

**BEFORE THE CITY COUNCIL
FOR THE CITY OF HOOD RIVER, OREGON**

ORDINANCE NO. 2019

An Ordinance amending the City of Hood River Comprehensive Land Use Plan by deleting Table 15 (Population Forecast) from the Background Report and adopting a new Table 15 (Population Forecast 2008-2018) for the Comprehensive Land Use Plan Background Report that includes population projections for Hood River County, the City of Hood River, the City of Cascade Locks and the unincorporated portions of Hood River County.

The Hood River City Council makes the following findings:

WHEREAS, the City of Hood River is conducting housing needs analysis to assess the need for residential land within Hood River Urban Growth Boundary (UGB). A foundational part of the housing needs analysis is a forecast for population growth over the 20-year planning period. The population forecast is based on a forecast that is coordinated, adopted by both the City of Hood River and Hood River County; and

WHEREAS, in 2008, the City of Hood River and Hood River County adopted a coordinated population forecast. The forecast is documented in the report: *Hood River County Coordinated Population forecast 2008-2028*, October 2008, attached as Exhibit A to this Ordinance and incorporated herein by this reference. This document provides a forecast of population growth for Hood River for the 2007 to 2035 period; and

WHEREAS, the portion of the report that addresses the Urban Growth Area of the City of Hood River presents population forecasts for the entire UGB. These values are present in Table 15-Population Forecast, City of Hood River UGB, 2007-2035 on page 26 Exhibit A; and

WHEREAS, the goal of the population estimates was to forecast the population of the entire UGA. However, only the population of the City of Hood River was used as the starting population base in 2007. This implies (probably unintentionally) there was no population within the UGB outside the city limits in 2007, which is an incorrect assumption. Therefore, the populations presented in Table 15 are only valid for the City of Hood River's city limits and not for the entire UGA; and

WHEREAS, in order to use the adopted population forecast of 2008 in for the Buildable Lands Inventory, the Department of Land Conservation and Development requested that the City revise Table 15 of the *Hood River County Coordinated Population Forecast 2008-2028*. The forecast uses the factual basis in the adopted forecast report, with updated data about Hood River's population, which is attached as Exhibit A to this Ordinance; and

WHEREAS, Table 15 of Exhibit A is the revised population forecast for the Hood River UGB for the 2014 to 2035 period, and the methodology used to amend the population forecast and construct Table 15 relies upon the following assumptions:

- **Population base in 2014.** The population in 2014 in Hood River's UGB is estimated to be 9,134 people.

- Population within the city limits. The Population Research Center at Portland State University's estimate of population with Hood River's city limits was 7,545 people in 2014. This estimate is used in the revised forecast in Table 15.
- Population within the urbanizing area. The urbanizing area is the area within Hood River's UGB but outside of the city limits. In 2006, there were about 656 dwellings in the urbanizing area. At an average of 2.25 persons per household based on the household size assumptions in the Transportation System Plan, there were 1,475 people in the urbanizing area.

Assuming that population in the urbanizing area grew at 2.0%, the rate of growth in the adopted population forecast for Hood River; population in the urbanizing area would have grown by 219 people to 1,695 people. By 2014, the urbanizing area had approximately 1,589 people.

- Population in the UGB. Table 115 shows population in Hood River's city limits and urbanizing area combined to 9,134 people in 2014.
- **Forecast growth rate.** The forecast in Table 15 assumes that population in the Hood River UGB will grow at an average annual growth rate of 2.0% between 2014 to 2015. This growth rate is the growth rate in the adopted forecast for Hood River and consistent with the growth rate in the medium forecast in the *Hood River County Coordinated Population Forecast 2008-2028*. Table 15 shows that the Hood River UGB will grow by 4,528 people between 2015 and 2035, at an average annual growth rate of 2.0%.

WHEREAS, the City of Hood River Planning Commission conducted a Public Hearing on July 6, 2015 to consider legislative amendments to the City's Comprehensive Plan and Background Report, after which it recommended Council adoption of an amended Hood River County Coordinated Population Forecast (2008-2028), an amendment to the City's Comprehensive Plan and Background Report based upon information in the staff report; and

WHEREAS, the City Council duly noticed and convened a public hearing at its regular meeting on August 10, 2015, at which time it received public testimony and comment on the proposal received from the Planning Commission and after reviewing the written and oral testimony and the Staff and Planning Commission recommendations, deliberated on the proposal.

NOW, THEREFORE, based on the foregoing findings, the City Council for the City of Hood River ordains as follows:

Section 1. The Hood River Comprehensive Land Use Plan is amended to delete Table 15 (Population Forecast) from the Background Report of the Hood River Comprehensive Land Use Plan.

Section 2. The Hood River Comprehensive Land Use Plan is amended to incorporate the following as the new Table 15 (Population Forecast, City of Hood River Urban Growth Boundary, 2014 to 2035) to the Background Report of the Hood River Comprehensive Land Use Plan:

Table 15. Population Forecast, City of Hood River Urban Growth Boundary, 2014 to 2035

	Hood River UGB
2014	9,134
2015	9,317
2016	9,503


2017	9,693
2018	9,887
2019	10,085
2020	10,287
2021	10,493
2022	10,703
2023	10,917
2024	11,135
2025	11,358
2026	11,585
2027	11,817
2028	12,053
2029	12,294
2030	12,540
2031	12,791
2032	13,047
2033	13,308
2034	13,574
2035	13,845
<hr/>	
Change 2015 to 2035	
Number	4,528
Percent	49%
AAGR	2.00%

Source: Population estimates for the Hood River city limits in 2014 is based on data from the Population Research Center at Portland State University. Population estimates for the urbanizing area is based on a count of dwelling units in the urbanizing area in 2006 from the Transportation System Plan 2011 update.
Analysis by ECONorthwest.

Read for the First Time this 24 day of Aug 2015.

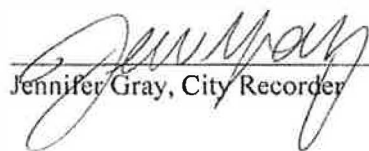
Read for the Second Time and approved this 24 day of Aug 2015. This Ordinance shall take effect on the 31st day following the second reading.

AYES: 7
NAYS: 0
ABSTAIN: 0
ABSENT: 0



Paul Blackburn, Mayor

ATTEST:



Jennifer Gray, City Recorder

Approved as to form:



Daniel Kearns, City Attorney

Hood River County Coordinated Population Forecast, 2008-2028

Prepared for

Hood River County
by

ECONorthwest

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Final Report

October, 2008

EXHIBIT A

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SUMMARY

Counties, cities and regional governments in Oregon use population forecasts for a variety of planning purposes. They typically help provide the foundation for counties and cities to determine future planning needs associated with housing, economic development and for the development of public infrastructure (e.g., roads or sewage treatment plants) and public services (e.g., schools and public safety). They also are used to judge the potential need for land and urban growth boundary expansion needs.

Per Oregon statutes and administrative rules, counties are required to develop “coordinated” forecasts for the County as a whole and for the cities within it. Hood River County is the designated “coordinating” agency in the County. The combined sum of forecasts for incorporated cities and rural areas must roughly equal the forecast for the county as a whole (the county “control total”). The control total usually comes from the long-term population and employment forecasts developed by the Office of Economic Analysis (OEA) of the State Department of Administrative Services. The most recent OEA forecasts were prepared in 2004.

Per Oregon Administrative Rule (OAR), “(t)he forecast must be developed using commonly accepted practices and standards for population forecasting used by professional practitioners in the field of demography or economics, and must be based on current, reliable and objective sources and verifiable factual information, such as the most recent long-range forecast for the county published by the Oregon Office of Economic Analysis (OEA).” This forecast must meet that and other state requirements.

This report includes an overall forecast for Hood River County, as well as component forecasts for the cities of Hood River and Cascade Locks, as well as the unincorporated portion of the County. While this report includes projections through 2035, the official adopted forecast only covers the period from 2008 through 2028. Key elements of the forecast include the following:

- The forecast assumes base (2007) population estimates prepared by Portland State University.
- The forecast incorporates the projected growth rates for the county as a whole assumed in the Oregon Office of Economic Analysis (OEA) forecast, equivalent to an Annual Average Growth Rate (AAGR) of approximately 1.29% for the County.
- The recommended annual average growth rates are 2.0% for the two cities of Hood River and Cascade Locks, which represent medium growth scenarios for those cities and 0.8% for the unincorporated portion of the County.
- Projections are generally consistent with and supported by historical growth trends; current demographic factors and future trend; locational and other factors specific to the county and two cities; and statewide urbanization policies directing the majority of growth to urban areas.
- Forecasted 2028 populations are: 27,696 for the County as a whole, 10,170 for the area within the City of Hood River UGB, 1,629 for the area within the Cascade Locks UGB and 15,896 in the unincorporated portion of the County.

I. INTRODUCTION

This report presents the coordinated population forecast for Hood River County and the incorporated communities of the City of Hood River and Cascade Locks consistent with the requirements of ORS 195.036, for the period 2008 to 2028. The report also includes population projections for the years 2029 through 2035 for informational purposes. However, these projections are outside the officially adopted forecast period.

The population forecast for the County is based on the Office of Economic Analysis' (OEA) 2004 forecast for population growth for Hood River County from 2000 to 2040.¹ The allocation of population to the City of Hood River and Cascade Locks is based on historical population growth trends, development trends, development capacity, and socioeconomic trends.

BACKGROUND

Local governments in Oregon have developed and adopted population forecasts for planning purposes since the inception of the statewide planning program. The forecasts are used for many purposes including determining the size of Urban Growth Boundaries (UGBs), capital improvement planning, and other planning activities. For example, Oregon state planning law (ORS 197.295 – 197.296) requires cities to plan for needed housing to accommodate population growth in urban growth boundaries. ORS 197.712 also requires cities to ensure that sufficient land is available in urban growth boundaries for commercial development and economic growth.

One problem that emerged from the forecasting process was consistency. In many instances the forecasts of incorporated cities would sum to a figure far higher than the county forecast. In 1995, the Oregon Legislature recognized a need for local consistency in population forecasting and for a coordinated statewide forecast by adding a statute requiring counties to:

“...establish and maintain a population forecast for the entire area within its boundary for use in maintaining and updating comprehensive plans, and shall coordinate the forecast with the local governments within its boundary.” [ORS 195.036]²

The legislature designated the state Office of Economic Analysis, a division of the Department of Administrative Services, as the primary forecasting agency for the state of Oregon. The OEA prepares population and employment forecasts for the state and each county. The OEA prepared state and county population forecasts in 1997 and again in 2004. These forecasts are intended to serve as a basis for county-level population coordination.

Population forecasts must be coordinated by a designated “coordinating” agency; in this case Hood River County. The combined sum of forecasts for incorporated cities and rural areas must roughly equal the forecast for the county as a whole (the county “control total”).³ The control

¹ Oregon Office of Economic Analysis: *Long-Term Population Forecast for Oregon and Its Counties, 2000-2040*. Available at: http://www.oregon.gov/DAS/OEA/docs/demographic/pop_components.xls.

² 1995 House Bill 2709 (ORS 197.296)

³ The forecasts for incorporated cities includes all lands within the existing Urban Growth Boundaries (UGBs) of those cities. In short, the forecasts are for growth in the UGBs.

total usually comes from the long-term population and employment forecasts developed by the Office of Economic Analysis of the State Department of Administrative Services.⁴ The most recent OEA forecasts are from 2004.

Hood River County last developed a population forecast in 1997. That forecast did not coordinate population growth in the cities and unincorporated areas of the County although it did break the projection down into different components of the County and has been used in the past during subsequent planning efforts. The intent of the forecast presented in this report is to develop a coordinated population forecast for incorporated and unincorporated areas in Hood River County that (1) reflects historic population trends, (2) provides the foundation for cities to determine whether they need urban growth boundary expansions, and (3) provides a foundation for planning for the development of public infrastructure (e.g., roads or sewage treatment plants) and public services (e.g., schools and public safety).

While this forecast may be used in the future to support other planning efforts, including studies related to affordable housing, school enrollment, public facilities planning or other issues, it does not address those topics directly. It does, however, include population and demographic trends related to those planning efforts.

In summary, this report presents data and findings that support a defensible county-wide population forecast from the year 2008 to the year 2028 and allocates that population to incorporated and unincorporated areas of the County.

ORGANIZATION OF THIS REPORT

The remainder of this report is organized as follows:

- **Section II, Data sources and methods** presents both the data used to create the forecasts and some difficulties with small area forecasts.
- **Section III, Hood River County population forecast 2008-2028** presents the population forecast for Hood River County, including the factual basis in support of the forecast.
- **Section IV, City of Hood River population forecast 2008-2028** presents the population forecast for the City of Hood River, including the factual basis in support of the forecast.
- **Section V, City of Cascade Locks population forecast 2008-2028** presents the population forecast for Cascade Locks, including the factual basis in support of the forecast.
- **Section VI, Unincorporated Hood River County population forecast 2008-2028** presents the population forecast for unincorporated areas within the County, including the factual basis in support of the forecast.

⁴ While most coordinating bodies use the OEA forecasts as the basis for coordination, there is no statutory requirement that the OEA forecasts be used.

- **Appendix A**, presents issues with small area population forecasts.

II. DATA SOURCES AND METHODS

The population forecasts presented in this report build from a range of secondary data sources. All of the data used in developing the forecasts are from easily available standard sources:

- The U.S. Census of population and housing (1990 and 2000) provides decennial population figures as well as a broad range of demographic and socioeconomic variables;
- The Oregon Office of Economic Analysis (OEA) provides long-term population forecasts for the State of Oregon and each county within the State;
- The Population Research Center at Portland State University provides annual population estimates for each county and city within Oregon as required by ORS 190.520;
- Claritas, Inc. provides custom demographic and market reports for the current year;⁵ and
- Existing population forecasts from: (1) the Hood River County Comprehensive Plan, dated January 1997, (2) the Hood River School District Enrollment Forecast, prepared by the Portland State University Population Research Center in May 2005, (3) the Hood River Public Facilities Plan updated in 2000, (4) DKS Associates "Transportation Forecasting Assumptions" memorandum, dated May 20, 2008, and (5) the Cascade Locks Comprehensive Plan, dated May 2001.

It should be noted that this report includes a number of different tables showing population data over different time periods. In a number of cases, the population figures in these tables do not match each other because the data shown in these tables comes from different sources: projection processes conducted at different times, historical data rather than population forecasts, or data from multiple sources (e.g., the U.S. Census or Claritas).

GEOGRAPHIC AREAS

This report presents population forecasts, population and demographic data, and development data for several geographic areas within Hood River County. ECO has tried to refer to these areas in a consistent way throughout the report, as follows:

- **Hood River County** includes the entirety of Hood River County, including all incorporated and unincorporated areas within the County.
- **Unincorporated Hood River County** includes all areas in the County except for areas within the urban growth boundaries of the City of Hood River and the City of Cascade Locks.

⁵ Claritas data is used in this report because the most recent demographic and housing data available from the U.S. Census for Hood River County or its cities is from 2000. Claritas is widely recognized among economists as a reliable source of recent demographic and market data.

- **The City of Hood River** includes all areas within the City limits. In some cases, the report discusses the City of Hood River's urban growth boundary (UGB), which is inclusive of the city limits and the City's urbanizing area (the area between the city limits and the urban growth boundary).
- **The City of Cascade Locks** includes all areas within the City limits. In some cases, the report discusses the Cascade Locks' urban growth boundary (UGB), which is inclusive of the city limits and the City's urbanizing area (the area between the city limits and the urban growth boundary).

FORECASTING METHODS

The literature about population forecasting identifies many accepted approaches to projecting or forecasting population. More robust approaches use component models (natural increase plus migration).⁶ Simpler approaches extrapolate from historic trends. At large geographic levels, migration becomes less of a factor making component models more accurate. For smaller regions such as Hood River County, migration and other factors are more difficult to document, making it more difficult to accurately forecast growth in areas with a relatively small population. Appendix A discusses issues with small area forecasts in more detail.

At the national or state level, population growth has a larger effect on employment growth. Standard cohort-component models can provide relatively accurate forecasts of population growth in larger areas where the migration component is small. Such models are frequently applied in areas where there is relative stability in demographic characteristics and vital statistics (e.g., birth and death rates).

Regional or city-level forecasts often use a step-down method based on a larger regional or national forecast. The general concept is to estimate the portion of regional population growth that will occur in the subregion. There are several variations on the step-down method, summarized in Table 1.

Table 1. Basic population forecasting methods for small areas

Method	Description
Trend extrapolation	Uses historical population growth rates and extrapolates them into the future.
Ratio trend	Uses current city/county ratio of population and extrapolates to the future.
Comparative	Past growth pattern is compared with growth patterns of larger, older areas. Should consider social, economic, political, and other variables.

Source: ECONorthwest

These methods are relatively simple and rely on past trends as an indicator of future growth. A number of assumptions are implicit in these methods: (1) past growth is a good indicator of

⁶ The OEA long-range forecasts use this methodology.

future growth; (2) factors affecting local population growth will not change substantially; and (3) selection of base year can significantly affect the forecast.

Developing a coordinated population forecast for Hood River County requires: (1) forecasting population growth for all of Hood River County and (2) allocating population growth to the incorporated and unincorporated areas.

- **Forecasting population in Hood River County.** We used the OEA forecast of population for Hood River County as the basis for the coordinated County-wide forecast. The OEA uses a cohort component model to develop its forecasts. In general, a cohort component model adds *natural increase (births – deaths)* to *net migration* for specified age cohorts (usually five year increments).⁷ This method uses the age/sex groupings of the existing population and assumptions about future aging patterns to estimate birth and death rates to calculate the “natural change” in population. The natural change component is especially useful for areas with a stable population (like many Eastern Oregon cities and counties) or a city with a large retirement population (like Brookings, Oregon for example). However, this component by itself is less accurate when a large share of the forecast increase is due to people moving into the areas. For example, if an area has a high percentage of growth due to in-migration the net migration becomes a much more important factor in the forecast.

Because migration can be a significant part of the growth calculation this method usually considers both the natural increase and migration patterns to generate the total population change. However, as the OEA states in its 2004 long-term forecast, “Migration is the most complex and most volatile component of population change.”⁸ The migration component cannot be easily predicted because the reasons people choose to move from one area to another are based on a variety of individual and family decisions including personal choice, economics, quality of life changes, quality of education, safety, political climate and others factors. Moreover, the importance of these various factors may change over time.

We used the OEA forecast as the basis for Hood River County’s population forecast because: it tracks well with historical growth trends, it accounts for expected demographic changes (e.g., the aging of the baby-boomers), and it provides a forecast of population growth in Hood River County that is acceptable to State agencies

- **Allocating population to sub-arcs of the County.** The population forecast for Hood River County provides a “control total” for population growth in the County. “Coordinating” the population forecast involves allocating the County’s expected growth to incorporated and unincorporated areas within the County. The sum of the population forecasts for all incorporated and unincorporated areas should be equal to the County “control total.”

⁷ The discussion of OEA methods in this section is summarized from *Deschutes County Coordinated Population Forecast, 2000 – 2025*. Deschutes County, August 2005.

⁸ *Long-Term Population Forecast for Oregon and Its Counties, 2000-2040*, Office of Economic Analysis, 2004, first page.

We considered several different methods for allocating population to subareas of the County including trend extrapolation methods and a ratio method. We selected the **trend extrapolation** that compounds population growth. This method uses historical trends as the basis to determine future growth. The forecast compounds population growth by assuming that as the population gradually grows, the number of people added each year will also grow.⁹ We chose this method because it is (1) consistent with historical population growth trends, (2) it is a relatively simple approach that builds from historical data and assumptions about future city and County growth policies, and (3) it allows for the assumption that the incorporated communities will grow at different rates from each other and the County.

In summary, ECO selected the trend extrapolation and compounding methodology to allocate population to the incorporated and unincorporated areas of the County because:

- The OEA population forecast provides a forecast of population growth in Hood River County that is acceptable to State agencies;
- It provides the best approximation of historical growth trends in the incorporated cities and unincorporated Hood River County;
- The County has not identified any constraints to population growth (e.g., physical or infrastructure constraints such as inability to provide public services, areas with significant drainage or groundwater issues, etc.);
- It is a simple method that implicitly considers factors that have affected historical population growth;
- It provides a method of modeling annual variations in population growth that have occurred in the past and will continue in the future; and
- Demographers and economists accept the trend extrapolation and compounding method for forecasting population and the State accepts this method for allocating population to the cities based on the OEA population forecast for Hood River County and given that Hood River County is considered a relatively small region.

⁹ Compounding population growth is mathematically similar to compound interest on a bank account. As more population accumulates, the same percent change will result in greater absolute growth over time. For example, if an area has 1,000 people and grows at 3% per year, the first year the area will grow by 30 people (to 1,030 people) and the second year the area will grow by 31 people (to 1,061 people).

III. HOOD RIVER COUNTY POPULATION FORECAST

This section presents population forecasts for Hood River County. It also presents the factual basis for the forecast and findings in support of the forecast.

HOOD RIVER COUNTY POPULATION FORECAST

The Hood River County population forecast is inclusive of population growth in the entire County, in incorporated and unincorporated areas within the County. The County forecast provides a “control total” for population growth within the County over the 2008 to 2028 period and additional projections for 2029-2035.

OEA Population Forecast

The OEA prepared the most recent long-term statewide population and employment forecasts in 2004. Despite the fact that statewide planning law requires cities to provide a 20-year supply of buildable land, the forecasts extended to a horizon year of 2040, so local governments must work back to a 2030 forecast. This section presents the OEA forecast for Hood River County and extrapolates the forecast on a year-by-year basis so that the forecast can be more easily used by the County and cities for planning purposes.

Table 2 shows the OEA’s population forecast for Oregon and Hood River County from 2000 to 2040. Table 2 shows that Hood River County’s actual population in 2000 was 20,500 people. The OEA predicts that Hood River County will grow from 21,998 people in 2010 to 28,404 people in 2030, an increase of more than 6,400 or 29%. This equates to an average annual rate of 1.29%. Over the 2000 to 2040 period, the OEA forecast projects that Hood River County will grow by nearly 12,000 people at an average annual rate of 1.16% per year.

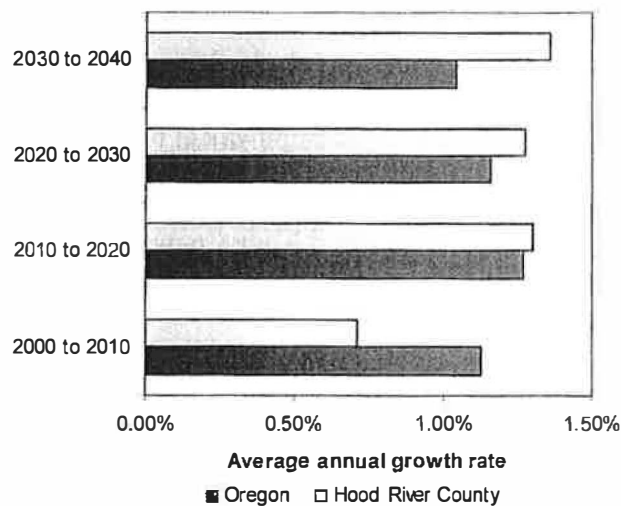
**Table 2. OEA population forecast,
Hood River County, 2004**

Hood River	
Year	County
2000	20,500
2005	20,698
2010	21,998
2015	23,485
2020	25,027
2025	26,667
2030	28,404
2035	30,310
2040	32,498
Change 2010 to 2030	
Number	6,406
Percent	29%
AAGR	1.29%

Source: Office of Economic Analysis (OEA)
Note: AAGR is average annual growth rate

Figure 1 shows a comparison of the OEA's average annual growth rates (AAGR) for Oregon and Hood River County by decade over the 2000 to 2040 period. The OEA forecasts that population in Hood River County will grow at about the same rate as Oregon over the 40-year period, about 1.15% average annual growth. The forecast, however, predicts that Hood River County's population will grow a little slower than the State average over the 2000 to 2020 period and slightly faster than the State average over the 2020 to 2040 period.

Figure 1. Average annual growth rates by decade for the OEA population forecast, Hood River County and Oregon, 2000 to 2040



Source: Office of Economic Analysis (OEA)

Annual Hood River County Population Forecast

ECO recommends that Hood River County adopt the OEA growth rates forecast as the basis for predicting population growth in the County over the 2008 to 2035 period. The basis for this recommendation is:

- **The OEA's forecast reflects recent growth trends.** The OEA's forecast growth rate for the 2000 to 2010 period is 0.7% annual growth, which reflects recent growth trends of about 0.7% average annual growth since 2000.
- **The OEA's forecast for 2010 to 2030 is consistent with long-term growth trends.** The OEA's forecast for the County is about 1.3% average annual growth between 2010 and 2030. This forecast is consistent with County growth trends over the 1980 to 2007 period (about 1.1% annual growth) and growth trends over the 1990 to 2007 period (1.4% annual growth).
- **The OEA's forecast projects Hood River County's population growth in relation to population growth for all of Oregon.** The OEA's forecast is based on expected growth in Oregon as a whole. The OEA forecast accounts for expected demographic shifts in Oregon and Hood River County. Typical concerns that some counties have with the OEA

forecast are related to underestimations of growth resulting from rapid in-migration. While in-migration is an important component in Hood River County's population growth, the County has not had as much in-migration as some areas in Oregon (such as the Bend and Redmond area).

- **The OEA's forecast is the State forecast.** The OEA population forecast provides a forecast of population growth in Hood River County that is acceptable to State agencies

ECO recommends that Hood River County use the official population estimate for 2007 from the Population Research Center as the basis for Hood River County's population forecast. The population estimates from the Population Research Center is the official State census of population for counties and cities in Oregon, as required by ORS 190.520.

Table 3 shows Hood River County's population forecast for the 2007 to 2035 period, extrapolated on a year-by-year basis, using the growth rates from the OEA forecast.¹⁰ ECO presents an annual population forecast so that the County and the cities have a population forecast number for each year over the 2008 to 2028 period and estimates for several future years, assuming the same average growth rate. This will allow the County and the cities to extrapolate the forecast to a 20-year projection for any period up to 2035.

The forecast in Table 3 shows that Hood River County will grow from 21,469 people in 2008 to 27,696 people by 2028, an increase of 6,227 people or 29% at an average annual growth rate of 1.28%. The population in 2035 would be 30,310 assuming the same growth rates. As noted above, the official adopted forecast covers the period from 2008 to 2028, shown in green shading.

¹⁰ The 2007 population estimate of 21,209 people was extrapolated from the OEA forecast based on the 2005 population forecast for the County (20,698) and the OEA growth rate between 2005 and 2010 (1.23%). This number is not equal to the actual population of Hood River County in 2007 (shown in Table 8) because the 2007 population number in Table 3 is an estimate.

**Table 3. Annual population forecast,
Hood River County, 2007 to 2035.**

Year	Population Forecast	Year	Population Forecast
2007	21,209	2022	25,671
2008	21,469	2023	25,998
2009	21,732	2024	26,330
2010	21,998	2025	26,667
2011	22,288	2026	27,005
2012	22,581	2027	27,348
2013	22,879	2028	27,696
2014	23,180	2029	28,048
2015	23,485	2030	28,404
2016	23,786	2031	28,775
2017	24,090	2032	29,151
2018	24,399	2033	29,532
2019	24,711	2034	29,918
2020	25,027	2035	30,310
2021	25,347		

Forecast Population Change 2008 to 2028	
Number	6,227
Percent	29%
AAGR	1.28%

Source: The 2007 population estimate was extrapolated from the OEA forecast based on the 2005 population forecast for the County (20,698) and the OEA growth rate between 2005 and 2010 (1.23%); Growth rates from the Office of Economic Analysis (OEA); Population extrapolated on a year-by-year basis by ECONorthwest
Note: Green shading denotes the official forecast period.

FACTUAL BASIS

This section discusses some of the factors that affect long-term growth in Hood River County. These factors include statewide and regional population trends, population trends in Hood River County, other population forecasts, development trends in Hood River County, and socioeconomic trends in Hood River County. These factors provide a factual basis in support of using the OEA's forecast for population growth in Hood River County.

Statewide and regional population trends

Statewide and regional population trends can affect population growth in Hood River County. The County is growing, in part, as a result of growth in Oregon and in the Portland metropolitan area. The County's high quality of life and proximity to Portland make the County an attractive place. Hood River County will continue to grow as the State and Portland region grow. This section describes different rates of growth and other population trends for Oregon, the Portland metropolitan region, and Hood River County.

Population growth in Oregon tends to follow economic cycles. Oregon's economy is generally more cyclical than the nation's, growing faster than the national economy during expansions and contracting more rapidly than the nation during recessions. This pattern is shown in Table 4, which presents data on population change in the U.S., Oregon, the Portland metropolitan area, Hood River County and its incorporated cities over the 1980 to 2007 period.

Table 4 shows Oregon has grown more rapidly than the U.S. over the 1980 to 2007 period. Oregon's growth lagged behind the U.S. during the 1980s, primarily as a result of the nationwide recession early in the decade. Oregon's population growth regained momentum in 1987, growing at annual rates of 1.4%–2.9% between 1988 and 1996. Population growth for Oregon and its regions slowed in 1997 and remained slow from 2000 to 2005, averaging 1.1% or 1.2% annually, the slowest rate since 1987.

Table 4. Population in the U.S., Oregon, Portland Metropolitan Area, Hood River County, and Cities in Hood River County, 1980 to 2007

Area	Population				Change 1980 to 2007		
	1980	1990	2000	2007	Number	Percent	AAGR
U.S.	226,545,805	248,709,873	281,421,906	301,621,157	75,075,352	33%	1.07%
Oregon	2,639,915	2,842,321	3,421,399	3,745,455	1,105,540	42%	1.30%
Portland metropolitan area	1,050,418	1,174,291	1,444,219	1,593,370	542,952	52%	1.56%
Hood River County	15,835	16,903	20,411	21,470	5,635	36%	1.13%
City of Hood River	4,329	4,632	5,831	6,710	2,381	55%	1.64%
Cascade Locks	838	930	1,115	1,075	237	28%	0.93%

Source: U.S. Census and Population Research Center at Portland State University.

Note: The 2007 population estimate for Hood River County is different in this table than in Table 3 because Table 4 presents population estimates from the Census and PSU, while Table 3 presents the OEA's forecast for growth.

Growth in the Portland metropolitan area will impact Hood River County because the County is located to the east of the Portland metropolitan area by about 60 miles. The Portland metropolitan area accounted for about 43% of the State's population in 2007 and accounted for 49% of the State's growth during the period, growing at a rate of 1.56% annually. In comparison,

Hood River County accounted for less than 1% of the State's population in 2007 and less than 1% of State growth over the 27-year period.

Population growth for the entire State is also related to economic conditions in other states—most notably, in California. During downturns in California's economy, people leave the state for opportunities in Oregon and elsewhere. As California's economy recovers, the population exodus tapers off. Such interstate migration is a major source of population change.

The Oregon Department of Motor Vehicles collects data on out-of-state driver licenses surrendered by applicants for Oregon licenses. These data provide an indicator of the source of Oregon's in-migration. During the period 1999-2005, over 30% of surrendered licenses were from California and approximately 17% were from Washington. All other states each accounted for less than 5% of the surrendered licenses.¹¹ The DMV also collects data on Oregon driver licenses surrendered in other states. These data indicate that Washington and California are the top destinations for Oregon's out-migrants.¹²

According to a U.S. Census study, Oregon had net interstate in-migration (more people moved *to* Oregon than moved *from* Oregon) during the period 1990-2004.¹³ Oregon had an annual average population growth of 26,290 more in-migrants than out-migrants during the period 1990-2000. The annual average growth dropped to 12,880 during the period 2000-2004.¹⁴

According to official State population estimates from the Population Research Center about 70% of Oregon's population growth during the 1990 to 2007 period, more than 633,000 people, was the result of in-migration. Over the same period, about 65% of Hood River County's population growth, nearly 3,000 people, was the result of in-migration. It is reasonable to assume that in-migration will continue to play an important part in population growth in Hood River County.

Other population forecasts for Hood River County

A number of agencies have forecast population growth in Hood River County over the last decade. Two of the most recent forecasts that are relevant to land-use planning are the County's 1997 adopted population forecast from the Comprehensive Plan and a 2004 enrollment forecast developed for Hood River School District.

Hood River County adopted a population forecast in 1997. Table 5 shows the range of population forecasts that the County considered adopting in 1997. The County chose the PSU Rates, the mid-range projection, as the County forecast. This forecast predicted that Hood River

¹¹ See Oregon Department of Motor Vehicles, "Driver Issuance Statistics," http://www.oregon.gov/ODOT/DMV/news/driver_stats.shtml, accessed May 25, 2006.

¹² For a discussion of the DMV data, see Ayre, A, 2004, *People Moved to Oregon Despite Recession*, Oregon Employment Department, July.

¹³ Marc J. Perry, 2006, *Domestic Net Migration in the United States: 2000 to 2004*, Washington, DC, Current Population Reports, P25-1135, U.S. Census Bureau.

¹⁴ In contrast, California had net interstate *out-migration* over the same period. During 1990-2000, California had an annual average of 220,871 more out-migrants than in-migrants. The net outmigration slowed to 99,039 per year during 2000-2004.

County would grow by about 5,000 people between 1995 and 2015, at an average annual rate of 1.2%.

Table 5. Hood River County's 1997 Population Forecast

Year	Low Rate (0.67% Annually)	PSU Rates (1.2 - 1.3% Annually)	High Rate (2.07% Annually)
1995	18,700	18,700	18,700
2000	19,151	19,859	20,736
2005	19,800	21,110	22,893
2010	20,471	22,377	25,274
2015	21,165	23,742	27,902
Change 1995 to 2015			
Number	2,465	5,042	9,202
Percent	13%	27%	49%
AAGR	0.6%	1.2%	2.0%

Source: Hood River County Comprehensive Plan, 1997

Actual population growth in Hood River County for the 1995 to 2005 period was consistent with the preferred mid-range projection (1.2% average annual growth) from the 1997 adopted forecast. Based on official State population estimates from the Population Research Center at Portland State University, the County actually grew by 2,290 people between 1995 and 2005, at an average annual rate of 1.2%.

The Hood River County School District, which serves all of Hood River County, commissioned a school enrollment study from the Population Research Center at Portland State University in 2005. Table 6 shows the three population growth scenarios forecast by the study. The growth scenarios range from average annual growth of 1.3% to 2.3% between 2005 and 2015, resulting in District-wide growth of more than 3,100 people to more than 5,700 people. The study identifies the "Medium" growth scenario as the most probable growth scenario, which forecasts annual growth that is 0.5% faster than the OEA forecast.

Table 6. Population forecast, Hood River County School District, 2000 to 2015

Year	Low	Medium	High
2000	20,117	20,117	20,117
2005	22,098	22,235	22,325
2010	23,728	24,390	25,067
2015	25,238	26,537	28,036
Change 2005 to 2015			
Number	3,140	4,302	5,711
Percent	14%	19%	26%
AAGR	1.3%	1.8%	2.3%

Source: Population Research Center at Portland State University "Hood River County School District School Enrollment Forecast, 2004 to 2015," May 2, 2005; calculations by ECONorthwest

The point of comparing and describing these different forecasts is not to attempt to reconcile them or use them directly to develop this new coordinated forecast. Rather they are described here to identify the range of previous forecasts used and generally assess how accurately they have reflected previous or current conditions.

These forecasts project similar amounts of growth in Hood River County. The growth rates used to develop these forecasts range from a low of 0.6% average annual growth from the County's 1997 forecast to a high of 2.3% average annual growth from the School Districts 2004 forecast. The range of growth rates used in these forecasts is generally compatible with the growth rate assumption used by the OEA forecast (1.3% average annual growth). The preferred growth rate from 1997 Comprehensive Plan forecast (1.2% average annual growth) was slightly lower (0.1%) than the OEA growth rate. The preferred growth rate from the 2004 School District's enrollment forecast (1.8% average annual growth) was higher (0.5%) than the OEA growth rate.

Hood River County population trends, 1980 to 2007

Historic population growth rates show population growth trends that provide a basis for projecting future growth in Hood River County. This section presents population trends for all of Hood River County (inclusive of unincorporated and incorporated areas) from 1980 to 2007.

Tables 7 and 8 summarize historical population trends for Hood River County for the period between 1980 and 2007. The County's rate of growth varied over the 27-year period, ranging from small decreases in population, mostly during the 1980's, to annual increases of nearly 3%. The County's population grew by 5,635 over the 27-year period, an increase of 36% at an average annual rate of 1.13%. Like the State, the County grew slowly in the 1980's (0.65% annual growth) and faster in the 1990's (1.9% annual growth). The County's population growth rate has slowed since 2000, averaging 0.73% annual growth.

**Table 7. Historic Growth Rates,
Hood River County, 1980 to 2007**

Period	Population Percent		
	AAGR	Change	Change
1980-2007	1.13%	5,635	36%
1990-2007	1.42%	4,567	27%
1980-1990	0.65%	1,068	7%
1990-2000	1.90%	3,508	21%
2000-2007	0.73%	1,059	5%

Source: U.S. Census and Population Research Center at Portland State University; calculations by ECONorthwest

**Table 8. Historic Population Change,
Hood River County, 1980 to 2007**

Year	Population	Annual Percent Change
1980	15,835	-----
1981	15,725	-0.7%
1982	15,870	0.9%
1983	16,200	2.1%
1984	16,400	1.2%
1985	16,350	-0.3%
1986	16,200	-0.9%
1987	16,500	1.9%
1988	16,500	0.0%
1989	17,000	3.0%
1990	16,903	-0.6%
1991	17,010	0.6%
1992	17,480	2.8%
1993	17,950	2.7%
1994	18,380	2.4%
1995	18,890	2.8%
1996	19,310	2.2%
1997	19,490	0.9%
1998	19,880	2.0%
1999	20,240	1.8%
2000	20,411	0.8%
2001	20,600	0.9%
2002	20,450	-0.7%
2003	20,500	0.2%
2004	21,050	2.7%
2005	21,180	0.6%
2006	21,335	0.7%
2007	21,470	0.6%

Source: U.S. Census and Population Research
Center at Portland State University; calculations by ECONorthwest
Note: The 2007 population estimate for Hood River County
is different in this table than in Table 3 because Table 8
presents population estimates from the Census and PSU,
while Table 3 presents the OEA's forecast for growth.

Development trends

Housing development trends provide additional information about growth and the rates of growth in an area. Housing generally grows as population grows. The exception is areas with a substantial number of homes used for vacation or secondary homes, where housing growth rates may be faster than population growth rates. This section includes information about housing development in Hood River County over the 2000 to 2008 period.

Table 9 shows the change in housing type and tenure in Hood River County. In 2000, the majority of the County's housing was single-family (84%) and about two-thirds of dwelling units were owner occupied. Between 2000 and 2008, the County added 675 dwellings, an increase in the County's housing stock of 9%. Nearly three-quarters of new dwellings were single-family units. The share of multifamily housing in the County increased over the eight-year period from 16% to 17% of all dwellings. Homeownership rates decreased by about 1%, from 65% in 2000 to 64% in 2008, possibly as a result of the increase in the share of multifamily housing.

Table 9. Housing by type and tenure, Hood River County, 2000 and 2008

	2000		2008		Change 2000 to 2008	
	Number	Percent	Number	Percent	Number	% Change
Housing Units						
Single-Family	6,584	84%	7,075	83%	491	7%
Multifamily	1,234	16%	1,418	17%	184	15%
Total	7,818	100%	8,493	100%	675	9%
Tenure						
Owner Occupied	4,703	65%	4,896	64%	193	4%
Renter Occupied	2,545	35%	2,704	36%	159	6%
Total	7,248	100%	7,600	100%	352	5%

Source: U.S. Census 2000 and Claritas 2008; calculations by ECONorthwest

Note: Caritas provides custom demographic and market reports for current years. Caritas provides estimates of housing and demographic data based on widely accepted forecasting models.

Table 10 shows occupancy, vacancy, and reason for vacancy in Hood River County in 2000. Table 10 shows that vacancies in Hood River County were about 7% in 2000. The most common reason for vacancies was for seasonal or recreational use and dwelling unit sale.

Table 10. Occupancy, vacancy, and reason for vacancy, Hood River County, 2000

	Number	Percent
Occupied	7,248	93%
Vacant	570	7%
For rent	60	1%
For sale only	142	2%
For seasonal, recreational, or occasional use	290	4%
Other vacant	78	1%

Source: U.S. Census 2000; calculations by ECONorthwest

Table 11 shows residential building permits (for single-family and multifamily dwellings) issued by Hood River County for the 2004 to 2007 period. The permits shown in Table 11 are for unincorporated Hood River County outside the cities of Hood River and Cascade Locks. More than 400 permits were issued in the County, at an average of 104 permits per year. The number of permits issued peaked in 2006. Over the 2004 to 2007 period, about three-quarters of the permits issued were for single-family and multifamily units, with fewer than one-quarter of permits issued for manufactured dwellings.

Table 11. Residential building permits issued, unincorporated Hood River County and Cascade Locks, 2004 to 2007

Year	Single-family and Multifamily Permits		Manufactured Permits		Total Permits	
	Number	Percent	Number	Percent	Number	Percent
2004	73	23%	33	34%	106	26%
2005	69	22%	26	27%	95	23%
2006	98	31%	17	18%	115	28%
2007	78	25%	20	21%	98	24%
Total	318		96		414	
Average 04-07	80		24		104	

Source: U.S. Census building permit database; calculations by ECONorthwest

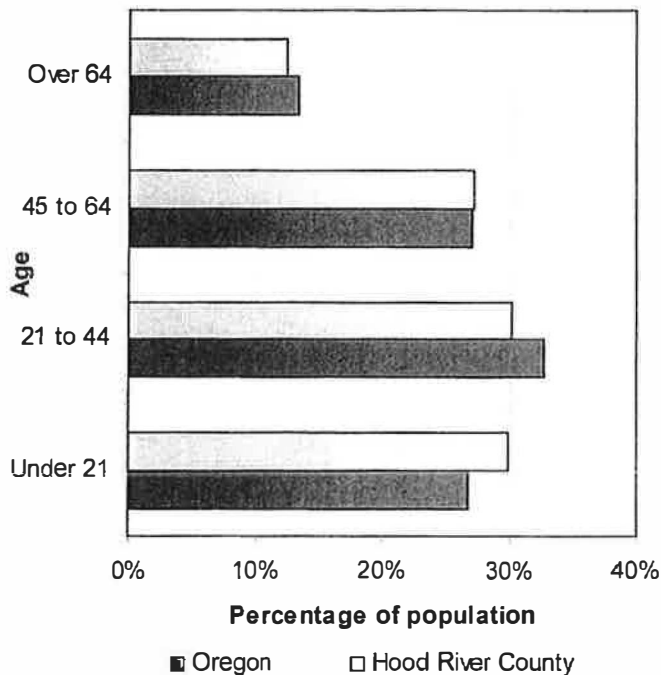
The development data presented in this section shows that housing development since 2000 has occurred at a faster rate than population growth since 2000. Since 2000, housing has grown by about 1% annually (based on data in Table 9) and population has grown at 0.7% annually (based on data in Table 8). The most likely explanation for the greater growth in housing than population is that some housing was built for the secondary or vacation market, including those occupied only in the summer months.

Socioeconomic trends

This section reviews historical socioeconomic trends in Hood River County, inclusive of all residents in Hood River County. Socioeconomic trends provide a broader context for growth; factors such as age, income, migration and other trends show how communities have grown and shape future growth. To provide context, we compare Hood River County with Oregon. Characteristics such as age and race are indicators of how population has grown in the past and provide insight into factors that may affect future growth.

Figure 2 compares age in Hood River County and Oregon for 2008. Hood River County's population had an age distribution that is similar to the State average. The County had a larger share (30%) of population under 21 years old than the State average (27%) and a smaller share (30%) between 21 and 44 years than the State average (33%).

Figure 2. Age distribution, Hood River County and Oregon, 2008



Source: Claritas, 2008

From 1990 to 2008 Hood River County experienced changes in the age structure of its residents. Table 12 shows population by age for Hood River County for 1990 and 2008, based on data from the U.S. Census and Claritas.¹⁵ While the County experienced an increase in population for every age group, the only group to increase its relative share of the population was the 45 to 64 group, which grew by about 2,800 people or 89%. The second fastest growing group was age 20 and under, which grew by nearly 1,300 people or 25%. The slowest growing age groups were people over 65 years, which increased by about 360 people or 15% and people 21 to 44 years, which grew by 402 people or 6%. Compared to State averages, Hood River County had more growth in people under 20 and less growth in people 21 to 44 and 64 and over.

¹⁵ Claritas provides custom demographic and market reports for current years. Claritas provides estimates of housing and demographic data based on widely accepted forecasting models.

Table 12. Population by Age, Hood River County, 1990 and 2008

Age Group	1990		2008		Change		
	Number	Percent	Number	Percent	Number	Percent	Share
20 and under	5,208	31%	6,507	30%	1,299	25%	-1%
21 to 44	6,192	37%	6,594	30%	402	6%	-6%
45 to 64	3,138	19%	5,941	27%	2,803	89%	9%
65 and over	2,365	14%	2,728	13%	363	15%	-1%
Total	16,903	100%	21,770	100%	4,867	29%	0%

Source: U.S. Census, 1990 and Claritas 2008

Note: The population in Hood River County in 2008 is an unofficial estimate, developed by Claritas. This estimate is different than the OEA forecast presented in Table 3.

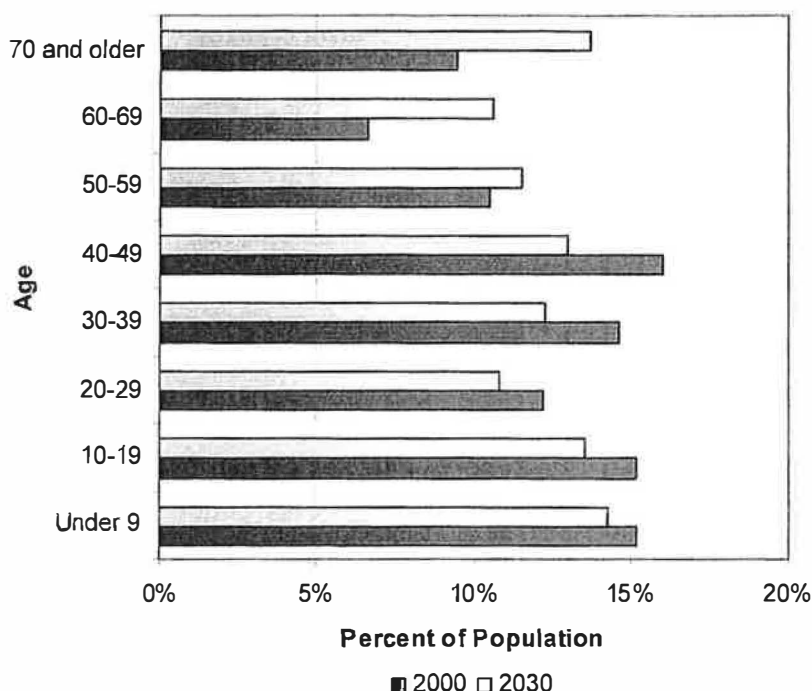
Note: The population change shown in Table 12 for Hood River County (4,867 people) is for the 1990 to 2008 period. The population change shown in Tables 6 and 7 include the 1990 to 2007 period and are different than the data in Table 12.

The data show the following age trends:

- The largest growing age group in Hood River County and its incorporated cities was people aged 45 to 64, the baby boomers. This trend follows State and national trends.
- Hood River County had proportionately larger growth in children (under 20 years old) and less growth in people 65 years and older. The data suggest that Hood River County is attracting families with children.
- Hood River County has attracted fewer college age people and younger adults (21 to 44 years old), compared to State averages.
- Hood River County is attracting retired people (65 years and older) at a lower rate than the State average.

Figure 3 shows the OEA's forecast for population growth by age group in Hood River County from 2000 to 2030. The OEA forecasts that the County will have the most growth in people aged 50 and over, consistent with expected changes in the age distribution for all of Oregon. The OEA forecasts that school aged children (5 to 19 years) will grow by nearly 1,150 people but they will account for a smaller share of population in 2030 (21% of all population) compared to 2000 (23% of all population).

Figure 3. Population growth by age group, Hood River County, 2000 to 2030



Source: Oregon Office of Economic Analysis Forecast of Population Growth by Age Groups, 2004

The U.S. Census collects information about migration patterns. Specifically, it asks households where their residence was in 1995 (5 years prior to the Census count). Table 13 shows place of residence in 1995 for Oregon and Hood River County. The data show that residents of Hood River County were less mobile than other residents of Oregon. About 52% of residents of Hood River County lived in the same house in 1995, compared to the State average of 47%.

Table 13. Place of residence in 1995, Oregon and Hood River County, persons 5 years and over, 2000

Location	Oregon		Hood River County	
	Persons	Percent	Persons	Percent
Population 5 years and older	3,199,323	100%	18,932	100%
Same house in 1995	1,496,938	47%	9,846	52%
Different house in 1995	1,702,385	53%	9,086	48%
Same county	863,070	27%	4,604	24%
Different county	755,954	24%	3,796	20%
Same state	356,626	11%	1,562	8%
Different state	399,328	12%	2,234	12%

Source: U.S. Census, SF-3

Table 14 shows the number of persons of Hispanic or Latino origin for Hood River County and Oregon for 1990, 2000, and 2008. Hood River County is more ethnically diverse than Oregon. In

2008, Hood River County's population was about 26% Hispanic residents, compared to the State average of 11% of Oregon's population. Hispanic population grew at a faster rate between 1990 and 2000 (86%) than 2000 to 2008 (11%).

Table 14. Persons of Hispanic or Latino origin, Hood River County and Oregon 1990, 2000, and 2008

	Oregon	Hood River County
1990		
Total Population	2,842,321	16,903
Hispanic or Latino	112,707	2,752
Percent Hispanic or Latino	4.0%	16.3%
2000		
Total Population	3,421,399	20,411
Hispanic or Latino	275,314	5,107
Percent Hispanic or Latino	8.0%	25.0%
2008		
Total Population	3,772,854	21,770
Hispanic or Latino	400,435	5,653
Percent Hispanic or Latino	10.6%	26.0%
Change 1990-2000		
Hispanic or Latino	162,607	2,355
Percent Hispanic or Latino	144%	86%
Change 2000-2008		
Hispanic or Latino	125,121	546
Percent Hispanic or Latino	45%	11%

Source: U.S. Census, 1990 and 2000, Claritas 2008

Note: The population in Hood River County in 2008 is an unofficial estimate, developed by Claritas. This estimate is different than the OEA forecast presented in Table 3.

In summary, the Hispanic population of Hood River County is growing faster than the overall population, similar to statewide trends. Hood River County was more ethnically diverse than the State on average, with greater growth in Hispanic population during the 1990's and slower growth since 2000.

Summary of findings

This section provides a summary of findings that support the population forecast for Hood River County based on the factual basis presented above.

- **Hood River County grew by more than one-third between 1980 and 2007.** Hood River County grew from 15,835 people in 1980 to 21,470 people in 2007, an increase of 5,635 people or 36% at an annual rate of 1.13%. The County grew slowly in the 1980's (0.65% annual growth) and faster in the 1990's (1.9% annual growth). The County's population growth rate slowed since 2000, averaging 0.73% annual growth.

- **Migration has played an important role in population growth in Hood River County.** Net migration has accounted for about 65% of the population increase in the County since 1990, adding nearly 3,000 new residents. In 2000, residents of Hood River County were less mobile than other residents of Oregon. About 52% of residents of Hood River County lived in the same house in 1995, compared to the State average of 47%.
- **Hood River's population is forecast to increase by nearly 30% by 2030.** The OEA forecasts that Hood River County will grow by about 6,400 people between 2010 and 2030, a 29% increase in population, at an average annual growth rate of 1.29%. The OEA forecast predicts that Hood River County's population will grow more slowly between 2000 and 2010, averaging 0.71% annual growth, with growth increasing over the forecast period to 1.36% average annual growth over the 2030 to 2040 period.
- **Previous population forecasts suggest that Hood River County would grow at a similar or slightly higher growth rate than the OEA's forecast.** The OEA forecasts that Hood River County will grow at 1.29% annually between 2010 and 2030. The Hood River Comprehensive Plan 1997 Population Forecast projected that the County would grow by 1.2% annually between 1995 and 2015. The Hood River School District enrollment forecast (from 2004) projects that the County will grow by 1.8% annually between 2005 and 2015. Historical growth rates in Hood River County for the 1990 to 2007 period are slightly higher than the OEA forecast (1.4%)
- **Residential development occurred at a faster rate than population growth.** The majority of development in the County was single-family housing types (83%). About 318 residential permits were issued in the County over the 2004 to 2007 period, averaging 80 permits annually (excluding manufactured home permits). Since 2000, housing has grown by about 1% annually and population has grown at 0.7% annually. The most likely explanation for the greater growth in housing than population is that some housing was built for the secondary or vacation market.
- **Hood River County is attracting families with children and people nearing retirement.** Hood River County had a larger share (30%) of population under 21 years old than the State average (27%) and a smaller share (30%) between 21 and 44 years than the State average (33%) in 2008. Between 1990 and 2008, the fastest growing age group was people 45 to 64 years, which grew by about 2,800 people or 89%. The second fastest growing group was age 20 and under, which grew by nearly 1,300 people or 25%.
- **The percentage of people over 50 years will increase in the County by 2030.** The OEA forecasts that, between 2000 and 2030, the County will have the most growth in people aged 50 and over, consistent with expected changes in the age distribution for all of Oregon.
- **The number of school aged children will grow in the County between 2000 and 2030.** The OEA forecasts that school aged children (5 to 19 years) will grow by nearly 1,150 people but they will account for a smaller share of population in 2030 (21% of all population) compared to 2000 (23% of all population).

- **Hood River County is more ethnically diverse than Oregon.** In 2008, Hood River County's population was about 26% Hispanic residents, compared to the State average of 11% of Oregon's population. Hispanic population grew at a faster rate between 1990 and 2000 (86%) than from 2000 to 2008 (11%).

The findings above support the use of the growth rates in the OEA forecast as the basis for Hood River County's population forecast, with a growth rate of 1.28% over the 2008 to 2028 period, based on:

- Historical growth rates (1.4% over the 1990 to 2007 period) track relatively closely with the OEA's forecast for growth of 1.28% in the County over the 2007 to 2035 period.
- Previous population forecasts, the County's 1997 Comprehensive Plan and the Hood River School District's enrollment forecast, project growth rates that are relatively similar to the OEA's forecast. The County's Comprehensive Plan projects average annual growth rates of 1.2% and the School District's enrollment forecast projects a rate of 1.8% average annual growth
- The County has had growth in families with children and people nearing retirement. Between 1990 and 2008, the fastest growing age group was people 45 to 64 years, which grew by about 2,800 people or 89%. The second fastest growing group was age 20 and under, which grew by nearly 1,300 people or 25%. Both of these groups are forecast to grow over the 2000 to 2030 period.
- The County has had growth in Hispanic population (an increase of 546 people or 11% between 2000 and 2008). Hispanic population is also expected to grow over the next twenty-years.

IV. CITY OF HOOD RIVER POPULATION FORECAST

This section presents population forecasts for the City of Hood River UGB. It also presents the factual basis for the forecast and findings in support of the forecast.

CITY OF HOOD RIVER POPULATION FORECAST

Table 15 shows a range of population forecasts for the City of Hood River urban area for the 2007-2035 period. The forecasts are based on: official population estimates from the Population Research Center at Portland State University, historic growth in the City of Hood River, recent development trends, and demographic trends. The forecasts require a base population to serve as the starting point for the forecasts. All three forecasts use the official state estimates of population for 2007 for the City of Hood River, compiled by the Population Research Center at Portland State University, as the a starting point population for the forecast. The base forecast uses the population estimate for the City limits and assumes that, as areas within the urban growth area (the area between the City limits and the UGB) are annexed into the City, population in these areas will grow at the same rate as population within the City limits. As a result, the forecast in this report represents the forecasted population within the City's UGB.

As described earlier, we propose to use the growth rates from the OEA forecast as the basis for estimating overall county population.

- The **Low** population forecast projects that the City will grow by 2,547 people or 37% over the 2008 to 2028 period. The Low forecast assumes that the City will grow at 1.6% per year based on the City's growth rate from 1980 to 2007.
- The **Medium** population forecast projects that the City will grow by 3,326 people or 49% over the 2008 to 2028 period. The Medium forecast assumes that the City will grow at 2.0% per year based on City's growth rate from 1980 to 2007, recent development trends, and demographic shifts in population characteristics.
- The **High** population forecast projects that the City will grow by 4,392 people or 64% over the 2008 to 2028 period. The High forecast assumes that the City will grow at 2.5% per year based on the City's growth rate over the 1990 to 2000 period, recent development trends, the City's attractiveness as a place to live, and the City's proximity to the Portland metropolitan area.

The forecasts assume that population will grow in the City of Hood River through the following means: natural increase (births minus deaths), in-migration into the City, and annexation of population in urbanizing areas. The forecasts also assume that growth will occur within the City of Hood River city limits and its UGB. As areas in the urbanizing area develop, it is expected that they will be annexed into the city limits. The official adopted forecast covers the period from 2008 to 2028, shown in green shading.

**Table 15. Population forecast,
City of Hood River UGB, 2007 to 2035**

Year	Low	Medium	High
2007	6,710	6,710	6,710
2008	6,817	6,844	6,878
2009	6,926	6,981	7,050
2010	7,037	7,121	7,226
2011	7,150	7,263	7,407
2012	7,264	7,408	7,592
2013	7,380	7,557	7,782
2014	7,499	7,708	7,976
2015	7,619	7,862	8,175
2016	7,740	8,019	8,380
2017	7,864	8,179	8,589
2018	7,990	8,343	8,804
2019	8,118	8,510	9,024
2020	8,248	8,680	9,250
2021	8,380	8,854	9,481
2022	8,514	9,031	9,718
2023	8,650	9,211	9,961
2024	8,789	9,396	10,210
2025	8,929	9,584	10,465
2026	9,072	9,775	10,727
2027	9,217	9,971	10,995
2028	9,365	10,170	11,270
2029	9,514	10,374	11,552
2030	9,667	10,581	11,841
2031	9,821	10,793	12,137
2032	9,978	11,008	12,440
2033	10,138	11,229	12,751
2034	10,300	11,453	13,070
2035	10,465	11,682	13,396
Change 2008 to 2028			
Number	2,547	3,326	4,392
Percent	37%	49%	64%
AAGR	1.6%	2.0%	2.5%

Source: 2007 population estimates from Portland State University Center for Population Research; Calculations by ECONorthwest
Note: Green shading denotes the official forecast period.

FACTUAL BASIS

This section discusses some of the factors that may affect long-term growth in the City of Hood River. These factors include other population forecasts, population trends in the City of Hood River, development trends in the City of Hood River, and socioeconomic trends in the City of Hood River. These factors provide a factual basis in support of using the forecast for population growth in the City.

Other population forecasts for the City of Hood River

Two recent studies forecast population growth for the Hood River UGB: (1) the Hood River Public Facilities Plan (updated in 2000) and (2) DKS Associates “Transportation Forecasting Assumptions” memorandum, dated May 20, 2008. In addition, the Hood River County Comprehensive Plan (updated in 1997) presents a forecast for population in the City. This section compares the growth rate assumptions in these forecasts to the growth rate assumptions used to develop the population forecast for The City of Hood River. This is done for information and comparison purposes.

Recent population forecasts

The Hood River Public Facilities Plan (updated in 2000) forecasts 2.2% average annual growth through 2015 and 2.0% average annual growth from 2016 to 2041. By 2035, the Hood River Public Facilities Plan forecasts that Hood River will have 13,938 people within its UGB. Comparing the result of these forecasts to the forecast presented in this report is difficult because these forecasts use an estimate of population within the UGB as the forecast base, while this report uses the estimate of population within the city limits as the forecast base.

DKS Associates developed the forecast as part of an analysis for a transportation study about future traffic volumes in the City. The forecast was based on an estimate of population, dwelling units, and employment in the UGB in 2006. DKS Associates forecasts 2.0% annual growth through 2031. Comparing the result of these forecasts to the forecast presented in this report is difficult because these forecasts use an estimate of population within the UGB as the forecast base, while this report uses the estimate of population within the city limits as the forecast base.

The growth rate assumptions in these forecasts are most consistent with the “medium” population forecast scenario, which assumes a growth rate of 2.0% average annual growth.

Hood River County’s 1997 population forecast

The Hood River County 1997 population forecast presented a forecast for the City of Hood River in 2015. Unlike the other forecasts discussed in this report, the County’s forecast for population growth for the City was not based on historical population trends. The forecast was based on potential for residential development capacity within the city limits and the urban growth area (UGA).

The 1997 County forecast estimated that population in the city limits could grow to 5,690 people by 2015 and population in the UGA could grow to 8,247 by 2015. The forecast results in average annual growth of 0.9% (900 people) within the City limits and 10.5% (7,130 people) in the

UGA. Over the 2005 to 2015 period, the City of Hood River had growth of 1,510 people at an average annual rate of 2.7%.

City of Hood River population trends, 1980 to 2007

Historic population growth rates show population growth trends that provide a basis for projecting future growth in the City of Hood River. This section presents population trends for the City of Hood River from 1980 to 2007.

Tables 16 and 17 summarize historical population trends in the City of Hood River for the period between 1980 and 2007, based on the official State estimates of population from the Population Research Center at PSU. The City of Hood River generally had positive rates of growth, ranging from a decrease of 0.7% in 1981 to an increase of 3.5% in 2005. The increase of 13.6% in 2000 can be attributed to inaccuracy in the annual population estimates from the Population Research Center.¹⁶

The City grew by 2,381 people over the 27-year period, an increase of 55%. Like the County, Hood River grew slowest in the 1980's. The City's growth rate exceeded the County average since 1990, growing at an average annual rate of 2.33% during the 1990's and 2.03% since 2000. The City's population accounted for 27% of the County's population in 1980, growing to 31% of the County's population in 2007. The City's growth of 2,381 people accounted for 42% of the County's growth (of 5,635 people) over the twenty-seven year period.

Between 2000 and 2007, Hood River grew by 879 people, at an average annual rate of 2%. About 253 (28%) of this population growth was the result of annexations of existing population in the urban growth area into the city limits.¹⁷

**Table 16. Historic Growth Rates,
City of Hood River, 1980 to 2007**

Period	Population Percent		
	AAGR	Change	Change
1980-2007	1.64%	2,381	55%
1990-2007	2.20%	2,078	45%
1980-1990	0.68%	303	7%
1990-2000	2.33%	1,199	26%
2000-2007	2.03%	879	15%

Source: U.S. Census and Population Research Center at Portland State University; calculations by ECONorthwest

¹⁶ According to staff with the Population Research Center, the decennial census serves as the base for the population estimates that are produced for subsequent years in the decade. The closer in time that the estimates are to the previous decennial census, the more accurate they tend to be.

¹⁷ The estimate of annexated population is based on data from the Population Research Center at Portland State University.

**Table 17. Historic Population Change,
City of Hood River, 1980 to 2007**

Year	Population	Annual Percent Change	% of County Population
1980	4,329	-----	27.3%
1981	4,300	-0.7%	27.3%
1982	4,370	1.6%	27.5%
1983	4,450	1.8%	27.5%
1984	4,475	0.6%	27.3%
1985	4,490	0.3%	27.5%
1986	4,520	0.7%	27.9%
1987	4,520	0.0%	27.4%
1988	4,520	0.0%	27.4%
1989	4,640	2.7%	27.3%
1990	4,632	-0.2%	27.4%
1991	4,715	1.8%	27.7%
1992	4,725	0.2%	27.0%
1993	4,725	0.0%	26.3%
1994	4,875	3.2%	26.5%
1995	4,940	1.3%	26.2%
1996	5,110	3.4%	26.5%
1997	5,065	-0.9%	26.0%
1998	5,130	1.3%	25.8%
1999	5,135	0.1%	25.4%
2000	5,831	13.6%	28.6%
2001	6,020	3.2%	29.2%
2002	6,210	3.2%	30.4%
2003	6,230	0.3%	30.4%
2004	6,230	0.0%	29.6%
2005	6,450	3.5%	30.5%
2006	6,580	2.0%	30.8%
2007	6,710	2.0%	31.3%

Source: U.S. Census and Population Research Center at Portland State University; calculations by ECONorthwest

Development trends

Housing development trends provide additional information about growth and the rates of growth in an area. Housing generally grows as population grows. The exception is areas with a substantial number of homes used for vacation or secondary homes, where housing growth rates may be faster than population growth rates. This section includes information about housing development in the City of Hood River over the 2000 to 2008 period.

Table 18 shows the change in housing type and tenure in the City of Hood River between 2000 and 2008. Compared to the entire County, Hood River had fewer single-family units and lower homeownership rates. About two-thirds of Hood River's dwelling units were single-family and fewer than half were owner occupied. Table 18 shows that the housing types in Hood River and tenure did not change substantially between 2000 and 2008.

Table 18. Housing by type and tenure, City of Hood River, 2000 and 2008

	2000		2008		Change 2000 to 2008	
	Number	Percent	Number	Percent	Number	% Change
Housing Units						
Single-Family	1,691	64%	1,907	63%	216	13%
Multifamily	966	36%	1,143	37%	177	18%
Total	2,657	100%	3,050	100%	393	15%
Tenure						
Owner Occupied	1,168	48%	1,260	47%	92	8%
Renter Occupied	1,264	52%	1,431	53%	167	13%
Total	2,432	100%	2,691	100%	259	11%

Source: U.S. Census 2000 and Claritas 2008; calculations by ECONorthwest

Note: Multifamily housing includes: duplexes, tri- and quad-plexes, and structures with five or more units.

Table 19 shows occupancy, vacancy, and reason for vacancy in the City of Hood River in 2000. Table 19 shows that the City of Hood River had an 8% vacancy rate. The most common reason for vacancies was for seasonal or recreational use and dwelling unit sale.

Table 19. Occupancy, vacancy, and reason for vacancy City of Hood River, 2000

	Number	Percent
Occupied	2,432	92%
Vacant	225	8%
For rent	16	1%
For sale only	44	2%
For seasonal, recreational, or occasional use	158	6%
Other vacant	5	0%

Source: U.S. Census 2000; calculations by ECONorthwest

Table 20 shows residential building permits (for single-family and multifamily dwellings) issued in the City of Hood River for the 2000 to 2007 period. The City of Hood River issued 636 permits, at an average of 80 permits per year. The number of permits issued in the City peaked between 2003 and 2005, decreasing in 2006.

Table 20. Residential building permits issued, the City of Hood River, 2000 to 2007

Year	Number	Percent
2000	38	6%
2001	77	12%
2002	88	14%
2003	92	14%
2004	101	16%
2005	95	15%
2006	74	12%
2007	71	11%
Total	636	
Average 00-07	80	

Source: U.S. Census building permit database and the City of Hood River; calculations by ECONorthwest

Residential development in the City of Hood River over the 2004 to 2007 period was slightly greater than in the County. The City issued an average of about 85 permits per year over the three year period, compared to the County's annual average of 80 residential permits, not including permits for manufactured homes.

In addition to the residential development described above, Hood River has a number of governmental, commercial, and mixed-use projects underway: (1) Columbia Gorge Community College is opening a campus in Hood River, (2) Barclay is a mixed-use project with about 14,000 square feet of commercial space, (3) Waucoma Center is a commercial building with 210,000 square feet of commercial space that is in the process of being purchased and about half of the building's space may be available for rental, (4) Creekside Station is in the planning stages and is expected to have about 75,000 square feet of commercial space and 125 residential units and, (5) Westgate Business Park is a 43-acre commercial site that is in the conceptual planning stage.¹⁸

The development trends presented in this section suggest that, like the County, housing development in the City of Hood River has out paced population growth. This suggests that the City of Hood River has more secondary or vacation homes than historic levels or that other factors in the housing market resulted in housing growth that outpaced population growth. According to City planning staff, the City continues to have development of vacation or second houses. There are currently twenty-five condominium units under construction, which will most likely be sold as vacation houses. In addition, there are currently permits for 125 homes in use as vacation rentals or secondary homes.¹⁹

Socioeconomic trends

This section reviews historical socioeconomic trends in the City of Hood River. Socioeconomic trends provide a broader context for forecasting growth; factors such as age, income, migration

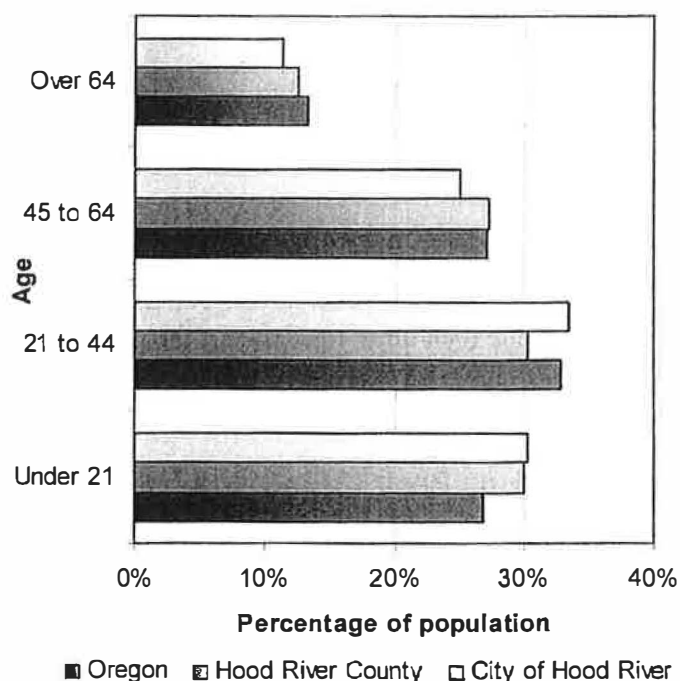
¹⁸ Information about commercial and mixed use development is from Stephen Ford, a commercial realtor.

¹⁹ Based on an interview with Cindy Walbridge, City of Hood River Planning Director.

and other trends show how communities have grown and shape future growth. To provide context, we compare the City of Hood River with Hood River County and Oregon. Characteristics such as age and race are indicators of how population has grown in the past and provide insight into factors that may affect future growth.

Figure 4 compares age in Oregon, Hood River County, and the City of Hood River for 2008. The City of Hood River had a younger population than the State or County averages. Hood River had a larger share of people aged 44 and under (64%) than the County or State averages (60%).

Figure 4. Age distribution, Oregon, Hood River County, and City of Hood River, 2008



Source: Claritas, 2008

From 1990 to 2008 the City of Hood River experienced changes in the age structure of its residents. Table 21 shows a population by age relationship for the City from 1990 to 2008. The City of Hood River had growth in all age groups, except for 65 and over. Hood River had the largest growth in people aged 45-64, which more than doubled in size and increased by nearly 900 residents. The share of Hood River residents in the age group 45-64 increased from 17% in 1990 to 25% in 2008. Other fast growing age groups were people 25 to 44 (increasing by about 400 people or 26%) and aged 5 to 17 (increasing by nearly 400 people or 48%).

Table 21. Population by Age, City of Hood River, 1990 and 2008

Age Group	1990		2008		Change		
	Number	Percent	Number	Percent	Number	Percent	Share
4 and under	364	8%	547	8%	183	50%	0%
5-17	820	18%	1,217	18%	397	48%	1%
18-24	386	8%	524	8%	138	36%	0%
25-44	1537	33%	1,939	29%	402	26%	-4%
45-64	769	17%	1,663	25%	894	116%	8%
65 and over	756	16%	753	11%	-3	0%	-5%
Total	4,632	100%	6,643	100%	2,011	43%	0%

Source: US Census, 1990 and Claritas, 2008

Note: The population in the City of Hood River in 2008 is an unofficial estimate, developed by Claritas. This estimate is different than the forecast for the City presented in Table 15.

The data show that the City of Hood River had proportionately larger growth in children (under 20 years old) and less growth in people 65 years and older. The data suggest that Hood River County and the City of Hood River are attracting families with children.

The U.S. Census collects information about migration patterns. Specifically, it asks households where their residence was in 1995 (5 years prior to the Census count). Table 22 shows place of residence in 1995 for Oregon, Hood River County, and the City of Hood River. The data show that residents of the City of Hood River were more mobile than other residents of the county. About 47% of residents of the City of Hood River lived in the same house in 1995, compared to the County average of 52%.

Table 22. Place of residence in 1995, Oregon, Hood River County and the City of Hood River, persons 5 years and over, 2000

Location	Oregon		Hood River County		City of Hood River	
	Persons	Percent	Persons	Percent	Persons	Percent
Population 5 years and older	3,199,323	100%	18,932	100%	10,264	100%
Same house in 1995	1,496,938	47%	9,846	52%	4,794	47%
Different house in 1995	1,702,385	53%	9,086	48%	5,470	53%
Same county	863,070	27%	4,604	24%	2,662	26%
Different county	755,954	24%	3,796	20%	2,423	24%
Same state	356,626	11%	1,562	8%	983	10%
Different state	399,328	12%	2,234	12%	1,440	14%

Source: U.S. Census, SF-3

Table 23 shows the number of persons of Hispanic or Latino origin for Oregon, Hood River County, and the City of Hood River for 1990, 2000, and 2008. The data show:

- Hood River County was historically more ethnically diverse than the City of Hood River. In 1990, Hood River County's population was about 16% Hispanic residents, compared to the City average of 11%. Hispanic population grew at a faster rate between 1990 and 2000 (179%) in the City than it did in the County (86%).

- The City of Hood River is now ethnically similar to the County. The City's population was about 26% Hispanic in 2008, a figure nearly identical to that of the County.
- The City of Hood River continues to be more ethnically diverse than the State. In 1990, 10.5% of the City's population was Hispanic, compared to the State average of 4% of the population. In 2008, about 26% of the City's population was Hispanic, compared to 10.6% of the State's population.

**Table 23. Persons of Hispanic or Latino origin,
Oregon, Hood River County and City of Hood River,
1990, 2000, and 2008**

	Oregon	Hood River County	City of Hood River
1990			
Total Population	2,842,321	16,903	4632
Hispanic or Latino	112,707	2,752	485
Percent Hispanic or Latino	4.0%	16.3%	10.5%
2000			
Total Population	3,421,399	20,411	5,831
Hispanic or Latino	275,314	5,107	1,351
Percent Hispanic or Latino	8.0%	25.0%	23.2%
2008			
Total Population	3,772,854	21,770	6,643
Hispanic or Latino	400,435	5,653	1,733
Percent Hispanic or Latino	10.6%	26.0%	26.1%
Change 1990-2000			
Hispanic or Latino	162,607	2,355	866
Percent Hispanic or Latino	144%	86%	179%
Change 2000-2008			
Hispanic or Latino	125,121	546	382
Percent Hispanic or Latino	45%	11%	28%

Source: U.S. Census, 1990 and 2000, Claritas 2008

Note: The population in the City of Hood River in 2008 is an unofficial estimate, developed by Claritas. This estimate is different than the forecast for the City presented in Table 15.

In summary, the Hispanic population of the City of Hood River is growing faster than the overall population, similar to statewide trends. Hood River County and the City of Hood River were more ethnically diverse than the State on average, with greater growth in Hispanic population during the 1990's and slower growth since 2000.

Summary of findings

- **The City of Hood River grew by more than 50% between 1980 and 2007.** Hood River grew from 4,329 people in 1980 to 6,710 people in 2007, an increase of 2,381 people over the 27-year period, an increase of 55%. Like the County, the City of Hood River grew slowest in the 1980's. The City's growth rate exceeded the County average since 1990, growing at an average annual rate of 2.33% during the 1990's and 2.03% since 2000. The City's population accounted for 27% of the County's population in 1980, growing to 31% of the County's population in 2007. Growth in the City accounted for 42% of total County growth between 1980 and 2007.
- **Recent population forecasts suggest that the City of Hood River will grow at 2.0% or 2.2% annually.** The Hood River Public Facilities Plan forecasts 2.2% average annual growth through 2015 and 2.0% average annual growth from 2016 to 2041. In a recent memorandum about transportation forecasting, DKS Associates forecast 2.0% annual growth through 2031. These forecasts accounted for growth within the Hood River UGB.
- **Residential development has occurred at a higher rate than population growth.** The City added nearly 400 dwelling units between 2000 and 2008, with residential development divided between single-family and multifamily housing types. The City issued 636 building permits over the 2000 to 2007 period, averaging 80 permits annually. The City accounted for more than half of residential building permits issued in the County over the 2000 to 2007 period, excluding manufactured home permits.
- **The City of Hood River is attracting younger people, as well as people nearing retirement.** In 2008, Hood River had a larger share of people aged 44 and under (64%) than the County or State averages (60%). Between 1990 and 2008, the fastest growing age group was 45-64 year olds, who grew by nearly 900 people from 17% of population in 1990 to 25% in 2008. Other fast growing age groups were people 25 to 44 (increasing by about 400 people or 26%) and aged 5 to 17 (increasing by nearly 400 people or 48%).
- **The City of Hood River is more ethnically diverse than Oregon.** The City's population was about 26% Hispanic in 2008. The City had the same pattern of growth in Hispanic population as the County, with rapid growth during the 1990's and slower growth since 2000. The proportion of Hispanic residents in the City was historically less than in the county as a whole. However, the proportion of Hispanic residents increased more rapidly than in the County since 1990, resulting in nearly identical city and county proportions today.

The findings above best support a growth rate of 2.0% annual growth over the 2008 to 2028 period. Table 24 shows that the City of Hood River's population will reach 10,170 people within the UGB by 2028. The forecast is based on population living in the city limits in 2007 but shows population growth in the entire UGB by 2028, based on the assumption that areas within the existing UGB will be annexed into the city limits over the 20-year period. The forecast is based on the following trends:

- Historical growth rates over 1990 to 2007 period support a 2.0% forecast. Hood River grew at 2.3% annually over the 1990 to 2007 period and at 2.0% annually between 2000 and 2007.
- The City experienced substantial residential development over the 2000 to 2007 period, about 28% of which is the result of annexations into the city limits from the urban growth area. In addition, the City has commercial development underway.
- The City is attracting younger residents, retirees and Hispanic people, groups that are forecast to grow statewide through 2035.

**Table 24. Population forecast,
City of Hood River
UGB, 2008 to 2028**

Year	Medium
2007	6,710
2008	6,844
2028	10,170
Change 2008 to 2028	
Number	3,326
Percent	49%
AAGR	2.0%

Source: 2007 population estimates
from Portland State University Center for
Population Research; Calculations
by ECONorthwest

Note: Green shading denotes the
official forecast period.

V. CITY OF CASCADE LOCKS POPULATION FORECAST

This section presents population forecasts for the Cascade Locks UGB. It also presents the factual basis for the forecast and findings in support of the forecast.

CITY OF CASCADE LOCKS POPULATION FORECAST

Table 25 shows a range of population forecasts for the City of Cascade Locks UGB for the 2007-2035 period. The forecasts require a base population to serve as the starting point for the forecasts. All three forecasts use the official state estimates of population for 2007 for the City of Cascade Locks, compiled by Population Research Center at Portland State University, as the basis for the forecast. The base forecast uses the population estimate for the City limits and assumes that, as areas within the urban growth area (the area between the City limits and the UGB) are annexed into the City, population in these areas will grow at the same rate as population within the City limits. As a result, the forecast in this report represents the forecasted population within the City's UGB.

- The **Low** population forecast projects that the City will grow by 239 people or 22% over the 2008 to 2028 period. The Low forecast assumes that the City will grow at 1% per year based on Cascade Locks' growth over the 1980 to 2007 period.
- The **Medium** population forecast projects that the City will grow by 532 people or 49% over the 2008 to 2028 period. The Medium forecast assumes that the City will grow at 2.0% per year based on Cascade Locks' growth rate over the 1990 to 2000 period.
- The **High** population forecast projects that the City will grow by 1,332 people or 119% over the 2008 to 2028 period. The High forecast assumes that the City will grow at 4.0% per year based on development of a proposed resort and casino in Cascade Locks.

The forecasts assume that population will grow in Cascade Locks UGB through the following means: natural increase (births minus deaths), in-migration into the City, and annexation of urbanizing areas. The forecasts also assume that growth will occur within the City of Cascade Locks city limits and its UGB. As areas in the urbanizing area develop, it is expected that they will be annexed into the city limits. The official adopted forecast covers the period from 2008 to 2028, as shown in green shading.

**Table 25. Population forecast,
Cascade Locks UGB, 2007 to 2035**

Year	Low	Medium	High
2007	1,075	1,075	1,075
2008	1,086	1,097	1,118
2009	1,097	1,118	1,163
2010	1,108	1,141	1,209
2011	1,119	1,164	1,258
2012	1,130	1,187	1,308
2013	1,141	1,211	1,360
2014	1,153	1,235	1,415
2015	1,164	1,260	1,471
2016	1,176	1,285	1,530
2017	1,187	1,310	1,591
2018	1,199	1,337	1,655
2019	1,211	1,363	1,721
2020	1,223	1,391	1,790
2021	1,236	1,418	1,862
2022	1,248	1,447	1,936
2023	1,261	1,476	2,013
2024	1,273	1,505	2,094
2025	1,286	1,535	2,178
2026	1,299	1,566	2,265
2027	1,312	1,597	2,355
2028	1,325	1,629	2,450
2029	1,338	1,662	2,548
2030	1,351	1,695	2,650
2031	1,365	1,729	2,756
2032	1,379	1,764	2,866
2033	1,392	1,799	2,980
2034	1,406	1,835	3,100
2035	1,420	1,872	3,224
Change 2008 to 2028			
Number	239	533	1,332
Percent	22%	49%	119%
AAGR	1.0%	2.0%	4.0%

Source: 2007 population estimates from Portland State University Center for Population Research; Calculations by ECONorthwest
Note: Green shading denotes the official forecast period.

FACTUAL BASIS

This section discusses some of the factors that may affect long-term growth in the City of Cascade Locks. These factors include other population forecasts, population trends in Cascade Locks, development trends in Cascade Locks, and socioeconomic trends in Cascade Locks. These factors provide a factual basis in support of using the forecast for population growth in the City.

Other population forecasts

There are two main sources of population forecast for Cascade Locks: The 2001 Cascade Locks Comprehensive Plan and the 1997 Hood River County Population Forecast. This section compares the growth rate assumptions in these forecasts to the growth rate assumptions used to develop the population forecast for Cascade Locks.

The 2001 Cascade Locks Comprehensive Plan presents a range of population forecasts for Cascade Locks, shown in Table 26. The Plan presents four scenarios of growth, ranging from no growth (with a City population of 1,080 in 2016) to rapid growth (with a City population of 3,170 in 2016).

Table 26. Comprehensive Plan population forecast, Cascade Locks, 1995 to 2016

Growth Scenario	Growth Rates		Population in 2016
	1996 to 2000	2000 to 2016	
No Growth	0.0%	0.0%	1,080
Continuation of recent trends	2.0%	2.0%	1,605
Accelerated growth	2.0%	2.4%	1,735
Rapid Growth	2.0%	6.3%	3,170

Source: City of Cascade Locks Comprehensive Plan – Part II, page 40, May 2001

The Hood River County Population Forecast from 1997 presented a population forecast for the City of Cascade Locks in 2015. Unlike the other forecasts discussed in this report, the County's forecast for population growth for the City was not based on historical population trends. The forecast was based on the potential for residential development capacity within the city limits and the urban growth area (UGA).

The 1997 County forecast estimated that population in the city limits could grow to 3,200 people by 2015, resulting in an average annual growth rate of 5.8% (2,155 people) in Cascade Locks. This forecast suggests that, based on the assumptions used in the 1997 County Comprehensive Plan, the land within the Cascade Locks UGB has capacity for about 3,200 residents. Over the 2005 to 2015 period, it was projected that Cascade Locks would grow by 110 people at an average annual rate of 1.0%.

The capacity for growth projected in this forecast of about 3,200 people, is consistent with the "high" growth scenario presented in Table 25, which projects that Cascade Locks will have 3,224 residents by 2035.

City of Cascade Locks population trends, 1980 to 2007

Historic population growth rates show population growth trends that provide a basis for projecting future growth in Cascade Locks. This section presents population trends for Cascade Locks from 1980 to 2007.

Tables 27 and 28 summarize historical population trends in Cascade Locks for the period between 1980 and 2007. Cascade Locks generally had positive rates of growth, ranging from a decrease of 3.3% in 1981 to an increase of 5.7% in 2005. It is likely that the increase of 10.7% in 1989 can be attributed to inaccuracy in the annual population estimates from the Population Research Center.

The City grew by 237 people over the 27-year period, an increase of 28%. Like the County, Cascade Locks grew slowest in the 1980's and some of the growth during this period was a result of annexations to the City. The City's growth rate did not exceed the County average for most periods since 1980, growing at an average annual rate of 1.83% during the 1990's and shrinking by 0.53% annually since 2000. The City's population accounted for 5.3% of the County's population in 1980, decreasing to 5.0% of the County's population in 2007.

**Table 27. Historic Growth Rates,
City of Cascade Locks, 1980 to 2007**

Period	AAGR	Population Change	Percent Change
1980-2007	0.93%	237	28%
1990-2007	0.86%	145	16%
1980-1990	1.05%	92	11%
1990-2000	1.83%	185	20%
2000-2007	-0.52%	-40	-4%

Source: U.S. Census and Population Research Center at Portland State University; calculations by ECONorthwest

Table 28. Historic Population Change, City of Cascade Locks, 1980 to 2007

Year	Population	Annual Percent Change	% of County Population
1980	838	-----	5.3%
1981	810	-3.3%	5.2%
1982	795	-1.9%	5.0%
1983	815	2.5%	5.0%
1984	815	0.0%	5.0%
1985	820	0.6%	5.0%
1986	825	0.6%	5.1%
1987	830	0.6%	5.0%
1988	845	1.8%	5.1%
1989	935	10.7%	5.5%
1990	930	-0.5%	5.5%
1991	975	4.8%	5.7%
1992	970	-0.5%	5.5%
1993	1,025	5.7%	5.7%
1994	1,035	1.0%	5.6%
1995	1,045	1.0%	5.5%
1996	1,050	0.5%	5.4%
1997	1,075	2.4%	5.5%
1998	1,095	1.9%	5.5%
1999	1,085	-0.9%	5.4%
2000	1,115	2.8%	5.5%
2001	1,130	1.3%	5.5%
2002	1,140	0.9%	5.6%
2003	1,140	0.0%	5.6%
2004	1,150	0.9%	5.5%
2005	1,155	0.4%	5.5%
2006	1,155	0.0%	5.4%
2007	1,075	-6.9%	5.0%

Source: U.S. Census and Population Research Center at Portland State University; calculations by ECONorthwest

Development trends

Cascade Locks issued 32 residential building permits for single-family detached dwellings between 2000 and 2007. During the same period, the City issued 16 building permits for townhouses and two permits for duplexes. The City has four subdivisions, with about 250 lots in total, which were platted in about 2005. As a result, the City has development capacity in excess of recent development trends.

The Bridge of the Gods Resort and Casino is a proposed development in Cascade Locks. The Environmental Impact Statement (EIS) process is underway and a decision about the EIS is expected in early 2009. The City thinks that there may be lawsuits filed after the decision about the EIS is made, which may take a year to litigate. Assuming the resort wins approval for development, building may begin in 2010 and the resort may open in 2012. Assuming that the resort is built, the City estimates that the resort will generate about 600 construction jobs, 1,700 jobs at the resort, and additional secondary jobs.

Assuming the resort is built, the City expects to grow faster than historic rates because of the number of jobs that the resort will provide. The City will be able to absorb some of the growth resulting from the resort in existing subdivisions and in other land available within the existing UGB. The City, however, has a limited amount of land available for development within the UGB. The City will encounter difficulties in expanding the UGB because of the City's location. The City is bounded along the north by the Columbia River and it is bounded by the Columbia River Gorge National Scenic Area to the south. Expanding on land within the Scenic Area in any significant way will be difficult (if not impossible) because of regulations governing development within the Scenic Area.

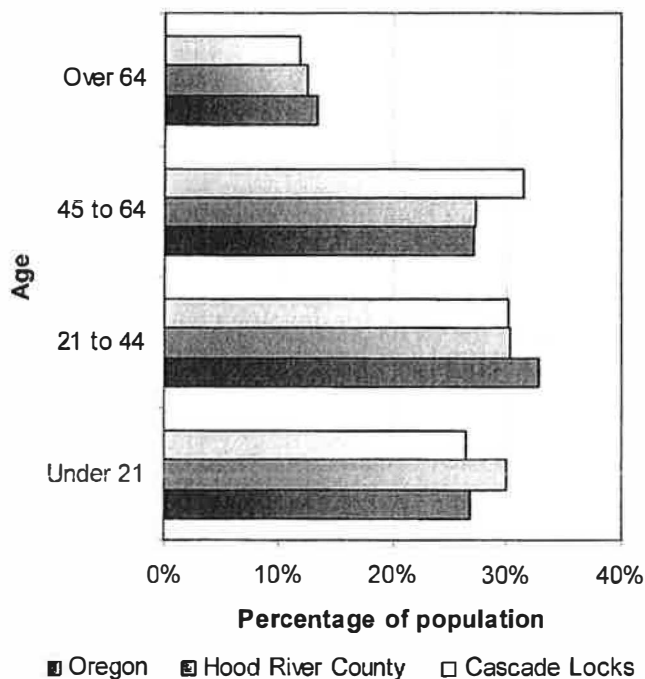
If the resort is built, the City may reach its development capacity by 2035 (or sooner). The City plans to begin a planning study to determine the development capacity within the UGB.

Socioeconomic trends

This section reviews historical socioeconomic trends in Cascade Locks. Socioeconomic trends provide a broader context for growth; factors such as age, income, migration and other trends show how communities have grown and shape future growth. To provide context, we compare Cascade Locks with Hood River County and Oregon. Characteristics such as age and race are indicators of how population has grown in the past and provide insight into factors that may affect future growth.

Figure 5 compares age in Oregon, Hood River County, and Cascade Locks for 2008. The data show that Cascade Locks had an older population than the County on average. Cascade Locks had a larger share of people aged 45 and over (43%) compared to the County and State average (40%).

Figure 5. Age distribution, Oregon, Hood River County, and Cascade Locks, 2008



Source: Claritas, 2008

From 1990 to 2008 Cascade Locks experienced changes in the age structure of its residents. Table 29 shows population by age for Cascade Locks for 1990 and 2008, based on data from the U.S. Census and Claritas. Cascade Locks grew by 70 people between 1990 and 2008, an 8% increase in population. Cascade Locks' population growth was concentrated in people aged 45 to 64 years (with an increase of 125 people). Cascade Locks' next largest change in age structure was a decrease in people aged 25 to 44 years (a loss of 51 people). Cascade Locks lost population under 17 years old (a decrease of 22 people) and had a small gain in people over 65 (an increase of 4 people).

Table 29. Population by Age, Cascade Locks, 1990 and 2008

Age Group	1990		2008		Change		
	Number	Percent	Number	Percent	Number	Percent	Share
4 and under	66	7%	59	6%	-7	-11%	-1%
5-17	198	21%	183	18%	-15	-8%	-3%
18-24	63	7%	77	8%	14	22%	1%
25-44	298	32%	247	25%	-51	-17%	-7%
45-64	190	20%	315	32%	125	66%	11%
65 and over	115	12%	119	12%	4	3%	0%
Total	930	100%	1,000	100%	70	8%	0%

Source: US Census, 1990 and Claritas, 2008

Note: The population in Cascade Locks in 2008 is an unofficial estimate, developed by Claritas. This estimate is different than the forecast for the City presented in Table 25.

The U.S. Census collects information about migration patterns. Specifically, it asks households where their residence was in 1995 (5 years prior to the Census count). Table 30 shows place of residence in 1995 for Hood River County and Cascade Locks. The data show that residents of Cascade Locks were more mobile than the County or State average. About 46% of Cascade Locks' residents lived in the same house in 1995, compared to the County average of 52% or State average of 47%. Residents of Cascade Locks were more likely to have lived in a different state (14%) than the residents of the County or State (12%).

Table 30. Place of residence in 1995, Oregon, Hood River County, and Cascade Locks, persons 5 years and over, 2000

Location	Oregon		Hood River County		Cascade Locks	
	Persons	Percent	Persons	Percent	Persons	Percent
Population 5 years and older	3,199,323	100%	18,932	100%	1,051	100%
Same house in 1995	1,496,938	47%	9,846	52%	487	46%
Different house in 1995	1,702,385	53%	9,086	48%	564	54%
Same county	863,070	27%	4,604	24%	254	24%
Different county	755,954	24%	3,796	20%	251	24%
Same state	356,626	11%	1,562	8%	145	14%
Different state	399,328	12%	2,234	12%	106	10%

Source: U.S. Census, SF-3

Table 31 shows the number of persons of Hispanic or Latino origin for Oregon, Hood River County, and Cascade Locks for 1990, 2000, and 2008. The data show Cascade Locks has a smaller share of Hispanic population than the County or State average. About 9% of Cascade Locks' population was Hispanic in 2008, lower than the County average (26%) or State average (10.6%). Like the County and City of Hood River, Cascade Locks had greater growth in Hispanic population during the 1990's and slower growth since 2000.

Table 31. Persons of Hispanic or Latino origin, Oregon, Hood River County, and Cascade Locks, 1990, 2000, and 2008

	Oregon	Hood River County	Cascade Locks
1990			
Total Population	2,842,321	16,903	930
Hispanic or Latino	112,707	2,752	7
Percent Hispanic or Latino	4.0%	16.3%	0.8%
2000			
Total Population	3,421,399	20,411	1,115
Hispanic or Latino	275,314	5,107	80
Percent Hispanic or Latino	8.0%	25.0%	7.2%
2008			
Total Population	3,772,854	21,770	1,000
Hispanic or Latino	400,435	5,653	93
Percent Hispanic or Latino	10.6%	26.0%	9.3%
Change 1990-2000			
Hispanic or Latino	162,607	2,355	73
Percent Hispanic or Latino	144%	86%	1043%
Change 2000-2008			
Hispanic or Latino	125,121	546	13
Percent Hispanic or Latino	45%	11%	16%

Source: U.S. Census, 1990 and 2000, Claritas 2008

Note: The population in Cascade Locks in 2008 is an unofficial estimate, developed by Claritas. This estimate is different than the forecast for the City presented in Table 25.

In summary, the Hispanic population of Cascade Locks is growing faster than the overall population, similar to statewide trends but still remains below the average levels in the state and county.

Summary of findings

- Cascade Locks grew by more than one-quarter between 1980 and 2007.** Cascade Locks grew from 838 people in 1980 to 1,075 people in 2007, an increase of 237 people over the 27-year period, or 28%. The City's population growth varied substantially over the 27-year period. Cascade Locks had decreases in population throughout the 27-year period, ranging from -0.5% in 1990 to -6.9% in 2007. Cascade Locks generally grew more slowly than the County, averaging 0.93% annual growth over the 27-year period. During the 1980's Cascade Locks grew by 1.05% annually and 1.83% during the 1990's. Since 2000, Cascade Locks has lost 40 residents, with a negative average annual growth rate of -0.5%. The City's population remained between 5 and 6% of the County's population over the 27-year period.
- Previous population forecasts projected that Cascade Locks could grow to about 3,200 people.** The City and County's Comprehensive Plans both project that Cascade Locks could grow to 3,200 people. The forecast presented in the County's 1997 Population Forecast is based on an estimate of residential land capacity within Cascade

Locks' UGB. The forecasts suggest that Cascade Locks could grow to 3,200 people by about 2015.

- **Cascade Locks' future growth may be impacted by development of the planned resort.** Cascade Locks has platted four large subdivisions in 2005, with a combined total of 250 lots. According to City staff, the lots are being slowly absorbed. City staff expects the lots to be more rapidly absorbed if the Bridge of the Gods Resort and Casino is developed. The City estimates that the Resort will generate about 600 construction jobs and 1,700 jobs at the Resort.
- **If the resort is built, the City may reach development capacity by 2035.** Assuming the resort is built, the City expects to grow faster than historic rates because of the number of jobs that the Resort will provide, possibly reaching the City's development capacity by 2035 (or sooner). The development capacity, about 3,200 people, was estimated by the County in the 1997 Population Forecast. The City plans to begin a planning study to update the development capacity within the UGB.
- **Cascade Locks has an older population.** Cascade Locks had a larger share of people aged 45 and over (43%) compared to the County and State averages (40%). Over the 1990 to 2008 period, Cascade Locks' population growth was concentrated in people aged 45 to 64 years (with an increase of 125 people). Cascade Locks' next largest change in age structure was a decrease in people aged 25 to 44 years (a loss of 51 people).
- **Cascade Locks is less ethnically diverse than the County or Oregon.** About 9% of Cascade Locks' population was Hispanic in 2008, lower than the County average (26%) or State average (11%). Like the County and City of Hood River, Cascade Locks had greater growth in Hispanic population during the 1990's and slower growth since 2000.
- **Cascade Locks has the ability to attract younger recreation-minded residents.** Cascade Locks has recreational and outdoor amenities that make it attractive to current and future residents including those that may relocate to Cascade Locks from other communities.
- **Cascade Locks is well-situated geographically to attract new residents.** The city is located about 25 miles from the eastern edge of the Portland metropolitan area, putting it within commuting distance of Portland.
- **The City wants to grow and has policies that support growth.** Public policy can be one factor that supports growth.
- **Projections are generally consistent with historical rates.** The 2% growth rate is not very different from the City's growth rate during the 1990's (1.8% AAGR)
- **Future development is expected.** The City expects to have large-scale development in its industrial park within the 20-year period.

- **Assuming a higher rate of growth in the city than in the county as a whole is consistent with statewide and local goals.** Combined assumptions for the two cities and counties are consistent with statewide and local goals to focus a majority of population growth in urban areas (i.e., they assume higher growth rates in the cities than in the unincorporated areas beyond the UGBs).

Forecasting population growth in Cascade Locks is difficult because of the uncertainty surrounding the proposed resort. If the resort is built, it is reasonable to expect that Cascade Locks will grow faster than historic rates, reaching the community's development capacity of about 3,200 by or before 2035. If the resort is not built (or is built more than half way through the planning period), Cascade Locks may have relatively slow average growth over the planning period.

In the face of this uncertainty, we recommend that Cascade Locks adopt the medium forecast, which assumes the City will grow at an average annual rate of 2.0% annually (shown in Table 32), reaching 533 people within the UGB by 2028. If the resort is built, we recommend that Hood River County and Cascade Locks reevaluate this forecast at some point in the future. The forecast is based on population living in the city limits in 2007 but shows population growth in the entire UGB by 2028, based on the assumption that areas within the existing UGB will be annexed into the city limits over the 20-year period.

**Table 32. Population forecast,
City of Cascade Locks
UGB, 2008 to 2028**

Year	Medium
2007	1,075
2008	1,097
2028	1,629
Change 2008 to 2028	
Number	533
Percent	49%
AAGR	2.0%

Source: 2007 population estimates
from Portland State University Center for
Population Research; Calculations
by ECONorthwest
Note: Green shading denotes the
official forecast period.

VI. UNINCORPORATED HOOD RIVER COUNTY POPULATION FORECAST

This section presents population forecasts for unincorporated Hood River County, which includes those areas of Hood River County that are outside the urban growth boundaries of the City of Hood River and the City of Cascade Locks. It also presents the factual basis for the forecast and findings in support of the forecast.

UNINCORPORATED HOOD RIVER COUNTY POPULATION FORECAST

Table 33 shows a population forecast for the unincorporated Hood River County for the 2008-2028 period and projected population estimates for several future years, assuming the same average growth rate. The forecast is based on the population projection for Hood River County minus population in incorporated cities (the medium forecasts for the City of Hood River and the City of Cascade Locks).

Table 33 shows that population in unincorporated Hood River County will grow by about 2,368 people (18%), at an average annual growth rate of 0.8% between 2008 and 2028, as shaded in green. The implication is that the majority of population growth in Hood River County will occur within the incorporated cities and UGBs.

**Table 33. Unincorporated Hood River County
population forecast, 2007 to 2035**

Year	Population
2007	13,424
2008	13,528
2009	13,632
2010	13,737
2011	13,861
2012	13,986
2013	14,112
2014	14,237
2015	14,364
2016	14,482
2017	14,600
2018	14,719
2019	14,838
2020	14,957
2021	15,075
2022	15,193
2023	15,311
2024	15,430
2025	15,548
2026	15,664
2027	15,780
2028	15,896
2029	16,012
2030	16,128
2031	16,254
2032	16,379
2033	16,505
2034	16,630
2035	16,756
Change 2008 to 2028	
Number	2,368
Percent	18%
AAGR	0.8%

Source: ECONorthwest

FACTUAL BASIS

Tables 34 and 35 summarize historical population trends in Unincorporated Hood River County for the period between 1980 and 2007. The Unincorporated County generally had positive rates of growth, ranging from a decrease of 2.6% in 1981 to an increase of 4.1% in 2005. It is likely that the decrease of 4% in 2000 can be attributed to inaccuracy in the annual population estimates from the Population Research Center. The unincorporated portion of the County grew by 3,017 people over the 27-year period, an increase of 28%. Like the County as a whole, Unincorporated areas grew slowest in the 1980's. Unincorporated Hood River County's growth rate has been slightly below the overall County average since 1990, growing at an average annual rate of 1.73% during the 1990's and .23% since 2000. The Unincorporated Area's population accounted for 67% of the County's population in 1980, shrinking to 64% of the County's population in 2007. The official adopted forecast covers the period from 2008 to 2028.

**Table 34. Historic Population Change,
Unincorporated Hood River County,
1980 to 2007**

Year	Population	Annual Percent Change
1980	10,668	-----
1981	10,615	-0.5%
1982	10,705	0.8%
1983	10,935	2.1%
1984	11,110	1.6%
1985	11,040	-0.6%
1986	10,855	-1.7%
1987	11,150	2.7%
1988	11,135	-0.1%
1989	11,425	2.6%
1990	11,341	-0.7%
1991	11,320	-0.2%
1992	11,785	4.1%
1993	12,200	3.5%
1994	12,470	2.2%
1995	12,905	3.5%
1996	13,150	1.9%
1997	13,350	1.5%
1998	13,655	2.3%
1999	14,020	2.7%
2000	13,465	-4.0%
2001	13,450	-0.1%
2002	13,100	-2.6%
2003	13,130	0.2%
2004	13,670	4.1%
2005	13,575	-0.7%
2006	13,600	0.2%
2007	13,685	0.6%

Source: U.S. Census and Population Research
Center at Portland State University; calculations by ECONorthwest

The population growth reported in unincorporated Hood River County may underestimate actual population growth in unincorporated areas of the County since 2000. Table 35 shows that population in unincorporated Hood River County grew by about 220 people between 2000 and 2007.²⁰ The County reports that 776 dwellings were built in unincorporated Hood River County since 2000. Assuming an average household size of 2.7 people per household (based on the

²⁰ The annual estimates of population growth in unincorporated Hood River County, presented in Table 34, were reached by subtracting the estimate of population in the cities of Hood River and Cascade Locks from the population in the entire County.

County's average household size from the 2000 Census), unincorporated population has increased by as many as 2,000 people. Some of the 776 dwellings may have been built within the urban growth area of one of the County's cities and some may be secondary homes (and would not result in population increase in the County). Even so, it is probable that the Population Research Center has underestimated growth in the County for the 2000 to 2007 period.

Table 35. Compound Growth Rates by Time Period, Unincorporated Hood River County, 1980 to 2007

Period	AAGR	Population Change	Percent Change
1980-2007	0.93%	3,017	28%
1990-2007	1.11%	2,344	21%
1980-1990	0.61%	673	6%
1990-2000	1.73%	2,124	19%
2000-2007	0.23%	220	2%

Source: U.S. Census and Population Research Center at Portland State University; calculations by ECONorthwest

SUMMARY OF FINDINGS

- **Between 1980 and 2007, the majority of growth in Hood River County occurred in unincorporated areas.** Unincorporated areas in the County grew by more than 3,000 people over the 27-year period, an increase of 28%. Growth rates in unincorporated areas of Hood River County were lower than the County average but followed similar patterns, with slower growth in the 1980s and since 2000 and faster growth in the 1990's. In addition, the unincorporated portion of the county experienced lower growth rates than the incorporated areas overall during this period, particularly in comparison to the City of Hood River. For example the population of the City of Hood River increased by about 55% during this period, compared to the 28% increase for the unincorporated portion of the County.
- **The majority of people in the County live in unincorporated areas.** Population in unincorporated Hood River County accounted for about two-thirds of the County's population throughout the 27-year period. However, the proportion declined somewhat during this period.

The population of unincorporated Hood River County is forecasted to grow by 2,368 people between 2008 and 2028. This finding is supported by: (1) the findings above, (2) the findings for all of Hood River County, (3) the population forecasts for the City of Hood River and Cascade Locks, and (4) the assumption that the majority of population growth will occur in incorporated cities.

APPENDIX A: ISSUES WITH SMALL AREA FORECASTS²¹

Planning implies forecasting. To use policies to change the future in ways that decision makers think their constituents would find beneficial, one must first have an idea of what could or is likely to occur in the absence of those policy changes.

Forecasting is usually better, and better received, if it is based on a model of how the world works. In the context of housing and economic development, that understanding must certainly include how households and businesses make decisions about where to locate, and what types of buildings to occupy.

In the context of land use and growth management, the main variables that one must forecast are population and employment, which are then used to forecast the demand for new built space (housing, offices, warehouses, retail stores, and so on). The demand for built space creates a derived demand for land on which to build that space.

The amount of land needed depends on the type and density of space that will be built to accommodate population and employment growth. The type and density of development will be a function of market factors (demand and supply conditions) and public policy (especially about density and infrastructure, but also about transportation, economic development, environmental protection, and so on). This function of forecasting is central to Hood River County and its cities: it will allow cities to determine whether they have sufficient land available to accommodate 20 years of population and employment growth.

The main point is that (1) forecasting growth requires a consideration of many variables that interact in complicated ways, and (2) any forecast of a single future is bound to be wrong—there are many possible futures that are more or less likely depending on one’s assessment of the likelihood of the assumptions.

Before presenting our evaluation of the County coordinated forecasts, it is useful to describe the limitations of small areas forecasts. The fact that the PSU estimates significantly underestimated the 2000 population of several Oregon cities underscores one of the key problems that emerge with small area population estimates and forecasts. Following is a discussion of why small area forecasts are highly uncertain:

- Projections for population in most cities and counties are not based on deterministic models of growth; they are simple projections of past growth rates into the future. They have no quantitative connection to the underlying factors that explain why and how much growth will occur.
- Even if planners had a sophisticated model that links all these important variables together (which they do not), they would still face the problem of having to forecast the future of the variables that they are using to forecast growth (in, say, population or employment). In the final analysis, all forecasting requires making *assumptions* about the future.

²¹ This section is adapted from previous work by ECONorthwest.

- Comparisons of past population projections to subsequent population counts have revealed that even much more sophisticated methods than the ones used in the study "are often inaccurate even for relatively large populations and for short periods of time."²² The smaller the area and the longer the period of time covered, the worse the results for any statistical method.
- Small areas start from a small base. A new subdivision of 200 homes inside the Portland Urban Growth Boundary has an effect on total population of 0.02%. That same subdivision in the City of Hood River would increase the community's housing stock by more than 6%—and population by a similar percentage.
- Especially for small cities in areas that can have high growth potential (e.g., because they are near to concentrations of demand in neighboring metropolitan areas, or because they have high amenity value for recreation or retirement), there is ample evidence of very high growth rates in short-term; there are also cases (fewer) of high growth rates sustained over 10 to 30 years.
- Public policy makes a difference. Cities can affect the rate of growth through infrastructure, land supply, incentives and other policies. Such policies generally do not have an impact on growth rates in a region, but may cause shifts of population and employment among cities.

Because of the uncertainty associated with small area forecasts, many forecasts present ranges of future population. ORS 195.036 is not explicit on the issue of whether ranges are appropriate (or legally acceptable), however, the OEA forecasts are point forecasts (i.e., they reflect one rate and a single future population) as are coordinated forecasts at the city level.²³ Cities have many reasons to use point forecasts: among the most important are projections of future revenues, need for infrastructure, and need for land. These factors provide sufficient rationale for cities to develop and adopt point forecasts. That fact, however, does not mean they are any more accurate.

In summary, the longer the forecast, the greater the potential that actual population growth will vary from the forecast. This implies that cities should closely monitor actual population growth so that either (1) plans can be modified to account for variations, or (2) policies can be implemented that increase the likelihood of achieving the population growth.

One final comment on forecasts: population forecasts are often viewed as "self-fulfilling prophecies." In many respects they are intended to be; local governments create land use, transportation, and infrastructure plans to accommodate the growth forecast. Those planning documents represent a series of policy decisions. Thus, how much population a local government (particularly cities) chooses to accommodate is also a policy decision. In short, the forecast and the plans based on the forecast represent a key element of the city's future vision.

²²Murdock, Steve H., et. al. 1991. "Evaluating Small-Area Population Projections." *Journal of the American Planning Association*, Vol. 57, No. 4, page 432.

²³ ECO is unaware of any coordinated forecasts that present ranges. It is not uncommon, however, for cities to consider ranges of population and employment during planning exercises.