <br> completion) |  |
| Infrastructure Projects (e.g. <br> transportation and utilities) |  |
| Other Factors Promoting <br> Population or Housing Growth | City of Madras' Housing Urban Renewal District (HURD) |
| Other Factors Hindering <br> Population or Housing Growth |  |
| 8a. Summary of current or <br> proposed policies affection growth <br> in your jurisdiction. |  |
| 8b. Findings related to growth or <br> population change from studies <br> conducted in you jurisdiction. |  |
| 8c. The effects of wildfires or other <br> disasters in your jurisdiction on <br> housing, employment/economics, <br> and infrastructure. |  |


| 8d. The effects of the COVID-19 <br> pandemic and policy measure on <br> employment and current and <br> planned developments. | More releocation into county from larger jurisdictions to <br> remote work. |
| :--- | :--- |
| 9. For representatives from <br> counties only: we invite you to <br> provide tax lot data if available. <br> These may be sent via email to <br> askprc@pdx.edu |  |
| Comments? |  |

6. Appendix B: Detail Population Forecast Results

| Age | $\mathbf{2 0 2 1}$ | $\mathbf{2 0 2 2}$ | $\mathbf{2 0 2 5}$ | $\mathbf{2 0 3 0}$ | $\mathbf{2 0 3 5}$ | $\mathbf{2 0 4 0}$ | $\mathbf{2 0 4 5}$ | $\mathbf{2 0 4 7}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{0 - 4}$ | $\mathbf{1 , 5 2 7}$ | $\mathbf{1 , 5 3 2}$ | 1,528 | $\mathbf{1 , 5 5 2}$ | $\mathbf{1 , 6 0 2}$ | $\mathbf{1 , 7 0 0}$ | $\mathbf{1 , 8 0 3}$ | 1,835 |
| $\mathbf{5 - 9}$ | 1,639 | 1,622 | 1,640 | 1,641 | 1,676 | 1,738 | 1,848 | 1,896 |
| $\mathbf{1 0 - 1 4}$ | 1,646 | 1,688 | 1,723 | 1,702 | 1,709 | 1,751 | 1,819 | 1,859 |
| $\mathbf{1 5 - 1 9}$ | 1,516 | 1,559 | 1,636 | 1,732 | 1,713 | 1,722 | 1,765 | 1,791 |
| $\mathbf{2 0 - 2 4}$ | 1,325 | 1,294 | 1,395 | 1,629 | 1,725 | 1,706 | 1,715 | 1,729 |
| $\mathbf{2 5 - 2 9}$ | 1,545 | 1,524 | 1,447 | 1,488 | 1,731 | 1,838 | 1,831 | 1,836 |
| $\mathbf{3 0 - 3 4}$ | 1,656 | 1,708 | 1,708 | 1,553 | 1,606 | 1,861 | 1,979 | 1,948 |
| $\mathbf{3 5 - 3 9}$ | 1,524 | 1,537 | 1,678 | 1,807 | 1,664 | 1,727 | 1,992 | 2,066 |
| $\mathbf{4 0 - 4 4}$ | 1,344 | 1,388 | 1,507 | 1,705 | 1,837 | 1,699 | 1,767 | 1,936 |
| $\mathbf{4 5 - 4 9}$ | 1,362 | 1,336 | 1,325 | 1,525 | 1,725 | 1,859 | 1,726 | 1,674 |
| $\mathbf{5 0 - 5 4}$ | 1,429 | 1,449 | 1,445 | 1,391 | 1,597 | 1,804 | 1,944 | 1,871 |
| $\mathbf{5 5 - 5 9}$ | 1,594 | 1,550 | 1,473 | 1,506 | 1,465 | 1,676 | 1,888 | 2,015 |
| $\mathbf{6 0 - 6 4}$ | 1,701 | 1,684 | 1,585 | 1,446 | 1,483 | 1,446 | 1,652 | 1,713 |
| $\mathbf{6 5 - 6 9}$ | 1,620 | 1,630 | 1,603 | 1,509 | 1,383 | 1,420 | 1,387 | 1,466 |
| $\mathbf{7 0 - 7 4}$ | 1,464 | 1,444 | 1,456 | 1,455 | 1,374 | 1,260 | 1,293 | 1,260 |
| $\mathbf{7 5 - 7 9}$ | 974 | 1,052 | 1,199 | 1,240 | 1,247 | 1,177 | 1,079 | 1,103 |
| $\mathbf{8 0 - 8 4}$ | 617 | 639 | 725 | 927 | 968 | 976 | 922 | 886 |
| $\mathbf{8 5 +}$ | 406 | 432 | 513 | 673 | 870 | 978 | 1,021 | 1,025 |

[^4]
## 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 1 counties, this section compares the current 2022 total county population forecast to the population forecast published by the Population Research Center in 2018.

Population Forecast Comparison



[^0]:    Cover Photo Credit: Gary Halvorson, July 2011.
    https://commons.wikimedia.org/wiki/File:Irrigation Canal (Jefferson County, Oregon scenic images) (jefDB1619).jpg

[^1]:    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.

[^2]:    ${ }^{1}$ https://csss.uw.edu/research/working-papers/contemporary-model-life-tables-developed-countries-application-model-based

[^3]:    Sources: Forecast by Population Research Center (PRC)

[^4]:    Source: PRC Estimates, 2021; Forecast by Population Research Center (PRC).

