

**City of The Dalles:
Economic Opportunities
Analysis**

Originally Prepared in 2006-07 for

The City of The Dalles

by

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Final Report

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Executive Summary

This report presents an economic opportunities analysis (EOA) for the City of The Dalles consistent with the requirements of statewide planning Goal 9 and the Goal 9 administrative rule (OAR 660-009) as revised in December 2005. It includes a 20-year forecast of employment for The Dalles. This study is intended to provide technical information that will help articulate the City's economic development policy and determine whether the City has an adequate inventory of industrial sites within its urban growth boundary (UGB) to accommodate employment growth over a 20-year planning period.

FINDINGS

The mix of productive factors present in The Dalles, relative to other communities in the Columbia River Gorge, form The Dalles' comparative advantage. A primary comparative advantage in The Dalles is its access to transportation and its location within the Columbia River Gorge. This makes The Dalles attractive to residents and businesses that want to live and work in a community that has small-town character and scenic beauty but still need to have access to any of several modes of transportation. Comparatively low housing costs are another important comparative advantage in The Dalles. The Dalles offers a lower-cost housing alternative to Hood River.

Chapter 3 reports industries that have shown growth and business activity in Oregon over the past few years. These industries are indicative of businesses that might locate or expand in The Dalles. The characteristics of The Dalles will affect the types businesses most likely to locate in The Dalles:

- The presence and expected growth of the Columbia Gorge Regional Airport could help The Dalles attract businesses engaged in the manufacture and service of aircraft, avionics, and related equipment.
- The Dalles' semi-rural setting, access to I-84 and other modes of transportation, and workforce availability make The Dalles attractive to businesses in manufacturing. Examples include high-tech electronics, food processing, industrial equipment, recreational equipment, and other specialty manufacturing.
- Access to transportation, including the access to I-84, the railroad, barges, and the airport, makes The Dalles attractive to businesses in the warehousing and transportation sector. Large warehouse facilities that serve large areas appear to favor more central settings, such as the Willamette Valley. The Dalles is more likely to attract more modest facilities that serve a smaller geographic region or that specialize in fewer goods.
- The Dalles' attractive semi-rural setting and quality of life could make it a location for professional, scientific and technical services, which are

attracted to areas with high quality of life. Examples include software design, engineering, and research.

- The Dalles' setting within the Columbia River Gorge, access to a variety of outdoor recreation, and the growing presence of viniculture make The Dalles attractive to tourists. Industries that serve tourists, such as food services and accommodations, are likely to grow if tourism increases.
- The comparatively low cost and high availability of electricity, water, and high speed internet connection (via the Q-life fiber optic loop) could make The Dalles attractive to businesses engaged in specialty manufacturing or technology related businesses

Cities exist in an economic hierarchy in which larger cities offer a wider range of goods and services than smaller cities. The location of a community relative to larger cities, as well as its absolute size, affects the mix of goods and services that can be supported by a small city. The Dalles' small size and has implications for the types of retail and service firms most likely to locate in The Dalles:

- The Dalles is the largest city in the Gorge, and it will continue to serve as a regional center for retail, services, and government.
- As a regional center for retail shopping, The Dalles will experience demand for development of big-box and mid-sized retail stores, primarily for Grocery, General Merchandise, and Home Improvement stores.
- The Dalles will continue to be the location for regional institutions such as the Mid-Columbia Medical Center, the Columbia Gorge Community College, Wasco County Courthouse, and other government offices.

GROWTH INDUSTRIES IN THE DALLES

Retail and Services. The State's forecast for nonfarm employment forecast for 2004 to 2014 (Table 2-10) projects that more than half of employment growth in Region 9, which includes Wasco County, will be in Retail and Services. As a regional center for retail and services, The Dalles may attract the following industries:

- The Dalles may be attractive to big-box and mid-sized retail.
- The Dalles may have growth in small and specialty retail shops and offices for business, professional, and health care services as population increases.
- The Dalles' setting within the Columbia River Gorge, access to a variety of outdoor recreation, and the growing presence of viniculture make The Dalles attractive to tourists. Industries that serve tourists, such as food services and accommodations, are likely to grow if tourism increases.
- The Dalles' may be attractive for firms engaged in professional, scientific and technical services, such as software design, engineering, and research.

Government. The State's forecast for nonfarm employment forecast for 2004 to 2014 (Table 2-10) projects that growth in government will account for about one-third of employment growth in Region 9, including Wasco County. The Dalles may see employment growth in government for the following reasons:

- The Dalles will continue to be the location for regional institutions such as the Columbia Gorge Community College, Wasco County Courthouse, and other government offices.
- The Dalles will have growth in local government as population increases. Assuming that families with young children locate in The Dalles, growth in local government is likely to be dominated by education.

Industrial. The State's forecast for nonfarm employment forecast for 2004 to 2014 (Table 2-10) projects that growth in industrial sectors will account for the smallest portion of employment growth in Region 9, which includes Wasco County. The Dalles has comparative advantages, such as location and access to transportation, that may contribute to the growth in employment in the following industries:

- The Dalles should be attractive for firms engaged in a range of specialty manufacturing, including aircraft, high-tech electronics, food processing, industrial equipment, and recreational equipment.
- The Dalles should also be attractive for firms engaged in warehousing and distribution. The Dalles is more likely to attract more modest facilities that serve a smaller geographic region or that specialize in fewer goods.
- The Dalles may be attractive to industries that need large amounts of electricity from stable sources.

Table S-1 shows a summary of vacant and partially redevelopable commercial and Industrial lands within The Dalles' UGB. The table shows that The Dalles has a total of about 89 gross acres of vacant land, including 60 gross acres of vacant industrial land and about 29 gross acres of vacant commercial land.

Table S-1 shows that The Dalles has a total of 342 gross acres of potentially redevelopable land, with 76 gross redevelopable commercial acres and about 266 gross acres of redevelopable industrial land. The City also has about 19 gross acres of land designated for mixed commercial and residential use, which could be redeveloped for commercial uses.

Table S-1. Summary of vacant and partially redevelopable commercial and industrial land in The Dalles UGB, 2006

Commercial and Industrial	
Vacant	89.04
<i>Commercial Vacant</i>	28.87
<i>Industrial Vacant</i>	60.17
Potentially Redevelopable	341.5
<i>Commercial Redevelopable</i>	75.88
<i>Industrial Redevelopable</i>	265.62
Mixed Use	18.81
Total	449.35

Source: The City of The Dalles, 2006

Table S-2 shows estimated demand for employment land in The Dalles UGB by land use type for the 2006-2026 period. The results show that The Dalles will need an estimated 278 gross acres of land for employment within its UGB for the 2006-2026 period.

Table S-2. Estimated demand for employment land in The Dalles UGB by land use type, 2006–2026

Land Use Type	Emp Growth	Emp Growth	Emp Growth	Emp per Net Acre	Land Demand	
		No Land Demand	with Land Demand		Net Acres	Gross Acres
2006-2026						
Retail and Services	2,196	220	1,976	18	110	129
Industrial	950	95	855	10	86	101
Government	541	54	487	12	41	48
Total	3,687	369	3,318		236	278

Source: ECONorthwest.

Table S-3 provides an estimated distribution of future employers by size and site needs. ECO used an average ratio of 1.5 firms per site to estimate the number of needed sites by size. The analysis does not distinguish between industrial and other employment types; it is likely that many larger employers (>50 employees) will generally want industrial sites. ‘

The results suggest that The Dalles will need 4 sites of 6 to 35 acres in size during the 2006-2026 period. While the city appears to need a lot of smaller sites, it is likely that many of the smaller uses will co-locate in office buildings or on retail sites.

Table S-3. Estimated distribution of future employers by size, site needs, The Dalles, 2006-2026

Number of Employees	Est # of		Sites Needed	Site Size Range	Avg Site Acres (net)	Net Acres Needed	Gross Acres Needed
	Firms	New Emp					
0 to 9	155	697	104	<1 ac	0.5	47	55
10 to 24	49	829	33	0.5 to 2.5	1.5	49	57
25 to 49	17	630	12	1 to 5	3.1	38	44
50 to 99	5	365	4	3 to 10	6.3	25	30
100 or more	4	796	4	6 to 35	20.3	81	95
Total	229	3317	157			240	282

Source: estimates by ECONorthwest; modified by Winterbrook Planning in 2011 at direction of City Council.

The land inventory data presented in Chapter 3 shows that The Dalles has about 449 gross acres of vacant and redevelopable land designated for industrial and other employment uses. Of these, about 89 acres were vacant—60 acres designated for industrial uses and 29 acres designated for commercial uses. The demand analysis in Chapter 4 concluded that The Dalles is forecast to consume 282 gross acres for the 2006-2026 period.

Table S-4 compares identified site needs with available sites for the 2006-2026 period. The results suggest that The Dalles has a surplus of acreage available for industrial and other uses. For the 2006-2026 period, the City will need a considerable number of smaller sites, and will need to use some of its larger sites to meet the small site deficit.

If there is new residential growth to the northwest of the existing UGB, a neighborhood commercial node would be suitable to serve the residential growth in that area.

Table S-4. Comparison of site needs and site supply, The Dalles UGB, 2006-2026

Site Size Range	Average Site Size	Sites Needed	Net Acres Needed	Supply: Sites	Supply: Net Acres	Needed Sites Surplus (def)	Needed Acres Surplus (def)
< 10	1	153	159	18	74	(135)	(84)
> 10	20	4	81	10	210	6	129
Non-site					49		49
Total		157	240	28	334		94

Source: estimates by ECONorthwest; modified by Winterbrook Planning in 2011 at direction of City Council

IMPLICATIONS

The economic opportunities analysis has several implications for the City of The Dalles. Following are the key implications:

- The City has a surplus of employment land. Considering regional development trends and state and city policies concerning economic development, we recommend the City identify and maintain an adequate

number of sites within its existing industrial land base to accommodate future employment growth.

- Topographic constraints in areas adjacent to the UGB limit the number of large industrial sites that the City could possibly expand into. The City should consider other policy options, including a long-term redevelopment strategy for existing industrial areas. Dallesport may be another option that would be attractive to certain industries, but because of distance, the Dallesport Industrial Park is not a viable long-term industrial strategy for The Dalles.
- Some office and retail uses will probably locate on land designated for light industrial uses. The City should consider policies that restrict commercial uses in some industrial areas.
- Over two-thirds of The Dalles' land supply is industrial. Our evaluation of the land capacity analysis is that the City should expand both the central business district and community commercial zones. The City should also consider identifying areas in close proximity to housing where neighborhood commercial services could be located. In addition, the City should consider establishing a business park designation that could accommodate office uses as well as certain light manufacturing uses.
- The City may choose to expand the downtown area, but expanding the Central Business designation will not require land outside the Urban Growth Boundary.

Finally, local policy also has an effect on the type and distribution of employment. Beyond the land allocation issue described above, jurisdictions that are looking at UGB expansions will be required under Goal 9 to provide a 20-year supply of industrial and other employment land. The Economic Opportunities Analysis suggests that The Dalles will need to plan for a significant amount of new employment—and allocate and preserve sites within its existing employment areas to accommodate that employment.

Introduction

This report presents an economic opportunities analysis (EOA) for the City of The Dalles consistent with the requirements of statewide planning Goal 9 and the Goal 9 administrative rule (OAR 660-009) as revised in December 2005. It includes a 20-year forecast of employment for The Dalles. This study is intended to provide technical information that will help articulate the City's economic development policy and determine whether the City has an adequate inventory of industrial sites within its urban growth boundary (UGB) to accommodate employment growth over a 20-year planning period.

BACKGROUND

The City of The Dalles is in the process of reviewing its Urban Growth Boundary (UGB). Cities in Oregon are required to conduct an Economic Opportunities Analysis (EOA) to assess their economic development potential. This EOA has x major components:

- A review of national, state, and local economic conditions.
- An assessment of the comparative advantages in the local economy.
- A forecast of employment growth over the planning period and the resulting demand for non-residential land.
- An assessment of the site needs for industries that may locate in the local economy.
- An inventory of buildable non-residential sites in the local jurisdiction.

The following section describes the requirements for economic development planning in Oregon and how this report fits with these requirements.

FRAMEWORK FOR ECONOMIC DEVELOPMENT IN OREGON

The content of this report is designed to meet the requirements of Oregon Statewide Planning Goal 9 and the administrative rule that implements Goal 9 (OAR 660-009). The Land Conservation and Development Commission adopted amendments to this administrative rule in December 2005.¹ The amendments are effective on January 1, 2007, but a provision of the amended rule allows cities and counties to voluntarily comply with the amendments. The analysis in this report is

¹ The amended OAR 660-009, along with a Goal 9 Rule Fact Sheet, are available from the Oregon Department of Land Conservation and Development at <http://www.oregon.gov/LCD/econdev.shtml>.

designed to conform to the requirements for an Economic Opportunities Analysis in OAR 660-009 as amended.

1. *Economic Opportunities Analysis (OAR 660-009-0015)*. The Economic Opportunities Analysis (EOA) requires communities to identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on information about national, state, regional, county or local trends; identify the number of sites by type reasonably expected to be needed to accommodate the expected employment growth based on the site characteristics typical of expected uses; include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use; and estimate the types and amounts of industrial and other employment uses likely to occur in the planning area. Local governments are also encouraged to assess community economic development potential through a visioning or some other public input based process in conjunction with state agencies.
2. *Industrial and commercial development policies (OAR 660-009-0020)*. Cities with a population over 2,500 are required to develop commercial and industrial development policies based on the EOA. Local comprehensive plans must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community. Local comprehensive plans must also include policies that commit the city or county to designate an adequate number of employment sites of suitable sizes, types and locations. The plan must also include policies to provide necessary public facilities and transportation facilities for the planning area
3. *Designation of lands for industrial and commercial uses (OAR 660-009-0025)*. Cities and counties must adopt measures adequate to implement policies adopted pursuant to OAR 660-009-0020. Appropriate implementing measures include amendments to plan and zone map designations, land use regulations, public facility plans, and transportation system plans. More specifically, plans must identify the approximate number, acreage and site characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies, and must designate serviceable land suitable to meet identified site needs.

In summary, this report is an Economic Opportunities Analysis, the first key element required by Goal 9. This EOA also includes an employment forecast that leads to identification of needed development sites, and an inventory of commercial and industrial land in The Dalles.

ORGANIZATION OF THIS REPORT

The remainder of this report is organized as follows:

- **Chapter 2: Context for Economic Growth in The Dalles** presents a demographic and socio-economic profile of The Dalles. It also profiles major employers and presents national and state economic trends that will influence The Dalles economy.

- **Chapter 3: Factors Affecting Future Economic Growth in The Dalles** describes national, state, and local economic trends that will influence the regional economy. It reviews local factors affecting economic development in The Dalles and advantages, opportunities, disadvantages, and constraints these factors may present. It ends with a discussion of the comparative advantages formed by the mix of factors present in The Dalles and the implications for the types of firms most likely to locate in The Dalles.
- **Chapter 4: Demand for Non-Residential Land in The Dalles** presents a projection of future employment levels in The Dalles for the purpose of estimating demand for commercial and industrial land.
- **Chapter 5: Implications for The Dalles** compares land supply and demand and describes some of the key issues related to economic development and land use planning in The Dalles.

Context for Economic Growth in The Dalles

This chapter presents a demographic and socioeconomic profile of The Dalles and describes external trends that may influence the potential for economic growth in The Dalles. This chapter discusses recent and current economic conditions in The Dalles, long-term national, statewide, and regional economic trends that may affect local growth, and forecasts from the State for growth in areas that include The Dalles.

ECONOMIC CONDITIONS IN THE DALLES

Future economic growth in The Dalles will be affected in part by demographic and economic trends in the city and surrounding region. A review of historical demographic and economic trends provides a context for establishing a reasonable expectation of future growth in The Dalles. In addition, the relationship between demographic and economic indicators such as population and employment can help us form judgments about future trends and resulting economic conditions. Local land use and economic development policy is also an important consideration that is addressed later in this report. This section addresses the following trends in The Dalles: population and demographics, household and personal income, employment, and business activity.

POPULATION AND DEMOGRAPHICS

Population growth in Oregon tends to follow economic cycles. Historically, Oregon's economy is more cyclical than the nation's, growing faster than the national economy during expansions and contracting more rapidly than the nation during recessions. 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 that decade.

Oregon's population growth regained momentum beginning in 1987, growing at annual rates of between 1.4% and 2.9% between 1988 and 1996. Population growth for Oregon and its regions slowed to 1.1% statewide in 1997, the slowest rate since 1987. Between 2000 and 2005 the rate of population growth in Oregon increase slightly to an average of 1.2% annually.

Table 2-1 shows population over the 1980-2005 period for the U.S., Oregon, Workforce Analysis Regions 9 and 10,² and The Dalles. Table 2 shows that between 1980 and 2005, Oregon grew at a faster rate than the U.S. and Region 10

² The Oregon Employment Department has divided Oregon into 15 Workforce Regions for the purpose of analyzing and forecasting employment and workforce trends. Region 9 is composed of Crook, Deschutes, and Jefferson counties. Region 10 is composed of Gilliam, Hood River, Sherman, Wasco, and Wheeler counties.

(Central Oregon) grew at a faster rate than Oregon. Region 9 grew at a slower pace than Oregon in this period. Population growth in Region 9 was led by Hood River and Wasco counties; other counties in this region had little or negative population growth in this period. Wasco County grew at an average annual rate of 0.39%, adding 2,203 residents between 1980 and 2005. The Dalles grew at an average annual rate of 0.58% and added 1,685 residents over the 25-year period, accounting for over 75% of population growth in Wasco County.

Table 2-1. Population in the U.S., Oregon, Central Oregon, Hood River County, Gilliam County, Sherman County, Wheeler County, Wasco County, and The Dalles, 1980 to 2005

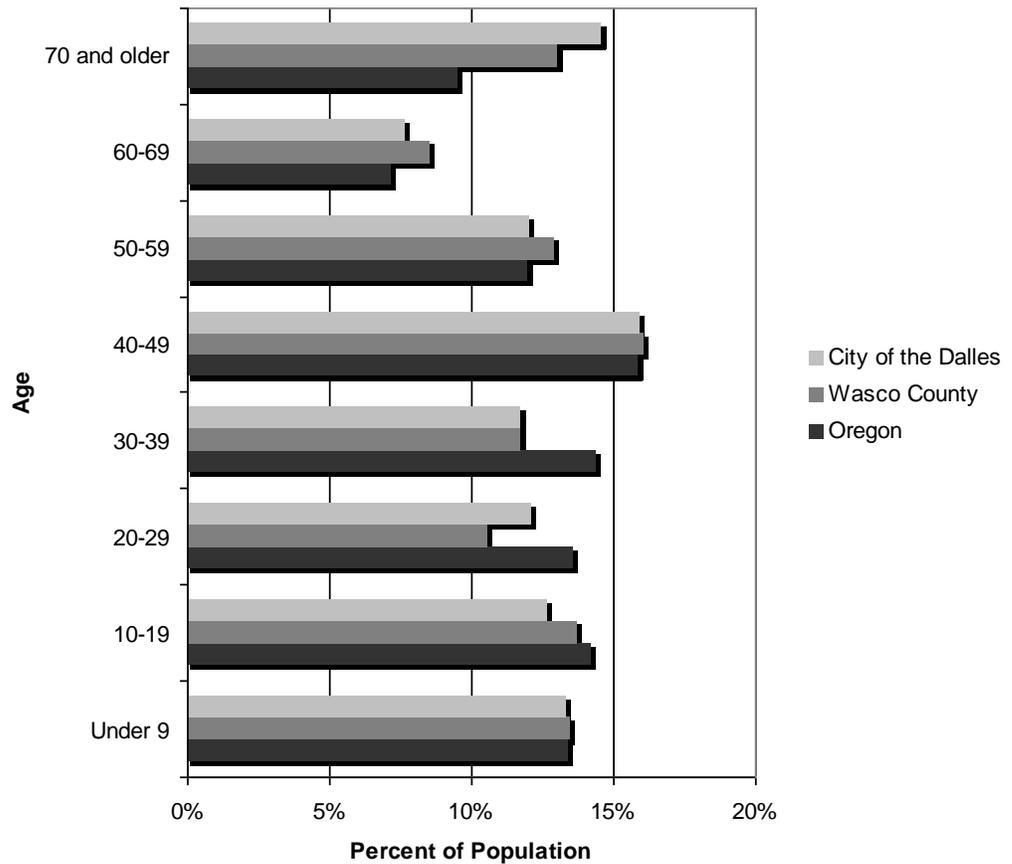
Area	Population				Change 1980 to 2005		
	1980	1990	2000	2005	Number	Percent	AAGR
U.S.	226,545,805	248,709,873	281,421,906	296,410,404	69,864,599	30.8%	1.08%
Oregon	2,639,915	2,842,321	3,421,399	3,628,700	988,785	37.5%	1.28%
Central Oregon	86,832	102,745	153,558	186,865	100,033	115.2%	3.11%
Hood River County	15,835	16,903	20,411	21,180	5,345	33.8%	1.17%
Gilliam County	2,057	1,717	1,915	1,890	-167	-8.1%	-0.34%
Sherman County	2,172	1,918	1,934	1,880	-292	-13.4%	-0.58%
Wheeler County	1,513	1,396	1,547	1,550	37	2.4%	0.10%
Wasco County	21,732	21,683	23,791	23,935	2,203	10.1%	0.39%
The Dalles	10,820	11,021	12,156	12,505	1,685	15.6%	0.58%

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

Note: Region 9 is composed of Crook, Deschutes, and Jefferson counties. Region 10 is composed of Gilliam, Hood River, Sherman, Wasco, and Wheeler counties.

Figure 2-1 shows the population distribution by age for Oregon, Wasco County and The Dalles for 2000. Compared to the Oregon average, The Dalles had a greater share of residents aged 60 years and older and a smaller share of residents aged under 40 years. The Dalles and Wasco County have a similar distribution of population by age, except that The Dalles has a larger share of residents aged 70 years and older. .

Figure 2-1. Population distribution by age in Oregon, Wasco County, and The Dalles, 2000



Source: US Census 2000.

Table 2-2 shows the change in population by age in The Dalles between 1990 and 2000. Population increased for all age groups except for residents aged 25-44 years which actually declined by 155 residents in the 1990s. The age group with the greatest increase in this period was 45-64 years, followed by population aged 18-24. These trends show that the population of The Dalles is aging, with the fastest growing age group nearing retirement in 20 years or sooner. The lack of growth in the population aged 25-44 suggests that The Dalles was not attractive for young adults who would consider living in a community like The Dalles during the 1990s. This trend is important because people in this age group are typically establishing roots in a community by forming households and starting careers. This age group is also the primary source of productive and trainable workers for employers in a region. Continued stagnation of population growth in this age group could have implications for the future level and type of employment growth in The Dalles.

Table 2-2. Population by age in The Dalles, 1990 and 2000

Age Group	1990		2000		Change		
	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	766	7%	776	6%	10	1%	-1%
5-17	2,191	20%	2,205	18%	14	1%	-2%
18-24	773	7%	971	8%	198	26%	1%
25-44	3,193	29%	3,078	25%	(115)	-4%	-4%
45-64	1,973	18%	2,953	24%	980	50%	6%
65 and over	2,164	20%	2,247	18%	83	4%	-1%
Total	11,060	100%	12,230	100%	1,170	11%	0%

Source: US Census 1990, US Census 2000, change calculated by ECONorthwest.

Table 2-3 shows the number and share of households by type in The Dalles, Wasco County, and Oregon in 2000. Household composition for all three areas was similar. The Dalles had a slightly smaller average household and average family size than Wasco County or Oregon. The Dalles and Wasco County had a similar proportion of households with children, single parent households, and households without children as Oregon.

Table 2-3. Households by type in The Dalles, Wasco County, and Oregon, 2000

Household Type	The Dalles		Wasco County		Oregon	
	Number	Percent	Number	Percent	Number	Percent
Households with children	1,506	31%	2,894	31%	410,803	31%
Married couples	1,074	22%	2,022	22%	296,404	22%
Female householder, no husband present	269	5%	556	6%	83,131	6%
Other families	163	3%	316	3%	31,268	2%
Households without children	3,417	69%	6,496	69%	922,920	69%
Married couples	1,461	30%	3,153	34%	396,128	30%
Other families	283	6%	499	5%	70,740	5%
Nonfamilies	1,673	34%	2,844	30%	456,052	34%
Total Households	4,923	100%	9,390	100%	1,333,723	100%
Average Household Size	2.4		2.47		2.51	
Average Family Size	2.94		2.96		3.02	

Source: US Census 2000.

HOUSEHOLD AND PERSONAL INCOME

Table 2-4 shows the median annual household income in 1999 for Oregon, Wasco County, and The Dalles. The median household income for The Dalles was \$5,486 (13%) lower than in Oregon and slightly lower than in Wasco County.

Table 2-4. Median household income, 1999 (in 1999 dollars)

	Median income
Oregon	\$40,916
Wasco County	\$35,959
The Dalles	\$35,430

Source: US Census 2000.

Table 2-5 shows the distribution of households by income range in Oregon and Wasco County in 2005. Wasco County has a greater percentage of households with an annual income below \$50,000 (63%) than Oregon (54%). This disparity is particularly acute at the low end of the income range: eighteen percent of households in Wasco County had a household income of \$15,000 or less in 2005, compared to only thirteen percent in Oregon.

Table 2-5. Distribution of household income by number and percentage of households, Oregon and Wasco County, 2005

	Oregon		Wasco County	
	Number	Percent	Number	Percent
< \$15,000	182,691	13%	1,646	18%
\$15,000 - \$24,999	165,057	12%	1,271	14%
\$25,000 - \$34,999	173,597	12%	1,281	14%
\$35,000 - \$49,999	243,064	17%	1,705	18%
\$50,000 - \$74,999	286,558	20%	1,858	20%
\$75,000 - \$99,999	160,479	11%	823	9%
\$100,000 - \$124,999	89,729	6%	380	4%
\$125,000 - \$149,999	45,239	3%	158	2%
\$150,000 - \$199,999	32,747	2%	128	1%
\$200,000+	35,784	3%	79	1%
Total	1,414,945	100%	9,329	100%

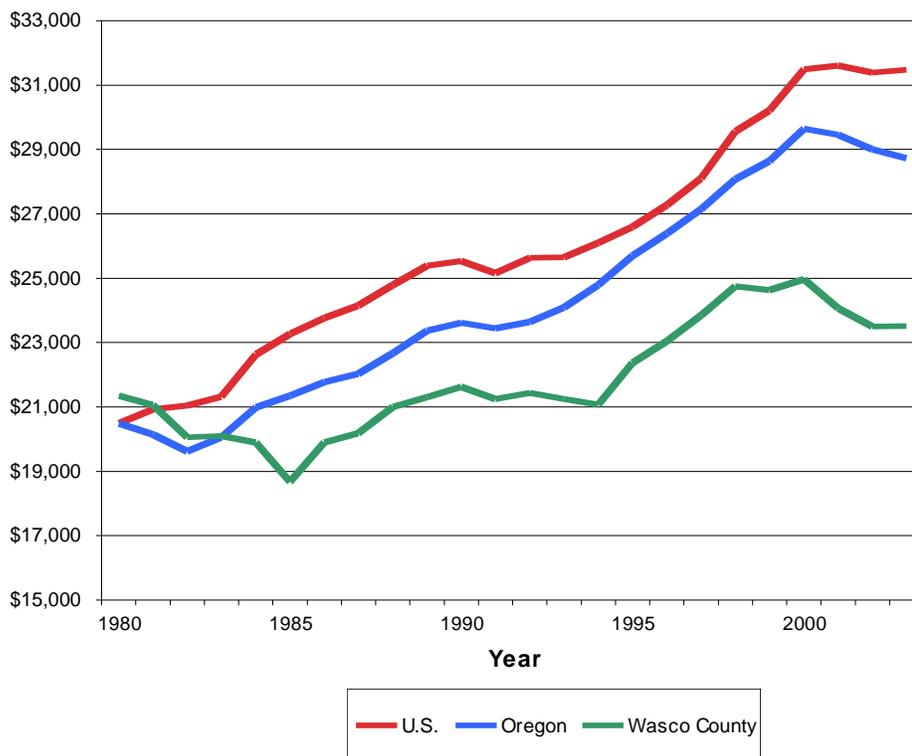
Source: Claritas, percentages calculated by ECONorthwest.

Figure 2-2 shows the level of average per capita personal income in the U.S., Oregon, and Wasco County between 1980 and 2003 (in constant 2003 dollars). Per capita personal income in Oregon was consistently lower than the U.S. average between 1980 and 2003. Oregon's average per capita personal income fell below the US average in 1981. While the gap between the Oregon and US average narrowed in the mid-1990s, it widened again starting in the late 1990s through 2003. Average per capita income in Wasco County was higher than in Oregon or the US but it fell below the Oregon average in the early 1980s. The gap between average per capita income in Wasco County compared to Oregon and the US has widened since the mid-1980s. Wasco County's average per capita income grew by only 10% between 1980 and 2003, while average per capita income grew by 40% in Oregon and 54% nationally during the same period.

Fluctuations in Wasco County personal income generally reflect national changes, although national trends resulted in larger changes in per capita personal income for Wasco County than for Oregon or the entire U.S. According to the

Oregon Employment Department’s regional economist, per capita personal income in Wasco County fluctuated for two main reasons: (1) fluctuations in the pay of employees at a local aluminum processing plant, such as annual bonuses that varied yearly, and (2) fluctuations in farm income.

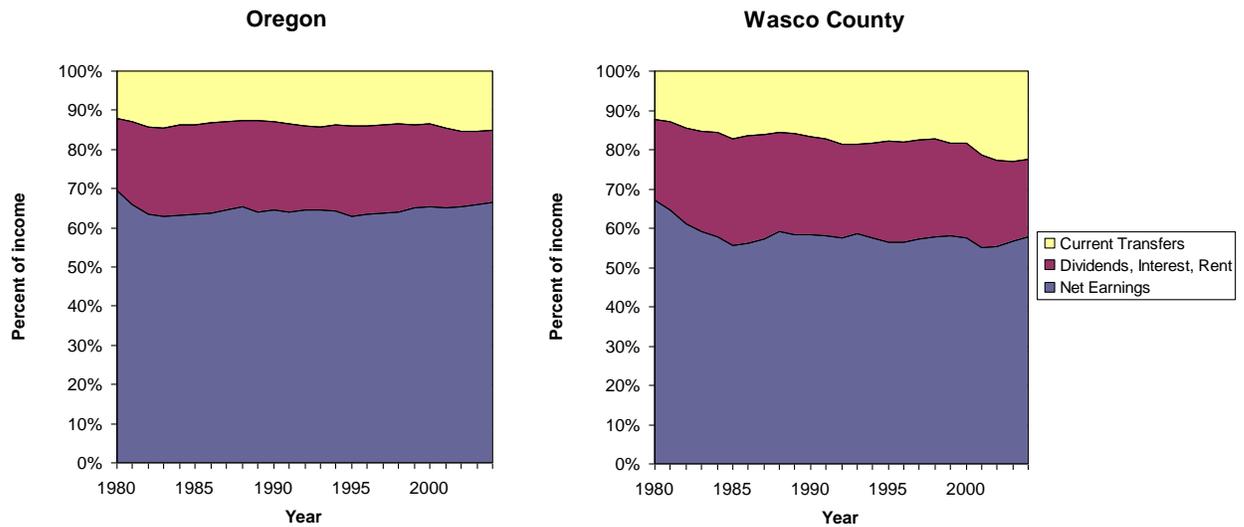
Figure 2-2. Per capita personal income, U.S., Oregon, and Wasco County, 1980-2003, (\$2003)



Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Figure 2-3 shows the share of total personal income by major source in Oregon and Wasco County between 1980 and 2004. The share of income from net earnings (wages and salaries) remained relatively stable in Oregon since the mid-1980s but has fluctuated in Wasco County. The share of personal income from current transfers (which includes social security and pension payments) nearly doubled for Wasco County during the 25-year period while increasing only slightly in Oregon. The people most likely to have personal income from Current Transfers are retirees. Figure 2-1 shows that Wasco County has a higher percentage of residents over 60 years old than Oregon as a whole. Together these data suggest that Wasco County has been retaining and attracting households in their retirement years.

Figure 2-3. Per capita personal income by major sources, Oregon and Wasco County, 1980 to 2004



Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

EMPLOYMENT

Tables 2-6 through 2-8 present data from the Oregon Employment Department that show changes in covered employment³ for Wasco County between 1980 and 2005. The changes in employment by sectors and industries are shown in two tables: between 1980 and 2000 (Table 2-6), and between 2001 and 2005 (Table 2-7). The analysis is divided in this way because of changes in industry and sector classification that make it difficult to compare information about employment collected after 2001 with information collected prior to 2000.

Employment data in this section is summarized by *sector*, each of which includes several individual *industries*. For example, the Retail Trade sector includes General Merchandise Stores, Motor Vehicle and Parts Dealers, Food and Beverage Stores, and other retail industries.

Table 2-6 shows the changes in covered employment by sector in Wasco County between 1980 and 2000. Total employment in the County grew from 7,865 to 10,224, adding 2,359 jobs over the twenty-year period. Every sector added jobs during this period except for Mining and Manufacturing. The sectors with the greatest increase in employment were Services and Retail Trade, which together added 1,611 jobs or almost 70% of the County's employment growth between 1980 and 2000. The sectors that grew the least (or shrank) during this period were Manufacturing, Mining, and Construction.

³ Covered employment refers to jobs covered by unemployment insurance, which includes most wage and salary jobs but does not include sole proprietors, seasonal farm workers, and other classes of employees.

Table 2-6. Covered employment by sector in Wasco County, 1980–2000

Sector	1980	1990	2000	Change from 1980 to 2000			
				Difference	Percent	AAGR	Share
Agriculture, Forestry and Fishing	626	772	1,171	545	87%	3.2%	1.6%
Mining	11	0	0	-11	-100%	-99.9%	-0.1%
Construction	258	154	275	17	7%	0.3%	-1.4%
Manufacturing	1,455	1,109	1,148	-307	-21%	-1.2%	-4.8%
Trans., Comm., and Utilities	189	210	210	21	11%	0.5%	0.2%
Wholesale Trade	266	241	330	64	24%	1.1%	-0.4%
Retail Trade	1,606	1,826	2,212	606	38%	1.6%	2.1%
Finance, Insurance and Real Estate	202	228	272	70	35%	1.5%	0.2%
Services	1,471	1,683	2,476	1,005	68%	2.6%	2.1%
Nonclassifiable/all others	9	18	69	60	667%	10.7%	0.1%
Government	1,772	1,853	2,061	289	16%	0.8%	0.4%
Total	7,865	8,094	10,224	2,359	30%	1.3%	0.0%

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages. <http://www.qualityinfo.org/olmisi/CEP> Accessed May 3, 2006. Summary by industry and percentages calculated by ECONorthwest.

Table 2-7 shows the change in covered employment by sector in Wasco County between 2001 and 2005. Total employment in Wasco County decreased by 534 jobs or 5% during this period. The sectors with the largest decreases were Government and Manufacturing. According to the Oregon Employment Department's regional economist, the change in Government employment resulted from a data error and the decrease in Manufacturing was caused by the reduction in workforce at the Northwest Aluminum plant. Sectors with the most employment growth in Wasco County since 2001 include Agriculture, Forestry, & Mining; Retail Services; Management of Companies; and Health & Social Assistance.

Table 2-7. Covered employment in Wasco County by sector, 2001–2005

Sector	2001	2005	Change from 2001 to 2005			
			Difference	Percent	AAGR	Share
Agriculture, Forestry, & Mining	1,129	1,391	262	23%	5.4%	4.1%
Construction	286	319	33	12%	2.8%	0.1%
Manufacturing	872	651	(221)	-25%	-7.0%	-1.3%
Wholesale	222	219	(3)	-1%	-0.3%	0.1%
Retail	1,290	1,491	201	16%	3.7%	1.8%
Transportation & Warehousing	77	131	54	70%	14.2%	0.1%
Information	162	122	(40)	-25%	-6.8%	-0.4%
Finance & Insurance	204	179	(25)	-12%	-3.2%	-0.2%
Real Estate Rental & Leasing	119	106	(13)	-11%	-2.9%	-0.1%
Professional, Scientific & Technical Services	161	184	23	14%	3.4%	0.2%
Management of Companies	20	103	83	415%	50.6%	0.8%
Admin. Support & Cleaning Services	113	100	(13)	-12%	-3.0%	-0.4%
Education	38	52	14	37%	8.2%	0.1%
Health & Social Assistance	1,363	1,435	72	5%	1.3%	1.6%
Arts, Entertainment & Recreation	111	125	14	13%	3.0%	0.2%
Accommodations & Food Services	956	899	(57)	-6%	-1.5%	0.2%
Other Services (except Public Admin.)	320	348	28	9%	2.1%	0.5%
Government	3,108	2,211	(897)	-29%	-8.2%	-7.6%
Total Covered Employment & Payroll	10,600	10,066	(534)	-5%	-1.3%	0.0%

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages. <http://www.qualityinfo.org/olmisj/CEP> Accessed May 3, 2006. Difference, percent, growth rates, and share calculated by ECONorthwest.

Table 2-8 shows covered employment for The Dalles UGB in 2004. Data for most industries in The Dalles is not shown in Table 2-8 to maintain the confidentiality of businesses in industries with few firms, or where a single employer accounts for the majority of employment in that industry.

Table 2-9 shows that The Dalles had 664 establishments with a total of 7,219 employees in 2004. The average annual pay per employee in The Dalles was \$27,378 in 2004. The sectors with the largest share of employment were: Health Care and Social Assistance (20%), Government (19%), Retail Trade (19%), and Accommodation and Food Services (11%). Together these sectors account for about 70% of total covered employment in The Dalles. Of these sectors, Government and Health Care are among the sectors with the highest average annual pay per employee. The Retail and Accommodations and Food Services sectors are among the sectors with the lowest average annual pay. Compared with The Dalles' average annual pay per employee, Accommodations and Food Services paid about \$15,500 less per employee and Retail paid about \$4,000 less per employee.

Table 2-8. Covered employment in The Dalles UGB by sector and industry, 2004

Sector / Industry	Est.	Ann. Avg. Emp.	Annual Payroll	% of Total Emp	Average Pay/Emp
Agriculture, Forestry, Mining	7	77	\$1,201,733	1%	\$15,607
Utilities	4	36	\$2,303,166	0%	\$63,977
Construction	51	220	\$6,232,750	3%	\$28,331
Specialty Trade Contractors	29	138	\$4,071,087	2%	\$29,501
Other Construction	22	82	\$2,161,663	1%	\$26,362
Manufacturing	22	655	\$19,382,170	9%	\$29,591
Wholesale	26	166	\$4,717,045	2%	\$28,416
Merchant Wholesalers, Durable Goods	11	49	\$1,707,623	1%	\$34,849
Merchant Wholesalers, Nondurable Goods	15	117	\$3,009,422	2%	\$25,722
Retail	110	1,347	\$31,428,072	19%	\$23,332
General Merchandise Stores	6	314	\$6,628,437	4%	\$21,110
Motor Vehicle and Parts Dealers	15	295	\$9,728,682	4%	\$32,979
Food and Beverage Stores	17	286	\$6,768,004	4%	\$23,664
Building Material and Garden Equipment and Supplies Dealers	9	120	\$2,501,998	2%	\$20,850
Other Retail Trade	63	332	\$5,800,951	5%	\$17,473
Transportation and Warehousing	16	85	\$3,142,197	1%	\$36,967
Information	14	99	\$2,659,123	1%	\$26,860
Finance and Insurance	42	174	\$6,113,677	2%	\$35,136
Credit Intermediation and Related Activities	17	92	\$3,006,384	1%	\$32,678
Insurance Carriers and Related Activities	22	75	\$2,555,439	1%	\$34,073
Other Finance and Insurance	3	7	\$551,854	0%	\$78,836
Professional, Scientific, and Technical Services	33	153	\$5,042,896	2%	\$32,960
Management of Companies and Enterprises	5	94	\$5,072,345	1%	\$53,961
Administrative & Support and Waste Management	17	60	\$1,651,521	1%	\$27,525
Educational Services	5	38	\$697,132	1%	\$18,346
Health Care and Social Assistance	76	1,413	\$44,308,583	20%	\$31,358
Ambulatory Health Care Services	54	340	\$11,855,274	5%	\$34,868
Other Health Care	15	938	\$30,122,381	13%	\$32,113
Social Assistance	7	135	\$2,330,928	2%	\$17,266
Arts, Entertainment, & Recreation	5	46	\$339,213	1%	\$7,374
Accommodation and Food Services	57	777	\$9,227,601	11%	\$11,876
Accommodation	7	106	\$1,508,596	1%	\$14,232
Food Services and Drinking Places	50	671	\$7,719,005	9%	\$11,504
Other Services (except public administration)	74	302	\$4,983,852	4%	\$16,503
Religious, Grantmaking, Civic, Professional, and Similar Orgs.	32	147	\$1,963,539	2%	\$13,357
Repair and Maintenance	19	77	\$1,844,511	1%	\$23,955
Other Other Services	23	78	1,175,802	1%	\$15,074
Government	69	1,388	\$47,409,647	19%	\$34,157
Federal Government	10	115	\$4,682,563	2%	\$40,718
State Government	12	203	\$8,165,177	3%	\$40,223
Local Government	47	1,070	\$34,561,907	15%	\$32,301
Total	664	7,219	\$197,644,626	100%	\$27,378

Source: Confidential ES-202 employment data provided by the Oregon Employment Department. Summary by sector and industry, percent of total employment, and average payroll per employee by ECONorthwest.

BUSINESS ACTIVITY

The Goal 9 administrative rule (OAR 660-009-0015(2)) suggests that local governments take into consideration expansion plans of major employers when determining the site requirements of major employers. ECONorthwest interviewed 10 major employers in The Dalles about their plans for the next twenty years, including their plans for adding employees, plans for expanding

their facilities, whether they would need to purchase land for expansion, whether they have plans to move their facilities outside of The Dalles, and whether there are infrastructure deficiencies that affect their ability to continue operations in The Dalles.

ECONorthwest interviewed 9 major employers in The Dalles. Of the 9 firms interviewed, three firms have expansion plans and expect to add between 80 and 90 jobs in the next few years. The Mid-Columbia Medical Center and Oregon Cherry Growers plan to continue to add between 40-60 employees per year for the next several years. The following is a list of major employers interviewed, and their responses regarding firm expansion plans.

- **Mid-Columbia Medical Center (735+ employees).** The Mid-Columbia Medical Center anticipates hiring about 30 employees per year as their facility expands. They are planning to build a new hospital in five or ten years. They own less than ten acres surrounding their current site. Their plans are uncertain at this point but they may choose to purchase land to relocate the hospital to a new site. If they do so, they will select a site closer to Interstate 84.
- **Oregon Cherry Growers, Inc. (250+ employees in standard processing, 1,000+ during fresh harvesting).** The Oregon Cherry Growers do not plan to expand their facilities, but plan to hire 10-20 standard processing employees every year for the next several years.
- **Safeway Stores, Incorporated (180+ employees).** Safeway Stores recently expanded their facility and do not plan any additional expansions in the near future. They are constantly hiring because of heavy employee turnover, but this hiring should not add substantially to their current employment level.
- **Wasco County (175+ employees).** The County is keeping employment levels stable, and has no plans to expand any facilities. The County owns a variety of sites in The Dalles UGB, most of which they want to eventually sell to put the land back on the tax rolls.
- **Fred Meyer (160+ employees).** The Fred Meyer store at The Dalles is scheduled for a 26,000 square-foot expansion between 2006 and 2007. The expanded store will occupy the current site, and they expect to add about 40 employees after the expansion.
- **Columbia Basin Nursing Home (70+ employees).** Columbia Basin is a non-profit corporation that operates the Nursing Home on land owned by Wasco County. The facility currently does not plan for significant employee growth or expansion of their building, but if any of the existing nursing homes in the area go out of business Columbia Basin may expand to meet demand.
- **Kmart (65+ employees).** Kmart has no plans for expansion of employment or its facilities.

- **Region 9 Educational Service District (57+ employees).** The Region 9 ESD has no plans for expansion of employment or its facilities.
- **Precision Lumber Company (28+ employees).** Precision Lumber recently laid off a number of employees. They do not expect to increase employment but may expand their facility relatively soon on land they own or lease.

In addition to what we learned from employer interviews, information available on the Oregon Labor Market Information System (OLMIS) web site and through other interviews indicates that other firms plan to expand or add jobs in The Dalles:

- Google has purchased about 30 acres of land from the Port of The Dalles and expects to build a data warehousing facility on the property. They expect to eventually employ about 120 people in The Dalles.
- Homeshield, a maker of components for windows and doors, has purchased land at the Port of the Dalles and expects to build a 65,000 square-foot manufacturing plant to fabricate window parts. Homeshield expects to expand this facility and add employees within three years.
- Home Depot opened a store in The Dalles in 2004 and has about 110 employees.
- The Columbia Gorge Regional Airport expects to grow over the next five years. According to airport staff, they have approximately 700 undeveloped acres. They hope to develop 200 acres for use by aviation related companies, including services and specialty manufacturing. They hope to develop the remaining 500 acres as a golf course and hotel complex. A developer is interested in this land and has a tentative agreement with the City to develop the hotel and golf course.

LONG-RUN NATIONAL AND STATE TRENDS AFFECTING GROWTH IN THE DALLES

NATIONAL CONDITIONS

Economic development in The Dalles over the next twenty to fifty years will occur in the context of long-run national trends. The most important of these trends includes:

- **The aging of the baby boom generation, accompanied by increases in life expectancy.** The number of people age 65 and older will double by 2050, while the number of people under age 65 will grow only 12 percent. The economic effects of this demographic change include a slowing of the growth of the labor force, an increase in the demand for healthcare

services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.⁴

- **The growing importance of education as a determinant of wages and household income.** According to the Bureau of Labor Statistics, a majority of the fastest growing occupations will require an academic degree, and on average they will yield higher incomes than occupations that do not require an academic degree. In addition, the percentage of high school graduates that attend college will increase.⁵
- **Continued growth in global trade and the globalization of business activity.** With increased global trade, both exports and imports rise. Faced with increasing domestic and international competition, firms will seek to reduce costs and some production processes will be outsourced offshore.⁶
- **Innovation in electronics and communication technology, and its application to production.** Advancements in communication and manufacturing technology increase worker productivity. There will be growth in the production of both services and goods, but the economy's emphasis on services will increasingly dominate.⁷
- **Continued shift of employment from manufacturing and resource-intensive industries to the service-oriented sectors of the economy.** Increased worker productivity and the international outsourcing of routine tasks lead to declines in employment in the major goods-producing industries. Projections from the Bureau of Labor Statistics indicate that U.S. employment growth will continue to be strongest in professional and business services, healthcare and social assistance, and other service industries. Construction employment will also grow.⁸
- **The combination of rising energy costs, strong energy demand, and requirements to reduce emissions and increase use of renewable fuels.** Output from the most energy-intensive industries will decline, but growth in the population and in the economy will increase the total amount of

⁴ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2006, *The 2006 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, May 1; Congressional Budget Office, 2006, *The Budget and Economic Outlook: Fiscal Years 2007 to 2016*, January; and Congressional Budget Office, 2005, *The Long-Term Budget Outlook*, December.

⁵ Daniel E. Hecker, "Occupational Employment Projections to 2014," *Monthly Labor Review* 128: 11, November, pp. 70-101.

⁶ Jay M. Berman, 2005, "Industry Output and Employment Projections to 2014," *Monthly Labor Review* 128:11, November, pp. 45-69.

⁷ Jay M. Berman, 2005, "Industry Output and Employment Projections to 2014," *Monthly Labor Review* 128:11, November, pp. 45-69.

⁸ Jay M. Berman, 2005, "Industry Output and Employment Projections to 2014," *Monthly Labor Review* 128:11, November, pp. 45-69; and Daniel E. Hecker, "Occupational Employment Projections to 2014," *Monthly Labor Review* 128: 11, November, pp. 70-101.

energy demanded. Energy sources will diversify and the energy efficiency of automobiles, appliances, and production processes will increase.⁹

- **Continued westward and southward migration of the U.S. population.** Although there are some exceptions at the state level, a 2006 U.S. Census report documents an ongoing pattern of interstate population movement from the Northeast and Midwest to the South and West.¹⁰
- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. Increases in the population and in households' incomes, plus changes in tastes and preferences, have dramatically increased demands for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such amenities contribute to a region's quality of life and play an important role in attracting both households and firms.¹¹

Short-term national trends will also affect economic growth in the region, but these trends are difficult to predict. At times these trends may run counter to the long-term trends described above. A recent example is the downturn in economic activity in 2001 following the collapse of Internet stocks and the attacks of September 11. The resulting recession caused Oregon's employment in the Information Technology and high-tech Manufacturing industries to decline. Employment in these industries has partially recovered, however, and they will continue to play a significant role in the national, state, and local economy over the long run. This report takes a long-run perspective on economic conditions (as the Goal 9 requirements intend) and does not attempt to predict the impacts of short-run national business cycles on employment or economic activity.

STATE AND REGIONAL TRENDS

State and regional trends will also affect economic development in The Dalles over the next twenty to fifty years. The most important of these trends includes: continued in-migration from other states, distribution of population and employment across the State,

Continued in-migration from other states

Oregon's population is also related to economic conditions in other states—most notably, in California. During downturns in California's economy, people leave the state for opportunities in Oregon and elsewhere. As California's

⁹ Energy Information Administration, 2006, *Annual Energy Outlook 2006 with Projections to 2030*, U.S. Department of Energy, DOE/EIA-0383(2006), February.

¹⁰ 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.

¹¹ For a more thorough discussion of relevant research, see, for example, Power, T.M. and R.N. Barrett. 2001. *Post-Cowboy Economics: Pay and Prosperity in the New American West*. Island Press, and Kim, K.-K., D.W. Marcouiller, and S.C. Deller. 2005. "Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes." *Growth and Change* 36 (2): 273-297.

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

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 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

Distribution of population and employment across the State

Oregon's population is not distributed equally across the state. Nearly 70% of Oregon's population lives in the Willamette Valley. With higher growth rates than the rest of the state, the Willamette Valley and Central Oregon (including Wasco County) have each captured a higher percentage of the state's population over the period 1970-2005. The *1999 Oregon In-migration Study* found that the majority of in-migrants moved to the Willamette Valley. About 10% of in-migrants moved to Central Oregon and about 2% of in-migrants moved to counties located along the Columbia River Gorge (including Wasco County).

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 May 25, 2006.

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*.

Employment growth generally follows the same trend as population growth. Employment growth varies between regions even more, however, as employment reacts more quickly to changing economic conditions. Total employment increased in each of the state's regions over the period 1970-2004, but the increases in employment did not materialize uniformly across the state. Over 70% of Oregon's employment was located in the Willamette Valley over the period 1970-2004. Central Oregon, including Wasco County, captured an increasing share of employment over the period, increasing from an average of 6.7% of the State's employment in 1970 to 1979 to an average of 7.9% of the State's employment in 2000 to 2005.

Shift from natural resource-based to high-tech industries

The composition of Oregon's employment has changed since 1970. Employment growth has been led by the Services sector. The share of Oregon's total employment in this sector increased from its 1970s average of 19% to 30% in 2000. Slow growth in Manufacturing caused its share of total employment to decline from its 1970s average of 18% to 12% in 2000.

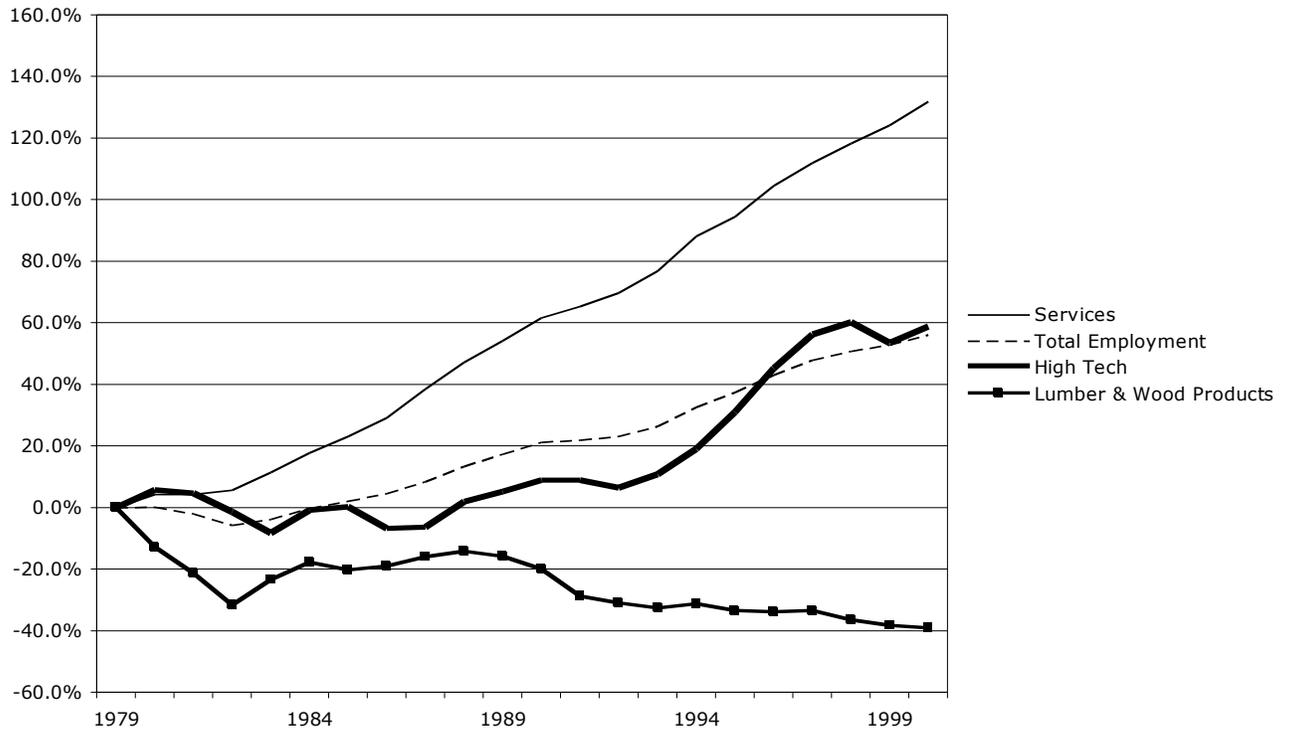
During the same period, Oregon started to transition away from reliance on traditional resource-extraction industries. A significant indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry¹⁷ and concurrent growth of employment in high-technology manufacturing industries (Industrial Machinery, Electronic Equipment, and Instruments¹⁸).

This pattern is shown in Figure 2-4, which charts the changes in the level of employment since 1979. The peak of Oregon's employment, Lumber & Wood Products industry was in 1979. From 1979 to 2000, employment in the Lumber and Wood Products industry declined 40%. Over the same time period, employment in high-tech industries increased by 60%, and employment in the Services sector increased by over 130%.

¹⁷ SIC 24

¹⁸ SIC 35, 36, 38

Figure 2-4. Comparison of Oregon employment to 1979 levels, 1979-2000



Source: ECONorthwest, based on data from the Bureau of Economic Analysis.

Continued lack of diversity in the State economy

While the transition from Lumber and Wood Products manufacturing to high-tech manufacturing has increased the diversity of employment within Oregon, it has not significantly improved Oregon's diversity relative to the national economy. Oregon's relative diversity has historically ranked low among states. Oregon ranked 35th in diversity (1st = most diversified) based on Gross State Product data for 1963–1986, and 32nd based on data for the 1977–1996 period.¹⁹ A recent analysis, based on 2003 data, ranked Oregon 33rd.²⁰ These rankings suggest that Oregon is still heavily dependent on a limited number of industries. Relatively low economic diversity increases the risk of economic volatility as measured by changes in output or employment.

The changing composition of employment has not affected all regions of Oregon evenly. Growth in high-tech and Services employment has been concentrated in urban areas of the Willamette Valley and Southern Oregon, particularly in Washington, Benton, and Josephine Counties. The brunt of the decline in Lumber & Wood Products employment was felt in rural Oregon, where these jobs represented a larger share of total employment and an even larger share of high-paying jobs than in urban areas.

¹⁹ LeBre, Jon. 1999. "Diversification and the Oregon Economy: An Update." *Oregon Labor Trends*. February.

²⁰ CFED, 2006, The Development Report Card for the States, <http://www.cfed.org>.

Public policy

Changing economic conditions in Oregon have not only been affected by national and international trends, but also by government action in Oregon. State policy made a concerted effort to attract industries with tax policy (e.g., no unitary tax, which would tax world-wide corporate income of businesses operating in Oregon), changes in corporation codes, reforms to reduce the costs of workers' compensation, investments in infrastructure, and other incentives (e.g., enterprise zones and the Strategic Investment Program, which attempts to stimulate capital-intensive industries through property tax abatement). The State has encouraged international trade and investments with missions and offices in Japan, Taiwan, and other Pacific Rim countries. State policy on land use and environmental quality aim at preserving the natural and cultural amenities that make Oregon attractive to its current and potential residents and businesses—but their effects, however, are not unambiguous, since they may also raise taxes, fees, and land development costs.

OUTLOOK FOR GROWTH IN THE DALLES

The State's long-term forecast of population change in Oregon and Wasco County is shown in Table 2-9, which shows that population in Oregon is expected to grow at an average annual rate of 1.16% over the 2005–2040 period. Growth in Wasco County is expected to be slower than the State average, with an average annual growth rate of 0.58% over the same period. Wasco County is expected to add more than 5,200 residents over the thirty-five year period between 2005 and 2040.

Table 2-9. Population forecast for Oregon and Wasco County, 2000-2040

Year	Population	
	Oregon	Wasco
2000	3,436,750	23,850
2005	3,618,200	23,420
2010	3,843,900	23,753
2015	4,095,708	24,297
2020	4,359,258	24,896
2025	4,626,015	25,670
2030	4,891,225	26,563
2035	5,154,793	27,522
2040	5,425,408	28,653
Average Annual Growth Rate		
2005-2040	1.16%	0.58%
2005-2010	1.22%	0.28%
2010-2015	1.28%	0.45%
2015-2020	1.26%	0.49%
2020-2025	1.19%	0.61%
2025-2030	1.12%	0.69%
2030-2035	1.06%	0.71%
2035-2040	1.03%	0.81%

Source: Office of Economic Analysis, 2004; ECONorthwest, 2006. Average annual growth rate (AAGR) calculated by ECONorthwest.

Table 2-10 shows the Oregon Employment Department’s forecast for employment by industry between 2004 and 2014 for Oregon and Region 9, which is comprised of Hood River, Wasco, Sherman, Gilliam, and Wheeler counties. Table 2-10 shows that Region 9 is expected to grow faster than the state average with the addition of 4,570 new jobs in Region 9 over the ten-year period.

At the State level, sectors that are projected to lead employment growth for the ten-year period are Professional and Business Services, Education and Health Services, Leisure and Hospitality, and Retail Trade. Together, these sectors are expected to add 153,100 new jobs, or 64% of the employment growth in Oregon. In Region 9, sectors that are expected to lead employment growth are Local Government (especially Indian Tribal Government), Education and Health Services, Retail Trade, and Leisure and Hospitality. Together, these sectors are expected to add 3,640 jobs, or 80% of the employment growth in Region 9 between 2004 and 2014. Sectors with the most employment growth in Region 9 are the same as those for Oregon as a whole, except for Indian Tribal Government which is a growth leader in Region 9 but not in Oregon, and Professional and Business Services which are a growth leader in Oregon but not in Region 9.

Table 2-10. Nonfarm employment forecast by industry in Oregon and in Region 9, 2004-2014

Sector/ Industry	Oregon				Region 9*			
	2004	2014	Growth	% Growth	2004	2014	Growth	% Growth
Natural Resources & Mining	9,600	9,400	-200	-2.1%	90	90	0	0.0%
Construction	82,300	97,200	14,900	18.1%	690	860	170	24.6%
Manufacturing	199,500	205,500	6,000	3.0%	1,790	1,990	200	11.2%
Transportation, & Utilities	56,800	65,700	8,900	15.7%	4,040	4,770	730	18.1%
Wholesale Trade	75,400	85,300	9,900	13.1%	770	810	40	5.2%
Retail Trade	188,200	215,400	27,200	14.5%	2,820	3,470	650	23.0%
Transportation, Warehousing, & Utilities	56,800	65,700	8,900	15.7%	450	490	40	8.9%
Information	33,000	38,200	5,200	15.8%	230	360	130	56.5%
Leisure & Hospitality	155,800	184,400	28,600	18.4%	3,020	3,680	660	21.9%
Accommodation & Food Services	135,100	160,500	25,400	18.8%	2,380	2,970	590	24.8%
Accommodation	21,400	24,800	3,400	15.9%	570	720	150	26.3%
Food Services & Drinking Places	113,700	135,700	22,000	19.3%	1,810	2,250	440	24.3%
Financial Activities	96,700	108,100	11,400	11.8%	660	730	70	10.6%
Professional & Business Services	176,800	225,700	48,900	27.7%	1,130	1,380	250	22.1%
Education & Health Services	193,000	241,400	48,400	25.1%	2,930	3,700	770	26.3%
Ambulatory health care services	58,000	73,900	15,900	27.4%	750	970	220	29.3%
Nursing & residential care facilities	36,100	46,100	10,000	27.7%	620	760	140	22.6%
Other Services	57,400	63,700	6,300	11.0%	580	640	60	10.3%
Government	269,800	293,900	24,100	8.9%	4,270	5,800	1,530	35.8%
Federal Government	30,200	29,200	-1,000	-3.3%	620	570	-50	-8.1%
State Government	62,100	65,100	3,000	4.8%	450	470	20	4.4%
Local Government	177,500	199,600	22,100	12.5%	3,200	4,760	1,560	48.8%
Indian Tribal	7,700	10,700	3,000	39.0%	290	1,500	1,210	417.2%
Local Education	93,900	104,000	10,100	10.8%	1,470	1,660	190	12.9%
Total Nonfarm Payroll Employment	1,594,300	1,833,900	239,600	15.0%	19,430	24,000	4,570	23.5%

Source: Oregon Employment Department. Employment Projections by Industry 2004-2014.

Note: Region 9 includes Hood River, Wasco, Sherman, Gilliam, and Wheeler counties.

Factors Affecting Future Economic Growth in The Dalles

Economic development opportunities in The Dalles will be affected by local conditions as well as the national and regional economic conditions that were addressed in Chapter 2. Factors affecting future economic development in The Dalles include its location, buildable land, labor force, housing, public services, transportation, natural resources, and quality of life. The Dalles shares the general characteristics and advantages of the Columbia River Gorge region and Oregon as a whole, such as location on I-84 and the recreational amenities of the Gorge. Economic conditions in The Dalles relative to conditions in other portions of the Columbia River Gorge form The Dalles' comparative advantage for economic development. The Dalles' comparative advantages have implications for the types of firms most likely to locate and expand in The Dalles.

This chapter begins with a description of comparative advantage and why it is relevant for this Economic Opportunity Analysis. The chapter then reviews local factors affecting economic development in The Dalles and any advantages, opportunities, disadvantages, or constraints these factors may present. It ends with a discussion of the comparative advantages formed by the mix of factors present in The Dalles and the implications for the types of firms most likely to locate in The Dalles.

There is little that The Dalles can do to influence national and regional conditions that affect economic development. The Dalles, however, can influence local factors that affect economic development. The review of local factors in this chapter will form a basis for developing economic development strategies for The Dalles later in this study.

WHAT IS COMPARATIVE ADVANTAGE?

Each economic region has different combinations of productive factors: land (and natural resources), labor (including technological expertise), and capital (investments in infrastructure, technology, and public services). While all areas have these factors to some degree, the mix and condition of these factors vary. The mix and condition of productive factors may allow firms in a region to produce goods and services more cheaply, or to generate more revenue, than firms in other regions.

By affecting the cost of production and marketing, comparative advantages affect the pattern of economic development in a region relative to other regions. Goal 9 and OAR 660-009-0015(4) recognizes this by requiring plans to include an analysis of the relative supply and cost of factors of production. An analysis of comparative advantage depends on the geographic areas being compared. Economic conditions in The Dalles will be largely shaped by national and regional economic conditions affecting the Columbia River Gorge region. This

section focuses on the comparative advantages of The Dalles relative to the Columbia River Gorge region and the rest of Oregon. The implications of these individual factors for The Dalles' overall comparative advantage are discussed at the end of this section.

LOCATION

The Dalles' location will have a substantial influence on its future development. The Dalles is located in Wasco County on the Columbia River Gorge, across the river from Washington State. The location of The Dalles has played a critical role in the growth of The Dalles and will continue to have implications for economic development in the region:

- The Dalles' location on the Columbia River Gorge makes it a highly scenic destination with many recreational opportunities.
- The Columbia River Gorge is a National Scenic area and is subject to regulation by the Federal Government, as well as State and local authorities. The regulatory environment in the Columbia River Gorge is complex and can make development difficult in some areas.
- The Dalles is located along Interstate 84, the major east-west route connecting Portland, Oregon with Salt Lake City, Utah. I-84 is a major freight transportation route. The Dalles is connected to Central Oregon via Highway 197, which connects to Highway 97, the major north-south road in Central Oregon. The Dalles has easy access to Washington Highway 14 with connections to communities in central and eastern Washington.
- The Dalles has both freight and passenger rail service, and barge freight service along the Columbia River.
- The Dalles has access to the Portland metropolitan area, which is located about 80 miles to the west of The Dalles.
- The Dalles offers access to rural housing and recreational opportunities.
- The Dalles is located along the Columbia River, which plays an important role in the local economy. It provides shipping opportunities, economic opportunities for natural resource industries such as fishing, employment and The Dalles Dam, and it provides a draw for tourism.
- The Dalles has access to abundant and relatively cheap renewable electricity sources. The City obtains more than 80% of its electricity from renewable sources.
- The climate of The Dalles, which is relatively mild and sunny, is well suited to agriculture, especially the cherry industry, and attractive to households and businesses looking for a sunny high-desert climate.

The Dalles' location in the Columbia River Gorge, the presence of Interstate 84 and Highways 197 and 14, and access to the Portland are the primary comparative advantages for economic development in The Dalles.

INVENTORY OF LANDS AVAILABLE FOR INDUSTRIAL AND OTHER EMPLOYMENT

This section presents an inventory of lands available for industrial and other employment uses. The data for this summary was provided by the City of The Dalles. The City classified land into the following categories:

- *Vacant land.* Land that generally did not have structures or improvements. Lots smaller than five acres had no structures or improvements and lots larger than five acres had structures or improvements on ½ of an acre or less.
- *Developed land.* Land that is already has improvements or structures.
- *Redevelopable land.* Land on which development exists but there exists potential that existing development will be converted to more intensive uses during the planning period. Improvements on redevelopable lands had an improvement to land value ratio of less than 1:1.
- *Constrained land.* Land that has constraints preventing development, such as wet lands or steep slopes.

Table 3-1 shows a summary of vacant and partially redevelopable commercial and Industrial lands within The Dalles' UGB. The table shows that The Dalles has a total of about 89 gross acres of vacant land, including 60 gross acres of vacant industrial land and about 29 gross acres of vacant commercial land.

Table 3-1 shows that The Dalles has a total of 342 gross acres of potentially redevelopable land, with 76 gross acres of redevelopable commercial land and about 266 gross acres of redevelopable industrial land. The City also has about 19 gross acres of land designated for mixed commercial and residential use, which could be redeveloped for commercial uses.

**Table 3-1. Employment Land Supply
The Dalles UGB, 2006, Gross Buildable Acres**

Commercial and Industrial	
Vacant	89.04
<i>Commercial Vacant</i>	28.87
<i>Industrial Vacant</i>	60.17
Potentially Redevelopable	341.5
<i>Commercial Redevelopable</i>	75.88
<i>Industrial Redevelopable</i>	265.62
Mixed Use	18.81
Total	449.35

Source: The City of The Dalles, 2006

To refine the land inventory, ECO worked with City staff to identify sites within The Dalles UGB that are (1) designated for industrial and other employment uses, and (2) greater than 0.5 acres of contiguous land. Forty-eight tax lots in 18 sites with 391 buildable acres met the criteria. The 18 sites account for about 87% of the 449 gross acres shown in Table 3-1. Non-site acreage totals 58 gross acres.

Table 3-2 provides a list of the 18 sites that meet the criteria above and provides information on the number of tax lots, acreage, constraints and other site attributes. The inventory includes both commercial and industrial sites. Map 3-1 shows these 18 sites within The Dalles UGB that are vacant, partially vacant, or redevelopable.²¹

With respect to industrial sites, the inventory identifies 15 sites with about 428 total acres. Of the total acres, about 68 of them are constrained, leaving about 360 unconstrained acres. Two of the sites are significantly constrained by wetland location. If only *vacant* sites without major wetland constraints are considered, the inventory decreases to 8 sites with about 99 total acres and 80 buildable acres. One of the larger sites, however, has a purchase option. This reduces the available inventory to 7 sites with a total of 58 acres and 53 unconstrained acres. Of these, only one is greater than 20 acres and four are larger than 5 acres.

The inventory includes three commercial sites ranging from six to 16 acres. Only one of the commercial sites is vacant.

It is worth noting that Dallesport has a significant inventory of industrial land. According to the Klickitat County Economic Development Department, the Dallesport Industrial Park has 640 acres of vacant industrial land.²² The site is three miles from I-84 and two miles from Dallesport. The site is approximately four miles from The Dalles. It has access to the Columbia River and immediate access to rail. According to the County, the park has immediate access to all services, with the exception of stormwater and tele-communications. It appears the County has sites for lease, but will accept purchase options under certain circumstances. It is ECO's opinion that sites in Dallesport are not substitutable for comparable sites in The Dalles due to location and other factors.

²¹ The NW Aluminum site (Site #3 on Table 3-2) has been master planned to accommodate 11 sites totaling 197 unconstrained acres.

²² <http://www.klickitatcounty.org/Business/IndustrialSites/Detail.asp?Id=6&fCategoryIdSelected=962561922&fContentIdSelected=>, accessed 8-15-06.

Table 3-2. Summary of sites designated for industrial and other employment, The Dalles UGB, 2006

Site	Tax Lot #	Gross Ac	Owner	Plan Designation	Constrained Ac	Net Acres	Notes
1	2N 13E 21 600	22.25	Northwest Aluminum Co.	IND	0	18.9	Vacant Lot
2	2N 13E 21 700	40.93	Port of The Dalles	IND	14.3	22.6	Vacant Lot, Google has purchase option on property for the next three years
3	Four Tax Lots	286.86	Northwest Aluminum Co.	IND	34.07	214.9	Aluminum Plant Property - See Master Plan
4	Two Tax Lots	3.85	Port of The Dalles	IND	0	3.3	Two vacant lots
5	Four Tax Lots	5.45	Port of The Dalles	IND	0	4.6	Four Contiguous Vacant Lots
6	Two Tax Lots	12.69	Northwest Aluminum Co.	IND	4.33	7.1	Two Vacant Contiguous Lots, Narrow Lots (between River Road and the river)
7	2N 13E 33 100	19.74	Martin Marietta Aluminum	IND	10.2	8.1	Buildable area has odd configuration because of wetlands
8	Eleven Tax Lots	16.78	Multiple	GC	0.38	13.9	Includes a mixture of contiguous vacant parcels and potentially redevelopable parcels (mainly a car junk yard)
9	Three Tax Lots	6.15	Three	CLI	0	5.2	Three Contiguous Vacant Lots
10	Four Tax Lots	8.99	Four	GC	1.46	6.4	Includes a mixture of contiguous vacant parcels and potentially redevelopable parcels
11	Four Tax Lots	5.76	Four	GC	0	4.9	Four Contiguous Vacant Lots
12	Four Tax Lots	6.89	Four	CLI	0.08	5.8	Four Contiguous Potentially Redevelopable Lots
13	Four Tax Lots	6.88	Four	CLI	0	5.8	Four Contiguous Potentially Redevelopable Lots
14	1N 13E 4 106	6.04	Ore. Child Dev. Coalition	H/MDR (NC Overlay)	2.69	2.8	NWI designated wetland in middle of parcel
15	2N 13E 33DB 300	2.26	Arthur Braun	IND	0	1.9	Small structures, mostly unused
16	2N 13E 33D 800	2.7	Cascade Fruit Company	IND	0.98	1.5	Storage area for adjacent fruit processing plant
17	1N 13E 4 104	1.58	Coal. for Cascade Housg	HDR	0	1.3	Vacant
18	Five Tax Lots	3.88	Five	CLI	0	3.3	Some structures, redevelopable

Source: Erik Rundell, City of The Dalles RARE Participant

LABOR FORCE

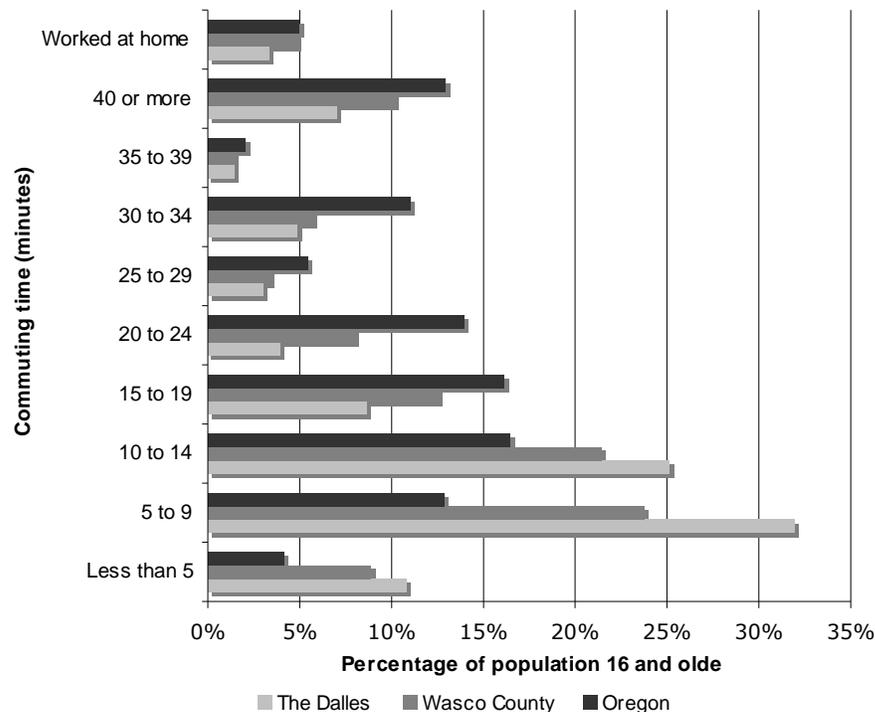
The availability of labor is critical for economic development. Availability of labor depends not only on the number of workers available, but the quality, skills, and experience of available workers. This section examines the availability of workers in The Dalles.

The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and the unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force.

The unemployment rate is one indicator of the relative number of workers who are actively seeking employment. Data from the Oregon Employment Department shows that unemployment in Wasco County was 7.1% in 2005, compared with 6.1% in Oregon.

Figure 3-1 shows a comparison of the commute time to work for residents 16 years and older in Oregon, Wasco County, and The Dalles. Residents of The Dalles spend less time commuting to work than residents of Wasco County or Oregon. Sixty-eight percent of residents of The Dalles commute 14 minutes or less, compared with 54% of Wasco County residents and 33% of Oregon residents.

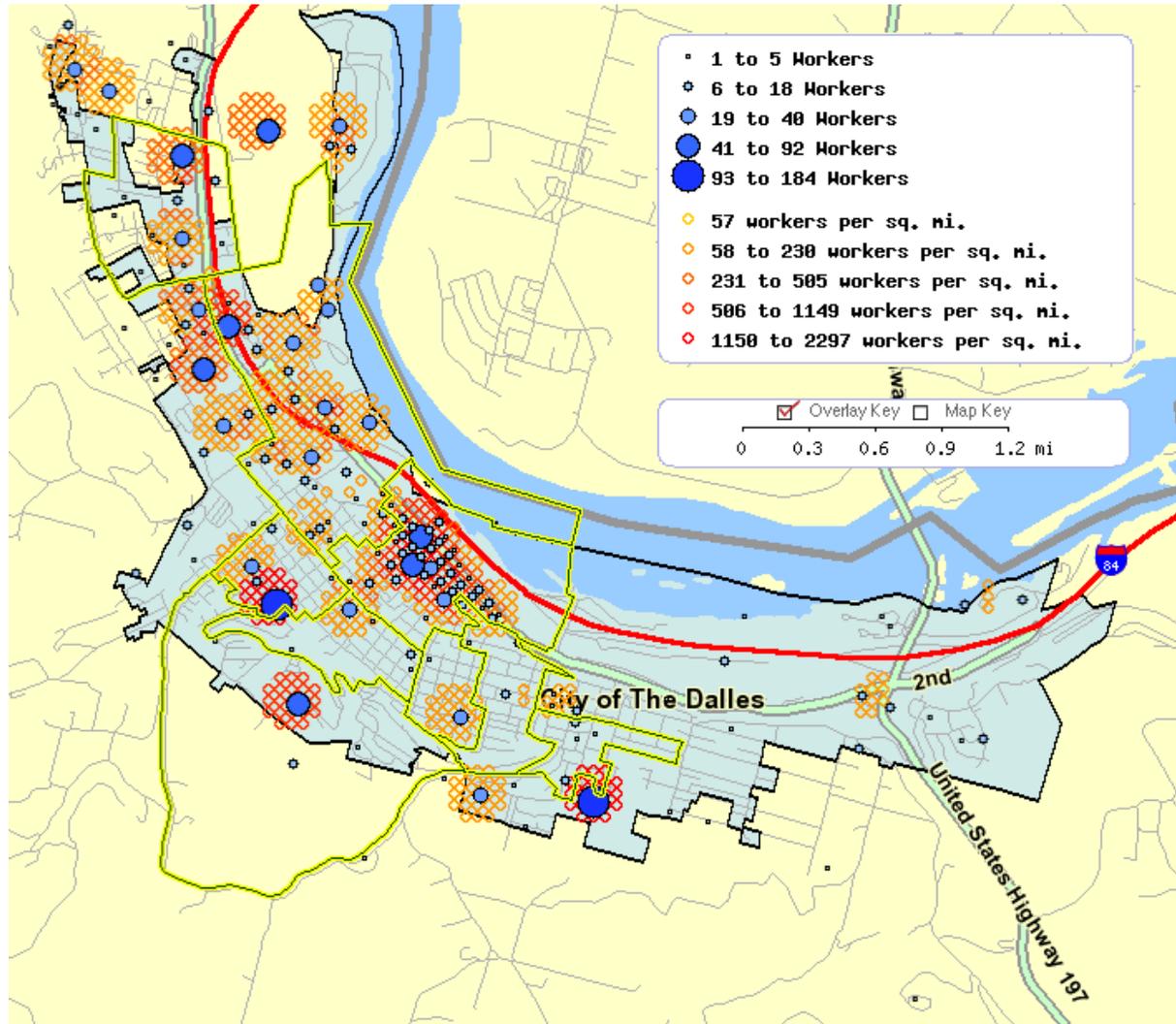
Figure 3-1. Commuting time to work in minutes for residents 16 years and older, Oregon, Wasco County, and The Dalles, 2000



Source: US Census 2000.

Figure 3-2 and Table 3-3 show where residents of The Dalles worked in 2003. Figure 3-2 and Table 3-3 show that the majority of residents of The Dalles work within the City, leading to the relatively short commuting times shown in Figure 3-1. About 10% of The Dalles residents are employed in Hood River County and about 15% of residents employed in counties that compose the Portland Metro region.

Figure 3-2 Places that residents of The Dalles were employed, 2003



Source: U.S. Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2003)

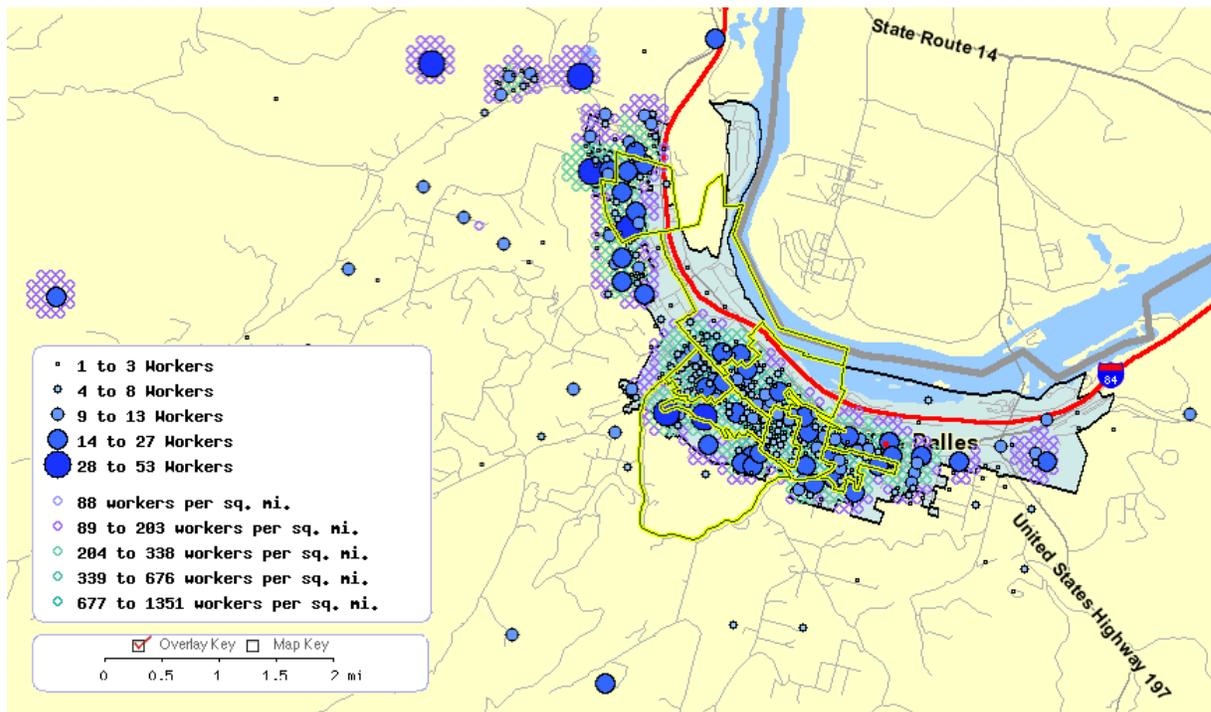
Table 3-3 Places that residents of The Dalles were employed, 2003

	Number	Percent
Wasco County	1,626	63%
City of The Dalles	1,419	55%
Hood River County	245	10%
Hood River	179	7%
Multnomah County	201	8%
Washington County	96	4%
Clackamas County	79	3%
All Other Locations	325	13%
Total	2,572	100%

Source: U.S. Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2003)

Figure 3-3 and Table 3-4 show where employees of firms located in The Dalles lived in 2003. For firm in The Dalles, forty-five percent of their workers lived in The Dalles and 21% lived in other parts of Wasco County. About 5% of workers commuted from Hood River County and 6% commuted from Multnomah or Washington Counties. The remaining 22% commuted from other locations not specified in the data, including locations in Washington State.

Figure 3-3. Places where workers in The Dalles lived, 2003



Source: U.S. Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2003)

Table 3-4. Places where workers in The Dalles lived, 2003

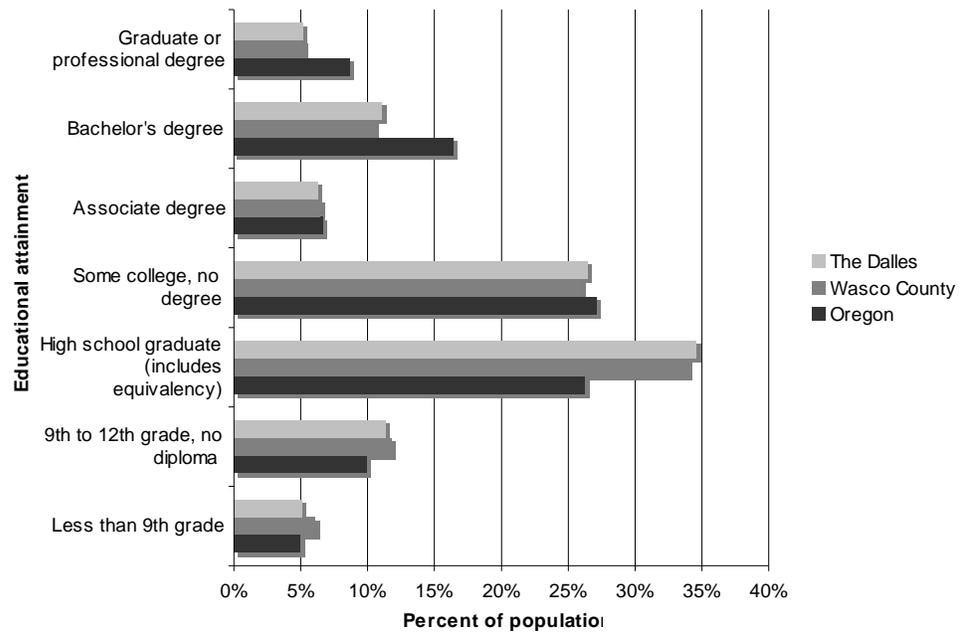
	Number	Percent
Wasco County	2,083	66%
City of The Dalles	1,413	45%
Hood River County	170	5%
Hood River	67	2%
Multnomah County	123	4%
Washington County	73	2%
All Other Locations	698	22%
Total	3,147	100%

Source: U.S. Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2003)

The implication of data presented in this section is that residents of The Dalles are likely to work in The Dalles. Residents and businesses in other areas along I-84 and the Columbia River Gorge. However, are a source of labor and jobs for residents and businesses in The Dalles.

Figure 3-4 shows the percent of population by education level completed in The Dalles, Wasco County, and Oregon. Residents of The Dalles have similar levels of education as residents of Wasco County. Figure 3-4 shows that residents in The Dalles and Wasco County generally have a lower educational attainment than residents for Oregon as a whole. For example, roughly 50% of residents in The Dalles and Wasco County attained an educational level higher than completing high school, compared with roughly 60% for Oregon as a whole. A smaller share of residents in The Dalles or Wasco County earned a Bachelor's degree or higher compared to Oregon as a whole.

Figure 3-4. Educational attainment for the population 25 years and older, Oregon, Wasco County, and The Dalles, 2000



Source: US Census 2000.

Table 3-5 reports the percent of population by ethnicity in Oregon, Wasco County, and The Dalles. This table shows that The Dalles had a higher proportion of Hispanic or Latino residents than Wasco County or Oregon in both 1990 and 2000. Between 1990 and 2000, the Hispanic or Latino population grew at a faster rate in The Dalles than in Oregon, but at a slower rate than Wasco County. In 2000, The Dalles had 1,276 (about 11%) Hispanic or Latino residents.

Table 3-5. Percent of population by ethnicity, Oregon, Wasco County, and The Dalles, 2000

	Oregon	Wasco County	The Dalles
1990			
Total Population	2,842,321	21,683	11,060
Hispanic or Latino	112,707	1,065	666
Percent Hispanic or Latino	4.0%	4.9%	6.0%
2000			
Total Population	3,421,399	23,791	12,156
Hispanic or Latino	275,314	2,214	1,276
Percent Hispanic or Latino	8.0%	9.3%	10.5%
Change 1900-2000			
Hispanic or Latino	162,607	2,108	1,096
Percent Hispanic or Latino	144%	198%	165%

Source: US Census 1990, US Census 2000.

Table 3-6 shows total employment by occupations for persons 16 years or older in Wasco County and Oregon in 2005. The distribution of occupations for

residents of Wasco County is similar to that in Oregon, but Wasco County has a larger share of the population that is not in the labor force than Oregon. The occupations with the largest share of employment were Sales and Related as well as Office and Administration Services, accounting for approximately 13% of employment in Wasco County and 16% in Oregon.

Table 3-6. Employment by occupation for residents 16 years or older in Oregon and Wasco County, 2005

Occupation	Wasco County		Oregon	
	Number	Percent	Number	Percent
Not in Labor Force	7,319	39%	994,491	35%
In Armed Forces	2	0%	2,811	0%
Civilian, Unemployed	887	5%	119,592	4%
Civilian, Employed	10,406	56%	1,750,955	61%
Management, except Farmers and Farm Managers	687	4%	153,247	5%
Farmers and Farm Managers	225	1%	14,097	0%
Business Operation Specialists	144	1%	34,676	1%
Financial Specialists	148	1%	32,915	1%
Computer and Mathematical	46	0%	40,058	1%
Architecture and Engineering	162	1%	39,781	1%
Life, Physical, and Social Science	99	1%	18,161	1%
Community and Social Services	153	1%	29,427	1%
Legal	71	0%	16,228	1%
Education, Training, and Library	559	3%	94,464	3%
Arts, Design, Entertainment, Sports, Media	107	1%	36,320	1%
Healthcare Practitioners and Technical	417	2%	72,370	3%
Healthcare Support	301	2%	32,688	1%
Protective Service	219	1%	27,297	1%
Food Preparation and Serving	679	4%	88,607	3%
Building and Grounds Cleaning, and Maintenance	374	2%	58,756	2%
Personal Care and Service	409	2%	57,962	2%
Sales and Related	1,179	6%	199,759	7%
Office and Administration Services	1,370	7%	258,309	9%
Farming, Fishing, and Forestry	356	2%	29,513	1%
Construction and Extraction	571	3%	94,585	3%
Installation, Maintenance, and Repair	472	3%	65,401	2%
Production	766	4%	142,688	5%
Transportation and Material Moving	892	5%	113,646	4%
Total	18,614	100%	2,867,849	100%

Source: Claritas, percentages calculated by ECONorthwest.

There are several implications of the workforce analysis in this section:

- 1) The majority of working age residents of The Dalles work in The Dalles;
- 2) The workforce in The Dalles is similar to that of Wasco County and Oregon in terms of ethnicity as well as general occupation distribution;
- 3) The educational attainment of the residents of The Dalles is similar to that of Wasco County, but both the County and The Dalles have lower levels of educational attainment than Oregon.

While it does not appear that workforce will be a major constraint on employment growth in The Dalles, workers' education levels may affect the type

of employment growth likely to occur by discouraging employers that require a highly-skilled workforce. We do not expect this effect to be large, because many employers bring some workers with them or attract workers from outside of the region. The relatively low educational attainment in The Dalles may also reflect the relative attractiveness of The Dalles for employers that do not require a highly-educated workforce. If this is true we expect this trend to shift as more households and employers seek out locations with a relatively high quality of life.

HOUSING

Housing is an important factor for economic development strategy because it affects the type of residents and employers who may be attracted to a region. Housing and economic development strategies should consider the availability of affordable housing for all income levels and the impact of housing prices on workforce availability and attractiveness of the community.

Housing choice includes choices about location and the type of housing. When making location decisions, households may consider many factors: costs, views, neighborhood characteristics, quality of schools, tax rates, commute times, and other quality of life issues. Housing type is defined by many attributes, the most important of which are structure type (e.g., single-family, multi-family) and size, lot size, quality and age, and price.

Housing tenure (own/ rent) is another important component of housing choice. Table 3-7 shows the number and percent of dwelling units by type and tenure in The Dalles, Wasco County, and Oregon in 2000. The Dalles has a slightly higher percentage of single-family units than Wasco County or Oregon, and a smaller proportion of manufactured/mobile units than Wasco County or Oregon. Homeownership rates in The Dalles and Oregon are similar.

Table 3-7. Dwelling units by type and tenure, Oregon, Wasco County, and The Dalles, 2000

	The Dalles		Wasco County		Oregon	
	Number	Percent	Number	Percent	Number	Percent
Total Housing Units	5,222	100%	10,544	100%	1,452,709	100%
Single-family	3,618	69%	6,659	63%	959,266	66%
Multifamily	1,332	26%	1,664	16%	334,897	23%
Manufactured/Mobile	272	5%	2,221	21%	158,546	11%
Occupied Housing Units	4,928	100%	9,401	100%	1,333,723	100%
Owner Occupied	3,151	64%	6,432	68%	856,951	64%
Renter Occupied	1,777	36%	2,969	32%	476,772	36%

Source: US Census 2000.

Anecdotal information from local real estate agents suggests that housing costs in The Dalles have increased by approximately 30 to 50% over the last several years but are still lower than in Portland and Hood River. Several real estate agents indicated that new and existing homes are selling faster than any time in recent memory. About half of the home buyers are new to The Dalles and are of a variety of ages and income levels.

The implication of the housing needs analysis is that people are moving to The Dalles, in part, because housing is less expensive in The Dalles than in Hood River or Portland. Table 3-2 shows that about 45% of residents of The Dalles have jobs located outside of The Dalles.

TRANSPORTATION

The Dalles has access to a full range of transportation services for passengers and freight:

- The Dalles is located on Interstate 84, which connects major metropolitan areas in Oregon, Idaho, and Utah. I-84 provides a direct connection between The Dalles and Portland. Highway 197 connects The Dalles to Highway 97 and Central Oregon to the south. To the north, Highway 197 crosses the Columbia River Gorge, connecting The Dalles with Washington Highway 14 which provides access to central and eastern Washington.
- The Dalles is served by Columbia Gorge Regional Airport, located across the Gorge in Klickitat County, Washington. This airport averages about 52 flights per day, mostly single-engine airplanes. The Columbia Gorge Airport does not have scheduled passenger service, but the Portland International Airport is about 80 miles from The Dalles.
- Greyhound provides passenger bus service to The Dalles with five westbound routes and four eastbound routes daily.
- Freight railroads have major east-west mainlines on both sides of the Gorge, providing access to the regional and national rail network. The Union Pacific Railroad operates on the Oregon side of the Gorge, with local access for freight at Dallesport, Washington, three miles across The Dalles Bridge. The Burlington-Northern Railroad operates on the north side of the Gorge, with local rail access at Wishram, Washington about 10 miles east of The Dalles. Passenger rail service is available from Amtrak at Bingen, Washington, located 15 miles from The Dalles.
- Barge services are available through the Port of The Dalles, providing access to the Port of Portland and other Columbia River ports for movement of bulk commodities

PUBLIC POLICY

Public policy support for economic development includes policies that local governments have to support economic activity, such as economic development policies and local tax policies. This section discusses broad economic development policies from The Dalles' comprehensive plan and The Dalles' property tax rate.

The goals and policies from The Dalles' comprehensive plan that support economic development and land needs include:

- Provide family wage employment opportunities
 - Encourage the start-up and growth of small- and medium-sized businesses providing family age jobs, including home business start ups
 - Promote Neighborhood Centers to allow residential and neighborhood commercial uses at focal intersections
 - Convert industrial port land to light industrial/ commercial zoning
 - Encourage investment in The Dalles Central Business District and support activities in the Columbia Gateway/ Downtown Urban Renewal Plan
 - Encourage cooperation between public and private sectors to support economic growth
- Diversify the economic base of the community
 - Promote tourism
 - Strengthen The Dalles as the retail center of the Mid-Columbia region (retail leakage from WA state)
 - Encourage growth of the Mid-Columbia Medical Center and other service, housing, and medical employment opportunities that take advantage of the economy of an aging population
 - Support the forest products industry
 - Reserve industrial zones for industrial uses
- Plan and make prudent public investments to meet economic needs
- Increase the tax base needed to provide an adequate level of community services for The Dalles' citizens

PROPERTY TAXES

The property tax rate in a jurisdiction can affect the location decisions of households and businesses. Table 3-8 shows the average property tax rates per \$1,000 assessed value for Oregon, Wasco County, and The Dalles in 2004-2005. Table 3-8 shows that the property tax rate in The Dalles are generally higher than in Wasco County or Oregon as a whole.

**Table 3-8. Property Tax Rate,
(Dollars per \$1,000
of assessed value), 2004-2005**

	Tax Rate
Oregon	\$15.56*
Wasco County	\$16.56*
The Dalles	\$17.34 to \$20.18

Source: Oregon Dept. of Revenue, www.egov.oregon.gov/DOR/STATS/docs/303-448-05/PTD_stats.htm, accessed May 8, 2006.

*Note: The tax rates shown for Oregon and Wasco County are the average rates for 2004-2005.

WATER

The City of The Dalles' Water Distribution Division provides drinking water to the area within The Dalles' UGB, except for the northwestern part of the city, which is served by the Chenoweth Water Public Utilities District (PUD).

According to Brian Stahl, The Dalles' Director of Public Works, about 80% of the City's water comes from surface sources and the remainder comes from wells. The surface water sources include a variety of rivers, including the Dog River, Alder Creek, Crow Creek, and the south fork of Mill Creek. The water is stored in the Crow Creek Dam, which has a storage capacity of 267 million gallons. Well water comes from three ground water wells, which are located within The Dalles. The water from the wells is used to meet peak water demand from May through October. The wells provide 5,200 gallons of water per minute.

The Dalles has sufficient access to water and water treatment to meet current demands. The water treatment facility treats water from the surface sources only because water from the wells requires disinfection but not treatment. The water treatment facility can deliver 5.6 million gallons per day. The average daily demand during the summer is about 3.5 million gallons per day, with a historic peak of 7 million gallons per day. They expect to have sufficient capacity to meet growth for the next five to ten years and in 2006 finalized a master plan to provide capacity to meet growth for the next 20 years.

The Chenoweth Water Public Utilities District (PUD) serves mostly residential customers in the northwestern part of The Dalles and adjacent unincorporated areas of Wasco County. According to Ben Beseda with the Chenoweth Water PUD, the district gets its water from ground water and three wells. The wells supply a total of between 6,600 and 7,500 gallons of water per minute. The PUD does not have a water treatment plan but chlorinates water when it is pumped.

The PUD has sufficient water to meet current demand for water but may need to find new sources of water to meet future demand. The PUD updated their master plan in 2003 and 2004. Based on growth projections from 2003, they estimated they had sufficient capacity to supply water to meet demand for the next 20 years. However, the rate of growth has increased in recent years, which

may require the PUD to look for additional sources of water to meet future demands.

The cost of water in The Dalles and the Chenoweth PUD is roughly comparable to the cost of water in Hood River.

WASTEWATER

The City of The Dalles' Wastewater Collection Division provides wastewater collection the area within The Dalles' UGB. According to According to Brian Stahl, The Dalles' Director of Public Works, The Dalles has sufficient capacity to treat wastewater through the planning period. The capacity of the wastewater treatment plan is 4.15 million gallons per day. The average volume of wastewater is about 2.3 million gallons per day. The volume increases as a result of infiltration during rainstorms to 2.5 to 3 million gallons per day.

The Wastewater Collection Division completed a master plan in 2002 to address future wastewater needs. The plan took into account expected growth from population changes, UGB build-out, industrial growth, and providing service to Chenoweth Road in the southwest part of the City. Their current facility has sufficient capacity to serve the increasing needs for the next ten years. The master plan includes facility expansion plans to provide treatment capacity for the next 20 years.

The cost of wastewater service to customers within the City limits is comparable to the cost of other providers in the region. Residential customers located outside the City limits (but within the UGB) pay more for wastewater service. This is expected to change as the City limits expand to include these residents.

PRIVATE UTILITIES

The Dalles is served by a variety of private utilities. NW Natural Gas provides natural gas, both Northern Wasco County PUD and Wasco Electric Co-Op provide electricity, and Sprint provides telephone service. Q-life serves The Dalles with a fiber optic loop, which provides high speed broad band Internet access. The Dalles Disposal Service provides solid waste management services.

RENEWABLE AND NON-RENEWABLE RESOURCES

Goal 9 requires economic development plans to consider the availability of renewable and non-renewable resources and pollution control requirements in the planning jurisdiction. Goal 9 also requires economic projections to consider the availability of natural resources to support expanded development, and planning should consider a major determinant the carrying capacity of the air, land, and water resources of the planning area.

For air quality, the Oregon Department of Environmental Quality (DEQ) has historically maintained compliance with all Environmental Protection Agency (EPA) health standards for outdoor air pollutants in The Dalles. Review of DEQ

publications show that air quality should not be a constraint on economic development in The Dalles for several reasons:

- The Dalles is currently in attainment in all areas of the EPA’s National Ambient Air Quality Standards (NAAQS). Jurisdictions that fail to comply with these standards are required, by law, to develop strategic plans to bring the areas back into compliance with the standards and maintain compliance.
- The Dalles should have no trouble complying with the EPA’s increasingly strict particulate matter standards (lowering the particulate matter levels from PM₁₀ to PM_{2.5}), because The Dalles has been below the PM_{2.5} standard since before 2001. (Since 2001, The Dalles’ PM_{2.5} levels have been between 6 and 8 ug/m³, and the limit is 15 ug/m³.) In addition, The Dalles has lower PM_{2.5} levels than most eastern Oregon cities, including Klamath Falls, Bend, and Pendleton.²³
- The Dalles’ Air Quality Summary from 2004 reported that air quality in The Dalles never reached levels of “unhealthy” and only for one day in 2004 reached levels of “unhealthy for sensitive groups.” Air quality is normally “good.”

The capacity of land to support development will be addressed in detail as part of the process for any proposed expansion of the UGB in The Dalles. This analysis will include identification of wetlands, steep slopes, and other physical constraints to growth. Application of the Goal 14 criteria will steer growth toward the most suitable sites given the expansion areas available to The Dalles. While the National Scenic Area Act (NSAA) may limit expansion of The Dalles UGB, once the expanded UGB is established the NSAA encourages development to locate in designated Urban Areas which are exempt from land-use regulation aspects of the legislation. Overall there do not appear to be any physical or external regulatory limits the supply of land in The Dalles.

The previous section addressed the capacity of water and wastewater treatment services to support growth in The Dalles.

QUALITY OF LIFE

Quality of life is difficult to assess because it is subjective—different people will have different opinions about factors affect quality of life, desirable characteristics of those factors, and the overall quality of life in any community. Economic factors such as income, job security, and housing cost are often cited as important to quality of life. These economic factors and overall economic conditions are the focus of this report, so this section will focus on non-economic factors that affect quality of life.

²³ “Air Quality Annual Report and Data Summaries,” Oregon Department of Environmental Quality, www.deq.state.or.us/eq/forms/annrpt.htm, accessed May 15, 2006.

The Dalles' quality of life, combined with its location and access to transportation, is a key comparative advantage for economic development. There are a variety of factors that contribute to the quality of life for residents of The Dalles:

- **The Columbia River Gorge.** The Columbia River Gorge is a unique, scenic area that provides a beautiful setting for The Dalles and access to recreational activities.
- **Sunny, dry weather.** The weather in The Dalles is comparatively sunny and dry.
- **Small town atmosphere.** The Dalles has a small town character and feel.
- **Small-town or rural lifestyle with access to urban amenities.** Residents of The Dalles have the option of choosing to live in a small-town or rural setting but still have relatively easy access to urban amenities in Portland.
- **Outdoor recreational activities.** There are a number of outdoor recreational opportunities available in or near The Dalles, including fishing and boating on the Columbia River, hunting, hiking, windsurfing, skiing, and other activities.
- **Ease of auto access.** The Dalles has easy highway access to Portland, Eastern Oregon and Idaho, Washington, and Central Oregon.
- **Access cultural and urban amenities in Portland.** The Dalles is located about 80 miles from Portland. Residents of The Dalles can access larger scale shopping and cultural amenities in Portland.
- **Access to higher education.** The Columbia Gorge Community College is located in The Dalles and offers Associates degrees in a range of subjects, as well as professional and applied training.

COMPARATIVE ADVANTAGE IN THE DALLES

The mix of productive factors present in The Dalles, relative to other communities in the Columbia River Gorge, form The Dalles' comparative advantage. A primary comparative advantage in The Dalles is its access to transportation and its location within the Columbia River Gorge. This makes The Dalles attractive to residents and businesses that want to live and work in a community that has small-town character and scenic beauty but still need to have access to any of several modes of transportation. Comparatively low housing costs are another important comparative advantage in The Dalles. The Dalles offers a lower-cost housing alternative to Hood River.

Chapter 3 reports industries that have shown growth and business activity in Oregon over the past few years. These industries are indicative of businesses that might locate or expand in The Dalles. The characteristics of The Dalles will affect the types businesses most likely to locate in The Dalles:

- The presence and expected growth of the Columbia Gorge Regional Airport could help The Dalles attract businesses engaged in the manufacture and service of aircraft, avionics, and related equipment.
- The Dalles' semi-rural setting, access to I-84 and other modes of transportation, and workforce availability make The Dalles attractive to businesses in manufacturing. Examples include high-tech electronics, food processing, industrial equipment, recreational equipment, and other specialty manufacturing.
- Access to transportation, including the access to I-84, the railroad, barges, and the airport, makes The Dalles attractive to businesses in the warehousing and transportation sector. Large warehouse facilities that serve large areas appear to favor more central settings, such as the Willamette Valley. The Dalles is more likely to attract more modest facilities that serve a smaller geographic region or that specialize in fewer goods.
- The Dalles' attractive semi-rural setting and quality of life could make it a location for professional, scientific and technical services, which are attracted to areas with high quality of life. Examples include software design, engineering, and research.
- The Dalles' setting within the Columbia River Gorge, access to a variety of outdoor recreation, and the growing presence of viticulture make The Dalles attractive to tourists. Industries that serve tourists, such as food services and accommodations, are likely to grow if tourism increases.
- The comparatively low cost and high availability of electricity, water, and high speed internet connection (via the Q-life fiber optic loop) could make The Dalles attractive to businesses engaged in specialty manufacturing or technology related businesses

Cities exist in an economic hierarchy in which larger cities offer a wider range of goods and services than smaller cities. The location of a community relative to larger cities, as well as its absolute size, affects the mix of goods and services that can be supported by a small city. The Dalles' small size and has implications for the types of retail and service firms most likely to locate in The Dalles:

- The Dalles is the largest city in the Gorge, and it will continue to serve as a regional center for retail, services, and government.
- As a regional center for retail shopping, The Dalles will experience demand for development of big-box and mid-sized retail stores, primarily for Grocery, General Merchandise, and Home Improvement stores. Because of its small population base, The Dalles is unlikely to have demand for large "category killer" retailers such as Petsmart or Borders Books.

- The Dalles will continue to be the location for regional institutions such as the Mid-Columbia Medical Center, the Columbia Gorge Community College, Wasco County Courthouse, and other government offices.
- Population growth in The Dalles will drive demand for more small and specialty retail shops and offices for business, professional, and health care services.

Chapter 4:

Demand for Industrial and Other Employment Land in The Dalles

To provide for at least an adequate supply of commercial and industrial sites consistent with plan policies, The Dalles needs to have an estimate of the amount of commercial and industrial land that will be needed over the planning period. Demand for commercial and industrial land will be driven by the expansion and relocation of existing businesses and new businesses locating in The Dalles. The level of this business expansion activity can be measured by employment growth in The Dalles. This chapter presents a projection of future employment levels in The Dalles for the purpose of estimating demand for commercial and industrial land.

The projection of employment in this chapter has four major steps:

1. **Establish base employment for the projection.** We start with the estimate of covered employment in The Dalles' UGB presented in Chapter 3. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in The Dalles. Employment by sector will be summarized into employment by land use type for the purposes of estimating land demand by type.
2. **Identify potential growth industries in The Dalles.** Given trends in economic activity and expected growth in Oregon, and The Dalles' comparative advantages, we identify the types of firms and industries that may locate in The Dalles.
3. **Project total employment.** The projection of total employment will consider a variety of factors, including historical growth rates and projections for Wasco County.
4. **Allocate total employment to land use types.** This allocation will use assumptions based on expected trends in employment growth by land use type.

The remainder of this chapter is organized by headings that correspond to these three major steps for the projection.

EMPLOYMENT BASE FOR PROJECTION

To forecast employment growth in The Dalles, we must start with a base of employment growth on which to forecast. Table 4-1 shows ECO's estimate of total employment in The Dalles UGB in 2006. To develop the figures, ECO started with estimated covered employment in The Dalles UGB from confidential

Quarterly Census of Workforce and Employment (QCEW) data provided by the Oregon Employment Department. Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Analysis of data shows that covered employment reported by the Oregon Employment Department for Wasco County is only about 80% of total employment reported by the U.S. Department of Commerce. We made this comparison by land use type for Wasco County and used the resulting ratios to convert covered employment to total employment in The Dalles.

Table 4-1 shows The Dalles had an estimated 9,548 employees within its UGB in 2006. This figure results in a relatively low population-to-employment ratio of 1.3 persons per employee. The statewide average is about 1.9 persons per employee. This result is not surprising for The Dalles—the City is a regional employment center and draws workers from throughout the County.

Table 4-1. Estimated total employment in The Dalles UGB by land use type, 2006

Land Use Type/Sector	2004 Covered	Covered % of Total	2004 Total	2006 Total	2006 % of Total
Retail and Services	4,592	72%	6,398	6,604	67%
Retail Trade	1,347	79%	1,715	1,770	18%
Information	99	78%	127	131	1%
Finance and Insurance	174	60%	290	299	3%
Real Estate, Rental, and Leasing	89	31%	284	293	3%
Professional, Scientific, and Technical Services	153	44%	351	362	4%
Management of Companies and Enterprises	94	80%	118	122	1%
Admin., Support Services, and Waste Mgt.	60	80%	75	77	1%
Private Educational Services	38	40%	96	99	1%
Health Care and Social Assistance	1,413	81%	1,742	1,798	18%
Arts, Entertainment, and Recreation	46	44%	104	107	1%
Accommodations and Food Service	777	91%	855	883	9%
Other Services	302	47%	641	662	7%
Industrial	1,239	73%	1,703	1,758	18%
Agriculture, Forestry, & Mining	77	80%	96	99	1%
Utilities	36	92%	39	40	0%
Construction	220	49%	450	465	5%
Manufacturing	655	90%	726	749	8%
Wholesale Trade	166	78%	214	221	2%
Transportation and Warehousing	85	48%	178	184	2%
Government	1,388	96%	1,447	1,490	15%
Total Employment	7,219	76%	9,548	9,856	100%

Source: 2004 covered employment from confidential Quarterly Census of Employment and Workforce data provided by the Oregon Employment Department. Employment summarized by land use type by ECONorthwest. Covered employment as a percent of total employment calculated by ECONorthwest using data for Wasco County employment from the U.S. Department of Commerce, Bureau of Economic Analysis (total) and the Oregon Employment Department (covered). 2004 total employment converted to 2006 total employment by ECONorthwest using an annual growth rate of 1.5% over two years.

POTENTIAL GROWTH INDUSTRIES

The analysis of economic conditions and trends in Chapter 2 and of The Dalles' comparative advantages in Chapter 3 have implications for industries with potential for growth in The Dalles. These implications include the following:

Retail and Services. The State’s forecast for nonfarm employment forecast for 2004 to 2014 (Table 2-10) projects that more than half of employment growth in Region 9, which includes Wasco County, will be in Retail and Services. As a regional center for retail and services, The Dalles may attract the following industries:

- The Dalles may be attractive to big-box and mid-sized retail stores but is unlikely to have the demand for large “category killer” retailers such as Petsmart or Borders Books.
- The Dalles may have growth in small and specialty retail shops and offices for business, professional, and health care services as population increases.
- The Dalles’ setting within the Columbia River Gorge, access to a variety of outdoor recreation, and the growing presence of viniculture make The Dalles attractive to tourists. Industries that serve tourists, such as food services and accommodations, are likely to grow if tourism increases.
- The Dalles’ may be attractive for firms engaged in professional, scientific and technical services, such as software design, engineering, and research.

Government. The State’s forecast for nonfarm employment forecast for 2004 to 2014 (Table 2-10) projects that growth in government will account for about one-third of employment growth in Region 9, including Wasco County. The Dalles may see employment growth in government for the following reasons:

- The Dalles will continue to be the location for regional institutions such as the Columbia Gorge Community College, Wasco County Courthouse, and other government offices.
- The Dalles will have growth in local government as population increases. Assuming that families with young children locate in The Dalles, growth in local government is likely to be dominated by education.

Industrial. The State’s forecast for nonfarm employment forecast for 2004 to 2014 (Table 2-10) projects that growth in industrial sectors will account for the smallest portion of employment growth in Region 9, which includes Wasco County. The Dalles has comparative advantages, such as location and access to transportation, that may contribute to the growth in employment in the following industries:

- The Dalles should be attractive for firms engaged in a range of specialty manufacturing, including aircraft, high-tech electronics, food processing, industrial equipment, and recreational equipment.
- The Dalles should also be attractive for firms engaged in warehousing and distribution. The Dalles is more likely to attract more modest facilities that serve a smaller geographic region or that specialize in fewer goods.

- The Dalles may be attractive to industries that need large amounts of electricity from stable sources.

PROJECTION OF TOTAL EMPLOYMENT

Chapters 2 and 3 presented economic conditions, trends, and forecasts for The Dalles, Wasco County, and Oregon. Using these trends and projections to forecast the rate of total employment growth in The Dalles UGB area requires that we make some qualitative judgments about future conditions:

- Employment in Wasco County has grown faster than population since 1980. Demographic and employment data shows that Wasco County has a higher ratio of residents per job than in Oregon as a whole, in part because Wasco County has a larger share of old residents who are not part of the labor force.
- The Dalles has been, and will continue to be, the employment center of Wasco County. The Dalles currently has almost 73% of the County’s employment, but only 52% of its population. This pattern of employment growth will probably change somewhat—population growth in The Dalles is likely to outpace employment growth, reducing the gap between its share of employment and population.

Based on these judgments, historic employment growth in Wasco County, and the population growth rates forecast for Wasco County and The Dalles, it appears that an appropriate assumption for the average annual rate of total employment growth is 1.6% for the next twenty years. Table 4-2 shows the result of applying this growth rate to the total employment base in The Dalles estimated in Table 4-1.

Table 4-2. Total employment growth in The Dalles UGB area, 2006–2026

Year	Total Employment
2006	9,856
2011	10,670
2016	11,551
2021	12,505
2026	13,538
2006-2026	
Growth	3,682
% Growth	37%
AAGR	1.6%

Source: ECONorthwest.

Note: shaded cells indicate assumptions by ECONorthwest.

To estimate employment growth by land use type in The Dalles UGB, we took the forecasted level of total employment in 2026 (13,538) and allocated this employment among three land use categories. Table 4-3 shows the share of

employment by land use type in 2006 and the assumed shares in 2026. The forecast by land use category does not anticipate a significant shift in the distribution of employment between 2006 and 2026.

Table 4-3. Employment growth by land use type in The Dalles UGB area, 2006–2056

	2006 Total	% of Total	2026 Total	% of Total	2006-2026 Growth
Retail and Services	6,604	67%	8,800	65%	2,196
Industrial	1,758	18%	2,708	20%	950
Government	1,490	15%	2,031	15%	541
Total Employment	9,856	100%	13,538	100%	3,682

Source: ECONorthwest.

Note: shaded cells indicate assumptions by ECONorthwest.

ALLOCATION OF EMPLOYMENT TO LAND-USE TYPES

Employment growth in The Dalles will drive demand for industrial, commercial, and public land. To estimate the demand for land generated by employment growth, ECO used factors for the number of employees per acre for each of the three land use types used in the employment forecast. ECO began this step by making a 10% deduction from total new employment (we refer to this as the “refill” assumption). This deduction accounts for:

- **Percent of total employment growth that requires no commercial or industrial built space or land.** Some new employment will occur outside commercial and industrial built space or land. For example, some construction contractors may work out of their homes, with no need for a shop or office space on non-residential land.
- **Percent of employment growth on non-residential developed land currently developed.** Some employment growth will be accommodated on existing developed or redeveloped land, as when an existing firm adds employees without expanding space.

The next assumption needed to estimate non-residential land need is employees per acre (EPA). This variable is defined as the number of employees per acre on non-residential land that is developed to accommodate employment growth. There are few empirical studies of the number of employees per acre, and these studies report a wide range of results. Ultimately the employees/acre assumptions reflect a judgment about average densities and typically reflect a desire for increased density of development. The final assumption is a net to gross factor. The EPA assumptions are employees per *net* acre (e.g., acres that are in tax lots). As land gets divided and developed, some of the land goes for right-of-way and other public uses. The net to gross factor varies by land use, but 15% is a reasonable assumption for employment lands.

Table 4-4 shows estimated demand for employment land in The Dalles UGB by land use type for the 2006-2026 period. The results show that The Dalles will

need an estimated 278 gross acres of land for employment within its UGB for the 2006-2026 period.

Table 4-4. Estimated demand for employment land in The Dalles UGB by land use type, 2006–2026

Land Use Type	Emp Growth Growth	Emp Growth	Emp Growth	Emp per Net Acre	Land Demand	
		No Land Demand	with Land Demand		Net Acres	Gross Acres
2006-2026						
Retail and Services	2,196	220	1,976	18	110	129
Industrial	950	95	855	10	86	101
Government	541	54	487	12	41	48
Total	3,687	369	3,318		236	278

Source: ECONorthwest.

SITE NEEDS²⁴

OAR 660-009-0025(1) states “...the plan must identify the approximate number, acreage and site characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies.” This section identifies the site requirements of firms that are likely to locate in The Dalles and provides a refined land need estimate that reflects identified site needs.

Firms wanting to expand or locate in The Dalles will be looking for a variety of site and building characteristics, depending on the industry and specific circumstances. Previous research conducted by ECO has found that while there are always specific criteria that change from firm to firm, many firms share at least a few common site criteria. In general, all firms need sites that are relatively flat, free of natural or regulatory constraints on development, with good transportation access and adequate public services. The exact amount, quality, and relative importance of these factors vary among different types of firms. This section discusses the site requirements for firms in industries with growth potential in the Columbia River Gorge and The Dalles.

The site requirements discussed below will be important for the region to consider not only for expected growth sectors, but they are also important factors in the successful development of the site identified as industrial lands of statewide significance.

Employment growth in The Dalles is expected in the each of the categories defined by type of land use: Retail and Services, Industrial, and Government. There are a wide variety of firms within each of these categories, and the required site and building characteristics for these firms range widely. As such, a variety of

²⁴ Parts of this section built from previous research ECO conducted for other cities.

parcel sizes, building types, and land use designations in The Dalles are required to accommodate expected growth.

Table 4-5 summarizes the lot sizes typically needed for firms in selected industries. The emphasis in Table 4-5 is on new large firms that have the most potential to generate employment growth. For example, while the number of convenience stores in the region is likely to grow, the site needs for these stores is not included in Table 4-5 because they are unlikely to generate substantial employment growth. Large food stores, which are typically 50,000 to 100,000 sq. ft. in size, are more likely to generate substantial employment growth in the region, and these stores require sites of 5 to 10 acres.

Table 4-5. Typical lot size requirements for firms in selected industries

Industry	Lot Size (acres)
Manufacturing	
Printing & Publishing	5 - 10
Stone, Clay & Glass	10 - 20
Fabricated Metals	10 - 20
Industrial Machinery	10 - 20
Electronics - Fab Plants	50 - 100
Electronics - Other	10 - 30
Transportation Equipment	10 - 30
Transportation & Wholesale Trade	
Trucking & Warehousing	varies
Retail Trade	
General Merchandise & Food Stores	5-10
Eating & Drinking Places	0.5-5
FIRE & Services	
Non-Depository Institutions	1 - 5
Business Services	1 - 5
Health Services	1 - 10
Engineering & Management	1 - 5

Source: ECONorthwest.

More specific site needs and locational issues for firms in potential growth industries include a range of issues. Table 4-6 summarizes these issues and how they pertain to development in The Dalles.

Table 4-6. Summary of site characteristics

Characteristic	Description	Comments
Flat sites	Flat topography (slopes with grades below 10%) is needed by almost all firms in every industry except for small Office and Commercial firms that could be accommodated in small structures built on sloped sites. Flat sites are particularly important for Industrial firms in manufacturing, trucking, and warehousing, since these firms strongly prefer to locate all of their production activity on one level with loading dock access for heavy trucks.	The Dalles has slopes of between 20-30% west of West 10 th Street, as well as north of Chenoweth Loop on the west side of town. There are also similarly steep slopes south of East 18 th Street.
Parcel configuration and parking	Large Industrial and Commercial firms that require on-site parking or truck access are attracted to sites that offer adequate flexibility in site circulation and building layout. Parking ratios of 0.5 to 2 spaces per 1,000 square feet for Industrial and 2 to 3 spaces per 1,000 square feet for Commercial are typical ratios for these firms. In general rectangular sites are preferred, with a parcel width of at least 200-feet and length that is at least two times the width for build-to-suit sites. Parcel width of at least 400 feet is desired for flexible industrial/business park developments and the largest Commercial users.	The Dalles only has three vacant tax lots that have more than 20 unconstrained industrial acres. Of these, two have three year purchase options. Several of the sites that are between five and 20 acres have long, narrow configurations that may not be attractive to many industries.
Soil type	Soil stability and ground vibration characteristics are fairly important considerations for some highly specialized manufacturing processes, such as microchip fabrications. Otherwise soil types are not very important for Commercial, Office, or Industrial firms—provided that drainage is not a major issue.	Soil types do not appear to be a constraining factor for industrial development in The Dalles
Road transportation	All firms are heavily dependent upon surface transportation for efficient movement of goods, customers, and workers. Access to an adequate highway and arterial roadway network is needed for all industries. Close proximity to a highway or arterial roadway is critical for firms that generate a large volume of truck or auto trips or firms that rely on visibility from passing traffic to help generate business. This need for proximity explains much of the highway strip development prevalent in urban areas today.	The Dalles has good access to I-84, as well as Highways 197 and 14.
Rail transportation	Rail access can be very important to certain types of heavy industries. The region has good rail access to many industrial sites.	The Dalles has access to both freight (Burlington Northern Santa Fe) rail service at Dallesport, WA and passenger (Amtrak) rail service at Bingen, WA.
Air transportation	Proximity to air transportation is important for some firms engaged in manufacturing, finance, or business services.	The Columbia Gorge Regional Airport continues to expand its operations in The Dalles.
Transit	Transit access is most important for businesses in Health Services, which has a high density of jobs and consumer activity, and serves segments of the population without access to an automobile.	Greyhound and The Link, a local passenger bus system, serve The Dalles.

Characteristic	Description	Comments
Pedestrian and bicycle facilities	The ability for workers to access amenities and support services such as retail, banking, and recreation areas by foot or bike is increasingly important to employers, particularly those with high-wage professional jobs. The need for safe and efficient bicycle and pedestrian networks will prove their importance over time as support services and neighborhoods are developed adjacent to employment centers.	The Historic Columbia River Highway connects Troutdale to The Dalles with miles of bicycling trails and safe shoulders. Within The Dalles, the street grid and Riverfront Trail provide easy pedestrian and bicycle access to all areas of town.
Labor force	Firms are looking at reducing their workforce risk, that is, employers want to be assured of an adequate labor pool with the skills and qualities most attractive to that industry. Communities can address this concern with adequate education and training of its populace. Firms also review turnover rates, productivity levels, types and amount of skilled workers for their industry in the area, management recruitment, and other labor force issues in a potential site area.	While the level of educational attainment of the workforce of The Dalles is lower than in surrounding areas, employers demanding highly skilled employees are likely to recruit from outside the region and attract employees because of The Dalles' high quality of life.
Amenities	According to the International Economic Development Council ²⁵ , attracting and retaining skilled workers requires that firms seek out places offering a high quality of life that is vibrant and exciting for a wide range of people and lifestyles.	The Dalles offers a rural lifestyle with access to the Columbia River Gorge National Scenic Area and other outdoor recreation opportunities, the cultural amenities of Portland, and the wine-related tourist attractions of the Hood River Valley.
Fiber optics and telephone	Most if not all industries expect access to multiple phone lines, a full range of telecommunication services, and high-speed internet communications.	The Q-life fiber optic loop provides telecommunications services to a growing variety of industries, including high technology and data storage facilities.
Potable water	Potable water needs range from domestic levels to 1,000,000 gallons or more per day for some manufacturing firms. However, emerging technologies are allowing manufacturers to rely on recycled water with limited on-site water storage and filter treatment. The demand for water for fire suppression also varies widely.	The PUD has sufficient water to meet current demand for water but may need to find new sources of water to meet future demand.
Power requirements	Electricity power requirements range from redundant (uninterrupted, multi-sourced supply) 115 kva to 230 kva. Average daily power demand (as measured in kilowatt hours) generally ranges from approximately 5,000 kwh for small business service operations to 30,000 kwh for very large manufacturing operations. The highest power requirements are associated with manufacturing firms, particularly fabricated metal and electronics. For comparison, the typical household requires 2,500 kwh per day.	Northern Wasco County PUD and Wasco Electric Co-Op provide electricity to The Dalles; the City obtains more than 80% of its electricity from renewable sources.

²⁵ International Economic Development Council. "Economic Development Reference Guide," <http://www.iedconline.org/hotlinks/SiteSel.html>. 10/25/02.

Characteristic	Description	Comments
Land use buffers	According to the public officials and developers/brokers ECO has interviewed, Industrial areas have operational characteristics that do not blend as well with residential land uses as they do with Office and Commercial areas. Generally, as the function of industrial use intensifies (e.g., heavy manufacturing) so to does the importance of buffering to mitigate impacts of noise, odors, traffic, and 24-hour 7-day week operations. Adequate buffers may consist of vegetation, landscaped swales, roadways, and public use parks/recreation areas. Depending upon the industrial use and site topography, site buffers range from approximately 50 to 100 feet. Selected commercial office, retail, lodging and mixed-use (e.g., apartments or office over retail) activities are becoming acceptable adjacent uses to light industrial areas.	The steep slopes separating the northwest area of town (Chenoweth Loop) from the central part of town may provide a buffer for eventual industrial development in that area. On the east side of town, Highway 197 may provide a buffer between industrial development east of the highway and housing west of the highway.

Source: ECONorthwest

In summary, there is a wide range of site requirements for firms in industries with potential for growth in The Dalles. While firms in all industries rely on efficient transportation access and basic water, sewer and power infrastructure, they have varying need for parcel size, slope, configuration, and buffer treatments. Transit, pedestrian and bicycle access are needed for commuting, recreation and access to support amenities.

One way of looking at site needs is to assume the structure of future employment will be more or less like the past. Table 4-7 shows the distribution of employment by firm size in The Dalles for 2004. In 2004, 8 employers with 100 or more employees accounted for 24% of employment in the city. About 90% of the firms had fewer than 25 employees and accounted for 46% of total employment.

Table 4-7. Distribution of employment by firm size, The Dalles, 2004

Firm Size	Number of Firms	Percent of Firms	Total	
			Covered Employment	Percent of Employment
0-9	474	71%	1,497	21%
10-24	127	19%	1,829	25%
25-49	42	6%	1,375	19%
50-99	13	2%	818	11%
100 or More	8	1%	1,700	24%
Total	664	100%	7,219	100%

Source: Oregon Employment Department, analysis by ECONorthwest

Table 4-8 provides an estimated distribution of future employers by size and site needs. ECO used an average ratio of 1.5 firms per site to estimate the number of needed sites by size. The analysis does not distinguish between industrial and other employment types; it is likely that many larger employers (>50 employees) will generally want industrial sites. ‘

The results suggest that The Dalles will need 153 medium-small sites of 10 acres or less, and 4 larger sites (averaging 20 acres each) during the 2006-2026 period. While the city appears to need a lot of smaller sites, it is likely that many of the smaller uses will co-locate in office buildings or retail sites, or will be accommodated through subdivisions or business parks on larger sites.

Table 4-8. Estimated distribution of future employers by firm size and site needs, The Dalles, 2006-2026

Number of Employees	Est # of Firms	New Emp	Sites Needed	Site Size Range	Avg Site Acres (net)	Net Acres Needed	Gross Acres Needed
0 to 9	155	697	104	<1 ac	0.5	47	55
10 to 24	49	829	33	0.5 to 2.5	1.5	49	57
25 to 49	17	630	12	1 to 5	3.1	38	44
50 to 99	5	365	4	3 to 10	6.3	25	30
100 or more	4	796	4	6 to 35	20.3	81	95
Total	229	3317	157			240	282

Source: estimates by ECONorthwest ; modified by Winterbrook Planning in 2011 at direction of City Council

A final question with respect to site needs is where within the City sites for various employment uses should be designated. In many respects the land use pattern for The Dalles is already defined by existing development. As the City reviews its UGB, however, has an opportunity to make adjustments to that land use pattern that will be implemented over the next 20 years. ECO uses the same land use categories used for the land supply analysis for this discussion.

- **Retail and Services.** Retail and service uses have a broad range of site needs. Many of these uses, however, serve local populations. Thus, The Dalles should consider tools to ensure that neighborhood retail and service “nodes” exist within a reasonable distance from existing and planned major residential centers. Some service uses will want to locate in higher density or amenity office locations such as downtowns or office parks. Finally, regional retail uses will want large sites with good auto access and visibility.

In general, we think that cities can be more selective about where retail and service employers get located. Retail and service structures tend to have a shorter usable life and a higher rate of redevelopment. They also tend to have higher vacancy rates in areas where a lot of vacant land is available.

- **Industrial.** As described in this section, industrial uses have a broad range of site needs. In general, major industrial employers will be looking for sites that have good access to transportation (highway and rail), services (water, sewer, etc.), and labor. Thus, sites with good access to I-84 and/or rail, as well as other major highways will be attractive to large industries.

Smaller industrial uses tend to be much more flexible in their locations

and in many respects do not differ substantially from “heavier” retail uses such as automotive repair shops.

- **Government.** Government uses also have a wide range of site needs. Because the amount of new government employment forecast is comparatively small, existing commercial and industrial sites should be able to accommodate these uses.
- **Institutional.** These uses include schools, colleges, hospitals, and related uses. We discuss these separately because some jurisdictions are finding siting such uses problematic. A regional hospital may require a site as large as 100 acres. High schools commonly locate on sites as large as 50 acres. Moreover, institutional uses frequently seek sites in residential areas.

In closing, it is worth noting that the employment forecasts and site needs analysis in this chapter do not take into account a major increase in employment that could result from the location of one or more large employers in the region during the planning period. Major economic events such as the successful recruitment of a very large employer are very difficult to include in a study of this nature. The implications, however, are relatively predictable: more demand for land (of all types) and public services—and redistribution of regional demand.

Implications of land demand and supply in The Dalles

This chapter provides a brief summary of the implications of the economic opportunities needs analysis for The Dalles. This study looked at economic trends and land needs within The Dalles UGB. This chapter includes a comparison of land supply and demand. It concludes with a discussion of the implications of the EOA findings.

COMPARISON OF LAND CAPACITY AND DEMAND

This section compares land demand and capacity. The comparison is based on data presented in this chapter and does not consider local policies or economic development strategies that may imply different site requirements and land needs. OAR 660-009-0025(2) requires cities to designate sufficient land in each site category to accommodate, at a minimum, the projected land needs for each category during the 20-year planning period.

The land inventory data presented in Chapter 3 shows that The Dalles has about 449 gross acres of vacant and redevelopable land designated for industrial and other employment uses. Of these, about 89 gross acres were vacant—60 gross acres designated for industrial uses and 29 gross acres designated for commercial uses. The demand analysis in Chapter 4 concluded that The Dalles needs 282 gross acres for the 2006-2026 period. Using this strict demand-based approach shows that The Dalles has enough total employment land to meet 20-year demand.

However, this simple demand comparison does not consider the site requirements of target industries and other factors required by OAR 660-009 that are important to economic development. Table 5-1 compares site needs identified in Chapter 4 with available sites for the 2006-2026 period.²⁶

²⁶ Table 5-1 is a comparison of available vs needed sites, and determines acreage deficit based on average site size. The surplus (deficit) acreages are approximate. Site needs are met by allocation of suitable and available sites within an acreage range, so needed acreage may vary. Site supply includes 11 sites within the NW Aluminum master planned area.

Table 5-1. Comparison of site needs and site supply, The Dalles UGB, 2006-2026

Site Size Range	Average Site Size	Sites Needed	Net Acres Needed	Supply: Sites	Supply: Net Acres	Needed Sites Surplus (def)	Needed Acres Surplus (def)
< 10	1	153	159	18	74	(135)	(84)
> 10	20	4	81	10	210	6	129
Non-site					49		49
Total		157	240	28	334		94

Source: estimates by ECONorthwest; modified by Winterbrook Planning in 2011 at direction of City Council

The results suggest that The Dalles has a surplus of large sites and acreage available for industrial and other uses. For the 2006-2026 period, the City has a 135-site deficit of small employment sites, and a surplus of six larger (over 10 acre) sites. The Dalles also has about 49 acres of employment land not meeting site requirements that can serve to accommodate very small firms. Some of the surplus industrial land at the larger site sizes may be used to meet smaller lot needs through business park development, but The Dalles should take steps to preserve at least 4 of the larger sites to meet 20-year needs.

SUMMARY AND IMPLICATIONS

The economic opportunities analysis has several implications for the City of The Dalles. Following are the key implications:

- The City has a surplus of industrial land. However, considering regional development trends and state and city policies concerning economic development, we recommend the City maintain its existing industrial land base for industrial and other employment uses.
- Topographic constraints in areas adjacent to the UGB limit the number of large industrial sites that the City could possibly expand into. The City should consider other policy options, including a long-term redevelopment strategy for existing industrial areas. Dallesport may be option that would be attractive to certain industries, but because of distance, the Dallesport Industrial Park is not a viable long-term industrial strategy for The Dalles.
- Some office and retail uses will probably locate on land designated for light industrial uses. This is already reflected in pending land use application the City is currently reviewing. The City should consider policies that restrict commercial uses in some industrial areas.
- Over two-thirds of The Dalles' employment land supply is industrial. Our evaluation of the land capacity analysis is that the City should expand both the central business district and community commercial zones. The City should also consider identifying areas in close proximity to housing where neighborhood commercial services could be located. In addition, the City should consider establishing a business park designation that could accommodate office uses as well as certain light manufacturing uses.

- The City may choose to expand the downtown area, but expanding the Central Business designation will not require land outside the Urban Growth Boundary.
- A considerable amount of the city’s industrial land has constraints—primarily slopes and access. These constraints make the lands less desirable for development.

Finally, local policy also has an affect on the type and distribution of employment. Beyond the land allocation issue described above, jurisdictions that are looking at UGB expansions will be required under Goal 9 to provide a 20-year supply of industrial and other employment land. The Economic Opportunities Analysis suggests that The Dalles will need to plan for a significant amount of new employment—and maintain sites in appropriate sizes and locations to accommodate that employment.