

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR JOSEPHINE COUNTY
STATE OF OREGON

ORDINANCE NO. 2008-001

AN ORDINANCE AMENDING THE TEXT OF THE JOSEPHINE COUNTY COMPREHENSIVE PLAN (ORDINANCE 81-11, AS ORIGINALLY ADOPTED AND THEREAFTER AMENDED) ADDING A POLICY TO GOAL 3 OUTLINING PROCEDURES FOR COORDINATING POPULATION FORECASTS AMONG JOSEPHINE COUNTY, THE CITY OF GRANTS PASS, AND THE CITY OF CAVE JUNCTION; AND ADOPTING 20-YEAR POPULATION FORECASTS FOR THE CITIES AND COUNTY.

WHEREAS, Oregon Revised Statute 195 036 requires counties to maintain population forecasts for the entire area within their boundaries for use in maintaining and updating comprehensive plans, and to coordinate the forecasts with the local governments within their boundaries, and

WHEREAS, Oregon Administrative Rule 660-024-0030(1) requires counties to adopt and maintain a coordinated 20-year population forecast for the county and for each urban area within the county consistent with statutory requirements, and

WHEREAS, the Josephine County Planning Manager proposed an amendment to Goal 3 of the Josephine County Goals and Policies relating to the item captioned above for consideration by the Josephine County Planning Commission, and

WHEREAS, the Planning Commission, pursuant to the review authority granted in Section 46 020 of the Rural Land Development Code (RLDC), and Goal 11, Policy 1, of the Josephine County Goals and Policies of the Comprehensive Plan, conducted a public hearing on January 7, 2008 regarding the proposed text amendment and population data, after required notice by publication, community advertisement, and mailing to interested persons, agencies and organizations, and

WHEREAS, after due consideration of the proposed amendment and adoption and the testimony and evidence from those participating at the hearing, the Planning Commission concluded by a vote of 7-0 to approve the amendment and adoption, and

WHEREAS, written findings of approval were prepared, approved, and signed by the Planning Commission at its regularly scheduled meeting on January 7, 2008, which findings have been entered into the official record of the proceedings kept by the Planning Manager; and

WHEREAS, the Josephine County Board of Commissioners, upon review of the record of the Planning Commission proceedings and the written Findings of Approval, and after discussing these matters with the Josephine County Planning Director, find the approved text amendment and population allocations advance the policies and purposes of the Josephine County Comprehensive Plan; and

WHEREAS, the authority to implement legislative amendments to the county's comprehensive plan by ordinance resides solely with the Board of Commissioners, as specified in Goal 11, Policy 1.D[2], and the RLDC, Section 46 020.B.2,

NOW, THEREFORE, based on the foregoing, the Board of County Commissioners of Josephine County Oregon, hereby ordain the following amendment to the text of the Josephine County Comprehensive Plan.

Section 1. Text Amendment

Amend the Josephine County Goals and Policies at Goal 3 (Land Allocations to Encourage a Variety of Safe and Affordable Housing) by adding Policy 8

Josephine County shall periodically allocate county-wide population forecasts to all of its cities and unincorporated areas in coordination with the cities. Such allocated forecasts shall comply with applicable state statutes and administrative rules. The population forecasts and allocations shall be maintained in a document that is adjunct to the Josephine County Comprehensive Plan Data Base (April 1981), and shall be entitled, *The Josephine County Coordinated Population Forecasts and Allocations with Findings*.

And adopt *The Josephine County Coordinated Population Forecast and Allocations with Findings Document*, attached as Exhibit A, includes both 20-year and 50-year forecasts. Because neither city intends to adopt urban reserves, which require 50-year forecasts, the Board of County Commissioners adopts only the 20-year forecasts as follows.

	2007	2027
Josephine County	85,966	112,932
Grants Pass UGB	37,460	57,888
Cave Junction UGB	2,241	5,500
Unincorporated Area	46,265	49,544

Section 2. Affirmation

Except as specifically amended by the provisions of this Ordinance, the Comprehensive Plan (Ordinance 81-11) is hereby affirmed in all other respects.

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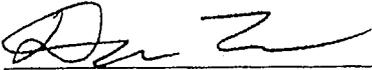
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Section 3. Effective Date:

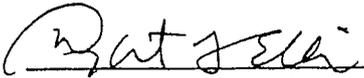
First reading by the Board of County Commissioners this 27th day of February 2008

Second reading and adoption by the Board of County Commissioners at least thirteen (13) days from the first reading this 19th day of March, 2008 This Ordinance shall take effect ninety (90) days after its adoption by the Board of County Commissioners.

JOSEPHINE COUNTY BOARD OF COUNTY COMMISSIONERS:

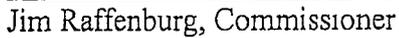


Dave Toler, Chair



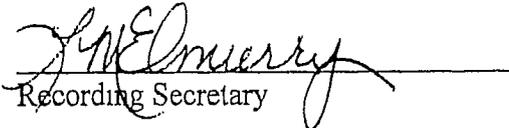
Dwight Ellis, Vice-Chair

Present at Signing



Jim Raffenburg, Commissioner

ATTEST:



Recording Secretary

APPROVED AS TO FORM:



Steven E. Rich, Legal Counsel

EXHIBIT A
Resolution No. 694 - City of Cave Junction
Values & Vision Statement

The City faces a variety of difficult challenges including a lack of basic services such as law enforcement and medicine. The community is frustrated with an aging housing stock, poorly maintained, and obsolete commercial structures, and debris throughout many of the private open spaces. The City notes declining public participation in once thriving community events. Cave Junction also recognizes a growing in-migration of retired residents, presenting changes to the quality of life in Cave Junction and new demands for commercial and government services already thought by the Citizen Advisory Committee (CAC) to be overwhelmed.

Vision

The community of Cave Junction defines a good quality of life as having a community with high public participation, orderly and tidy public spaces, and good public health and safety. A more prosperous and beautiful downtown is the most important project in pursuit of quality of life. The uniqueness and beauty of the Illinois Valley with the City as its center should be emphasized with improved pedestrian ways, store fronts, and traffic flows that enhance business in town. During the next 20 years, Cave Junction will provide for convenient parking within walking distance of interesting activities like craft and specialty shops, restaurants, lodging, and locally produced goods - especially local wine.

Cave Junction will find ways to continue to provide for the area's parks, civic centers and organizations, churches, shopping, and medical service centers while also creating investment in the built environment. The local economy is growing in the tourist, cottage industry, specialty shops, vineyard, recreation and medical services sectors and continues to invest in improving services to the growing retirement population. Lodging facilities will be modernized and expanded to accommodate a visitor industry that enhances the level of commercial services offered to the whole community.

CAC members and community leaders identify the future of Cave Junction in the context of overcoming frustrations with the status quo. Seeing solutions to the City's most basic obstacles are the foundation for every community vision. A growing population is expected to provide new commercial opportunities. The City should favor incentives and market based programs over regulation as a means of promoting civic goals.

Recent rates of population growth in Cave Junction will be slightly lower than rates of growth in Grants Pass and by 2027 will reach a maximum of 5,500 people. The proportion of retired residents will increase to levels that other southern Oregon communities are currently experiencing, between 45 and 55% of the total. Increased demand for services by in-migrants will lead to higher quality services for established residents and visitors alike, providing more and high paying employment in the community.

RESOLUTION NO. 694

A RESOLUTION ESTABLISHING THE FUTURE VISION AND 2027 POPULATION FORECAST FOR THE CITY OF CAVE JUNCTION.

WHEREAS, the City Council is concerned about the recent development and expected growth of the City; and

WHEREAS, the Council further concludes that the growth will impact its public facilities, roads, storm drainage, economy, housing, recreation and available inventory of buildable lands; and

WHEREAS, the Council has established a duly authorized Citizens Advisory Committee to review the impacts of recent growth and to provide recommendations for revising the Cave Junction Comprehensive Plan; and

WHEREAS, the Citizens Advisory Committee has held four public meetings to review projected growth needs and concerns; and

WHEREAS, the Citizens Advisory Committee has also created a list of values and visions for the community, attached hereto as Exhibit 'A', to be expressed in the Comprehensive Plan regarding the quality of life, public health, safety and welfare, environment, infrastructure, housing, transportation, economy, community involvement and public facilities; and

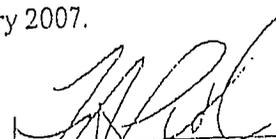
WHEREAS, the Citizens Advisory Committee has recommended that comprehensive planning be based upon a projected maximum population of 5,500 residents.

NOW THEREFORE, BE IT RESOLVED by the City of Cave Junction, that the future vision and maximum population forecast of 5,500 be herein adopted for growth over the next twenty (20) year planning horizon and that it guide the update of the City's Comprehensive Plan.

BE IT FURTHER RESOLVED, by the City Council, that staff are herein directed to coordinate with Josephine County a population forecast of 5,500 for the City of Cave Junction pursuant to ORS 195.036.

PASSED by the Common Council of the City of Cave Junction on this 12th day of February, 2007.

SUBMITTED TO AND APPROVED by the Mayor of the City of Cave Junction on this 13th day of February 2007.

SIGNED: 
TONY PAULSON, Mayor

ATTEST: 
CHARLES J. POLK, Recorder

Available Lands

Figure 2 illustrates the effect of building on the available land inventory in Cave Junction. The City assumes that as the supply of available lands is consumed, the City will lose its price advantage over Grants Pass. The City also assumes that the easiest to develop lots will be consumed first and the City's redevelopment opportunities will be consumed last. This development is expected to be more expensive than green field development currently under way, further eroding the City's price advantage and leading to a slower rate of land consumption during the 2016 through 2027 period.

Figure 1:

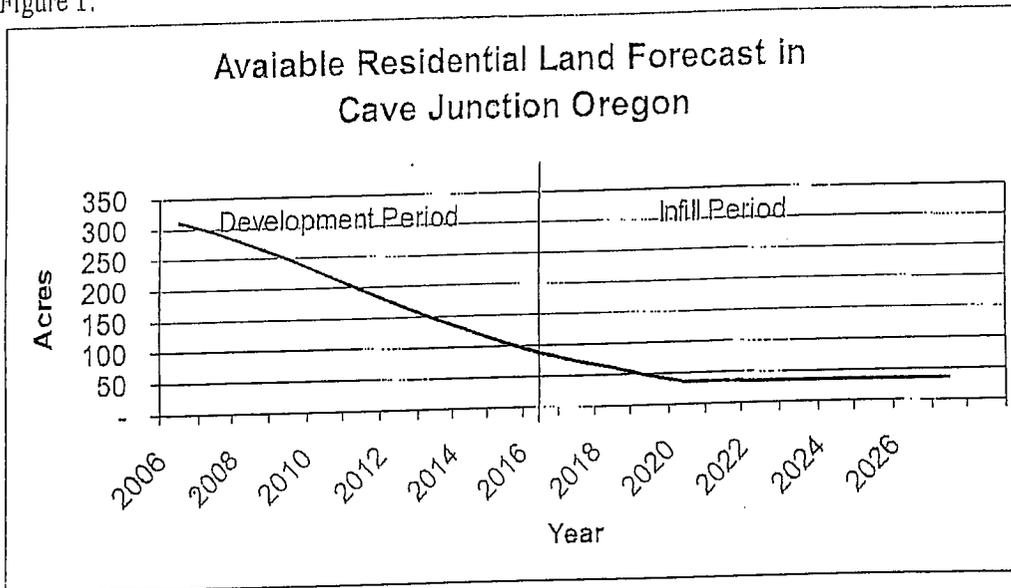


Table 2: Cave Junction proposed subdivisions

Subdivision Name	Number of Lots
Echo Park	5
Cedar Brook PUD	120
IV Estates PUD	41
Mountain Valley	41
Hanby Vistas	50
Vinyard Place	25
Jessi Rae Estates	11
Pomeroy Park MPD	59
Too Far South	9
Cottage Business Park	12
Mariah's Meadow	6
Laurel Pines 1	76
Primrose MPD	13
Belleau Woods	12
Better Way	6
Frank	3
Hall	3
Clinton	3
Total New Lots	495
Total Expected Population	1,119

Population Forecast

The City expects that growth rates will be high over the next several years while developments currently in the construction phase are built and occupied. After a transition period beginning in 2014 and ending in 2018 the City expects that the rate of growth will slow to 3% per year on average. High annual percent increases during the current development period are an artifact of the small current population in the City.

Table 3 shows graphically the City's expectation for population growth over the planning horizon. The table shows the assumption that development currently planned will be constructed as single family dwellings but that development will slow to a rate of 3% per year after 2018. The table also serves to illustrate the effect of short periods of building activity on long term average growth rate in towns with a very small population base. In Cave Junction a relatively small number of lots being developed over a period of 5 years will cause large percentage increases in the population over the planning period despite that growth rates are expected to be moderate over more than half of the planning horizon.

BEFORE THE COUNTY COMMISSION
FOR JOSEPHINE COUNTY, OREGON

IN THE MATTER OF APPLICATIONS)
CONCERNING A COORDINATE)
POPULATION FORCAST FOR)
JOSEPHINE COUNTY OREGON AND)
THE CITY OF CAVE JUNCTION)
OREGON)
)
)
)
)
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FINDINGS OF FACT
Applicant's Exhibit 1

City of Cave Junction: Applicant

I
NATURE AND SCOPE

The City of Cave Junction Oregon is preparing revisions to its' comprehensive plan. In 2000 the City sent its revised comprehensive plan to the State Department of Land Conservation and Development where it was remanded for flaws in sections related to Goals 5 and 9. The City is revising remanded portions of its plan and also chapters related to housing, public facilities, transportation and urbanization, goals 10, 11, 12 and 14 respectively.

For the purpose of planning the City requires a population forecast for the 20 year planning period pursuant to OAR 660-24-0030(1), ORS 195.025 and ORS 195.036. The City of Cave Junction proposes that Josephine County adopt a forecast of 5500 people in January of 2027. The forecast takes into account documented long-term demographic trends, the 1992 to 1998 moratorium on new sewer and water connections, a recent surge in development activity and the aspirations of the community. New and expanded public facilities have facilitated development proposals which have and will continue to result in new population. For the planning horizon the City anticipates a return to the average long term growth trend experienced since 1960 because of rapid residential expansion since 2003 which is expected to continue through 2014.

A Citizen Advisory Committee was constituted for the purpose of providing public input to the Comprehensive Planning Process during September of 2006. The Committee held

public meetings from October 2006 through February of 2007 and concluded by unanimously recommending to the City Council of Cave Junction that the City adopt 5500 people in the year 2027 as the City's official population forecast. The City Council of Cave Junction adopted the population forecast by resolution on the 21st of February, 2007. Resolution 694 of the Cave Junction City Council is attached to this document.

Table 1, shown below, contains population forecasts for each of the jurisdictions in Josephine County. The City of Cave Junction recommends the forecast shown in Table 1 to the Josephine County Commissioners as the coordinated population forecast for the next 20 years.

Table 1: Comparison of population change in Cave Junction, Grants Pass and Josephine County

Year	Josephine County	Grants Pass UGB	Cave Junction UGB	Unincorporated County
2007	85,966	37,460	2,241	46,265
2027	112,932	57,888	5,500	49,545
Growth	26,966	20,428	3,259	3,280
Average Annual Growth Rate	1.37%	2.20%	4.46%	0.34%

Historical Trends and Recent Events

During the period from 1960 until 2006 the population of the City grew at an average rate of 4.1%. The rate of growth during the 1990s was 1.93%, substantially lower than the long term rate of growth because of a building moratorium.

Josephine County as a whole has experienced a 2.3% rate of growth between 1960 and 2006. Between 1990 and 2006 the County has grown on average 1.8% per year reflecting changes in the timber economy during the 1990's. Consistent with the policy of the Oregon Department of Land Conservation and Development, growth has been concentrated in the urban areas. The unincorporated portion of Josephine County has been declining in population in recent years, averaging -1.3% per year since 2004.

Since 2003 Cave Junction has experienced a wave of unprecedented development. In 16 recently approved subdivisions Cave Junction expects 517 lots to develop with residential construction over the next 4 years. By 2014 the City expects recently approved subdivisions to be fully developed containing 1168 new residents. The city makes the assumption that financial investment by investors is evidence that these subdivisions or subdivisions like them will be built out with single family homes over the next six years and that an additional 206 homes will be built by 2016. Some residential construction has already occurred in recent developments causing increases in population during 2005 and 2006. Table 2, shown below lists recently approved developments in Cave Junction.

Josephine County Coordinated Population Forecast

Prepared for

Josephine County
and
City of Grants Pass
by

ECONorthwest

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Eugene, OR 97401
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Draft Report

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Table of Contents

	Page
SUMMARY	I
POPULATION FORECAST	1
FINDINGS	11
I. INTRODUCTION.....	1
BACKGROUND.....	1
ORGANIZATION OF THIS REPORT.....	2
DATA SOURCES AND METHODS	3
OEA FORECASTS: 2000-2040.....	3
ALLOCATION METHODS: OVERVIEW	4
POPULATION FORECASTS FOR JOSEPHINE COUNTY AND ITS CITIES.....	6
COUNTY FORECAST.....	6
ALLOCATION OF POPULATION GROWTH TO CITIES AND UNINCORPORATED AREAS.....	8
FACT BASE.....	10
REGIONAL POPULATION GROWTH	11
POPULATION GROWTH TRENDS IN JOSEPHINE COUNTY	11
IMPACT OF IN-MIGRATION ON POPULATION GROWTH	14
RECENT RESIDENTIAL DEVELOPMENT TRENDS	16
DEMOGRAPHIC CHARACTERISTICS.....	17
FINDINGS	22
APPENDIX A. ISSUES WITH SMALL AREA FORECASTS	26
APPENDIX B. METHOD FOR DETERMINING BASE POPULATIONS FOR JOSEPHINE COUNTY AND THE GRANTS PASS UGB	28
APPENDIX C. METHOD FOR DETERMINING THE UGB POPULATION BASE FOR GRANTS PASS IN 2006.....	30

SUMMARY

This report presents the coordinated population forecast for Josephine County and its incorporated communities consistent with the requirements of ORS 195.036, for the period 2007 to 2060. The forecasts presented in this report were developed by ECONorthwest as part of the Grants Pass urban growth boundary (UGB) review.

POPULATION FORECAST

Table S-1 presents the population forecast for Josephine County, the Grants Pass UGB, the Cave Junction UGB, and unincorporated Josephine County outside of UGBs. Table S-1 uses adjusted 2007 base population estimates.¹ It also assumes that the OEA forecast for the County is adjusted by 5% for the 2010-2060 period.

Table S-1 shows population in Josephine County growing by 26,966 people between 2007 and 2027. It shows the Grants Pass UGB growing by 20,428 people and the Cave Junction UGB growing by 3,259 people over the same period. Unincorporated Josephine County is forecast to grow by 3,280 people over the twenty-year period.

Table S-1. Population forecast, Josephine County, Cave Junction, and Grants Pass, 2007 – 2027 and 2007 – 2057

Year	Josephine County	Grants Pass UGB	Cave Junction UGB	Unincorp.
2007	85,966	37,460	2,241	46,265
2027	112,932	57,888	5,500	49,545
2057	154,908	79,275	7,532	68,101
Change 2007 to 2027				
Number	26,966	20,428	3,259	3,280
AAGR	1.37%	2.20%	4.59%	0.34%
Change 2007 to 2057				
Number	68,942	41,815	5,291	21,836
AAGR	1.18%	1.51%	2.45%	0.78%

Source: The 2007 Grants Pass UGB population was developed by the City of Grants Pass; the 2007 Cave Junction UGB population and 2027 forecast were developed by Craig Stone and Associates; the 2007 Josephine County population and 2027 and 2057 forecasts were based on the OEA forecast; Calculations by ECONorthwest.

¹ ECO found significant discrepancies between the PSU population estimates and the number of building permits issued in unincorporated Josephine County and the City of Grants Pass. These discrepancies result in PSU significantly underestimating population growth between 2000 and 2007. A more detailed explanation of these adjustments is provided in Appendix A and Appendix B of this report.

FINDINGS

The following are key findings identified through analyzing historic population and demographic trend data and through developing population forecasts for Josephine County.

1. Josephine County experienced substantial population growth between 1980 and 2006. Josephine County grew from 58,855 people in 1980 to 81,125 people in 2006, an increase of more than 22,000 people at an average annual growth rate of 1.29%. Over the twenty-six year period, Josephine County grew at approximately the same rate as the State average.
2. The State projects that Josephine County will continue growing but at a lower rate than the historic average. The State forecast for population growth in Josephine County projects that the County will grow from 76,050 people in 2000 to 117,216 people in 2040, an increase of 41,166 people at an average annual growth rate of 1.09%. Extending the State's forecast for population growth in Josephine County out to 2060 based on an average annual growth rate of 1.05%, Josephine County can be expected to grow to about 144,500 people, an increase of about 64,600 people between 2005 and 2060.
3. Migration was the largest source of population growth in Oregon and Josephine County. For the 1990 to 2006 period, about 70% of population growth in Oregon resulted from net migration. All population growth in Josephine County between 2000 and 2006 was the result of net migration because Josephine County experienced negative population growth from natural causes, with about 1,500 more deaths than births during this period. In addition, Census data show that residents of Josephine County were more likely to have lived in a different state in 1995 compared with the State averages.
4. Josephine County's historical population growth rate is higher than the OEA's forecast for growth in the County. Between 1960 and 2006, Josephine County's population increased by 51,208 people at 2.19% annual growth. Between 1990 and 2006, the County's population increased by 20,790 residents at an average annual rate of 1.24%. The OEA forecasts that Josephine County will grow by 41,166 people at an average annual rate of 1.09% between 2000 and 2040.
5. Permits for 5,425 new dwelling units were issued in Josephine County over the seven-year period, including permits issued in the unincorporated area, and in the cities of Grants Pass and Cave Junction and their UGBs. An average of 775 permits were issued annually in Josephine County.
6. Based on building permit data, PSU appears to have underestimated population growth in Josephine County between 2000 and 2006 by 4,841 people. Our estimate of the County's population in 2007 is 85,966.
7. The key assumptions used to develop the Alternative forecast were the base population of the UGB and growth rate assumptions. The base population used in this forecast increased population in the 2007 to 85,966 residents based on building permit activity. The growth rate assumption for population growth over the 2000 to 2040 period was 1.35%. This rate was based on historic population growth, recent development trends,

demographic changes, and migration trends. The growth rate assumption for the forecast for 2027 to 2060 was 1.05%, which is the OEA's forecast for population growth in Josephine County between 2030 and 2040.

8. The Alternative forecast projects that population in Josephine County will grow from 76,050 residents in 2000 to 116,895 residents in 2040, an increase of 53,762 residents at an average annual rate of 1.35%. Between 2000 and 2060, population will increase by 84,034 residents at an average annual rate of 1.25%.
9. Based on the distribution of residents by age and changes to the age structure during the 1990's, Josephine County is attracting retirees or people nearing retirement. Forty percent of Josephine County's population was 50 years or older, compared with the State average of 29%. During the 1990's, people aged 45-64 and 65 years and older accounted for more than 70% of the population growth in Josephine County.
10. Josephine County is becoming more ethnically diverse. Although Josephine County had a smaller share of Hispanic population in 2000, 4.3% of population compared to the State average of 8.0%, Hispanic population increased by 85% (1,480 people) during the 1990's. National and State trends suggest that Josephine County will continue to become more ethnically diverse.
11. While Grants Pass and Cave Junction are the county's incorporated cities, the Merlin/North Valley area, including Paradise Ranch, is identified as an Unincorporated Community. Current zoning will permit approximately 1,500 new residents, with no increase in zoning density. The population in 2004 was estimated to be 1,290. Increased densities would accommodate even greater numbers and account for significant portions of the county's rural allocation.

The Dyer Partnership Engineers & Planners, Inc. prepared a Merlin/North Valley Water Master Plan in April 2001. The plan included a slightly larger area than what was the Board of County Commissioners ultimately adopted, extending west and north from the Merlin townsite. As a result, the projections anticipated by the study are higher than would be expected for the smaller area. The study evaluated two alternatives. Alternative A used a one-acre minimum and a 2.1 percent average annual growth rate, resulting in a projected 2020 population of 1,955. Extending the same growth rate to the year 2027 results in a population of 2,261, which is still more than 1,000 below the projected rural county population. Ultimate buildout population for Alternative A is 3,073. Alternative B assumed the same population of 1,955 for 2020, but calculated later growth based on a 12,000 square foot lot size minimum, resulting in an ultimate buildout of 10,639. The projected growth under either scenario could be absorbed into the 20 and 50-year projections.

The following are key findings identified through analyzing historic population and demographic trend data and through developing population forecasts for the City of Grants Pass.

12. Between 1980 and 2006, population within the Grants Pass city limits grew from 15,032 residents in 1980 to 30,930 residents in 2006, an increase of 15,989 people at an average annual rate of 2.93%.

13. Between 1990 and 2006, annexations added more than 4,600 persons to the City of Grants Pass. More than 95% of 4,600 people annexed into the City were brought in between 2000 to 2006.²
14. Between 1990 and 2006, nearly half of the growth in the County occurred in Grants Pass. Excluding annexations, Grants Pass grew by 8,819 people from 1990 to 2006, accounting for 48% of 18,476 person population increase in Josephine County over the sixteen year period.
15. Grants Pass experienced faster population growth than the County average. Grants Pass' population more than doubled between 1960 and 2006, growing by 20,812 residents at an average annual rate of 2.46%. Grants Pass grew at an average annual rate of 2.81% between 1980 and 2006, faster than the County average. Excluding population growth from annexations, the average annual growth rate for Grants Pass between 1990 and 2006 was 2.6%.
16. Migration played an important part in population growth in Josephine County and Grants Pass. Census data show that in 2000 17% of residents of Grants Pass lived in a different state in 1995, compared with the State average of 12%.
17. Grants Pass issued a total of 2,572 residential permits within the City's UGB between 2000 and 2006, averaging 367 permits issued annually.
18. Based on building permit data, PSU appears to have underestimated population growth in Grants Pass between 2000 and 2006 by 3,307 people. Our estimate of the population within Grants Pass UGB in 2007 is 37,460.
19. The key assumptions used to develop the population forecast for the Grants Pass UGB were the base population of the UGB and growth rate assumptions. The base population used in this forecast for the Grants Pass UGB was 37,460 people in 2007. The growth rate assumption for population growth over the 2007 to 2027 period was 2.2%. This rate was based on historic population growth, recent development trends, demographic changes, and migration trends. The growth rate assumption for the forecast for 2027 to 2060 was 1.05%, which is the OEA's forecast for population growth in Josephine County between 2030 and 2040.
20. The forecast for population growth in the Grants Pass UGB projects that population in the UGB will grow from 37,460 people in 2007 to 57,888 people in 2027, an increase of 20,428 people at an average annual growth rate of 2.2%. Between 2007 to 2057, the forecast projects that the Grants Pass UGB will grow to 79,275 people, an increase of 41,815 people at an average annual growth rate of 1.51% over the 50-year period.
21. Grants Pass is attracting retirees or near retirees and families with children. Grants Pass has a larger share of residents under 19 years and 70 years and older than Josephine County or Oregon. During the 1990's the fastest growing groups were 45 to 64 years and 5 to 17 years. The slowest growing group was 65 years and older.

² The information from the Population Research Center at Portland State University about annexations prior to 2002 seems to be incomplete, possibly resulting in an under reporting of the number of people annexed by Grants Pass.

22. Grants Pass has a smaller average household size (2.36) compared to the County (2.41) or State (2.51) averages. Grants Pass has a larger share of households with children (32%) compared with Josephine County (27%) and Oregon (31%). Grants Pass has a larger share of non-family households (36%) than the County average (30%) or State average (34%).
23. Grants Pass is becoming more ethnically diverse. Grants Pass Hispanic population grew from 494 residents in 1990 to 1,236 residents in 2000, an increase of 742 people or 150%. In 2000, Grants Pass had a lower share Hispanic residents (5.4%) compared to the State average (8.0%) but higher than Josephine County's average (4.3%). National and State trends suggest that Grants Pass will continue to become more ethnically diverse.

I. INTRODUCTION

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.

Historically, consistency was an issue in the forecasting process. 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]

To help with consistency at the state level, the legislature designated the state Office of Economic Analysis (OEA), 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.

ORS 197.036 requires that population forecasts be coordinated by a designated “coordinating” agency; in this case Josephine 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 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.

OAR 660-024-0030 provides additional guidance on local population forecasts. Subsection 1 requires cities to adopt a 20-year population forecast for the urban area consistent with the coordinated county forecast. Subsection 2 defines the standards for population forecasting:

“The 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

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

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.

factual information, such as the most recent long-range forecast for the county published by the Oregon Office of Economic Analysis (OEA). The forecast must take into account documented long-term demographic trends as well as recent events that have a reasonable likelihood of changing historical trends. The population forecast is an estimate which, although based on the best available information and methodology, should not be held to an unreasonably high level of precision." OAR 660-024-0030(2)

Thus, the forecasting requirement is for 20 years—a figure consistent with the requirement that cities maintain a 20-year land supply. OAR 660-021, however, allows the establishment of urban reserve areas to accommodate up to 50 years of growth. This report presents forecasts that extend to 2060 to provide a basis for establishing urban reserves, should cities desire to do so.

The intent of this forecasting process is to develop a set of forecasts that (1) reflect recent population trends; (2) reflect expected future growth trends Josephine County and the greater Rogue Valley region; and (3) provide the foundation for cities to determine if they have a sufficient supply of buildable lands within their UGBs.

This report presents a population forecast for Josephine County from 2007 to 2060 and allocates that population to the Grants Pass UGB, Cave Junction, and unincorporated Josephine County. It also describes the methodology used to develop the population forecast and allocation and presents findings that support the forecasts.

ORGANIZATION OF THIS REPORT

The remainder of this report is organized as follows:

- **Data Sources and methods** presents the data sources and methods for population forecasting, including the Office of Economic Analysis's (OEA) forecast for population growth in Josephine County for 2000 to 2040.
- **Population forecasts for Josephine County and its cities** presents population forecast for Josephine County and population allocations to Grants Pass, Cave Junction, and unincorporated Josephine County.
- **Fact base** provides the factual basis for the population forecast, including regional population growth trends, population growth trends in Josephine County, the impact of in-migration on population growth, recent development trends, and demographic characteristics.
- **Findings** presents the findings in support of the population forecast.

This report also includes three appendices:

- **Appendix A:** Issues with small area forecasts
- **Appendix B:** Method for determining base populations for Josephine County and the Grants Pass UGB
- **Appendix C:** Method for determining the UGB population base for Grants Pass in 2006

DATA SOURCES AND METHODS

The population allocations presented in this report build from ECO's analysis of a range of secondary data sources—primarily historical population data and the OEA's forecast for Josephine County. All of the data used in developing the allocations 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. Where possible, data from the 2005 American Community Survey provides updated information on demographic and socioeconomic variables;
- The Oregon Office of Economic Analysis (OEA) provides long-term population forecasts (through 2040);
- The Population Research Center at Portland State University provides annual population estimates and annexation history for incorporated cities; and
- The Grants Pass Community Development Department provided data on building permit activity in Josephine County and Grants Pass.

The population forecast for Josephine County and its incorporated cities has two parts: (1) a County forecast that serves as the "control total" for all County population growth and (2) allocation of the County's population growth to incorporated cities and unincorporated parts of the County. The allocation of population uses the County forecast as a control total and does not exceed population growth in the County's forecast.

OEA FORECASTS: 2000-2040⁵

The State Office of Economic Analysis (OEA) issued forecasts for population growth in the State and each county in 2004. 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). 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 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 in-migration numbers can "swamp" the natural increase numbers and make them less important.

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*

⁵ The discussion of OEA methods in this section is summarized from *Deschutes County Coordinated Population Forecast, 2000 – 2025*. Deschutes County, August 2005.

complex and most volatile component of population change.⁶ 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.

Table 1 shows the OEA's forecast for Josephine County from 2000 to 2040. The OEA forecasts that Josephine County will grow by more than 41,000 people over the 40-year period, at an average annual growth rate of 1.09%.

Table 1. OEA forecast, Josephine County, 2000 to 2040

Year	Josephine County
2000	76,050
2005	79,956
2010	84,186
2015	89,211
2020	94,385
2025	100,001
2030	105,552
2035	111,133
2040	117,216
Change 2000 to 2040	
Number	41,166
Percent	54%
AAGR	1.09%

Source: Office of Economic Analysis (OEA), 2004
AAGR - Average Annual Growth Rate

ALLOCATION METHODS: OVERVIEW

The literature identifies many accepted approaches to projecting or forecasting population. More robust approaches use component models (natural increase plus migration),⁷ or econometric models (which consider the interplay between population and employment). Simpler approaches extrapolate from historic trends. At large geographic levels, migration becomes less of a factor making component models more accurate. For smaller regions, migration and other factors are more difficult to document. Appendix A discusses issues with small area forecasts in more detail.

At the national or state level, population growth has a larger affect 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).

⁶ *Long-Term Population Forecast for Oregon and Its Counties, 2000-2040*. Office of Economic Analysis, 2004, first page.

⁷ The OEA long-range forecasts use this methodology.

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 population regional population growth that will occur in the subregion. There are several variations on the step-down method, summarized in Table 2.

Table 2. Basic population forecasting methods

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 future growth; (2) factors affecting local population growth will not change substantially; and (3) selection of base year can significantly affect the forecast. The ratio and comparative methods scale from forecasts of larger geographies and implicitly assume that the forecasts for the larger areas are (1) good forecasts, and (2) represent trends that might be observed in the smaller geography.

The Josephine County forecasts used the "extrapolation trend" method described in Table 2 to allocate population to the Grants Pass UGB. The forecast began with a review of historical population trends to develop observed annual growth rates that provide the basis for allocations (e.g., the assumed future growth rates). Trend data reviewed as part of this analysis included annual population changes from the Census and from the Population Research Center at Portland State University. Historical population changes for Josephine County and its cities is shown in the next section of the memorandum. The Cave Junction forecast was developed by Craig Stone and Associates.

In selecting a methodology, the County considered several different methods for allocating population to subareas of the County including the straight-line extrapolation method, the compounding method, and the ratio method. The County dismissed the comparative method in this instance because it would be difficult to identify comparable cities to Grants Pass and Cave Junction. The County selected the **compounding methodology** because it is (1) most 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 assumes that the increment of population growth (e.g., the rate of growth or annual percent change) will be constant. The County used the OEA forecast, with modifications described later in the memorandum, to provide the control total for the County population.

In summary, the County selected the compounding methodology with modifications to the OEA forecast as the County control total because:

- The OEA forecast considers economic and demographic trends;
- The OEA forecast uses a cohort-component method that addresses the influence of age (e.g., birth and death rates) and in-migration;
- The compounding method is a simple method that implicitly considers factors that have affected historical population growth in Grants Pass; and
- It is an accepted method for allocating population to the cities based on the OEA population forecast for Josephine County.

POPULATION FORECASTS FOR JOSEPHINE COUNTY AND ITS CITIES

The population forecast for Josephine County and its incorporated cities has two parts: (1) a County forecast that serves as the "control total" for all County population growth and (2) allocation of the County's population growth to incorporated cities and unincorporated parts of the County. The allocation of population uses the County forecast as a control total and does not exceed population growth in the County's forecast.

The methodology for developing the County forecast is based on the OEA's forecast for the County, with an adjustment to the forecast base and growth rates. The allocation of population to incorporated and unincorporated area of the County uses the compounding methodology, described previously in the memorandum.

COUNTY FORECAST

The OEA forecast uses historical population estimates from the Portland State University Center for Population Research to provide base population estimates and derive growth rate assumptions, which are used to develop the OEA's projection of future population.⁸ Based on building permit data, it appears that the PSU estimates from 2001 to 2006 systematically underestimate population. A detailed review of PSU population estimates and building permit data shows significant discrepancies between the number of permits issued for new residences and the population estimates. The key conclusion of this review is that PSU is underestimating the County's population. The implications are that:

1. The county is growing faster than the OEA forecasts, and
2. Making adjustments to account for under-reported population are justifiable and will lead to a more accurate long term forecast for the county.

The County estimates that population in Josephine County in 2007 will be 85,966, an increase of 4,841 people over the 2006 PSU population estimate. Appendix B shows the methodology used to develop the County population estimate for 2007.

⁸ The information about the OEA's methodology is from Alec Miller at Craig Stone Associates, based on information gathered from Kanhaiya Vaidya at the OEA.

There is no statutory requirement that the County accept the OEA forecast. The data presented in Appendix B provide evidence that support an alternative forecast for the County.

Table 3 shows the OEA's forecast and the alternative forecast adopted by the County:

- The OEA forecast is the forecast that the OEA issued for Josephine County in 2004. This forecast estimates that by 2040, Josephine County's population will increase from 81,622 people in 2007 to 117,216 people in 2040, an overall increase of 44% or 35,594 people.
- The Alternative Forecast adds 5% more population to the OEA's forecast, using the same base population as "the Adjusted base" forecast in 2007. Using this scenario Josephine County's population will be 129,812 persons by 2040, which is 12,596 people more than the "OEA forecast's" population in 2040.

Both of the forecasts assumes the same growth rate of 1.05% annual growth for the 2040 to 2060 period. This growth rate is based on the OEA forecast's growth rate assumption for the 2030 to 2040 period.

Table 3. OEA population forecast and Alternative forecast, Josephine County, 2000-2060

Year	Original forecast	Alternative forecast
2000	76,050	76,050
2005	79,956	79,956
2007	81,622	85,966
2010	84,186	93,233
2020	94,385	104,528
2027	102,186	113,167
2030	105,552	116,895
2040	117,216	129,812
2050	130,167	144,156
2057	140,076	155,129
2060	144,550	160,084
Average Annual Growth Rates		
2000 to 2040	1.09%	1.35%
2000 to 2060	1.08%	1.25%
2040 to 2060	1.05%	1.05%

Source: Original forecast from the Office of Economic Analysis (OEA); Alternative forecast based on Census data and permits issued by Josephine County; calculations by ECONorthwest

Notes: The forecast for 2040 to 2060 was extrapolated based on the OEA's 2030 to 2040 growth rate (1.05% annually).

AAGR – Average Annual Growth Rate

The following findings support an alternative forecast for Josephine County:

- **Underestimation of growth since 2000.** Based on building permit activity, it appears that PSU has underestimated population growth in Josephine County by approximately

4,841 between 2000 and 2006. We estimate that Josephine County's population in 2007 is 85,966 people. Appendix B presents the methods and assumptions used to produce this population estimate.

- **Historic population growth.** Past growth trends suggest that the OEA underestimate growth rates in Josephine County by at least 5% of overall population growth. These trends support adding 5% to the OEA forecast for the 2010 to 2060 time period. Josephine County's population increased from 29,917 residents in 1960 to 81,125 residents in 2006, an increase of 171% or 51,208 residents over the 46-year period. Between 1990 and 2006 Josephine County's population increased by 18,476 people or 30%.
- **Historic population growth rates.** Josephine County grew at an average annual rate 2.19% between 1960 and 2006. Population growth was slower during the 1980-2006 period (1.24% average annual growth), mostly as a result of slow growth during the 1980's (0.63%). Between 1990 and 2006 Josephine County grew at 1.63% annually.
- **Net Migration.** About 70% of Oregon's population growth between 1990 and 2006 resulted from in-migration. All population growth in Southern Oregon and Josephine County between 2000 and 2006 was the result of migration. The effects of migration are difficult to forecast because migration changes with economic and demographic changes in the nation and state.

The County adopted the alternative forecast because (1) it makes an adjustment to the base population and (2) because the growth rate assumption is reasonable. The Alternative forecast includes an adjustment to the population base (2007) to more accurately reflect current population in Josephine County, based on building permit activity in the County between 2000 and 2006. In addition, the growth rate for 2000 to 2040 used in this scenario is lower than the historic growth rate for the 1960 to 2006 period (2.19%) and the 1990 to 2006 period (1.63%). However, it is reasonable to expect a decline in the average annual rate of population growth as population increases because a larger population base requires a larger increase in the *number* of people in the County to achieve the same *rate* of increase.

ALLOCATION OF POPULATION GROWTH TO CITIES AND UNINCORPORATED AREAS

This section presents population allocations based on the scenarios for growth in the County population shown in Table 3. The County population for each scenario presented in Table 3 is used as the "control total" for 2007 to 2057. The next step in the population forecast is to allocate the County's population to unincorporated areas of the County and the Grants Pass and Cave Junction UGBs.

The first step in allocating the County's population was to develop a 2007 base population of population living within the urban growth boundary of each incorporated city. For Grants Pass, the 2007 base used an estimate of population within the UGB based on an estimate of population within the UGB in 2000 and recent permit activity. The methodology for estimating the

population in the Grants Pass UGB in 2007 is presented in Appendix B. Craig Stone and Associates provided the base population and 2027 population for the Cave Junction UGB.⁹

The next step was to develop average annual growth rates for each city. The forecasting period was divided into two parts: 2007-2027 and 2007 to 2057. The 2007 to 2027 average annual growth rate for the Grants Pass UGB are based on historic population growth, recent development trends, demographic changes, and migration trends. The population growth rate for the Cave Junction UGB for the 2007 to 2027 period was provided by Craig Stone and Associates. The growth rate assumption for the 2027 to 2057 period for both cities was taken from the OEA's growth rate assumption for Josephine County for the 2030 to 2040 period (1.05% average annual growth rate). Growth in unincorporated Josephine County was calculated by subtracting population in the Grants Pass and Cave Junction UGBs from the County's OEA forecast.

Table 4 presents the population forecast for the Grants Pass UGB and Cave Junction UGB for 2007 to 2027 and 2007 to 2057. Table 4 shows that the Grants Pass UGB will grow by 20,428 people at an average annual rate of 2.20% between 2007 and 2027. Between 2007 and 2057, the Grants Pass UGB will grow by 41,815 people at an average annual rate of 1.51%. The forecast assumes that Grants Pass UGB population would grow at 1.05% annually from 2027 to 2060 based on the rate that the OEA used to forecast County growth between 2030 and 2040.

Table 4 shows the Cave Junction UGB growing by 3,259 people at an average annual rate of 4.59% between 2007 and 2027 and by 5,291 people at an average annual rate of 2.45% over the 2007 to 2057 period. The forecast assumes that Cave Junction UGB population would grow at 1.05% annually from 2027 to 2060 based on the rate that the OEA used to forecast County growth between 2030 and 2040.

Table 4. Population forecast, Grants Pass UGB and Cave Junction UGB, 2007-2057

	2007 Pop.	2027 Pop.	2057 Pop.	Change 2007 to 2027			Change 2007 to 2057		
				Difference	Percent		Difference	Percent	
					change	AAGR		change	AAGR
Grants Pass UGB	37,460	57,888	79,275	20,428	35%	2.20%	41,815	112%	1.51%
Cave Junction UGB	2,241	5,500	7,532	3,259	59%	4.59%	5,291	236%	2.45%

Source: ECONorthwest and Craig Stone and Associates

Note: The methodology for developing the Grants Pass UGB population estimate for 2007 is presented in Appendix B. The population base assumption for the Cave Junction UGB and growth rate assumption for 2007-2027 was developed by Craig Stone and Associates

The population forecasts for unincorporated Josephine County were developed by subtracting forecast population in the UGBs of the incorporated cities from the County control total, show in Table 3. Table 5 presents population forecast scenarios for unincorporated Josephine County outside UGBs, based on the forecast scenarios for the entire County presented in Table 3. The forecast scenarios for population change in unincorporated Josephine County outside UGBs

⁹ Craig Stone and Associates provided a base population for Cave Junction in 2005 of 2,049 and a 2027 population of 5,500. Based on this forecast, ECO calculated that the Cave Junction would have an average annual growth rate of 4.59%. ECO used this growth rate to extrapolate the 2005 population to 2007 to provide a 20-year forecast for the Cave Junction UGB.

between 2007 to 2027 range from population decreasing by 1,729 people to population increasing by 3,280. The Alternative forecast shows the adopted forecast for population growth in unincorporated Josephine County.

Table 5. Population forecast, Unincorporated Josephine County Outside UGBs, 2007-2057

Year	Original forecast	Alternative forecast
2007	44,476	46,265
2027	42,747	49,545
2057	58,677	68,101
Change 2007 to 2027		
Number	-1,729	3,280
AAGR	-0.20%	0.34%
Change 2007 to 2057		
Number	14,201	21,836
AAGR	0.56%	0.78%

Source: ECONorthwest

The forecast of population growth for unincorporated Josephine County presented in Table 5 may underestimate the amount of population growth that unincorporated areas of the County will experience in the next 20 and 50 year periods.

- The forecast projects lower than historic growth rates. The forecast for the 2007 to 2027 period predicts that unincorporated Josephine County will grow by 3,280 people at an average annual rate of 0.34%. In comparison, unincorporated Josephine County grew by 5,695 people at an annual rate of 0.49% between 1980 to 2006, not including residents that were annexed into incorporated cities. However, it is reasonable to expect a decline in the average annual rate of population growth as population increases because a larger population base requires a larger increase in the number of people in the County to achieve the same rate of increase.
- The forecast does not estimate potential impacts of Measure 37. The impacts of Measure 37 on population growth are difficult to estimate. As a result, the forecast does not take Measure 37 into consideration.

FACT BASE

This section discusses regional population growth, long-term historical population changes in Josephine County, the impact of in-migration on population growth, recent residential development, and demographic changes that can impact population growth. The data presented in this section is intended to provide a factual context for the forecasts presented in the previous sections.

REGIONAL POPULATION GROWTH

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 6, which presents data on population in the U.S., Oregon, and Southern Oregon, and Jackson and Josephine Counties and selected cities in Southern Oregon over the 1980–2006 period.

Table 6 shows Oregon grew more rapidly than the U.S. in the 1990s (which was generally an expansionary period) but lagged behind the U.S. in the 1980s. Oregon's slow growth in the 1980s was primarily due to 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 between 2000 to 2006, averaging 1.1% to 1.3% annually, the slowest rate since 1987.

Growth in Southern Oregon, including Douglas, Jackson, and Josephine Counties, has been on average slower than the State average over the twenty-six year period. The fastest growing county in Southern Oregon has been Jackson County, which grew by about 62,000 residents at an average annual rate of 1.55% over the twenty-six year period. Josephine County grew by more than 22,000 people at an average annual growth rate of 1.29% between 1980 to 2006.

The majority of population growth in Southern Oregon occurred in the cities of Medford, Ashland, Central Point, and Grants Pass. These cities grew by about 62,000 people, accounting for about two-thirds of the population growth in Southern Oregon over the 1980 to 2006 period.

Table 6. Historic Population Change, U.S., Oregon, Southern Oregon, Jackson And Josephine Counties, and Selected Cities in Southern Oregon, 1980 - 2006

Area	Population				Change 1980 to 2006		
	1980	1990	2000	2006	Number	Percent	AAGR
U.S.	226,545,805	248,709,873	281,421,906	299,398,484	69,864,599	31%	1.08%
Oregon	2,639,915	2,842,321	3,421,399	3,690,505	988,785	37%	1.28%
Southern Oregon	285,059	303,685	357,394	383,555	98,496	35%	1.19%
Jackson County	132,456	146,389	181,269	198,615	62,059	47%	1.55%
Medford	39,746	46,951	63,154	73,960	31,109	78%	2.34%
Ashland	14,943	16,234	19,522	21,430	5,937	40%	1.35%
Central Point	6,357	7,509	12,493	16,550	9,283	146%	3.67%
Josephine County	58,855	62,649	75,726	81,125	22,270	38%	1.29%
Grants Pass	15,032	17,488	23,003	30,930	15,898	106%	2.93%
Cave Junction	1,023	1,126	1,363	1,600	577	56%	1.81%

Source: U.S. Census, Population Research Center, and calculations by ECONorthwest
 Note: Southern Oregon includes Douglas, Jackson, and Josephine Counties.

POPULATION GROWTH TRENDS IN JOSEPHINE COUNTY

Long-term population growth in Josephine County has historically followed Oregon's population growth trends. Since 1960, like Oregon, Josephine County's population growth was fastest during the 1970's and 1990's. Table 7 shows that Josephine County's population has grown from 29,917 residents in 1960 to 81,125 residents in 2006, an increase of 51,208 people at 2.19%

annual growth. Josephine County grew at a slower rate between 1980 and 2006, averaging 1.24% annual growth and adding 20,790 residents.

Table 7. Population change, Josephine County, 1960-2006

Year	Population	Change	% Change
1960	29,917	--	--
1970	35,746	5,829	19%
1980	58,855	23,109	65%
1990	62,649	3,794	6%
2000	75,726	13,077	21%
2006	81,125	5,399	7%
Average Annual Growth Rates			
1960 to 2006	2.19%		
1980 to 2006	1.24%		

Source: Portland State University Center for Population Research; Calculations by ECONorthwest.

Table 8 shows population change within the city-limits of Grants Pass from 1960 to 2006. Grants Pass' population more than doubled between 1960 and 2006, growing by 20,812 residents at an average annual rate of 2.46%. Grants Pass grew at an average annual rate of 2.81% between 1980 and 2006. Between 1990 and 2006, annexations added more than 4,500 persons to the City of Grants Pass.¹⁰ Excluding population growth from annexations, the average annual growth rate for Grants Pass between 1990 and 2006 was 2.6%.

The share of population in Grants Pass has varied from about one-third of the County population in 1970, dropping to about one-quarter of the County population in 1980. By 2006, more than one-third of the County's population lived within the city limits of Grants Pass.

Table 8. Population change, Grants Pass city limits, 1960-2006

Year	Population	Change	% Change	% of County Population
1960	10,118	--	--	33.8%
1970	12,455	2,337	23%	34.8%
1980	15,032	2,577	21%	25.5%
1990	17,488	2,456	16%	27.9%
2000	23,003	5,515	32%	30.4%
2006	30,930	7,927	34%	38.1%
Average Annual Growth Rates				
1960 to 2006	2.46%			
1980 to 2006	2.81%			

Source: Portland State University Center for Population Research; Calculations by ECONorthwest.

¹⁰ PSU's information about annexations prior to 2002 seems to be incomplete, possibly resulting in an under reporting of the number of people annexed by Grants Pass.

Table 9 shows Cave Junction's historic population changes from 1960 to 2006. Cave Junction's population grew from 248 residents in 1960 to approximately 1,600 residents in 2006. The greatest growth occurred between 1970 and 1980, where the city grew by 608 residents (147%). Cave Junction's average annual growth rate over the forty-six year period was 4.14% annual growth, with a lower growth rate of 1.74% annually between 1980 and 2006. Cave Junction's share of the County population has gradually grown from 0.8% in 1960 to 2.0% of the County's population in 2006.

Table 9. Population change, Cave Junction city limits, 1960-2006

Year	Population	Change	% Change	% of County
				Population
1960	248	--	--	0.8%
1970	415	167	67%	1.2%
1980	1,023	608	147%	1.7%
1990	1,126	103	10%	1.8%
2000	1,363	237	21%	1.8%
2006	1,600	237	17%	2.0%
Average Annual Growth Rates				
1960 to 2006	4.14%			
1980 to 2006	1.74%			

Source: Portland State University Center for Population Research; Calculations by ECONorthwest.

Table 10 shows population changes in unincorporated Josephine County from 1960 to 2006.¹¹ Population in unincorporated Josephine County has grown from 19,551 residents in 1960 to 48,595 residents in 2006. The fastest growth in unincorporated areas of the County occurred between 1970 and 1980, when population increased by 19,924 residents (87%). The larger than usual change in population in unincorporated Josephine County may be attributable to a combination of: (1) lower housing costs in unincorporated Josephine County than in Grants Pass; (2) fewer regulations governing building in unincorporated Josephine County, and (3) a preference for a rural living situation.

Since 1980, unincorporated Josephine County grew at a slower rate, with an average growth rate of 0.49% annually. The growth rate in unincorporated Josephine County may be higher than 0.49% annually because of shifts in population allocations from unincorporated Josephine County into one of the cities resulting from annexations. The share of population living in unincorporated Josephine County has varied between about 65% and 73% of the County's population, decreasing to about 60% in 2006.

¹¹ The estimate of population for unincorporated Josephine County in Table 4 includes population inside all population located outside of the Cave Junction or Grants Pass city limits, including population in the cities' UGB that is outside of the cities' limits.

Table 10. Population change, unincorporated Josephine County, 1960-2006

Year	Population	Change	% of County	
			% Change	Population
1960	19,551	--	--	65.4%
1970	22,876	3,325	17%	64.0%
1980	42,800	19,924	87%	72.7%
1990	44,035	1,235	3%	70.3%
2000	51,360	7,325	17%	67.8%
2006	48,595	-2,765	-5%	59.9%
Average Annual Growth Rates				
1960 to 2006	2.00%			
1980 to 2006	0.49%			

Source: Portland State University Center for Population Research; Calculations by ECONorthwest
 Note: Population change in unincorporated Josephine County was calculated by subtracting the populations of Grants Pass and Cave Junction from the County's population.

IMPACT OF IN-MIGRATION ON POPULATION GROWTH

The rate of population growth in Oregon is 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.

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 1990-2004.¹² Oregon had an annual average of 26,290 more in-migrants than out-migrants during the period 1990-2000. The annual average dropped to 12,880 during the period 2000-2004.¹³

According to data from the Population Research Center at Portland State University, about 70% of population growth in Oregon resulted from migration and about 30% resulted from natural increase (births minus deaths). Between 2000 to 2006 in Southern Oregon, net migration accounted for all the population increase because population growth from natural increase was negative (deaths outnumbered births). All population growth in Josephine County between 2000 to 2006 was the result of net migration because the County had about 1,500 more deaths than births.

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.¹⁴ The DMV also collects data on Oregon driver

¹² 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.

¹³ 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.

¹⁴ See Oregon Department of Motor Vehicles. "Driver Issuance Statistics." http://www.oregon.gov/ODOT/DMV/news/driver_stats.shtml, accessed April 19, 2007.

licenses surrendered in other states. These data indicate that Washington and California are the top destinations for Oregon's out-migrants.¹⁵

The *1999 Oregon In-migration Study* found that migrants to Oregon tend to have the same characteristics as existing residents, with some differences—recent in-migrants to Oregon are, on average, younger and more educated, and are more likely to hold professional or managerial jobs, compared to Oregon's existing population. The race and ethnicity of in-migrants generally mirrors Oregon's established pattern, with one exception: Hispanics make up more than 7% of in-migrants but only 3% of the state's population. The number-one reason cited by in-migrants for coming to Oregon was family or friends, followed by quality of life and employment.¹⁶

The Census collects information about migration patterns. Specifically, it asks households where their residence was in 1995 (5 years prior to the Census count). Table 11 shows the place of residence in 1995 for Oregon, Josephine County, and Grants Pass. Table 11 shows the following trends:

- Residents of Josephine County were less mobile than the State average, with 51% of County residents living in the same house in 1995, compared with the State average of 47%. However, residents of Josephine County were more likely to have lived in a different state in 1995 than the State average, 15% compared to 12% of all residents of Oregon.
- Residents of Grants Pass were more mobile than the County or State averages. Residents of Grants Pass were more likely to have lived in a different state in 1995. Sixty-percent of Grants Pass residents lived in a different house in 1995, compared with 49% of Josephine County residents and 53% of Oregon residents. Seventeen percent of Grants Pass residents lived in a different state in 1995, compared with 15% of Josephine County and 12% of Oregon residents.

¹⁵ For a discussion of the DMV data, see Ayre, A. 2004. *People Moved to Oregon Despite Recession*. Oregon Employment Department, July.

¹⁶ State of Oregon, Employment Department. 1999. *1999 Oregon In-migration Study*.

Table 11. Place of residence in 1995, Oregon, Josephine County, and Grants Pass, Persons 5 years and over

Location	Oregon		Josephine County		Grants Pass	
	Persons	Percent	Persons	Percent	Persons	Percent
Population 5 years and older	3,199,323	100%	71,725	100%	21,283	100%
Same house in 1995	1,496,938	47%	36,636	51%	8,570	40%
Different house in 1995:	1,702,385	53%	35,089	49%	12,713	60%
Same county	863,070	27%	18,814	26%	7,087	33%
Different county:	755,954	24%	15,946	22%	5,531	26%
Same state	356,626	11%	5,207	7%	1,865	9%
Different state	399,328	12%	10,739	15%	3,666	17%

Source: U.S. Census, 2000

RECENT RESIDENTIAL DEVELOPMENT TRENDS

Residential development is a key factor directly correlated with population growth—households cannot (and will not) move to an area without housing. One way to track residential development is to compare the number of permits issued for new residences. Examining the number of building permits issued can provide an indication of the level of potential building activity (it does not indicate the amount of actual residential development because a building permit does not guarantee development). The construction of a dwelling unit will eventually result in a population increase as the dwelling gets occupied.

Table 12 shows the number of new dwelling units permitted in Josephine County and the City of Grants Pass UGB for the 2000-2006 period. Permits for 4,818 new dwelling single-family units were issued in Josephine County over the seven-year period, including permits issued in the unincorporated area, and in the cities of Grants Pass and Cave Junction and their UGBs. An average of 775 permits were issued annually in Josephine County. Grants Pass issued permits for 2,357 new dwelling units, excluding group quarters, within its UGB over the same period. The City issued an average of 369 permits annually.

Table 12. New single-family dwelling units permitted, Josephine County and Grants Pass UGB, 2000-2006

Year	Josephine County	Grants Pass
2000	607	225
2001	594	232
2002	717	328
2003	828	411
2004	918	495
2005	1028	533
2006	733	358
Total	4,818	2,357
Average	775	369

Source: Josephine County and City of Grants Pass

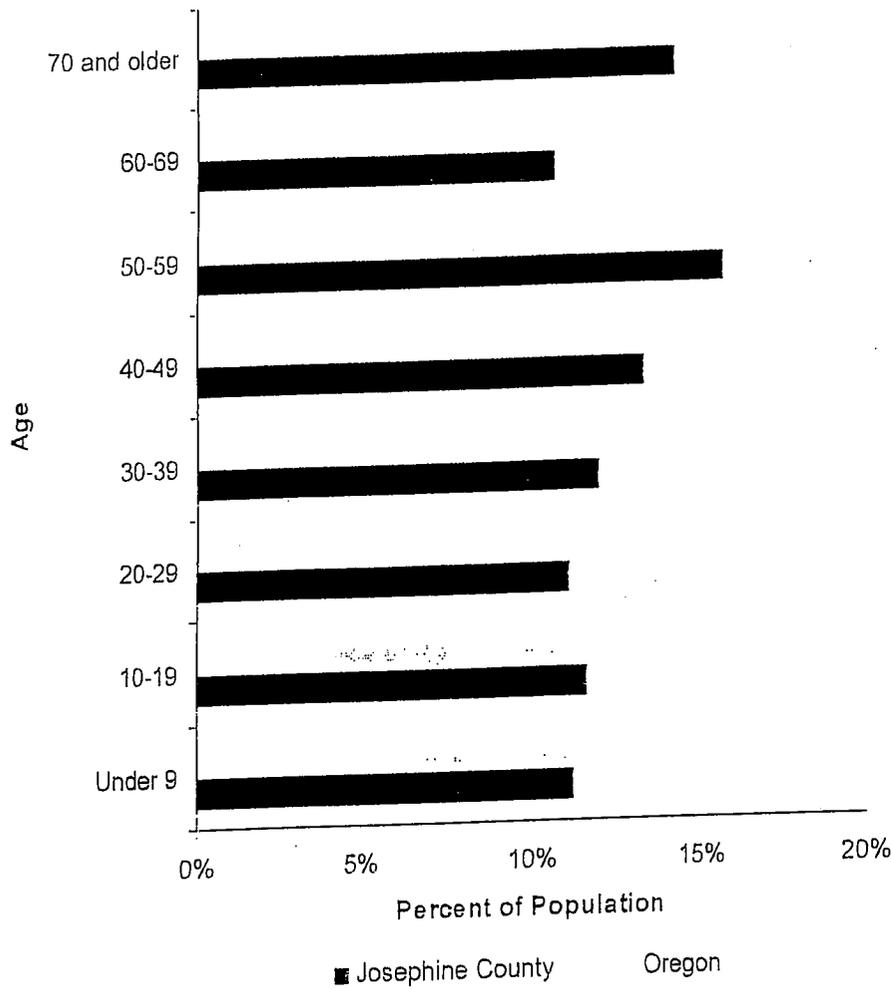
DEMOGRAPHIC CHARACTERISTICS

Demographic characteristics provide a broader context for growth: factors such as age, household composition, ethnicity, and migration show how communities have grown and shape future growth. To provide context, Josephine County is compared to Grants Pass and Oregon where appropriate.

Figure 1 shows the age distribution of population in Josephine County and Oregon in 2005. Figure 1 shows the following trends:

- Josephine County population was older than the State average. Forty-one percent of Josephine County's population was 50 years or older, compared the State average of 31%. Josephine County had a larger share of population age 70 or older than the State average.
- Josephine County had a smaller share of residents younger than 30 years, 34% compared to the State average of 40% of residents.

Figure 1. Age distribution, Oregon and Josephine County, 2005



Source: U.S. Census, American Community Survey, 2005

Like Josephine County, Grants Pass had a larger share of older residents. In 2000, the distribution of Grants Pass' population by age was similar to the State average for most age categories, except had a larger share of residents 70 and older (16%) compared to the State average (10%).¹⁷ About 33% of Grants Pass residents were aged 50 or older, compared to 40% of County residents and the State average of 29%.

Josephine County experienced changes in the age structure of its residents between 1990 and 2005. Table 13 shows population by age for Josephine County for 1990 and 2005. Josephine County's population increased by more than 17,100 residents during the 15-year period. The group with the largest increase was people aged 45-64 and 65 years and older. Together these groups accounted for about 70% of the population growth in Josephine County.

¹⁷ The most current source of information about the age of Grants Pass' residents was the 2000 Census. Grants Pass was not included in the U.S. Census American Community Survey in 2005.

Table 13. Population by age, Josephine County, 1990 and 2005

Age Group	1990		2005		Change		
	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	3,965	6%	3,940	5%	-25	-1%	-1%
5-17	11,231	18%	12,959	16%	1,728	15%	-2%
18-24	4,061	6%	6,044	8%	1,983	49%	1%
25-44	16,897	27%	18,415	23%	1,518	9%	-4%
45-64	13,660	22%	22,860	29%	9,200	67%	7%
65 and over	12,835	20%	15,533	19%	2,698	21%	-1%
Total	62,649	100%	79,751	100%	17,102	27%	0%

Source: U.S. Census, 1990 and American Community Survey, 2005

During the 1990's Grants Pass experienced changes in the age structure of its residents. Table 14 shows population by age for Grants Pass for 1990 and 2000. Grants Pass grew by more than 5,500 people during the ten year period. While Grants Pass experienced an increase in population for every age group, the fastest growing groups were 45 to 64 years and 5 to 17 years. The slowest growing group was 65 years and older.

Table 14. Population by age, Grants Pass, 1990 and 2000

Age Group	1990		2000		Change		
	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	1,257	7%	1,613	7%	356	28%	0%
5-17	3,087	18%	4,377	19%	1,290	42%	1%
18-24	1,406	8%	1,872	8%	466	33%	0%
25-44	4,902	28%	5,917	26%	1,015	21%	-2%
45-64	2,995	17%	4,760	21%	1,765	59%	4%
65 and over	3,841	22%	4,464	19%	623	16%	-3%
Total	17,488	100%	23,003	100%	5,515	32%	0%

Source: U.S. Census, 1990 and 2000

The implication of the distribution of population by age and changes in the age structure in Josephine County and Grants Pass is that the County and Grants Pass are attractive to retirees. In addition, Grants Pass attracted families with children.

Table 15 shows household composition for Oregon, Josephine County, and Grants Pass. Josephine County households had the following characteristics when compared with the State:

- The County had smaller households, with an average household size of 2.41 people, compared to the State average of 2.51 people per household.
- According to Census data, in 2005, the average household size in Josephine County decreased to 2.39 people per household, compared with the State average of 2.50 people per household.
- Josephine County had a smaller share of households with children, 27% compared to the State average of 31% of households.

- Josephine County had a larger share of households with married couples with no children, 37% compared to the State average of 30%. The County has a smaller share of nonfamily households, 30% compared to the State average of 34%.

Grants Pass households showed the following characteristics when compared with Josephine County and the State:

- Grants Pass had fewer people per household, with an average household size of 2.36 people, compared to the County average of 2.41 and State average of 2.51 people per household.
- Grants Pass had a larger share of households with children (32%) compared with Josephine County (27%) and Oregon (31%). Grants Pass also had a larger share of female householders with children and no husband, 9% compared with the County and State averages of 6%.
- Grants Pass had a smaller share of households with married couples, with and without children, than the State and County averages.
- Grants Pass had a larger share of non-family households (36%) than the County average (30%) or State average (34%).

Table 15. Household composition, Oregon, Josephine County, and Grants Pass, 2000

Household Type	Oregon		Josephine County		Grants Pass	
	Number	Percent	Number	Percent	Number	Percent
Households with children	410,803	31%	8,454	27%	3,003	32%
Married couples	296,404	22%	5,929	19%	1,980	21%
Female householder, no husband present	83,131	6%	1,929	6%	865	9%
Other families	31,268	2%	596	2%	158	2%
Households without children	922,920	69%	22,573	73%	6,442	68%
Married couples	396,128	30%	11,458	37%	2,393	25%
Other families	70,740	5%	1,657	5%	628	7%
Nonfamilies	456,052	34%	9,458	30%	3,421	36%
Total Households	1,333,723	100%	31,027	100%	9,445	100%
Average Household Size	2.51		2.41		2.36	
Average Family Size	3.02		2.85		2.94	

Source: U.S. Census, 2000

Table 16 shows the number of persons of Hispanic or Latino origin in Oregon, Josephine County, and Grants Pass for 1990 and 2000. The data show the following trends:

- Josephine County had a smaller share of Hispanic population (4.3%) compared to the State (8.0%). Hispanic population grew by 1,480 people (85%) during the 1990's.
- Grants Pass had a larger share of Hispanic population (5.4%) compared to the County (4.3%) but a smaller share compared to the State (8.0%). Grants Pass Hispanic population grew from 494 residents in 1990 to 1,236 residents in 2000, an increase of 742 people or 150%.

Ethnic diversity is increasing faster in Grants Pass than in Josephine County. The Hispanic population grew faster in Josephine County and Grants Pass than the overall population, which is similar to State trends. National demographic trends suggest that this trend will continue in Grants Pass. By 2050, the Census forecasts that Hispanics will account for 24% of the population nationwide.

Table 16. Persons of Hispanic or Latino origin, Oregon, Josephine County, and Grants Pass, 1990 and 2000

	Oregon	Josephine County	Grants Pass
1990			
Total Population	2,842,321	62,649	17,488
Hispanic or Latino	112,707	1,749	494
Percent Hispanic or Latino	4.0%	2.8%	2.8%
2000			
Total Population	3,421,399	75,726	22,865
Hispanic or Latino	275,314	3,229	1,236
Percent Hispanic or Latino	8.0%	4.3%	5.4%
Change 1900-2000			
Hispanic or Latino	162,607	1,480	742
Percent Hispanic or Latino	144%	85%	150%

Source: U.S. Census, 1990 and 2000

Richard Bjelland, State Housing Analyst at the Housing and Community Services Department of the State of Oregon, analyzed recent demographic changes taking place in Oregon and discussed their implications in a 2006 presentation "Changing Demographics: Impacts to Oregon and the US." Bjelland's findings with the most significant implications for population growth are summarized below:

- Oregon's minority population is growing quickly. Minorities made up 9.2% of the population in 1990 and 16.5% of the population in 2000, a 52% increase.
- Hispanics and Latinos make up a large share of that population and their growth rate is higher than non-Hispanics/ Latinos. The growth rate of Oregon's non-Hispanic/ Latino population between 1990 and 2000 was 15.3% compared to 144.3% for Hispanics and Latinos.
- The birth rates of Hispanic/ Latino residents are higher than non-Hispanic/ Latino residents. In 1998, for the US, white non-Hispanic/ Latino residents had a birth rate of 12.3 per 1,000, lower than Asians and Pacific Islanders (16.4 per 1,000), black non-Hispanics (18.2 per 1,000) and Hispanic/ Latino (24.3 per 1,000).
- The share of resident births and deaths in Oregon shows the implications of that birthrate: Hispanic/ Latino residents accounted for 17.4% of births but only 1.4% of deaths in Oregon for 2001. In addition, **Hispanic/ Latino Oregonians are younger than non-Hispanic/ Latino residents:** in 2000, 75.9% of Hispanic/ Latino residents of Oregon are under age 35, compared to 45.7% of non-Hispanic/ Latino residents.

FINDINGS

This section summarizes the findings in support the population forecasts. The following are key findings identified through analyzing historic population and demographic trend data and through developing population forecasts for Josephine County.

1. Josephine County experienced substantial population growth between 1980 and 2006. Josephine County grew from 58,855 people in 1980 to 81,125 people in 2006, an increase of more than 22,000 people at an average annual growth rate of 1.29%. Over the twenty-six year period, Josephine County grew at approximately the same rate as the State average.
2. The State projects that Josephine County will continue growing but at a lower rate than the historic average. The State forecast for population growth in Josephine County projects that the County will grow from 76,050 people in 2000 to 117,216 people in 2040, an increase of 41,166 people at an average annual growth rate of 1.09%. Extending the State's forecast for population growth in Josephine County out to 2060 based on an average annual growth rate of 1.05%, Josephine County can be expected to grow to about 144,500 people, an increase of about 64,600 people between 2005 and 2060.
3. Migration was the largest source of population growth in Oregon and Josephine County. For the 1990 to 2006 period, about 70% of population growth in Oregon resulted from net migration. All population growth in Josephine County between 2000 and 2006 was the result of net migration because Josephine County experienced negative population growth from natural causes, with about 1,500 more deaths than births during this period. In addition, Census data show that residents of Josephine County were more likely to have lived in a different state in 1995 compared with the State averages.
4. Josephine County's historical population growth rate is higher than the OEA's forecast for growth in the County. Between 1960 and 2006, Josephine County's population increased by 51,208 people at 2.19% annual growth. Between 1990 and 2006, the County's population increased by 20,790 residents at an average annual rate of 1.24%. The OEA forecasts that Josephine County will grow by 41,166 people at an average annual rate of 1.09% between 2000 and 2040.
5. Permits for 5,425 new dwelling units were issued in Josephine County over the seven-year period, including permits issued in the unincorporated area, and in the cities of Grants Pass and Cave Junction and their UGBs. An average of 775 permits were issued annually in Josephine County.
6. Based on building permit data, PSU appears to have underestimated population growth in Josephine County between 2000 and 2006 by 4,841 people. Our estimate of the County's population in 2007 is 85,966.
7. The key assumptions used to develop the Alternative forecast were the base population of the UGB and growth rate assumptions. The base population used in this forecast increased population in the 2007 to 85,966 residents based on building permit activity. The growth rate assumption for population growth over the 2000 to 2040 period was 1.35%. This rate was based on historic population growth, recent development trends,

demographic changes, and migration trends. The growth rate assumption for the forecast for 2027 to 2060 was 1.05%, which is the OEA's forecast for population growth in Josephine County between 2030 and 2040.

8. The Alternative forecast projects that population in Josephine County will grow from 76,050 residents in 2000 to 116,895 residents in 2040, an increase of 53,762 residents at an average annual rate of 1.35%. Between 2000 and 2060, population will increase by 84,034 residents at an average annual rate of 1.25%.
9. Based on the distribution of residents by age and changes to the age structure during the 1990's, Josephine County is attracting retirees or people nearing retirement. Forty percent of Josephine County's population was 50 years or older, compared with the State average of 29%. During the 1990's, people aged 45-64 and 65 years and older accounted for more than 70% of the population growth in Josephine County.
10. Josephine County is becoming more ethnically diverse. Although Josephine County had a smaller share of Hispanic population in 2000, 4.3% of population compared to the State average of 8.0%. Hispanic population increased by 85% (1,480 people) during the 1990's. National and State trends suggest that Josephine County will continue to become more ethnically diverse.
11. While Grants Pass and Cave Junction are the county's incorporated cities, the Merlin/North Valley area, including Paradise Ranch, is identified as an Unincorporated Community. Current zoning will permit approximately 1,500 new residents, with no increase in zoning density. The population in 2004 was estimated to be 1,290. Increased densities would accommodate even greater numbers and account for significant portions of the county's rural allocation.

The Dyer Partnership Engineers & Planners, Inc. prepared a Merlin/North Valley Water Master Plan in April 2001. The plan included a slightly larger area than what the Board of County Commissioners ultimately adopted, extending west and north from the Merlin townsite. As a result, the projections anticipated by the study are higher than would be expected for the smaller area. The study evaluated two alternatives. Alternative A used a one-acre minimum and a 2.1 percent average annual growth rate, resulting in a projected 2020 population of 1,955. Extending the same growth rate to the year 2027 results in a population of 2,261, which is still more than 1,000 below the projected rural county population. Ultimate buildout population for Alternative A is 3,073. Alternative B assumed the same population of 1,955 for 2020, but calculated later growth based on a 12,000 square foot lot size minimum, resulting in an ultimate buildout of 10,639. The projected growth under either scenario could be absorbed into the 20 and 50-year projections. The following are key findings identified through analyzing historic population and demographic trend data and through developing population forecasts for the City of Grants Pass.

12. Between 1980 and 2006, population within the Grants Pass city limits grew from 15,032 residents in 1980 to 30,930 residents in 2006, an increase of 15,989 people at an average annual rate of 2.93%.

13. Between 1990 and 2006, annexations added more than 4,600 persons to the City of Grants Pass. More than 95% of 4,600 people annexed into the City were brought in between 2000 to 2006.¹⁸
14. Between 1990 and 2006, nearly half of the growth in the County occurred in Grants Pass. Excluding annexations, Grants Pass grew by 8,819 people from 1990 to 2006, accounting for 48% of 18,476 person population increase in Josephine County over the sixteen year period.
15. Grants Pass experienced faster population growth than the County average. Grants Pass' population more than doubled between 1960 and 2006, growing by 20,812 residents at an average annual rate of 2.46%. Grants Pass grew at an average annual rate of 2.81% between 1980 and 2006, faster than the County average. Excluding population growth from annexations, the average annual growth rate for Grants Pass between 1990 and 2006 was 2.6%.
16. Migration played an important part in population growth in Josephine County and Grants Pass. Census data show that in 2000 17% of residents of Grants Pass lived in a different state in 1995, compared with the State average of 12%.
17. Residential development activity in Grants Pass in the first six years of this decade is greater than during the 1990's. The City issued a total of 2,572 residential permits between 2000 and 2006, averaging 367 permits issued annually. The U.S. Census database of building permit activity shows that Grants Pass issued an average of about 235 permits annually during the 1990's.
18. Based on building permit data, PSU appears to have underestimated population growth in Grants Pass between 2000 and 2006 by 3,307 people. Our estimate of the population within Grants Pass UGB in 2007 is 37,460.
19. The key assumptions used to develop the population forecast for the Grants Pass UGB were the base population of the UGB and growth rate assumptions. The base population used in this forecast for the Grants Pass UGB was 37,460 people in 2007. The growth rate assumption for population growth over the 2007 to 2027 period was 2.2%. This rate was based on historic population growth, recent development trends, demographic changes, and migration trends. The growth rate assumption for the forecast for 2027 to 2060 was 1.05%, which is the OEA's forecast for population growth in Josephine County between 2030 and 2040.
20. The forecast for population growth in the Grants Pass UGB projects that population in the UGB will grow from 37,460 people in 2007 to 57,888 people in 2027, an increase of 20,428 people at an average annual growth rate of 2.2%. Between 2007 to 2057, the forecast projects that the Grants Pass UGB will grow to 79,275 people, an increase of 41,815 people at an average annual growth rate of 1.51% over the 50-year period.
21. Grants Pass is attracting retirees or near retirees and families with children. Grants Pass has a larger share of residents under 19 years and 70 years and older than Josephine

¹⁸ The information from the Population Research Center at Portland State University about annexations prior to 2002 seems to be incomplete, possibly resulting in an under reporting of the number of people annexed by Grants Pass.

County or Oregon. During the 1990's the fastest growing groups were 45 to 64 years and 5 to 17 years. The slowest growing group was 65 years and older.

22. Grants Pass has a smaller average household size (2.36) compared to the County (2.41) or State (2.51) averages. Grants Pass has a larger share of households with children (32%) compared with Josephine County (27%) and Oregon (31%). Grants Pass has a larger share of non-family households (36%) than the County average (30%) or State average (34%).
23. Grants Pass is becoming more ethnically diverse. Grants Pass Hispanic population grew from 494 residents in 1990 to 1,236 residents in 2000, an increase of 742 people or 150%. In 2000, Grants Pass had a lower share Hispanic residents (5.4%) compared to the State average (8.0%) but higher than Josephine County's average (4.3%). National and State trends suggest that Grants Pass will continue to become more ethnically diverse.

The following are key findings identified through analyzing historic population and demographic trend data and through developing population forecasts for the City of Cave Junction.

24. The forecast for growth in the Cave Junction UGB is for growth of 3,259 people at an average annual rate of 4.59% between 2007 and 2027 and by 5,291 people at an average annual rate of 2.45% over the 2007 to 2057 period. The forecast assumes that Cave Junction UGB population would grow at 1.05% annually from 2027 to 2060 based on the rate that the OEA used to forecast County growth between 2030 and 2040.

APPENDIX A. ISSUES WITH SMALL AREA FORECASTS

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 Josephine 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.

In conjunction with the 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.
- 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."¹⁹ 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 Eagle Point would increase the community's housing stock by more than 8%—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 (e.g., they reflect one rate and a single future population) as are coordinated forecasts at the city level.²⁰ 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 the city's future vision.

¹⁹Murdock, Steve H., et al. 1991. "Evaluating Small-Area Population Projections." *Journal of the American Planning Association*, Vol. 57, No. 4, page 432.

²⁰ECO 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.

APPENDIX B. METHOD FOR DETERMINING BASE POPULATIONS FOR JOSEPHINE COUNTY AND THE GRANTS PASS UGB

This appendix presents the method ECO used to determine the base populations for Josephine County and the Grants Pass UGB in 2007. Based on building permit data, it appears that the PSU estimates from 2001 to 2006 have been consistently low. The estimate of population in Josephine County and the Grants Pass UGB in 2007 is based on the Census population estimate in 2000 and the number of dwelling units permitted between 2000 and 2006.

Table B-1 shows the number of new dwelling units permitted in Josephine County and the City of Grants Pass UGB for the 2000-2006 period. Permits for 5,425 new dwelling units were issued in Josephine County over the six year period, including permits issued in the unincorporated area, and in the cities of Grants Pass and Cave Junction and their UGBs. Grants Pass issued permits for 2,572 new dwelling units, excluding group quarters, within its UGB over the same period.

Table B-1. New dwelling units permitted, Josephine County and Grants Pass UGB, 2000-2006

Year	Josephine County	Grants Pass UGB
2000	607	225
2001	594	232
2002	717	328
2003	828	411
2004	918	495
2005	1,028	533
2006	733	348
New DU	5,425	2,572

Source: Josephine County and City of Grants Pass

Table B-2 shows an estimate of the new population in Josephine County and the Grants Pass UGB living in the dwelling units show in Table B-2. The number of new dwelling units was reduced by the number of demolitions of existing dwelling units. The average household size and occupancy rate assumptions are based on 2000 Census data. Table B-2 shows that Josephine County's population increased by an estimated 10,240 residents since 2000. The Grants Pass UGB population increased by an estimated 5,375 residents since 2000.

Table B-2. Estimate of new population based on new dwelling units, Josephine County and Grants Pass UGB, 2007

	Josephine County	Grants Pass UGB
New Units	5,425	2,572
Demolitions	869	160
HH size	2.41	2.34
Occupancy	93.3%	95%
New Population	10,240	5,375

Source: Josephine County and City of Grants Pass; U.S. Census; Calculations by ECONorthwest

Table B-3 shows a comparison of population estimates for Josephine County and the Grants Pass UGB. The information in Table B-3 includes the following columns:

- **2000 Census.** Josephine County's population in 2000 is based on the Census estimate. The City of Grants Pass developed the 2000 estimate of the population within the UGB by matching 2000 Census Block data with the UGB boundaries and aggregating population within these blocks.
- **2007 Estimate.** The 2007 estimates were developed by adding the 2000 Census population to the new population shown in Table B-2. Josephine County's population is estimated to be 85,966 people and the Grants Pass UGB is estimated to have 37,460 people. These estimates serve as the base population for the forecasts in this memo.
- **2006 Estimate: PSU estimate and Grants Pass UGB estimate.** This County estimate is taken from PSU's estimate of population from 2006 for Josephine County. For Grants Pass, the 2006 Grants Pass UGB estimate is based on PSU's July 1, 2006 estimate for Grants Pass city limits (30,930 people) and a 2006 staff analysis of population located in the Urbanizing Area (UA), which is the area within the UGB but outside City limits (3,223 people).
- **Increase of 2006 estimate.** This shows the difference in population in the "2007 Estimate" from the "2006 Estimate."

Table B-3. Comparison of population estimates, Josephine County and Grants Pass UGB and city limits, 2007

	Josephine County	Grants Pass UGB	Grants Pass city limits
2000 Census	75,726	32,085	23,003
2007 Estimate	85,966	37,460	34,237
2006 Estimate	81,125	34,153	30,930
Increase over PSU est.	4,841	3,307	3,307

Source: U.S. Census; Population Research Center; ECONorthwest, City of Grants Pass

APPENDIX C. METHOD FOR DETERMINING THE UGB POPULATION BASE FOR GRANTS PASS IN 2006

This appendix presents a memorandum from the City of Grants Pass that explains the methodology that the City used to estimate the population in Grants Pass' urbanizing area (the area between the city limits and the urban growth boundary). The City estimated that population in the urbanizing area in 2006 was 3,223 people and the UGB population (urbanizing area and city limits) was 34,153 people, based on PSU July 1, 2006 estimate for Grants Pass.