

ECONorthwest

ECONOMICS • FINANCE • PLANNING

Phone • (541) 687-0051
FAX • (541) 344-0562
info@eugene.econw.com

Suite 400
99 W. 10th Avenue
Eugene, Oregon 97401-3001

Other Offices
Portland • (503) 222-6060
Seattle • (206) 622-2403

22 May 2006

TO: Dan Durow, Planning Director
FROM: Bob Parker and Page Phillips
CC: Greg Winterowd, Jesse Winterowd
SUBJECT: POPULATION FORECAST FOR THE DALLES

SUMMARY

The City of The Dalles is in the process of reviewing its Urban Growth Boundary (UGB). A foundational component of this review is the population forecast. The population forecast provides the basis for estimating land needed for housing and related uses. As part of our work program, ECONorthwest is required to conduct an independent review of the City's draft population forecast.

Table S-1 presents the population forecast for the City of The Dalles for the period 2006-2056. The forecast reaches a population of 18,953 by 2026, and of 34,331 by 2056. The assumed growth rate for the 2006-2056 period is 1.9% annually until 2026, 1.3% between 2027 and 2046, and 0.9% between 2047 and 2056. This rate is based on The Dalles' growth between 1980 and 2005.

Table S-1. The Dalles population forecast and average annual growth rate (AAGR), by decade 2006-2056

Year	Population	Decade increase	AAGR	Percent Change
2006	15,472			
2016	18,677	3,204	1.90%	21%
2026	22,545	3,868	1.90%	21%
2036	25,653	3,108	1.30%	14%
2046	29,190	3,537	1.30%	14%
2056	31,926	2,736	0.90%	9%

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

Table S-2. The Dalles population forecast and average annual growth rate (AAGR), 2006-2056

Year	Population	Change	% Change
2005	15,184	-	-
2006	15,472	288	1.9%
2007	15,766	294	1.9%
2008	16,066	300	1.9%
2009	16,371	305	1.9%
2010	16,682	311	1.9%
2011	16,999	317	1.9%
2012	17,322	323	1.9%
2013	17,651	329	1.9%
2014	17,987	335	1.9%
2015	18,329	342	1.9%
2016	18,677	348	1.9%
2017	19,032	355	1.9%
2018	19,393	362	1.9%
2019	19,762	368	1.9%
2020	20,137	375	1.9%
2021	20,520	383	1.9%
2022	20,910	390	1.9%
2023	21,307	397	1.9%
2024	21,712	405	1.9%
2025	22,124	413	1.9%
2026	22,545	420	1.9%
2027	22,838	293	1.3%
2028	23,135	297	1.3%
2029	23,435	301	1.3%
2030	23,740	305	1.3%
2031	24,049	309	1.3%
2032	24,361	313	1.3%
2033	24,678	317	1.3%
2034	24,999	321	1.3%
2035	25,324	325	1.3%
2036	25,653	329	1.3%
2037	25,987	333	1.3%
2038	26,324	338	1.3%
2039	26,667	342	1.3%
2040	27,013	347	1.3%
2041	27,364	351	1.3%
2042	27,720	356	1.3%
2043	28,080	360	1.3%
2044	28,446	365	1.3%
2045	28,815	370	1.3%
2046	29,190	375	1.3%
2047	29,453	263	0.9%
2048	29,718	265	0.9%
2049	29,985	267	0.9%
2050	30,255	270	0.9%
2051	30,527	272	0.9%
2052	30,802	275	0.9%
2053	31,079	277	0.9%
2054	31,359	280	0.9%
2055	31,641	282	0.9%
2056	31,926	285	0.9%
2057	32,213	287	0.9%
2058	32,503	290	0.9%
2059	32,796	293	0.9%
2060	33,091	295	0.9%

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

I. BACKGROUND

The City of The Dalles is presently reviewing its Urban Growth Boundary (UGB). A foundational component of this review is the population forecast. The population forecast provides the basis for estimating land needed for housing and related uses. Thus, it is timely for the City to review the forecast, and potentially make adjustments to the population forecast.

A prerequisite to expanding a UGB is having a coordinated population forecast as required by ORS 195.036. Population forecasts must be coordinated by a designated “coordinating” agency, in this case Wasco 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”).¹ 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.² The most recent OEA forecasts are from 2004.

Population forecasts serve several purposes. First they allow cities to estimate the amount of infrastructure capacity to provide. This ensures that cities have sufficient capacity to accommodate projected growth. Next, it allows cities to develop estimates of how much housing, park, school, institutional, commercial, and industrial space will be needed. These estimates in turn allow for an estimate of how much land will be needed to accommodate that growth. Finally, the population forecasts (when expressed as acres of land needed for growth) can be compared with the buildable land inventory to determine whether sufficient land is available to accommodate 20 years of growth.

The City of the Dalles needs to develop a justifiable coordinated population forecast as a foundational step in reviewing its UGB. The analysis should consider historical trends, regional trends, demographics, and the City’s growth objectives. The *Land Use Needs and Location Analysis*, completed by the City in 2005 used a nominal growth rate of 2% for the 2005-2025 period. It was not the intent of that analysis to present documentation that would justify a coordinated figure. This memorandum is intended to provide such documentation. Specifically, this memorandum addresses:

- Historical growth trends and factors affecting growth in the Columbia Gorge region, Wasco County, and The Dalles. ECO’s evaluation begins with data on historical population growth and socioeconomic factors.
- Evaluation of Wasco County population forecasts developed by the State Office of Economic Analysis. This memorandum provides an evaluation of the assumptions underlying the projections and comments on those assumptions given recent population and socioeconomic trends.
- Discussion of alternative forecasts for the City of The Dalles.

¹ The forecasts for incorporated cities includes all lands within the existing Urban Growth Boundaries (UGBs) of those cities. In short, the forecasts are for growth in the UGBs.

² While most coordinating bodies use the OEA forecasts as the basis for coordination, there is no statutory requirement that the OEA forecasts be used.

In summary, this memorandum is intended to provide factual data for consideration by the The Dalles City Council and Planning Commission and the Wasco County Board of Commissioners to support a revised coordinated population forecast.

METHODS

ECO based its evaluation on historical data from the U.S. Census for 1980, 1990, and 2000; data from the Population Research Center at Portland State University; and review of the County's documentation of the population forecasts.

The population forecasts presented in this memorandum build from a range of secondary data sources—primarily historical population data and forecasts from other planning documents. All of the data used in developing the forecasts are from easily available standard sources:

- The U.S. Census of population and housing (1990 and 2000) provides decennial population figures as well as a broad range of demographic and socioeconomic variables;
- The Oregon Office of Economic Analysis (OEA) provides long-term population forecasts; and
- The Population Research Center at Portland State University provides annual population estimates and annexation history for incorporated cities.

ORGANIZATION OF THIS MEMORANDUM

The remainder of this memorandum is organized as follows:

- **Section II, Issues With Small Area Forecasts** describes common problems observed with small area population forecasts.
- **Section III, Demographic Trends** describes historical population and socioeconomic trends that are relevant to population projections.
- **Section IV, Review of Draft Population Forecast for the The Dalles** comments on the City's population forecast as presented in the draft buildable lands report. This section also presents a 2005-2025 and 2005-2060 population forecast for The Dalles.

II. ISSUES WITH SMALL AREA FORECASTS³

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 The Dalles: it will allow the City to determine whether it has 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.

³ This section builds from work previously completed by ECONorthwest.

- Comparisons of past population projections to subsequent population counts have revealed that even much more sophisticated methods than the ones used in the study "are often inaccurate even for relatively large populations and for short periods of time."⁴ 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 a community of 10,000 would increase the community's housing stock by more than 5%—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.⁵ 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.

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

⁵ ECO is unaware of any coordinated forecasts that present ranges. It is not uncommon, however, for cities to consider ranges of population and employment during planning exercises.

III. DEMOGRAPHIC TRENDS

Population Trends

Table 1 compares the population and average annual growth rate of The Dalles to Wasco County, Hood River County, Central Oregon (Crook, Deschutes, and Jefferson Counties), Oregon, and the U.S. Wasco County and The Dalles experienced slower population growth than the other areas shown in Table 1. The Dalles' growth rate between 1980 and 2000 was 0.58%, with the fastest growth between 1990 and 2000. Through the 20 year period, the population of The Dalles has consistently been about 50% of Wasco County's population.

Table 1. Population and average annual growth rate, U.S., Oregon, Central Oregon, Skamania County (WA), Hood River County, Wasco County, and The Dalles, 1980-2000 [6732 chart here](#)

Area	1980	1990	2000	Average Annual Growth Rate		
				80-90	90-00	80-00
U.S.	226,545,805	248,709,873	281,421,906	0.94%	1.24%	1.09%
Oregon	2,633,156	2,842,321	3,421,399	0.77%	1.87%	1.32%
Central Oregon	86,832	102,745	153,558	1.70%	4.10%	2.89%
Skamania County, WA	7,919	8,289	9,872	0.46%	1.76%	1.11%
Hood River County	15,835	16,903	20,411	0.65%	1.90%	1.28%
Wasco County	21,732	21,683	23,791	-0.02%	0.93%	0.45%
The Dalles	10,820	11,060	12,156	0.22%	0.95%	0.58%

Source: U.S. Census and Population Research Center at Portland State University, Calculations by ECONorthwest. The Central Region includes Crook, Deschutes, and Jefferson Counties.

Table 2 shows historic population growth and change in population in The Dalles between 1980 and 2005. The Dalles population decreased during the 1980's, from 11,315 in 1981 to 10,590 residents in 1989. Population began to increase in the 1990s, with the fastest growth between 1996 and 2000. Since 2000, population growth has slowed relative to growth in the 1990's.

Table 2. Annual percent change in population, The Dalles, 1980-2005

Year	The Dalles	Annual Percent Change
1980	10,820	--
1981	11,315	4.57%
1982	11,260	-0.49%
1983	11,050	-1.87%
1984	10,960	-0.81%
1985	10,900	-0.55%
1986	10,630	-2.48%
1987	10,265	-3.43%
1988	10,715	4.38%
1989	10,590	-1.17%
1990	11,060	4.44%
1991	11,130	0.63%
1992	11,370	2.16%
1993	11,325	-0.40%
1994	11,325	0.00%
1995	11,355	0.26%
1996	11,460	0.92%
1997	11,600	1.22%
1998	11,765	1.42%
1999	11,880	0.98%
2000	12,156	2.32%
2001	12,230	0.61%
2002	12,250	0.16%
2003	12,350	0.82%
2004	12,410	0.49%
2005	12,505	0.77%

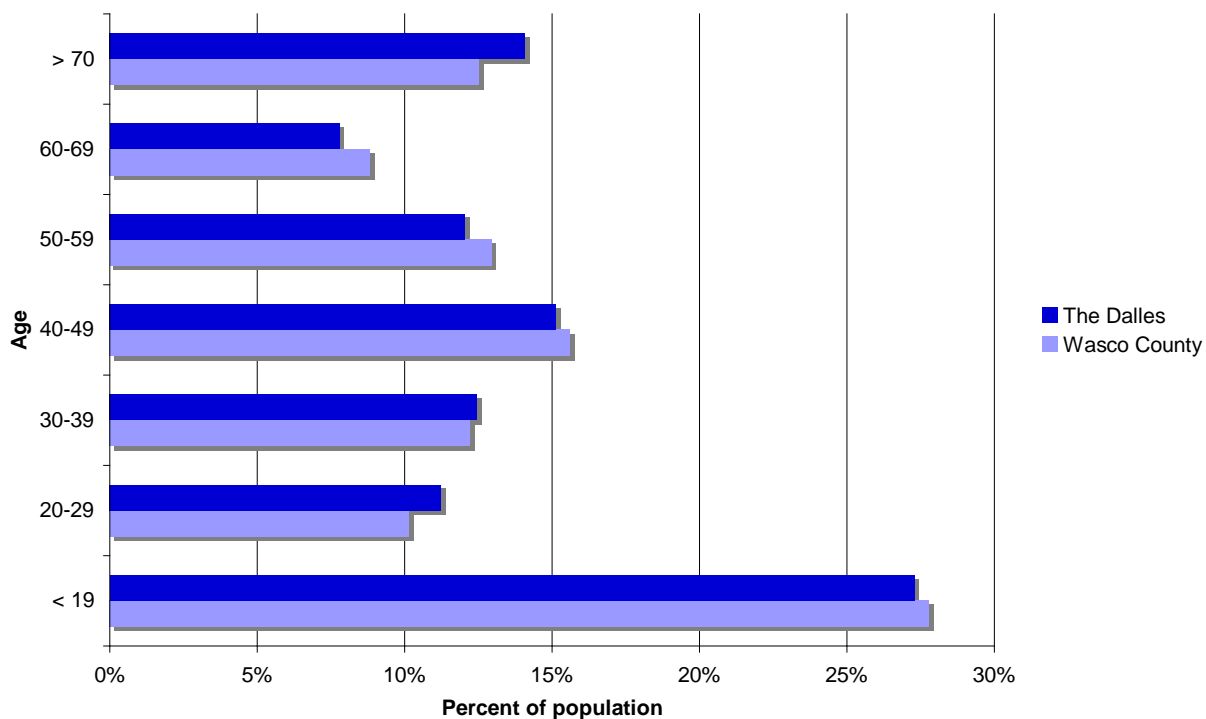
Source: U.S. Census and Population Research Center at Portland State University

SOCIOECONOMIC AND EMPLOYMENT TRENDS

This section of the memorandum reviews selected socioeconomic trends in The Dalles, as well as significant employment and industry trends. These trends provide a context for growth in a city; factors such as age, income, migration, occupation and other trends show how communities have grown and hypothesize the shape of the future. To provide context, the socioeconomic findings compare the City of The Dalles and Wasco County for 2000.

Socioeconomic trends

Figure 1 shows the age distributions for residents of The Dalles and Wasco County. The data show that The Dalles has a higher percentage of older residents than Wasco County. The Dalles has a higher percentage of its population in the following age classes: 70 and older and 20 to 39. The Dalles has a lower proportion of its population in the 40 to 69 age range and 19 years of age and younger. These trends suggest that The Dalles is attracting retirees and young adults.

Figure 1. Age distribution, Wasco County and The Dalles, 2000

Source: U.S. Census, SF-1

During the 1990's The Dalles experienced changes in the age structure of its residents. Table 3 shows population by age for The Dalles for 1990 and 2000. The Dalles grew by 1,096 persons between 1990 and 2000—a 10% increase in population. The Dalles experienced an increase in population for every age group except 25-44 year olds, which decreased by 69 persons or 2%. The fastest growing groups between 1990 and 2000 were residents aged 45-64 years, who accounted for 45% of the population increase, and residents aged 18-24 years, who accounted for 25% of the population increase.

Table 3. Population by Age, City of The Dalles, 1990 and 2000

Age Group	1990		2000		Change		
	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	766	7%	813	7%	47	6%	0%
5-17	2,191	20%	2,203	18%	12	1%	-2%
18-24	773	7%	965	8%	192	25%	1%
25-44	3,193	29%	3,124	26%	(69)	-2%	-3%
45-64	1,973	18%	2,856	23%	883	45%	6%
65 and over	2,164	20%	2,195	18%	31	1%	-2%
Total	11,060	100%	12,156	100%	1,096	10%	0%

Source: U.S. Census 1990 and 2000

The U.S. Census collects information about migration patterns. Specifically, it asks households where their residence was in 1995 (5 years prior to the census count). Table 4 shows place of residence in 1995 for The Dalles and Wasco County. Residents of The Dalles were slightly more mobile than those of Wasco County. Fifty-six percent of residents in The Dalles lived in the

same residence in 1995, compared to 50% in Wasco County. About a quarter of residents in Wasco County and The Dalles lived in a different county in 1995 and just over 10% lived in a different state in 1995. These trends indicate that migration was a factor in The Dalles' growth.

Table 4. Place of residence in 1995, Wasco County and The Dalles, persons 5 years and over

Location	Persons	Percent	Persons	Percent
Population 5 years and older	22,260	100%	11,454	100%
Same house in 1995	11,166	50%	5,094	44%
Different house in 1995	11,094	50%	6,360	56%
Same county	5,557	25%	3,446	30%
Different County	5,246	24%	2,744	24%
Same State	2,846	13%	1,327	12%
Different State	2,430	11%	1,417	12%

Source: U.S. Census, Summary file 3

Migration continues to be a significant factor in the growth of Wasco County. Between 2000 and 2005, population increased by 0.6%, with all the increase resulting from migration. Excluding migration, population in Wasco County decreased because deaths outnumbered births during the five-year period. Throughout Oregon, migration represented 59% of population growth between 2000 and 2005, demonstrating that migration is an important factor to growth in Oregon and Wasco County.

Table 5 shows the number of persons of Hispanic or Latino origin for The Dalles and Wasco County for 1990 and 2000. Hispanic population increased in both Wasco County and The Dalles during this period. The Dalles' Hispanic/Latino population grew slightly faster than Wasco County's Hispanic/Latino population, increasing from 6.0% of residents in 1990 to 10.5% of residents in 2000.

Table 5. Persons of Hispanic or Latino origin, Wasco County and The Dalles, 1990 and 2000

	Wasco County	The Dalles
1990		
Total Population	21,683	11,060
Hispanic or Latino	1,065	666
Percent Hispanic or Latino	4.9%	6.0%
2000		
Total Population	23,791	12,156
Hispanic or Latino	2,214	1,276
Percent Hispanic or Latino	9.3%	10.5%
Change 1990-2000		
Hispanic or Latino	1,149	610
Percent Hispanic or Latino	92.7%	109.2%

Source: U.S. Census, SF-1, 1990 and 2000

Employment and Industry

The Dalles has a mild climate and moderate rainfall. Where pioneers on the Oregon Trail once came and loaded their wagons onto barges for their final float to the mouth of the Columbia

River, now people come to The Dalles because of the proximity to the Cascade Mountains, Gorge, and the mild climate. The climate contributes to two of the most important employment trends affecting The Dalles: the growth of agriculture, forestry and fishing occupations, as well as the growth in tourism-related industries such as services as well as arts, entertainment, and recreation.

Between 1980 and 2000, the agriculture, forestry and fishing sector increased covered employment by 545 positions. In 2004, this sector had the second-highest total number of jobs in Wasco County, second only to government. The climate in Wasco County, which has 14 inches of rainfall annually, is ideal for growing tree fruits, especially cherries, as well as producing nuts and grains, or raising cattle. Agriculture, forestry and fishing continues to be a growth sector, with an average annual growth rate of 4.3% between 1990 and 2000, and a 6.3% rate of growth between 2001 and 2004.

The Dalles' mild climate, proximity to Mt. Hood National Recreation Area as well as other Cascade destinations, and location on the Columbia Gorge also contributes to the growth of the second category of employment. Activities such as windsurfing, hiking, and biking bring people to the area, and sectors including arts, entertainment, and recreation as well as services have grown to meet this demand.⁶ Between 1980 and 2000, the service sector increase by 1,005 jobs, the most of any sector, and had an annual growth rate of 2.6%. Between 2001 and 2004, arts, entertainment and recreation had a growth rate of 3.0% and retail had a growth rate of 1.5%.

Sectors that experienced a decrease in growth between 1980 and 2004 include mining, manufacturing, and between 2001 and 2004, information and government. Overall, Wasco County gained 2,359 jobs between 1980 and 2000, then lost 822 jobs between 2001 and 2004 during the national recession. Many of these jobs were lost in the manufacturing and government sectors.

Infrastructure

The Dalles has access to good transportation infrastructure, including several highway connections, as well air, rail, and barge services. The Dalles is located at the center of the Interstate 84 connection between major metropolitan areas in Oregon, Idaho, and Utah. Interstate 84, an east-west route connecting Portland, Oregon with Boise, Idaho and Salt Lake City, Utah, passes directly through The Dalles. This road also continues as Highway 30 until Salt Lake City. Highway 197, a north-south route, connects The Dalles with Central Oregon. Highway 197 continues across the Gorge in Washington State, connecting the Dalles with Washington Highway 14. Greyhound bus serves The Dalles with five westbound routes and four eastbound routes daily.

The Dalles has access to air, rail, and barge services.

- The Dalles is served by Columbia Gorge Regional/The Dalles Municipal Airport, located across the Gorge in Klickitat County, Washington. This airport offers no passenger

⁶ *The Dalles Community Profile*, Oregon Economic and Community Development Department, <http://info.econ.state.or.us:591/profile.htm>, accessed May 12, 2006.

service, but the Portland International Airport is only 83 miles (an hour and 15 minutes driving time) from The Dalles.

- Rail service is provided by Union Pacific, which offers freight but no passenger services. Rail access for freight is at Dallesport, Washington, three miles across The Dalles Bridge. Passenger service is available at Bingen, Washington, located 15 miles from The Dalles.
- Barge services are available through the Port of The Dalles.

Regional Context

Already the major player in the Wasco County economy, The Dalles has the potential to become a regional center in the Columbia Gorge area as well. Because of its location at the intersection of Highway 197 and Interstate 84, The Dalles has some of the best transportation infrastructure in the area. The twin draws of a strong agriculture sector and the growing retail, service, and recreation sectors suggest that people are moving to The Dalles to capitalize on its high quality of life.

In a regional context, Wasco County has been slower to grow than neighboring counties. The Columbia Gorge area, including Wasco and Hood River Counties in Oregon as well as Skamania County across the Gorge in Washington, experienced a period of faster growth between 1990 and 2000 than in the previous decade, as illustrated in Table 7. Between 1990 and 2000, the average annual growth rate for Hood River County was 1.90% and for Skamania County it was 1.75%, indicating steady, modest growth, compared with 0.65% for Hood River County and 0.46% for Skamania County in the 1980's. The Dalles and Wasco County also grew faster in the 1990's than the 1980's, moving from growth rates of -0.02% to 0.93% for Wasco County and from 0.22% to 0.95% for The Dalles. Since 2000, growth has slowed across the region, ranging from 0.74% in Hood River from 2000 to 2005 to 0.12% in Wasco County during that same time period.

The historical growth rates shown in Table 6 provide context for developing population projections. The data underscore several key points:

- The start and end dates have a big impact on the growth rate. This is because population growth slowed in the 1980s due to a statewide economic recession then grew in the 1990s.
- The average annual growth rate (AAGR) for The Dalles was between 0.22% (1980-1990) and 0.95% (1990-2000) depending on the time period.
- The Dalles' rate of growth is lower than Hood River and Skamania Counties but higher than Wasco County for all time periods.
- The data show that Hood River and Skamania counties have historically grown at faster rates than Wasco County or The Dalles. Although all three counties (1) the have good recreational opportunities, and (2) their location provides a high quality of life, higher growth rates in Hood River and Skamania Counties can be explained largely by proximity to Portland.

Table 5. Average annual growth rates for Hood River County, Skamania County (WA), Wasco County, and The Dalles, 1980-2005

Period	Hood River County	Skamania County, WA	Wasco County	The Dalles
1980-2005	1.17%	1.06%	0.39%	0.58%
1980-1990	0.65%	0.46%	-0.02%	0.22%
1990-2000	1.90%	1.76%	0.93%	0.95%
2000-2005	0.74%	0.85%	0.12%	0.57%

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

IV. POPULATION FORECAST FOR THE DALLES: 2005-2060

The City of The Dalles Community Development Department used an annual growth rate of 2% as a placeholder to for long-range planning. This growth rate mirrors the State of Oregon's and Hood River County's growth rate from 1990 to 2000. The City acknowledged it was higher than the OEA estimate. The City did not use historic population trends for The Dalles or Wasco County in its analysis. The rationale for this decision was based on what the report described as a recent surge in new business and industrial development in The Dalles.

ECO METHODS: OVERVIEW

ECO reviewed population trends as a basis for future growth. 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. Appendix A discusses issues with small area forecasts.

Trend extrapolation is a simple forecasting method. One benefit of using this method is that many of the factors that affect the pattern of growth are already included in the trend data. In other words, since this method uses the real numbers for historic change it already includes the aggregate result of various growth components such as natural increase from births and deaths, net migration, employment levels, and local and national economic conditions. For example, an average annual growth rate of 1 percent can reflect a rate of change from one time period to the next and reflect population growth due to natural increase and net migration.

ECONorthwest considered several different methods for developing the city population forecast including a compounding method, a ratio method, a decreasing rate method, and a straight-line method. We 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 compounding methodology also assumes that the number of persons added will increase each year.

OEA FORECASTS⁷

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 (like many Eastern Oregon cities and counties) or a city with a large retirement population (like Brookings, Oregon for example). However, this component by itself is less accurate when a large share of the forecast increase is due to people moving into the areas. For example, if an area has a high percentage of growth due to in-migration the in-migration numbers can “swamp” the natural increase numbers and make them less important.

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

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

Table 7 represents a comparison of OEA population forecasts for Wasco County for the period between 2005 and 2040. In 1997, the OEA issued an average annual growth rate forecast for Wasco County of about 0.50%, which would result in a population increase of 2,301 people between 2005 and 2025. In 2004, the OEA revised the forecast downwards, to an annual growth rate of about 0.45%, for an increase of 1,770 residents.

Table 7. Comparison of 1997 and 2004 Office of Economic Analysis forecasts for Hood River and Wasco County

Year	Wasco County				Hood River County			
	1997		2004		1997		2004	
	Pop	AAGR	Pop	AAGR	Pop	AAGR	Pop	AAGR
2005	23,713	--	23,420	--	21,477	--	20,698	--
2010	24,258	0.46%	23,753	0.28%	22,804	1.21%	21,998	1.23%
2015	24,867	0.50%	24,297	0.45%	24,174	1.17%	23,485	1.32%
2020	25,498	0.50%	24,896	0.49%	25,559	1.12%	25,027	1.28%
2025	26,201	0.55%	25,670	0.61%	26,930	1.05%	26,667	1.28%
2030	26,945	0.56%	26,563	0.69%	28,224	0.94%	28,404	1.27%
2035	27,714	0.56%	27,522	0.71%	29,527	0.91%	30,310	1.31%
2040	28,512	0.57%	28,653	0.81%	30,780	0.83%	32,498	1.40%
Population Change 2005 to 2025								
Number	2,488		2,250		5,453		5,969	
Percent	10.5%		9.6%		25.4%		28.8%	
AAGR	0.50%		0.46%		1.14%		1.27%	
Population Change 2025 to 2040								
Number	2,311		2,983		3,849		5,831	
Percent	8.8%		11.6%		14.3%		21.9%	
AAGR	0.6%		0.7%		0.9%		1.3%	

Source: Office of Economic Analysis

THE DALLES POPULATION FORECAST

Table 8 presents the population forecast for the City of The Dalles for the period 2006-2056. The forecast reaches a population of 22,545 by 2026, and of 31,926 by 2056. The assumed growth rate for the 2006-2026 period is 1.9% annually until 2026, 1.3% between 2027 and 2046, and 0.9% between 2047 and 2056. This rate is based on The Dalles' growth between 1980 and 2005.

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

Table 8. The Dalles UGB population forecast and average annual growth rate (AAGR), 2006-2056

Year	Population	Change	% Change
2005	15,184	-	-
2006	15,472	288	1.9%
2007	15,766	294	1.9%
2008	16,066	300	1.9%
2009	16,371	305	1.9%
2010	16,682	311	1.9%
2011	16,999	317	1.9%
2012	17,322	323	1.9%
2013	17,651	329	1.9%
2014	17,987	335	1.9%
2015	18,329	342	1.9%
2016	18,677	348	1.9%
2017	19,032	355	1.9%
2018	19,393	362	1.9%
2019	19,762	368	1.9%
2020	20,137	375	1.9%
2021	20,520	383	1.9%
2022	20,910	390	1.9%
2023	21,307	397	1.9%
2024	21,712	405	1.9%
2025	22,124	413	1.9%
2026	22,545	420	1.9%
2027	22,838	293	1.3%
2028	23,135	297	1.3%
2029	23,435	301	1.3%
2030	23,740	305	1.3%
2031	24,049	309	1.3%
2032	24,361	313	1.3%
2033	24,678	317	1.3%
2034	24,999	321	1.3%
2035	25,324	325	1.3%
2036	25,653	329	1.3%
2037	25,987	333	1.3%
2038	26,324	338	1.3%
2039	26,667	342	1.3%
2040	27,013	347	1.3%
2041	27,364	351	1.3%
2042	27,720	356	1.3%
2043	28,080	360	1.3%
2044	28,446	365	1.3%
2045	28,815	370	1.3%
2046	29,190	375	1.3%
2047	29,453	263	0.9%
2048	29,718	265	0.9%
2049	29,985	267	0.9%
2050	30,255	270	0.9%
2051	30,527	272	0.9%
2052	30,802	275	0.9%
2053	31,079	277	0.9%
2054	31,359	280	0.9%
2055	31,641	282	0.9%
2056	31,926	285	0.9%
2057	32,213	287	0.9%
2058	32,503	290	0.9%
2059	32,796	293	0.9%
2060	33,091	295	0.9%

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

An issue with this forecast is that The Dalles will account for an increasingly large percentage of the county's population. The forecast results in The Dalles UGB accounting for more than 65% of the OEA's forecast population for Wasco County in 2040. Because Wasco County has relatively few parcels available for residential development in rural residential exception areas, it is reasonable to expect that The Dalles will account for an increased percentage of the County's population. However, the ratio implied by the growth rate assumptions shown in Table 8, maybe unrealistically high if Wasco County's population growth is held constant.

On the other hand, the factors that will influence growth in The Dalles will also affect Wasco County. Thus it is reasonable to adjust the OEA figures to account for a higher rate of growth in The Dalles. Table 9 shows a comparison of the OEA and adjusted Wasco County Forecasts. The Adjusted Forecast assumes an average annual growth rate of about 1.3% through 2056. The Adjusted County Forecast assumes that the differential in population growth from the OEA forecast will be accommodated within the City of The Dalles UGB.

Table 9. Comparison of OEA and adjusted Wasco County population forecast, and Ratio of The Dalles' population to Wasco County's population, 2005-2040

Year	Wasco County		The Dalles	Dalles as % of
	OEA	Adjusted		Wasco County Adjusted
2005	23,420	23,420	15,184	65%
2010	23,753	25,582	16,682	65%
2015	24,297	27,944	18,329	66%
2020	24,896	30,525	20,137	66%
2025	25,670	33,346	22,124	66%
2030	26,563	35,578	23,740	67%
2035	27,522	37,737	25,324	67%
2040	28,653	40,029	27,013	67%

Source: Based on the Oregon Office of Economic Analysis forecasts for Wasco County and projections for The Dalles' population by ECONorthwest.

SUMMARY OF FINDINGS

This section summarizes the findings in support of this population forecast for The Dalles.

The Dalles has experienced fluctuation in its population since 1980.

- Between 1980 and 2005 the average annual growth rate was 0.6%. The average annual growth rate was 0.2% between 1980 and 1990 and 0.9% between 1990 and 2000.
- The growth rate of 1.9% until 2026, 1.5% between 2027 and 2046, and 1.0% between 2047 and 2056 is based on The Dalles' historical growth rates between 1980 and 2005.

The Dalles is attracting retirees and young adults.

- The Dalles has more retirees than Wasco County. The fastest growing age groups between 1990 and 2000 were residents aged 45-64 years, who accounted for 45% of the population increase, and residents aged 18-24 years, who accounted for 25% of the population increase. These trends suggest that The Dalles is attracting retirees and young adults. As retirement areas such as Bend and Hood River become more expensive and more crowded, The Dalles' appeal to a growing group of baby boomers is likely to increase.

In-migration accounts for most of the recent population growth in The Dalles

- The data show that residents of The Dalles are slightly more mobile than those of Wasco County. About a quarter of residents in Wasco County and The Dalles lived in a different county in 1995; 11% of Wasco County's and 12% of The Dalles' residents lived in a different state in 1995. These trends indicate that migration is a factor in The Dalles' past growth.
- Net migration represented 113% of population growth in Wasco County in 2005. Migration represented a greater percent of population growth in Wasco County than in Oregon as a whole.

The Dalles has a larger proportion of Hispanic/Latino residents than Wasco County.

- The Dalles has a larger proportion (10.5% in 2000) of Hispanic/Latino population than Wasco County, and this population is growing faster than in Wasco County. Wasco County's Hispanic/Latino population grew by 92.7% between 1990 and 2000; The Dalles' Hispanic/Latino population grew 109.2% during the same time period.

The Dalles has experienced growth in agriculture, forestry and fishing, as well as more tourism-related occupations such as services and arts, entertainment, and recreation.

- Agriculture, forestry and fishing continues to be a growth sector, with an average annual growth rate of 4.3% between 1990 and 2000, and a 6.3% rate of growth between 2001 and 2004.
- Between 1980 and 2000, the service sector increase by 1,005 jobs, the most of any sector, and had a growth rate of 2.6%. Between 2001 and 2004, arts, entertainment and recreation had a growth rate of 3.0% and retail had a growth rate of 1.5%. As The Dalles attracts larger numbers of retirees and second homeowners, the need for service sector jobs will increase as well.

The Dalles has strong transportation infrastructure and potential to become a regional center.

- The Dalles has access to good transportation infrastructure, including several highway connections, as well air, rail, and barge services. Interstate 84 connects The Dalles with Portland, Oregon, Boise, Idaho and Salt Lake City, Utah and Highway 197 connects The Dalles with Central Oregon.

- The diversity of employment, mild climate, continued migration, and growth of the population of young adults as well as retirees suggests that The Dalles is becoming a county, and potential regional center.

The findings above support the assumed growth rate of 1.9% annually for the 2006-2026 period, 1.5% for the 2027-2046 period, and 1.0% for the 2047 to 2056 period.