## Coordinated Population Forecast



## Harney

County
Urban Growth
Boundaries (UGB)
\& Area Outside UGBs
\& 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).


# Population Research Center (PRC) Project Staff 

Cindy Chen, Population Forecast Program Manager<br>Ethan Sharygin, Director<br>Meisha Whyte, Graduate Research Assistant<br>Deborah Loftus, Accounting Technician<br>Charles Rynerson, Oregon State Data Center Coordinator<br>Huda Alkitkat, Population Estimates Program Manager

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

2022-2072

Prepared by<br>Population Research Center<br>College of Urban and Public Affairs

Portland State University

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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

Harney County's population was reported as 7,495 in the 2020 census, which was an increase of 73 from the 2010 census. The county has maintained an AAGR of $0.1 \%$ between the 2010 and 2020 censuses and it is projected to have a similar AAGR during most of the years in the forecast timeframe. The two cities in Harney County, Burns and Hines, are both projected to grow, especially Burns which has seen some population increase from out-of-state in the past few years and currently has plans for housing expansion. Recent housing development grants received by Burns may help solve challenges related to the lack of housing options in the city, which in turn, may potentially promote population growth. The general survey responses received from Harney County and its cities suggested that the county was impacted by the COVID-19 pandemic, which drove people working in lower paying jobs away from the Burns city.

## 3. Historical Trend and Population Forecast

### 3.1 County Population

As illustrated in the Figure 1, Harney Country has experienced both population growth and decline according to the past seven censuses. The county's population increased at relatively high AAGRs up to the 1980 census and growth has slowed since then. Both the 1990 and 2010 censuses indicated a population decline. The largest decline occurred in the 1980 s where the AAGR was $-1.6 \%$, meaning an average annual decrease of $1.6 \%$ occurred between 1980 and 1990. After the county population experienced recovery in the 1990s before another decline occurred in the 2000s. The 2020 census indicated that the county had an AAGR of $0.1 \%$ between 2010 and 2020. Harney County's population has not been able to recover to the same level as the 1980 census. Figure 2 shows that the county population is projected to remain relatively stable in the next 50 years. The county may experience slight declines between 2030 and 2040, but is expected to maintain a population of 7,524 at the end of the forecast period, which is very close to the 2020 census population of 7,495.

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. Harney County's TFR experienced a decline from 2.5 to 1.5 between 2016 and 2018 but recovered to 1.9 in 2020. Compared to Oregon state, which experienced a TFR drop from 1.7 to 1.4 between 2014 and 2020, Harney County has a slightly higher TFR during that time. According to the preliminary 2021 births data, the county's TFR did not appear to be significantly impacted by COVID-19 as it did not experience a sudden drop that was seen in many other places in Oregon. The TFR projection used data up to 2020 and was not significantly affected by any COVID-19. The county TFR is projected to range between 1.7 and 1.9 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 is projected to experience some decline in the next 5 to 10 years and then recovers afterwards. The annual births in the county are expected to reach near 80 by 2047, which is at in the mid-range compared to the births data in the past two decades.

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 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 had positive share of net migration in the county, with the exception of the two oldest age groups. Many factors can impact the age-specific migration rates. The relatively higher positive shares of annual migration in the 0-9, 30-39, and 40-49 age groups implied that families with young children are among those more likely to move to 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 Harney County, 2015-2019.

As shown in Figure 6, the historic annual net migration in Harney County varied significantly between 2000 and 2020. County-wide net migration experienced some downturns in the 2000s and early 2010s. Negative annual net migration in the late 2000s and early 2010s may be associated with the impacts of the economic recession during that period. The lowest annual net migration occurred in the 2000s, which may be one of the reasons for the county's population decline between 2000 and 2010. The county experienced the highest number of net migrations in 2016 and 2019, in which the annual net migration reached over 100. Annual net migration is projected to remain in the mid-30s over throughout the forecast period.

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. Among adults, population between the ages of 35 and 49 accounted for the highest proportion in the 2000 census. Population between the ages of 5 and 14 accounted for the largest shares among people under 18. In 2010, the population aged forward and the 50 to 59 -year-olds become the largest population. The 35-39 age group from the 2000 census lost some of the shares in the 2010 census, implying that out-migration may have outnumbered in-migration for this age group during the 2000s. The 2035 and 2047 age pyramids reflect changes in age structure compared to the 2022 age pyramid. Over time, the share of the youngest age groups is projected to increase, which may be associated with recovering annual births (Figure 4) in the future and positive age-specific net migration.



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 "Some Other Race alone" has the most relative gain compared to other race/ethnicity groups, followed by population of two or more races. Populations identified as "Black or African American alone" and "Native Hawaiian and Other Pacific Islander alone" accounted for the smallest share in the county according to the 2020 census. Population of two or more races experienced the largest absolute change between the two censuses.

Table 1. County population by race/ethnicity.

| Hispanic or Latino and Race | 2010 |  | 2020 |  | Absolute Change | Relative Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Population | 7,422 |  | 7,495 |  | 73 | 1.0\% |
| Hispanic or Latino (of any race) | 294 | 4.0\% | 394 | 5.3\% | 100 | 34.0\% |
| Not Hispanic or Latino | 7,128 | 96.0\% | 7,101 | 94.7\% | -27 | -0.4\% |
| White alone | 6,648 | 89.6\% | 6,435 | 85.9\% | -213 | -3.2\% |
| Black or African American alone | 16 | 0.2\% | 5 | 0.1\% | -11 | -68.8\% |
| American Indian and Alaska Native alone | 227 | 3.1\% | 219 | 2.9\% | -8 | -3.5\% |
| Asian alone | 34 | 0.5\% | 36 | 0.5\% | 2 | 5.9\% |
| Native Hawaiian and Other Pacific Islander alone | 1 | 0.0\% | 0 | 0.0\% | -1 | -100.0\% |
| Some Other Race alone | 6 | 0.1\% | 21 | 0.3\% | 15 | 250.0\% |
| Two or More Races | 196 | 2.6\% | 385 | 5.1\% | 189 | 96.4\% |

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 (births less than deaths, which is negative in the county because there are more deaths than births), while the lighter blue shade indicates the net migration. At the county level, natural decrease and positive net migration are expected to balance each other during most years in the forecast period and therefore, leads to little change in county population. Annual net migration was relatively high in 2016-2020 compared to other years, however, this level of net migration is not projected to continue for the next 50 years, according to the historic migration trend.

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, the two UGBs in Harney County, Burns and Hines, are projected to receive some growth in the next 50 years. Most of the growth occurs in the Hines UGB, in which the AAGR in the 50-year time horizon reaches $0.5 \%$. The Burns UGB is also expected to have a slower but positive AAGR. Population outside of the UGBs is projected to decrease, indicating that most of the growth are expected to occur in the cities.

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

|  | Historical |  |  | Forecast |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2010 | 2020 | $\begin{gathered} \text { AAGR } \\ (2010-2020) \\ \hline \end{gathered}$ | 2022 | 2047 | 2072 | $\begin{gathered} \text { AAGR } \\ (2022-2047) \\ \hline \end{gathered}$ | $\begin{gathered} \text { AAGR } \\ (2047-2072) \\ \hline \end{gathered}$ |
| Harney County | 7,422 | 7,495 | 0.1\% | 7,555 | 7,510 | 7,524 | 0.0\% | 0.0\% |
| Burns | 2,929 | 2,796 | -0.5\% | 2,811 | 2,853 | 2,855 | 0.1\% | 0.0\% |
| Hines | 1,707 | 1,781 | 0.4\% | 1,804 | 2,050 | 2,320 | 0.5\% | 0.5\% |
| Outside UGBs | 2,786 | 2,918 | 0.5\% | 2,939 | 2,607 | 2,349 | -0.5\% | -0.4\% |

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

### 3.7.1 UGBs Shares

As shown in Table 3, the Burns UGB continues to account for most of the population shares among all UGBs, reaching 37.9 \% of the county population by 2072. The Hines UGB, although less populated than Burns, is projected to grow its population share by 6.9 percent points by 272. The two UGBs are
projected to accommodate $68.7 \%$ of the county population. 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 |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{2 0 2 2}$ | $\mathbf{2 0 4 7}$ | $\mathbf{2 0 7 2}$ | $\mathbf{2 0 2 2}$ | $\mathbf{2 0 4 7}$ | $\mathbf{2 0 7 2}$ |
| Harney County | 7,555 | 7,510 | 7,524 |  |  |  |
| Burns | 2,811 | 2,853 | 2,855 | $37.2 \%$ | $38.0 \%$ | $37.9 \%$ |
| Hines | 1,804 | 2,050 | 2,320 | $23.9 \%$ | $27.3 \%$ | $30.8 \%$ |
| Outside UGBs | 2,939 | 2,607 | 2,349 | $38.9 \%$ | $34.7 \%$ | $31.2 \%$ |

[^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 | Harney |
| :---: | :---: |
| Date\|Time | 11.22.21 |
| Jurisdiction | City of Burns, Oregon |
| Name and Title | Daniel J. Brown, City Manager |
| Observations about Population (e.g. birth rates, aging, immigration, racial and ethnic change) | There are currently little to no dwelling units available. When a house goes on the market, it sells very quickly. We have experienced some of our housing units be sold to cash buyers who are turning the units into vacation rentals (AirBnB, VRBO, etc.) |
| Observations about Housing (Vacancy rates, seasonal occupancy, demolitions, renovations) | We have a planned 100 single family residential planned community currently in phase 1 . This is 120 acres north of Monroe, bordering our city limits to the west this should be completed by Spring of 2024 completely. . We also have a 40 unit multi-housing unit complex planned for Spring of 2022 on 16 acres north of Monroe. We have a 20 unit Veteran Housing Unit starting in Spring of 2022 next to our hospital. |
| Planned Housing Developments or Group Quarters Facilities (including number of units, occupancy, and estimated year of completion) | Increase in population during 2021 from an influx of relocated families from out-of-state and other in-state relocations. |
| Economic Development (e.g. new employers or facilities, including number of jobs and est. year of completion) | Approximately 50 new jobs coming in the aviation manufacturing realm that will be located at our municipal airport. New hospital and local government jobs will bring approximately 15 jobs. All in 2022. |
| Infrastructure Projects (e.g. transportation and utilities) | Water Master Plan projects city-wide, starting in Fall of 2022. Airport master plan is underway. Street improvements, Broadband improvements will begin in Spring of 2022. |
| Other Factors Promoting Population or Housing Growth | The City of Burns recently entered into and MOU (and eventual ORS-190) with the Town of Lakeview and the City of John Day. We have already received a housing development grant for $\$ 60,000$ from DLCD. We have submitted a $\$ 30,000,000$ grant for housing implementation from BBBRC. On 11/29/2021 the Burns City Council will likely approve the Burns Urban Renewal Agency. URA incentivization for blighted |


|  | buildings and new housing/commercial buildings is included in the URA plan. |
| :---: | :---: |
| Other Factors Hindering Population or Housing Growth | Lack of housing due to lack of middle-income job opportunities. The job growth is also directly related lack of existing housing options. |
| 8a. Summary of current or proposed policies affection growth in your jurisdiction. | The City of Burns recently entered into and MOU (and eventual ORS-190) with the Town of Lakeview and the City of John Day. We have already received a housing development grant for $\$ 60,000$ from DLCD. We have submitted a $\$ 30,000,000$ grant for housing implementation from BBBRC. On 11/29/2021 the Burns City Council will likely approve the Burns Urban Renewal Agency. URA incentivization for blighted buildings and new housing/commercial buildings is included in the URA plan. |
| 8b. Findings related to growth or population change from studies conducted in you jurisdiction. | A housing study is scheduled for Spring of 2022. |
| 8 c . The effects of wildfires or other disasters in your jurisdiction on housing, employment/economics, and infrastructure. | None. |
| 8d. The effects of the COVID-19 pandemic and policy measure on employment and current and planned developments. | Substantial. COVID 19 restrictions have had a negative impact on small businesses locally. Many people in low paying jobs have left the state, or government assistance has not led them back to work as of yet. |
| 9. For representatives from counties only: we invite you to provide tax lot data if available. These may be sent via email to askprc@pdx.edu |  |
| Comments? |  |


| County | Harney |
| :--- | :--- |
| Date\|Time | Harney County |
| Jurisdiction | Pete Runnels - Harney County Judge |
| Name and Title | 11.24 .21 |
| Observations about Population (e.g. <br> birth rates, aging, immigration, <br> racial and ethnic change) | Lack of workforce housing, lack of housing for professionals |
| Observations about Housing <br> (Vacancy rates, seasonal occupancy, <br> demolitions, renovations) | None |
| Planned Housing Developments or <br> Group Quarters Facilities (including <br> number of units, occupancy, and <br> estimated year of completion) | Aging community, seeing growth from overcrowded <br> communities |
| Economic Development (e.g. new <br> employers or facilities, including <br> number of jobs and est. year of <br> completion) | Nothing new, some on the horizon (next two years) |
| Infrastructure Projects (e.g. <br> transportation and utilities) | None |
| Other Factors Promoting Population <br> or Housing Growth | Ability to work from home with good broadband helps locate <br> people out here. |
| Other Factors Hindering Population <br> or Housing Growth | Developers willing to work this far away from suppliers |
| 8a. Summary of current or <br> proposed policies affection growth <br> in your jurisdiction. | We have made many incentives available to entice builders <br> from the cities to the county. |
| 8b. Findings related to growth or <br> population change from studies <br> conducted in you jurisdiction. | None - we have been spared the big fires for six to seven years |
| now. |  |
| 8c. The effects of wildfires or other <br> disasters in your jurisdiction on <br> housing, employment/economics, <br> and infrastructure. | Nrat\| |


| 8d. The effects of the COVID-19 <br> pandemic and policy measure on <br> employment and current and <br> planned developments. | Slowed things down, but not to the detrimental effects seen in <br> larger communities. We have held strong. |
| :--- | :--- |
| 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 | 2021 | 2022 | 2025 | 2030 | 2035 | 2040 | 2045 | 2047 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-4 | 368 | 356 | 364 | 330 | 319 | 348 | 380 | 385 |
| 5-9 | 443 | 446 | 403 | 378 | 343 | 332 | 362 | 375 |
| 10-14 | 438 | 435 | 448 | 426 | 401 | 366 | 355 | 363 |
| 15-19 | 422 | 448 | 452 | 459 | 436 | 411 | 377 | 369 |
| 20-24 | 342 | 344 | 400 | 458 | 465 | 443 | 418 | 402 |
| 25-29 | 393 | 387 | 362 | 411 | 469 | 476 | 454 | 420 |
| 30-34 | 451 | 440 | 422 | 383 | 431 | 490 | 496 | 517 |
| 35-39 | 457 | 462 | 471 | 445 | 405 | 454 | 512 | 506 |
| 40-44 | 451 | 454 | 467 | 480 | 453 | 414 | 462 | 517 |
| 45-49 | 380 | 411 | 455 | 477 | 489 | 463 | 424 | 417 |
| 50-54 | 414 | 389 | 379 | 461 | 483 | 495 | 469 | 455 |
| 55-59 | 449 | 433 | 411 | 376 | 456 | 478 | 490 | 481 |
| 60-64 | 606 | 584 | 492 | 408 | 374 | 452 | 474 | 476 |
| 65-69 | 607 | 605 | 581 | 480 | 401 | 369 | 443 | 452 |
| 70-74 | 509 | 511 | 546 | 536 | 445 | 373 | 343 | 375 |
| 75-79 | 359 | 375 | 422 | 472 | 467 | 386 | 325 | 305 |
| 80-84 | 243 | 266 | 276 | 333 | 375 | 370 | 306 | 272 |
| 85+ | 206 | 211 | 231 | 275 | 342 | 400 | 419 | 422 |

Source: PRC Estimates, 2021; 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 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 2010.
    https://commons.wikimedia.org/wiki/File:Delintment Lake (Harney County, Oregon scenic images) ( harDA0224).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)

