City of Ashland:

Economic Opportunities Analysis

Prepared for

City of Ashland

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 Ashland consistent with the requirements of statewide planning Goal 9 and the Goal 9 administrative rule (OAR 660-009). A goal of this project is to establish a clear economic development direction that identifies the city's strengths and opportunities, and its position in the broader Bear Creek Valley region. This project will facilitate employment opportunities and job creation in Ashland by identifying industrial/employment land needs and developing a catalog of prospective industries, along with an action plan to achieve results.

COMPARISON OF LAND CAPACITY AND DEMAND

Section IV presents an analysis of land availability and capacity for employment uses in Ashland. Section V presents an analysis of potential growth industries in Ashland and the employment forecast for Ashland. Based on this analysis, Table S-1 shows a comparison of land supply and need in terms of sites and acres. The results show that Ashland has a deficit of about 47 sites and six acres. However, the deficit is not in all size categories.

Table S-1. Comparison of vacant land supply and site needs, Ashland UGB, 2006-2027

	Vacant Land Supply		Land Need		Surplus/(Deficit)	
Site Size	Number of Sites	Net Acres	Needed Sites	Needed Acres	Sites	Acres
<1 ac	66	21.9	100-125	33.0	(44)	(11.1)
1-2 ac	19	27.6	15-25	26.0	(1)	1.6
2-5 ac	3	46.9	12-15	42.0	(11)	4.9
5-10 ac	14	49.0	2-4	22.5	11	26.5
10 or more ac	1	9.8	2-4	37.5	(2)	(27.7)
Total	103	155.1	131-173	161.0	(47)	(5.9)

Source: ECONorthwest.

The data in Table S-1 address vacant and partially vacant land. While the analysis in Table S-1 shows a deficit in many of the size categories, it does not account for several other factors:

- *Redevelopment.* The City's buildable lands inventory identified 43 acres of redevelopable land—primarily in the commercial and employment plan designations. Redevelopable lands have capacity for 700 to 800 additional employees.

- *Employment that does not require vacant land*. ECO assumed that 20% of employment would not require any vacant land. This would include employment that locates in residential areas as well as employment that locate on land that is already classified as developed.

The presence of the Croman Mill site will adequately meet the industrial site needs of the community for the 20-year planning period. The remainder of site needs can be met through redevelopment and employment that does not require vacant land. The data also suggest that Ashland could justify a small UGB expansion to add employment land if that is a desired policy direction.

IMPLICATIONS

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

- *Economic growth.* The City can expect more of the same type of economic growth that it has experienced in the past 15 years. It is remarkable how well the 1989 Economic Element update anticipated development trends in the City. While this is a rather obvious and mundane conclusion, it is consistent with the vision established in the Comprehensive Plan. A significant deviation from the plan would be bigger issue for the City because it would either mean (a) the development vision and implementing policies were not effective; or (b) the EOA did not correctly anticipate development trends.

- *Buildable lands.* The City appears to have a close match between land needs and supply. While the site needs analysis identified a deficit of vacant land designated for employment, historically a lot of employment has located in residential areas. Moreover, 700 to 800 jobs could be accommodated on redevelopable lands. The results also suggest the City could justify a small UGB expansion for retail and services uses. One issue with expanding the UGB is that land on the fringe will not be ideally located for retail and service uses.

- *Demand for industrial land*. The EOA clearly demonstrates a need for industrial land in the community. This is an identified change from past trends, but a logical one that takes advantage of a key community resource: the Croman Mill site. ECO recommends that Ashland retain the Croman Mill site in an industrial designation. If this site is converted to other uses, the City will no longer have an industrial land base. Adding new industrial land will be challenging.

- *Plan for industrial uses that are compatible with the City's economic development objectives*. The Croman site is presently zone M-1; the M-1 zone permits a broad range of industrial activities—some of which, in our opinion, are not compatible with the site and surrounding uses. The City should consider preparing a master plan for the site that evaluates appropriate uses and incorporates sustainable development concepts. One option is to develop an "eco-industrial park."[1]

[1] There is a wealth of literature and case studies on Eco-industrial parks. The Smartgrowth network has compiled a series of case studies that help define the concept and how it has been applied in other communities: http://www.smartgrowth.org/library/eco_ind_case_intro.html.

- *Monitor development and land supply*. Land supply monitoring is relatively simple using the existing GIS land base, building permit, and the Quarterly Census of Employment and Wage (QCEW) databases. The City should monitor where employment locates, what rate vacant land is being absorbed, and how much new employment is occurring by industry.

The Economic Opportunities Analysis suggests that Ashland will need to plan for a modest amount of new employment—and land to accommodate that employment. The City may want to review its economic development vision and strategies as a result of this study—as well as make some code changes to reflect economic development potential and ensure that it gets the type of employment growth that it wants.

Section I

Introduction

This report presents an Economic Opportunities Analysis (EOA) for the City of Ashland consistent with the requirements of statewide planning Goal 9 and the Goal 9 administrative rule (OAR 660-009). Goal 9 says that the EOA is "an analysis of the community's economic patterns, potentialities, strengths, and deficiencies as they relate to state and national trends" and states that "a principal determinant in planning for major industrial and commercial developments should be the comparative advantage of the region within which the developments would be located."

BACKGROUND

Ashland plays a unique role in the regional economy of the Bear Creek Valley. Southern Oregon University, combined with a strong tourism industry, are the foundation of the City's economy. The Economic Element of the City's Comprehensive Land Use Plan has not been substantially updated since the late 1980s. A broad range of factors that influence Ashland's economy have changed since that time. Key among these are the transition of the wood products industry, and the technological advances in communications and computing.

There is tangible evidence of how these changes have affected Ashland. Housing prices increased substantially between 2000 and 2006—largely due to external economic factors. This is creating pressure for conversion of employment lands for residential uses. For example, in 2006, the City of Ashland adopted a goal to prepare master plan for the Croman Mill site—a site that represents the majority of the City's industrial land base. The City was getting pressure from developers to convert the land to residential uses. Given the limited employment land base in the City, the conversion of the Croman site represents a major policy decision that has long-term implications. This document, the Ashland Economic Opportunities Analysis (EOA), is intended to update the Economic Element of the Ashland Comprehensive Plan, to respond to the requirements of Goal 9 and OAR 660-009, and to help inform policy decisions such as the Croman Mill site.

A goal of this project is to establish a clear economic development direction that identifies the city's strengths and opportunities, and its position in the broader Bear Creek Valley region. This project will facilitate employment opportunities and job creation in Ashland by identifying industrial/employment land needs and developing a catalog of prospective industries, along with an action plan to achieve results. This report presents the Economic Opportunities Analysis, which is supported with an Implementation Plan and potential code revisions. The Implementation Plan developed as part of this project is presented in a separate document.

FRAMEWORK FOR ECONOMIC DEVELOPMENT PLANNING 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.[2] The analysis in this report is 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. Finally, cities within a Metropolitan Planning Organization (which includes the cities in the Bear Creek Valley) must adopt policies that identify a competitive short-term supply of land for desired industrial and other employment uses as an economic development objective.

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

[2] 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.

industrial and other employment uses to implement plan policies, and must designate serviceable land suitable to meet identified site needs.

Plans for cities and counties within a Metropolitan Planning Organization or cities and counties that adopt policies relating to the short-term supply of land must designate suitable land to respond to economic development opportunities as they arise.

This report is an Economic Opportunities Analysis, the first key element required by Goal 9. This EOA includes an analysis of national, state, regional, and county trends as well as an employment forecast that leads to identification of needed development sites. It also includes an inventory of buildable commercial and industrial land in Ashland.

ORGANIZATION OF THIS REPORT

The remainder of this report is organized as follows:

- **Section II, National, state, regional, county, and local trends** summarizes historic economic trends that affect current and future economic conditions in Ashland.

- **Section III, Factors affecting future economic growth in Ashland** summarizes Ashland's comparative advantages formed by the mix of factors present in Ashland and discusses the implications for the types of firms most likely to locate in Ashland.

- **Section IV, Land Available for Industrial and Other Employment Uses** presents a regional inventory of industrial and other employment lands.

- **Section V, Land Demand and Site Needs in Ashland** presents the employment forecast for Ashland and an estimate of how much land is needed to accommodate the 20-year employment forecast. It also describes the types of sites that are needed to accommodate industries that are likely to locate or expand in Ashland.

- **Section VI, Implications** presents a comparison of land supply and site needs and discusses the implications of the Economic Opportunities Analysis.

This report also includes 3 appendices:

- **Appendix A, Review of National, State, Regional, County, and Local Trends** describes national, state, and local economic trends that will influence the regional economy. It reviews local factors affecting economic development in Ashland and advantages, opportunities, disadvantages, and constraints these factors may present.

- **Appendix B, Comparative Advantages** discusses the comparative advantages formed by the mix of factors present in Ashland.

- **Appendix C, Employment Forecast** presents an employment forecast for Ashland for the periods 2007-2027 and 2007-2057.

Section II

National, State, Regional, County, and Local Trends

This section summarizes national, state, regional, county, and local trends affecting economic growth in Ashland. Each heading in this section represents a key trend that will affect Ashland's economy and economic development potential. A more detailed analysis of economic trends is presented in Appendix A.

POPULATION GROWTH AND IN-MIGRATION

Population growth in Oregon tends to follow economic cycles. Oregon's economy is generally more cyclical than the nation's, growing faster than the national economy during expansions and contracting more rapidly than the nation during recessions. This pattern is shown in Table 1, which presents data on population in the U.S., Oregon, Jackson County, and Ashland over the 1980–2005 period.

Over the 1980 to 2005 period, Jackson County's population grew by 47%, at an average annual rate of 1.55%. About 10% of the County's increase in population happened in Ashland, which grew at average annual rate of 1.35% over the twenty-five year period. The fastest population growth occurred during the 1990's, which was generally an expansionary period.

Table 1. Population change in the U.S., Oregon, Jackson County, and Ashland, 1980-2005

	Population				Change 1980 to 2005		
Area	1980	1990	2000	2005	Number	Percent	AAGR
U.S.	226,545,805	248,709,873	281,421,906	296,410,404	69,864,599	31%	1.08%
Oregon	2,639,915	2,842,321	3,421,399	3,628,700	988,785	37%	1.28%
Jackson County	132,456	146,389	181,269	194,515	62,059	47%	1.55%
Ashland	14,943	16,234	19,522	20,880	5,937	40%	1.35%

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

An important cause of population growth in Oregon and Jackson County is in-migration from other states. Oregon will continue to experience in-migration from other states, especially California and Washington. Ashland's location, weather, and high quality of life make it an attractive place for in-migrants, especially in-migrants from California.

AGING POPULATION

The number of people age 65 and older in the U. S. will double by 2050, while the number of people under age 65 will only grow by 12%. 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.[3]

The population in Ashland is also aging. Table 2 shows the change in age distribution for Ashland between 1990 and 2000. Although population increased in most age groups, the age group that increased the most was people aged 45 to 64, which grew by 2,294 people (85%). This group also grew in Jackson County but not as quickly as it did in Ashland. One cause of the comparative large increases in population aged 45 years and older may be in-migration of people nearing retirement age.

Table 2. Change in age distribution, Ashland, 1990-2000

	1990		2000		Change		
Age Group	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Share**
Under 5	793	4.9%	802	4.1%	9	1.1%	-0.8%
5-17	2,679	16.5%	2,874	14.7%	195	7.3%	-1.8%
18-24	2,712	16.7%	3,413	17.5%	701	25.8%	0.8%
25-44	5,126	31.6%	4,552	23.3%	(574)	-11.2%	-8.3%
45-64	2,691	16.6%	4,985	25.5%	2,294	85.2%	9.0%
65 and over	2,233	13.8%	2,896	14.8%	663	29.7%	1.1%
Total	**16,234**	**100.0%**	**19,522**	**100.0%**	**3,288**	**20.3%**	**0.0%**

Source: U.S. Census, 2000

LOW INCOME AND HIGH HOUSING COSTS

Over the last twenty-four years, income in Oregon has been below national averages and income in Jackson County has been below state averages. There are four basic reasons that income has been lower in Oregon and Jackson County than in the U.S.: (1) wages for similar jobs are lower; (2) the occupational mix of employment is weighted towards lower paying occupations; (3) a higher proportion of the population has transfer payments (e.g. social security payments for retirees), which are typically lower than earnings; and (4) there is a lower proportion of working age residents. To a certain degree, these factors are all true for Oregon and Jackson County. The combination of these factors results in lower income for Oregon and Jackson County.

Household income in Ashland is lower than average income in Jackson County or Oregon. Table 3 shows the median household income in 1999 for Oregon, Jackson County, and Ashland. The median household income in Jackson County was 89% of Oregon's median income. Ashland's median household income was lower than Jackson County's median household income and about 80% of the State median income. According to Claritas Inc., a private market data provider, Ashland's median household income increased from $32,670 in 1999 to $39,306 in 2006.

[3] 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.

One reason that household income in Ashland is lower than in Jackson County or the state average is that Ashland has a larger share of college aged residents (many of whom attend Southern Oregon University). Householders under 25 years have a lower median income than any other age group. The lowest median income for householders under age 25 was in Ashland, where their average household income was less than $14,000 annually. The lower median income for householders under 25 and the greater share of residents in this age group explains why Ashland has a lower median than the County or State average. Ashland's median family income is higher than the County median and nearly the same as the State median.

Table 3. Median household income by age and median family income, Oregon, Jackson County, and Ashland, 1999

	Oregon	Jackson County	Ashland
Median household income	$40,916	$36,461	$32,670
Householder under 25 years	$22,636	$21,327	$13,796
Householder 25 to 34 years	$40,325	$34,169	$21,559
Householder 35 to 44 years	$48,538	$41,534	$38,250
Householder 45 to 54 years	$53,916	$49,437	$46,742
Householder 55 to 64 years	$46,535	$41,760	$47,531
Householder 65 to 74 years	$31,518	$31,111	$44,563
Householder 75 years and over	$23,783	$24,169	$24,385
Median family income	$48,680	$43,675	$49,647

Source: U.S. Census 2000.

In addition to comparatively low income, Ashland has high housing costs. Housing costs in Ashland are the most expensive in Jackson County and some of the most expensive in Oregon (described in Appendix B). In 2005, the median sales price of a single-family dwelling was $389,000. This compares to a regional average of about $270,000. The combination of low wages and high housing costs may constrain the types of people who move to Ashland, making it difficult for employers to fill lower paying jobs. Workers may have to live in communities further from Ashland, causing an increase in commuting.

SHIFTS IN EMPLOYMENT BY SECTOR

Over the past few decades, employment in the U.S. has shifted from manufacturing and resource-intensive industries to service-oriented sectors of the economy. Increased worker productivity and the international outsourcing of routine tasks have lead to declines in employment in the major goods-producing industries.

In the 1970s 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 industry[4] and concurrent growth of employment

[4] SIC 24

in high-technology manufacturing industries (Industrial Machinery, Electronic Equipment, and Instruments[5]). As Oregon has transitioned away from natural resource-based industries, the composition of Oregon's employment has shifted from natural resource based manufacturing and other industries to service industries. The share of Oregon's total employment in Service industries increased from its 1970s average of 19% to 30% in 2000, while employment in Manufacturing declined from an average of 18% in the 1970s to an average of 12% in 2000.

The changes in employment in Jackson County have followed similar trends as changes in national and state employment. Between 1980 to 2000, Jackson County added nearly 31,000 jobs. The sectors with the greatest change in share of employment were Services and Retail Trade, adding 22,295 jobs. The sectors that grew slowest during this period were Wholesale Trade, Government, and Manufacturing. Since 2001, Jackson County has added more than 8,250 jobs, with the most growth in Construction, Health & Social Assistance, and Retail. The Manufacturing sector lost the most employees.

In 2004, Ashland had 9,058 jobs at 1,010 establishments. The sectors with the greatest employment were: Public Administration (18%), Accommodation and Food Services (17%), Health Care and Social Assistance (16%), and Retail Trade (14%). These sectors accounted for 67% of Ashland's jobs.

The sectors with the greatest employment and above average pay were Public Administration with an average pay per employee of $35,067 and Health Care and Social Assistance with an average pay per employee of $29,113. Employees in Retail Trade and Accommodation and Food Services had below average pay.

Compared with Oregon, Ashland has the highest concentration of employment in the following sectors: Health Care and Social Assistance; Retail Trade; and Accommodations and Food Services. The Oregon Employment Department forecasts that demand for services in these sectors will grow. The growth is tied to increases with population growth, continued tourism, the aging population, and in-migration of older people. Other potential growth sectors include Government and Professional, Scientific, and Technical Services. However, the City of Ashland has little direct control over growth in the Government sector, especially Southern Oregon University, which has said it is unlikely to have substantial growth in the foreseeable future.

Ashland's high concentration of employment in tourism-related sectors (Accommodations and Food Services, Retail, and Arts, Entertainment, and Recreation) indicates that these businesses form a tourism cluster in Ashland. Success in growing tourism by businesses in these sectors is likely to benefit businesses in any of these sectors.

[5] SIC 35, 36, 38

OUTLOOK FOR GROWTH IN ASHLAND

Growth in population and employment is expected to continue in Jackson County and Ashland. Ashland's population will grow at a slower rate than the County's population growth rate; employment in Ashland will grow and employment in the County will grow faster than the State. The County's forecast for population growth in Ashland predicts that Ashland's population will continue to grow at a lower rate than the County's population. By 2026, Ashland is expected to have 22,319 people, an increase of 1,439 people.

The City's 2026 population forecast is worth commentary. In 2006, Jackson County conducted a review of population forecasts for all incorporated cities within the County, including Ashland. The final population figures adopted by the County assume a countywide average annual growth rate of about 1%. Ashland, by contrast, has an assumed average annual growth rate of about 0.28%. This lower than average growth rate reflects the tighter land supply and higher housing costs in Ashland relative to other cities in the County. It is likely that Ashland will experience greater population growth than the County has forecasted. The City should monitor population growth over the next five years to determine the impact of actual population growth on land needs.

The State forecasts that employment will continue growing in Region 8 (Jackson and Josephine Counties) faster than the state average. The sectors that will lead employment growth in Region 8 between 2004 to 2014 are: Professional and Business Services, Health Care & Social Assistance, Leisure & Hospitality, and Retail Trade. Ashland has high concentrations of employment in these sectors, which are likely to continue growing in Ashland.

The implications for Ashland of the growth forecasts for Jackson County and Region 8 are:

- Ashland's population and economy will grow but at a slower pace than Jackson County.

- Three of the sectors with the largest share of employment in Ashland are forecast to grow the fastest in Region 8: Health Care & Social Assistance, Leisure & Hospitality (including Accommodations and Food Services), and Retail Trade.

Section III Factors Affecting Future Economic Growth in Ashland

Economic development opportunities in Ashland will be affected by local conditions as well as the national, state, and regional economic conditions that were addressed in Section II and Appendix A. Factors affecting future economic development in the Ashland include its location, availability of transportation facilities and other public facilities, quality and availability of labor, housing availability, and quality of life. Economic conditions in Ashland relative to these conditions in other portions of the Jackson County and southern Oregon form Ashland's comparative advantage for economic development. Ashland's comparative advantages have implications for the types of firms most likely to locate and expand in Ashland.

There is little that Ashland can do to influence national and regional conditions that affect economic development. Ashland can influence local factors that affect economic development. The review of local factors described in Appendix B forms a basis for developing economic development implementation strategies for Ashland.

This section includes a summary of Ashland's comparative advantages and discusses the implications for the firms most likely to locate in Ashland. Appendix B presents a full review of comparative advantages in Ashland.

COMPARATIVE ADVANTAGE IN ASHLAND

The mix of productive factors present in Ashland, relative to other communities in Oregon, is the foundation of the city's comparative advantage. A primary comparative advantage in Ashland is its location on I-5, proximity to California, and high quality of life. This makes Ashland attractive to residents and businesses that want a high quality of life where they live and work.

Ashland's comparative advantages are similar to Oregon's comparative advantages, although the labor force has higher levels of education than Oregon. Some businesses moving to Ashland may have problems finding some types of skilled workers in the region but many firms would likely be able to find skilled workers. Ashland has a full range of services to support businesses and a full range of amenities to create a high quality of life.

Ashland may also have some factors that constrain future employment growth. Housing affordability—particularly workforce housing—is likely to continue to be an issue in the community. The limited land supply in Ashland may be a constraining factor for future employment growth.

Section II reports industries that have shown growth and business activity in Ashland over the past few years. These industries are indicative of businesses that might locate or expand in Ashland.

The characteristics of Ashland will affect the types of businesses most likely to locate in Ashland:

- Ashland's proximity to I-5, high quality of life, the presence of Southern Oregon University, and abundance of cultural amenities and events make it attractive to businesses that need access to educated workers and want a high quality of life. These types of businesses could include software design, engineering, research, and other professional services that are attracted to high-quality settings.

- Ashland's proximity to rural Jackson County, where grapes and orchard fruit are grown, combined with the City's high level of cultural amenities could make Ashland attractive to viniculture and related industries.

- Ashland's location and high quality of life may attract small food processing firms, especially firms specializing in organic or natural foods. Ashland's comparatively limited water availability will discourage water-intensive food processors from locating in Ashland.

- Ashland's amenities, access to outdoor recreation, the Shakespeare Festival and other events, and presence of viniculture make Ashland attractive to tourists. Industries that serve tourists, such as food services and accommodations, are likely to grow if tourism increases.

- Ashland's cultural and shopping amenities make Ashland likely to attract high-end small specialty shops, such as women's clothing or jewelry.

- Ashland's location along I-5, proximity to other cities in Jackson County, and high quality of life may make Ashland attractive for small scale manufacturing firms (e.g., firms with less than 50 employees). Examples include high-tech electronics, recreational equipment, furniture manufacturing, specialty apparel, and other specialty manufacturing. Ashland is less attractive regional for medium and large firms because of limited sites, access, location, and cost.

- Ashland's growing population of retirees or near retirees, climate, location, and high quality of life may attract health services that provide services to older people, such as assisted living facilities or retirement centers.

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. Ashland's small size compared to Medford has implications for the types of retail and service firms most likely to locate in Ashland:

- Population growth and tourism will drive development of small and specialty retail in Ashland.

- Ashland will continue to be the location for regional institutions such as Southern Oregon University and the Ashland Community Hospital, Ashland city government, local schools, and government offices.

Section IV Land Available for Industrial and Other Employment Uses

This section presents an inventory of land available for industrial and other employment uses in the Ashland UGB as required by OAR 660-009-0015(3). The results are based on the *Ashland Buildable Lands Inventory, 2005 Update*.

VACANT BUILDABLE LAND

The City of Ashland updated its buildable lands inventory (BLI) in November 2005. While the stated purpose of the BLI was "…to allow a community to increase the probability that needed housing will be built," the inventory also included industrial and other employment lands.

The 2005 BLI concluded:

> "Within the following tables the amount of 'net' buildable acres are provided for both the City Comprehensive Plan Designations, as well as the City zoning types. The primary distinction between the two is that within the UGB, but outside the City Limits, there exists a considerable amount of buildable land that is not currently zoned to urban densities. All told there is approximately 580 net acres of land within Ashland's UGB that is considered buildable. There is only 338 acres within the City Limits that is currently available." (*Ashland Buildable Lands Inventory Update*, November 2005).

Table 4 shows buildable industrial and other employment lands within the Ashland UGB as of November 2005. The 2005 BLI showed that Ashland had about 213.5 gross buildable acres, and about 155.1 net buildable acres of industrial and other employment land. The majority (96%) of buildable land is in the Employment and Industrial plan designations.

Table 4. Buildable industrial and other employment lands, Ashland UGB, November 2005

Plan Designation	Gross Buildable Acres	Net Buildable Acres	Percent of Total
Commercial	8.2	5.7	3.7%
Downtown	0.1	0.1	0.1%
Employment	134.7	92.4	59.6%
Industrial	70.1	56.7	36.5%
Health Care	0.4	0.2	0.1%
Total	213.5	155.1	100.0%

Source: Ashland buildable lands inventory update, 2005

Map 1 shows the location of vacant and partially vacant industrial and other employment land within the Ashland UGB. The map shows that all of the industrial land is in the Croman Mill Site. The City has three main areas of Employment land: areas on the northwest fringe, the railroad site, and areas north of the Croman Mill site.

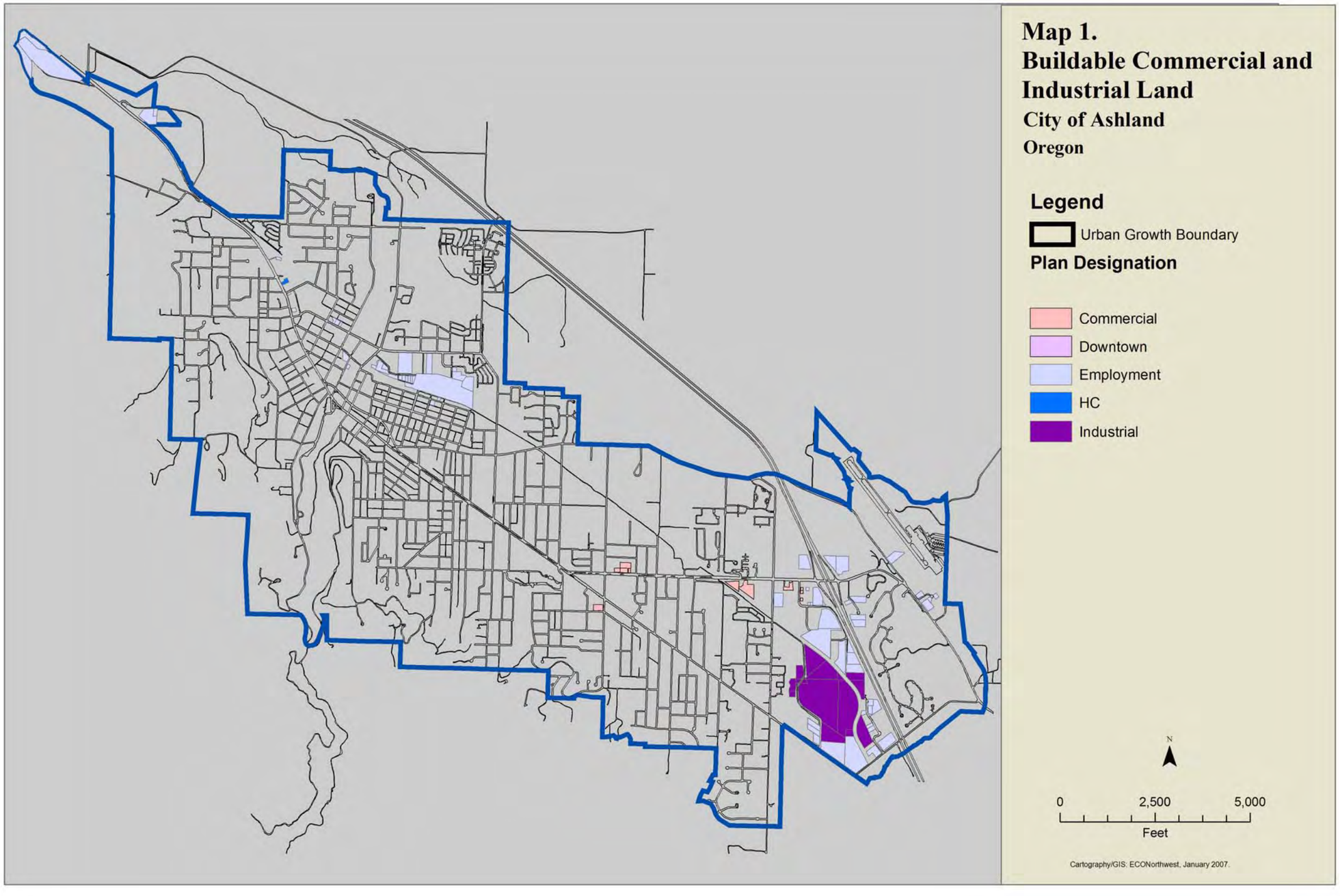
Table 5 shows vacant land by plan designation by parcel size.[6] This analysis is useful in that it shows the distribution of vacant land by parcel size, which allows an evaluation of whether a sufficient mix of parcels is available. The distribution varies by plan designation. For example, relatively few vacant parcels exist in the Commercial and Industrial designations, while the greatest number of parcels is in the Employment designation. The results show that Ashland has only 3 parcels of 10 acres or larger that are vacant or partially vacant. This masks the fact that all of the industrial parcels are adjacent to one another and form a single site that is over 70 acres.

Table 5. Vacant and partially vacant industrial and other employment land by plan designation and lot size

	Lot Size (Net Buildable Acres)							
Plan Designation	**<0.25**	**0.25-0.49**	**0.50-0.99**	**1.00-1.99**	**2.00-4.99**	**5.00-9.99**	**10.00 ac or larger**	**Total**
Acres								
Commercial	0.6	1.1	2.1	1.9	0.0	0.0	0.0	5.7
Downtown	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Employment	2.6	5.4	6.1	20.4	32.2	9.8	15.9	92.4
Health Care	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Industrial	0.3	1.5	1.9	5.3	16.7	0.0	31.0	56.7
Total Acres	3.7	8.1	10.1	27.6	49.0	9.8	46.9	155.1
Number of Tax Lots								
Commercial	4	3	3	1	0	0	0	11
Downtown	1	0	0	0	0	0	0	1
Employment	18	17	9	15	10	1	1	71
Health Care	1	0	0	0	0	0	0	1
Industrial	4	4	2	3	4	0	2	19
Total Tax Lots	28	24	14	19	14	1	3	103
Percent of Acres	2.4%	5.2%	6.5%	17.8%	31.6%	6.3%	30.2%	100.0%
Percent of Tax Lots	27.2%	23.3%	13.6%	18.4%	13.6%	1.0%	2.9%	100.0%

Source: Ashland buildable lands inventory update, 2005; analysis by ECONorthwest

[6] The table shows vacant, buildable acres in vacant and partially vacant parcels.


Map 1.
Buildable Commercial and Industrial Land
City of Ashland
Oregon
Legend
Urban Growth Boundary
Plan Designation
Commercial
Downtown
Employment
HC
Industrial
N
0
2,500
5,000
Feet
Cartography/GIS: ECONorthwest, January 2007.

REDEVELOPMENT POTENTIAL

Redevelopment potential addresses land that is classified as developed that may redevelop during the planning period. While many methods exist to identify redevelopment potential, a common indicator is improvement to land value ratio. A threshold used in some studies is an improvement to land value ratio of 1:1. Not all, or even a majority of parcels that meet this criterion for redevelopment *potential* will be assumed to redevelop during the planning period. The 2005 BLI update identified redevelopable land, but did not include it in the buildable land base.

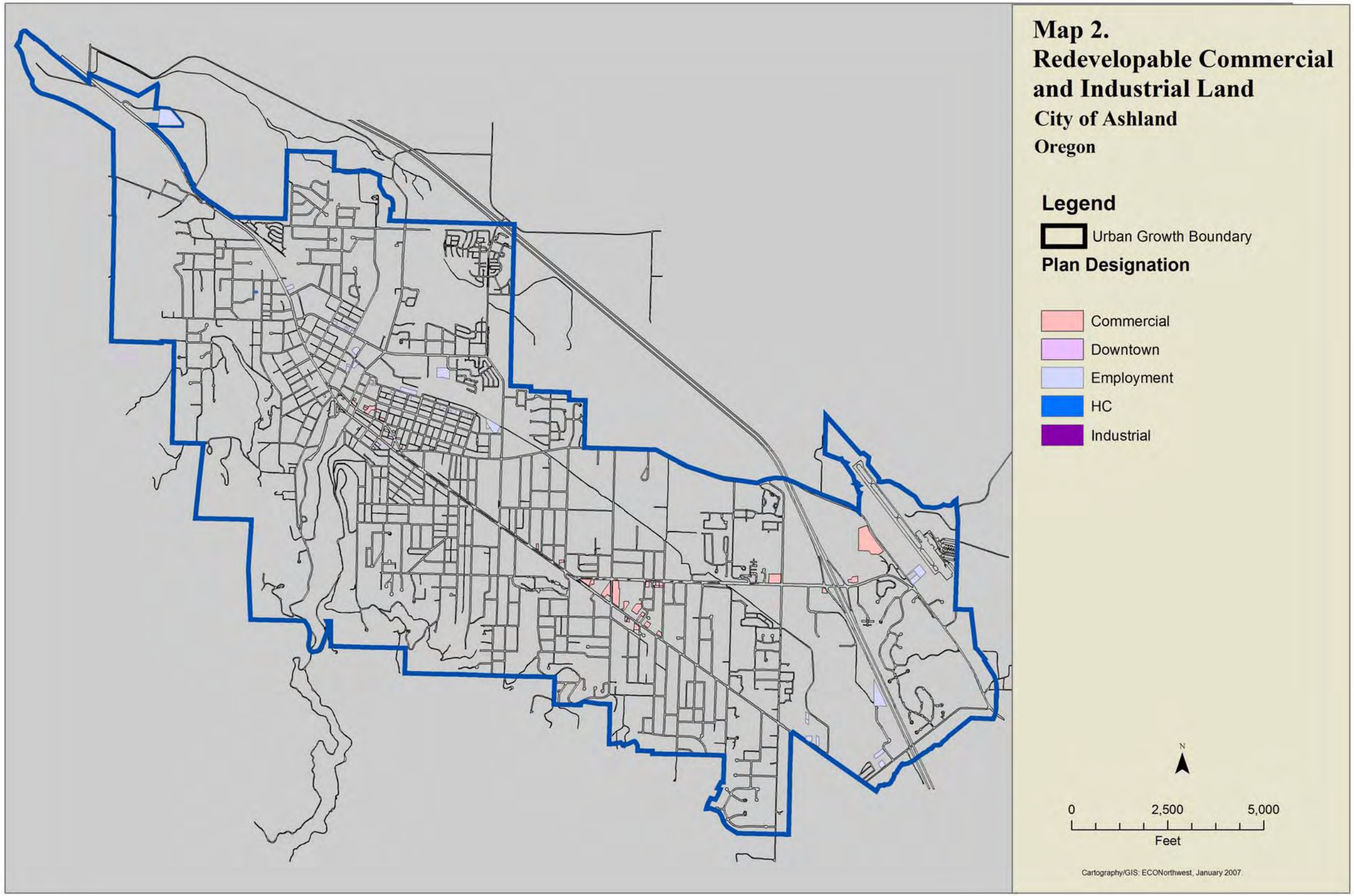
Table 6 summarizes redevelopable industrial and other employment land in the Ashland UGB. The data indicate that Ashland has about 43.8 net redevelopable acres in designations that accommodate employment. The land area is relatively evenly split between Commercial and Employment. No industrial lands were identified as redevelopable.

Table 6. Tax lots with redevelopment potential, Ashland UGB, November 2005

Plan Designation	Number of Tax Lots	Net Redevelopable Acres
Commercial	36	21.5
Downtown	7	0.9
Employment	37	21.3
Heath Care	1	0.1
Total	**81**	**43.8**

Source: Ashland buildable lands inventory update, 2005; analysis by ECONorthwest

Map 2 shows the location of redevelopable lands by plan designation in the Ashland UGB. The map suggests that redevelopable lands are dispersed throughout the community.


Map 2.
Redevelopable Commercial and Industrial Land
City of Ashland
Oregon
Legend
Urban Growth Boundary
Plan Designation
Commercial
Downtown
Employment
HC
Industrial
N
0
2,500
5,000
Feet
Cartography/GIS: ECONorthwest, January 2007

EMPLOYMENT DENSITY AND LAND CAPACITY

A key 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. The purpose of the employment density analysis is twofold: (1) to establish empirically historical densities in Ashland; and (2) to estimate employment capacity of vacant and partially vacant land in the Ashland UGB. Ultimately the employees/acre assumptions reflect a judgment about average densities and typically reflect a desire for increased density of development. Analysis ECO has done in other jurisdictions indicates that considerable variation can exist within individual industries and land use designations.

The DLCD Goal 9 Guidebook (*Industrial and Other Lands Analysis Guidebook*¸ DLCD, 2005) provides detailed guidance on how to comply with the revised Goal 9 Rule (OAR 660-009, amended December 2005). The guidebook suggests the following allowances (expressed in jobs per acre): Industrial Sector: 8-12; Commercial/Service Sector: 6-10; Institutional/Government: 6-10; and Other/Uncovered Employment: 6-10.

Table 7 shows actual employment densities in Ashland by plan designation. The analysis shows that employment is located in every plan designation in the City; the data in Table 7, however focuses on those plan designations that are intended to accommodate employment and have buildable lands. The results show an average employment density (measured in employees per acre) of 17.2. The results also show considerable variation in employment densities by plan designation—ranging from a high of 91.6 in the downtown designation to a low of 9.2 in the employment designation.

Table 7. Employment density by plan designation, Ashland UGB, 2004

Plan Designation	Employees	Net Acres	Emp/Ac
Commercial	1,843	117.2	15.7
Downtown	1,521	16.6	91.6
Employment	1,287	139.6	9.2
Industrial	177	14.6	12.1
Health Care	659	30.9	21.3
Total	**5,486**	**319**	**17.2**

Source: Quarterly Census Of Employment And Wages (QCEW), Ashland Buildable Lands Inventory, 2005 update; analysis by ECONorthwest

One of the key objectives of this analysis is to determine employment capacity within the Ashland UGB. This is consistent with the Goal 9 administrative rule requirement that cities provide a 20-year supply of buildable industrial and other employment land. Table 8 shows estimated employment capacity for vacant and partially vacant employment lands in the Ashland UGB in 2005. Table 8 shows Ashland has capacity for between about 1,600 and 2,250 additional employees on

these lands. This probably underestimates overall employment capacity in the city for two reasons: (1) it does not consider capacity added through redevelopment; and (2) it does not address the fact that the City has considerable employment that is located in residential areas. Based on these considerations, the City has capacity for 700-800 additional employees on lands identified as redevelopable in the 2005 inventory update.

Table 8. Estimated employment capacity, industrial and other employment land, Ashland UGB, 2005

		Employment Density		Capacity	
Plan Designation	Net Buildable Acres	DLCD Average	City Observed	Based on DLCD Average	Based on City Observed
Commercial	5.7	17	15.7	96	89
Downtown	0.1	17	91.6	1	9
Employment	92.4	17	9.2	1571	851
Industrial	56.7	10	12.1	566	683
Health Care	0.2	17	21.3	3	4
Total	**155.1**			**2,237**	**1,636**

Source: Quarterly Census Of Employment And Wages (QCEW), Ashland Buildable Lands Inventory, 2005 update; analysis by ECONorthwest

Note: DLCD employment density average is the average of ranges presented in the *Industrial and Other Lands Analysis Guidebook, Appendix B*, DLCD. The ranges are: Industrial Sector—allowance (typically 8-12 jobs/ac); Commercial/Service Sector—allowance (typically 14-20 jobs/ac); Institutional/Government Sector—allowance (typically 6-10 jobs/ac).

SHORT-TERM LAND AVAILABILITY

Because Ashland is part of an MPO, it must address the short-term supply requirement of the Goal 9 Administrative Rule (OAR 660-009-0025(3). Ashland's Comprehensive Plan recognizes that short-term supply is important:

> With the exception of these types of industries, Ashland can provide for the lands set-aside for commercial and industrial development, all key public facilities. All of Ashland's commercial and industrial land resource either has or has access to adequate sewer, water, transportation, and storm drainage. (Comprehensive Plan, Section 7.04)

While the Economic Element was last updated in 1989, the City has not added any employment land or made significant changes to the employment land designations. Thus, all of Ashland's land supply is available for development from an infrastructure perspective. Land availability (e.g., properties available for sale) does not appear to be an issue. Anecdotally, individuals interviewed for this project did not indicate that availability is a big issue in Ashland at this time.

The Croman Mill site is the City's only major industrial site. While it is technically available in the short-term, because it is a redevelopment site, it may take more than one year for the site to be ready for development.

Section V Land Demand and Site Needs in Ashland

To provide for at least a 20-year supply of commercial and industrial sites consistent with plan policies, Ashland needs 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 Ashland. The level of this business expansion activity can be measured by employment growth in Ashland.

EMPLOYMENT FORECAST

This section presents an analysis of potential growth industries and a forecast of employment for Ashland for 2007-2027 and 2007-2057. Appendix C presents the process used to project employment growth in Ashland and the employment forecast.

POTENTIAL GROWTH INDUSTRIES

An analysis of growth industries in Ashland should address two main questions: (1) Which industries is Ashland most likely to attract? and (2) Which industries best meet Ashland economic objectives? The types of industries that Ashland wants to attract have the following attributes: high-wage, stable jobs with benefits; non-polluting industries; industries that use comparatively little water; and industries that are compatible with Ashland's community values.

The School of Business at Southern Oregon University prepared a report titled "Industrial Clusters and Jackson and Josephine Counties." This report identified twelve industrial clusters in the Rogue Valley, which are likely to grow in the Rogue Valley. The clusters that may be successful or have potential growth in Ashland include:

- **Headquarters**. This is a growing cluster in the Rogue Valley that includes Management of Companies. Firms may choose to locate in Ashland because of its comparative advantages.

- **Elder Care.** The report identified elder Community Care, which includes large retirement residences and senior foster homes, as cluster with potential for future growth in the Rogue Valley. Ashland's quality of life and access to health care make it an attractive place for elder care facilities.

- **Wood products.** The Rogue Valley has a growing amount of employment in manufacturing furniture, especially in Household and Institutional Furniture and Kitchen Cabinet Manufacturing. Firms involved in furniture

manufacturing may be attracted to Ashland for its quality of life or retail opportunities.

- **Creative.** The report identifies Performing Arts Companies as a cluster with potential for future growth. Ashland's high-amenity tourism and existing performing arts businesses make it a natural place for other performing arts firms to locate. Other creative sectors that may be attracted to Ashland include Clay Production and Glass and Glass Products Manufacturing, which might be able to take advantage of existing retail outlets, such as art galleries.

- **Tourism and Recreation.** The report indicates that Ashland has a higher than average concentration of firms in the Accommodation and Food Services sector. While this cluster may continue to provide employment in Ashland, it has shown slow growth over recent years and has much lower than average wages. This cluster may be more important for the services that it provides to other businesses in Ashland, rather than providing additional jobs.

- **Food and Beverage Production.** This cluster includes wine production. Wineries may be attracted to Ashland because of the presence of other tourism, high-end retail, recreational activities, and other cultural amenities.

A separate analysis of clusters specific to Ashland reinforces the conclusions of the "Industrial Clusters and Jackson and Josephine Counties" report. Based on this analysis, following are growth industries or are likely to be growth industries in Ashland: Accommodations and Food Services; Retail; Health and Social Assistance; Arts, Entertainment, and Recreation; Information; and Professional, Scientific and Technical Services.

Another way that Ashland's employment market may change is through growing or attracting specialty manufacturing. In the past, Ashland has attracted or grown firms engaged specialty manufacturing that could have located many places in the U.S. but chose to locate in Ashland because of the city's unique attributes, such as the City's high quality of life. The websites of most of these firms describe the company's dedication to environmental issues, sustainable production, and concern about the community. Some examples of specialty manufacturing firms in Ashland include:

- **Dagoba Organic Chocolates** produces a variety of chocolate products in Ashland. Dagoba purchases equitably traded ingredients and uses sustainable practices to produce its chocolate.

- **Maranatha Nut Butters** was founded in Ashland in 1982. They produce specialty organic and natural peanut, nut, and seed butters.

- **Dream Sacks** manufactures natural fiber bed linens and clothing. The materials they use include silk, bamboo, soy, and cashmere.

- **Sappo Hill** produces vegetable oil soaps. Sappo Hill was started in the founder's home in Ashland and manufacturing is now done in a factory in Ashland.

- **Plexis Healthcare Systems** develops and supports medical claims software. According to the Portland Business Journal, Plexis was the second fastest growing technology company in Oregon in 2005. Their customers include 80 healthcare payer organizations across the U.S. and international clients.

- **Brammo Motorsports LLC** manufactures specialty sports cars and located in Ashland in 2006. According to the Oregon Employment Department, Brammo hopes to employ eventually approximately 100 workers in Ashland.

This analysis of industrial clusters and specialty manufacturing, the analysis of economic conditions and trends in Section II, and Ashland's comparative advantages in Section III have implications for the industries with potential for growth in Ashland. Based on these assumptions, the types of firms that may locate in Ashland include the following:

Retail and Services. About three-quarters of Ashland's current employment is in retail and services. The State's forecast for nonfarm employment forecast for 2004 to 2014 (Table A-9) projects that about two-thirds of employment growth in Jackson and Josephine Counties will be in Retail and Services. Ashland may attract the following industries:

- Ashland may attract retail and services to serve residents, such as financial institutions, drug stores, and grocery stores.

- The aging population in Ashland, both from aging of existing residents and in-migration of retirees, may attract healthcare related firms that provide services to older people, such as assisted living facilities or retirement centers.

- Population growth, changing demographics, and tourism may drive more development of small and specialty retail shops, as well as offices for business, professional, and health care services.

- Ashland's amenities, high quality of life, and the presence of Southern Oregon University may be attractive for firms engaged in professional, scientific and technical services, such as software design, engineering, and research.

- Ashland's proximity to outdoor recreation areas and attractions like the Shakespeare Festival makes Ashland highly attractive to tourists. Industries that serve tourists, such as food services, accommodations, and specialty retail, are likely to grow if tourism increases.

Manufacturing and Light Industry. Ashland has comparative advantages, such as location, access to transportation, access to natural resources, and high quality of live that may contribute to the growth in employment in the following light industries:

- Ashland should be attractive to small-scale light manufacturing firms. Examples include high-tech electronics, recreational equipment, furniture manufacturing, specialty apparel, and other specialty manufacturing.

- Ashland's high amenities, tourism, and proximity to where fruits are grown should make Ashland attractive to viniculture and related industries.

- Ashland may be attractive to small food processing firms, especially firms specializing in organic or natural foods. Constraints on the amount of potable water available in Ashland will discourage water-intensive food processors from locating in Ashland.

Government and Institutional. As population grows in Ashland, government employment will grow. The following types of public employment may grow in Ashland:

- Demand for government services, such as education, will grow with population.

- Ashland will continue to be the location for regional institutions such as Southern Oregon University, the Ashland Community Hospital, Ashland City governmental offices, and local schools.

PROJECTION OF TOTAL EMPLOYMENT

Sections II and III presented economic conditions, trends, and forecasts for Ashland, Jackson County, and Oregon. Using these trends and projections to forecast the rate of total employment growth in Ashland's UGB requires making some qualitative judgments about future conditions:

- Employment in Jackson County has grown faster than population since 1980. Demographic and employment data shows that Jackson County the ratio of residents per job has been decreasing since 1980, meaning that there are more jobs per person in Jackson County in 2005 than there were in 1980.

- Ashland's ratio of residents per job is lower than Jackson County's. This indicates that Ashland is an employment center in Jackson County. People work in Ashland but live in other cities. SOU and Ashland's tourism industry are two industries that probably attract employees from other communities.

- Ashland's residential and employment markets are unique in Jackson County and possibly unique in Oregon. Housing prices and housing

densities are higher in Ashland than in most places in Oregon, except the Portland Metro area. Even with the higher housing prices and densities, Ashland continues to be attractive to residents and businesses. It is likely that employment in Ashland will continue to grow faster than population.

- The employment capacity, described in Section IV, on vacant and partially vacant industrial and other employment lands in Ashland is between about 1,600 and 2,250 employees, plus an additional 700 to 800 employees on redevelopable land.

Based on these trends and assumptions, historic employment growth in Jackson County, and the population growth rates forecast for Jackson County and Ashland, an appropriate assumption for the average annual rate of total employment growth is 0.75% for the next twenty-years. Table C-2 shows the result of applying this growth rate to the total employment base in Ashland estimated in Table C-1. Between 2027 to 2057, the employment growth rate assumption was decreased to 0.35% annually. A more detailed description of the rationale underlying these assumptions is presented in Appendix C. This assumption is consistent with the growth rate assumption in the City's coordinated population forecast. This results in an average annual growth rate of 0.51% for the 2007-2057 period.

Table 9. Total employment growth, Ashland UGB, 2007–2057

Year	Total Employment
2007	13,107
2012	13,606
2017	14,124
2022	14,662
2027	15,220
2037	15,761
2047	16,321
2057	16,901
2007-2027	
Growth	2,113
% Growth	16%
AAGR	0.75%
2007-2057	
Growth	3,794
% Growth	29%
AAGR	0.51%

Source: ECONorthwest.
Note: shaded cells indicate assumptions by ECONorthwest.

To estimate employment growth by land use type in the Ashland UGB, the forecasted level of total employment in 2027 (15,220) was distributed among the three categories of land use types based on existing employment patterns. Table 10 shows the share of employment by land use type in 2007 and the assumed

shares in 2027 and 2057. The forecast by land use category does not anticipate a significant shift in the distribution of employment between 2007 and 2027.

Table 10. Employment growth by land use type in Ashland's UGB, 2007–2057

Land Use Type	2007 Total	% of Total	2027 Total	2057 Total	% of Total	2007-2027 Growth	2007-2057 Growth
Retail and Services	9,764	74%	10,654	11,831	70%	890	2,067
Industrial	1,503	11%	2,283	2,535	15%	780	1,032
Government	1,840	14%	2,283	2,535	15%	443	695
Total Employment	13,107	100%	15,220	16,901	100%	2,113	3,794

Source: ECONorthwest.
Note: shaded cells indicate assumptions by ECONorthwest.

SITE NEEDS

OAR 660-009-0015(2) requires the EOA identify the number of sites, by type, reasonably expected to be needed for the 20-year planning period. Types of needed sites are based on the site characteristics typical of expected uses. The Goal 9 rule provides flexibility in how jurisdictions conduct and organize this analysis. For example, site types can be described by plan designation (i.e., heavy or light industrial), they can be by general size categories that are defined locally (i.e., small, medium, or large sites), or it can be industry or use-based (i.e., manufacturing sites or distribution sites).

The analysis of site needs presented in this section builds from existing development patterns in Ashland, an employment forecast, and an evaluation of the types of sites that industries most likely to locate in Ashland need. The analysis is presented in aggregate and by major uses (e.g., industrial and retail/services).

SITE REQUIREMENTS OF EXISTING BUSINESSES

Firms wanting to expand or locate in the Ashland 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 southern Oregon.

A review of existing employment centers in Ashland is instructive in the context of site needs. As stated in the Ashland Comprehensive Plan, Ashland enjoys a diversity of locations for economic activity:

- **Downtown.** The Downtown area, the first and most important area of economic activity for the City, is the heart of the City. It provides a variety of retail goods and services, and also serves as the center of tourist activity in the City.

- **Railroad District.** The Railroad District, adjacent to Downtown, is an historic commercial center along A Street has had a resurgence of activity in recent years. It is a mixed-use area, providing a variety of retail, service, industrial, warehouse, and residential uses.

- **Hersey Street Industrial Area.** North of the railroad district is the Hersey Street industrial area, which extends from Laurel Street to Ann Street. This area features mostly manufacturing and service related industries.

- **North Main.** North Main, from the downtown to the north City limits, is an area of mixed development.

- **Valley View Commercial Area.** The Valley View commercial area provides important retail activity. It is outside the City limits, but inside the Urban Growth Boundary. The strongest activity in this area is automobile sales.

- **Siskiyou Boulevard** has scattered commercial and institutional development from the City limits to the downtown. Like North Main, the mix of residential use with limited commercial development enhances the community's appearance.

- **Ashland-Walker Streets.** South of Ashland Street extending to Walker Street is a commercial retail area. South of Walker a mixture of neighborhood retail and residential development dominate the landscape.

- **Mistletoe-Washington Street**. The City's largest area of manufacturing employment is the Mistletoe-Washington Street area. This large area bounded by the freeway on the east, the Railroad tracks and Tolman Creek Road on the west, Ashland Street on the north, and Siskiyou Boulevard on the south.

- **Home Occupations.** In addition, significant economic activity occurs in the form of home occupations throughout the City. Many of Ashland's most successful firms began as home occupations, and when they outgrew their homes, moved to larger facilities. In 2004, nearly 1600 employees were located in residential zones.

In summary, employers in Ashland occupy a variety of site sizes and types. These sites are interspersed through the community and provide a rich, diverse urban form.

LONG-TERM LAND AND SITE NEEDS

Employment growth in Ashland 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. This step began by making a deduction from total new employment (referred to as the "refill" assumption). This deduction accounts for: (1) percent of total employment growth that requires no commercial or industrial built space or land; and (2) percent of employment growth on non-residential developed land currently developed.

Typical refill deductions range from 10% in small cities to 30% or more for larger areas. For example, Portland Metro estimated refill at around 40% for 1996 and 1997 in a small empirical study they conducted. A reasonable refill rate for Ashland probably falls somewhere in the middle. Based on analysis of the City's buildable land inventory, ECO estimates that Ashland has capacity for 700-800 employees on redevelopable lands. This redevelopment potential adds 30% to 50% to the City's overall employment capacity. Moreover, the City has a high rate of employment that is not located on lands designated for employment uses. About 17% of all employees in Ashland in 2004 were located in residential zones. However, some employers (retail and manufacturing, for example) will be required to locate on employment land. Thus, it is reasonable to assume that 20% of new employment will not require vacant commercial or industrial land.

The next set of assumptions 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 25% is a reasonable assumption for employment lands. This assumption is consistent with the net to gross factor used by the City in the Buildable Lands Update.

Table 11 shows estimated demand for employment land in the Ashland UGB by land use type for the 2007-2027 and 2007-2057 periods. The results show that Ashland will need an estimated 165 gross acres of land for employment within its UGB for the 2007-2027 period and 283 gross acres between the 2007-2057 period.

Table 11. Estimated demand for employment land in the Ashland UGB by land use type, 2007–2027 and 2007-2057

Land Use Type	Total New Emp.	Emp. On Refill Land	Emp. on New Land	Emp. Per Net Acre	Land Need (Net Acres)	Land Need (Gross Acres)
2007-2027						
Retail and Services	890	178	712	17	41.9	55.8
Industrial	780	156	624	12	52.0	69.3
Government	443	89	354	12	29.5	39.4
Total	**2,113**	**423**	**1,690**		**123.4**	**164.6**
2007-2057						
Retail and Services	2,067	413	1,654	17	97.3	129.7
Industrial	1,032	206	826	12	68.8	91.7
Government	695	139	556	12	46.3	61.8
Total	**3,794**	**379**	**3,415**		**212.4**	**283.2**

Source: ECONorthwest.

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

Most businesses in Ashland occupy small sites. Analysis of the employment data and the City's buildable lands inventory indicates only three employers on sites larger than 10 acres. These include SOU and the Airport. About 90% of businesses in Ashland are located on sites smaller than one acre. Many sites have multiple employers.

The Economic Element of the Comprehensive Plan also identifies industries that are unsuitable for Ashland. This includes:

a. Businesses, which use large amounts of water, especially when Ashland's water needs peak.

b. Businesses that emit significant amounts of air pollution.

c. Businesses that create toxic wastes that require specialized disposal techniques not available locally.

Thus, the City has determined that water intensive and polluting industries are inappropriate for Ashland. This still leaves a broad range of economic activities that are possible in Ashland. As discussed above, Ashland will continue to see growth in Retail and Service industries (particularly those serving tourists), Specialty Manufacturing, and Government and Institutional uses. Site needs for firms in these potential growth industries include the following attributes:[7]

[7] The following discussion is taken in part from the *Bear Creek Valley Economic Opportunities Analysis*, ECONorthwest, 2006.

- **Flat sites:** Flat topography (slopes with grades below 10%) is desirable to all firms in every industry except certain retail and services. As evidenced by existing development in Ashland, Office and Commercial firms can be accommodated in small structures built on sloped sites. Flat sites are particularly important for Industrial firms in manufacturing.

- **Parcel configuration and parking:** Larger 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.

- **Soil type:** Soil types are not very important for the types of firms likely to locate or expand in Ashland—provided that drainage is not a major issue.

- **Road transportation:** Most firms are heavily dependent upon surface transportation for efficient movement of goods, customers, and workers.

- **Rail Transportation**: Rail access can be very important to certain types of heavy industries. Because of the limited sites and opportunities for heavy manufacturing, rail access is of limited importance to the types of forms likely to locate or expand in Ashland.

- **Air transportation:** Proximity to air transportation is important for some firms engaged in manufacturing, finance, or business services.

- **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.

- **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 overtime as support services and neighborhoods are developed adjacent to employment centers.

- **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.

- **Potable water:** Potable water needs range from domestic levels to 1,000,000 gallons or more per day for some manufacturing firms. The demand for water for fire suppression also varies widely. Ashland has already identified that it is unsuitable for water intensive industries.

- **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. For comparison, the typical household requires 2,500 kwh per day.

- **Land use buffers:** According to the public officials and developers/brokers ECO has interviewed, many 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.

In summary, the site requirements for industries have many common elements. Firms in all industries rely on efficient transportation access and basic water, sewer and power infrastructure, but may 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.

Table 12 shows the distribution of developed industrial and other employment lands by plan designation and lot size. The results show expected trends: the majority of employees and employers are located on small lots; a few industries are located on larger lots.

Table 12. Distribution of developed industrial and other employment land by plan designation and lot size, Ashland, 2004

	Lot Size (net acres)								
Percent of	<0.25 ac	0.25 - 0.49 ac	0.50 - 1.00 ac	1.00 - 1.99 ac	2.00 - 4.99 ac	5.00 - 9.99 ac	10.00 - 19.99 ac	20.00 ac or larger	Total
Employees	35%	14%	14%	11%	15%	9%	1%	0%	100%
Acres	8%	10%	15%	20%	25%	5%	19%	0%	100%
Employers	44%	21%	16%	11%	6%	1%	1%	0%	100%

Source: Ashland Buildable Lands Inventory Update 2005, Quarterly Census of Employment and Wages; analysis by ECONorthwest

The analysis in Table 12 is informative in the context of identifying the site needs of future employers:

- *The majority of need is for small sites in areas that accommodate retail and service uses.* About 63% of all employees and 81% of employers in Ashland are located on sites of less than one acre. There will be demand for these sites in a variety of locations—downtown will be a primary area, but neighborhood shopping areas will also be important. It is possible that

the railroad district (on both sides of the tracks) will see significant development and redevelopment activity.

- *There may be need for a few medium size sites for retail and services.* These sites would range from one to five acres and might accommodate grocery stores and other related neighborhood uses, specialty retail, and auto-related retail and service. Given that little population is forecast for the planning period, there will not be a lot of demand for these uses.

- *The City should designate at least one site for a master planned industrial park.* The Croman Mill Site is the largest industrial site in Ashland. The site is largely vacant and is getting pressure for housing and associated retail uses. The employment forecast, however, is for 600 to 700 industrial jobs. Most of these will be in specialty manufacturing and other light industries. Ashland will have difficulty accommodating this employment if it does not have an industrial land base. The Croman site is approximately 70 acres; it is unlikely that any individual user would require more than five acres. Many will need less than one acre.

- *The City should clarify its desire to attract employers that require large sites.* Ashland currently does not have any sites that have good freeway access and would be attractive to large retail or industrial employers. Because the City does not have such sites, it discourages such employers. A logical location for large sites (5 to 10 acres) for firms that need good freeway access would be near the airport. Other cities have had success locating industrial land near the airport because industrial uses are likely to be compatible with the airport.

Table 13 shows site needs by site size and major employment use. The estimate of needed sites builds off of the 20-year employment forecast. Employees and employers are distributed in ratios similar to those shown in Table 12. This distributions assumes that Ashland will continue to attract similar types of employers in the future as exist in the City now. It also assumes that the average number of employers per firm (9) will continue into the future.

The results show that Ashland needs to provide between 131 and 173 sites to accommodate employment growth between 2006 and 2026. About one-third of these sites will need to be industrial sites; the remainder will be used for retail, services, government, and institutional uses.

Table 13. Needed sites by site size and major use, Ashland, 2006-2027

Site Size	Est # of Firms	Est. Emp 2006-2026	Sites Needed		
			Industrial	Other	Total
<1 ac	188	1268	30-40	80-95	100-125
1-2 ac	28	317	5-9	10-16	15-25
2-5 ac	15	254	4-5	8-10	12-15
5-10 ac	2	211	1-2	1-2	2-4
10 or more ac	2	63	1-2	1-2	2-4
Total	**235**	**2113**	**41-58**	**100-125**	**131-173**

Source: estimates by ECONorthwest

The identified site needs shown in Table 13 do not distinguish sites by comprehensive plan designation. About 17% of Ashland's employment in 2004 was located in residential areas. It is reasonable to assume that none of the industrial uses will locate (or be permitted to locate) in residential zones. Based on historic employment patterns, it is reasonable to assume that between 15% and 25% of the other sites can be provided in residential zones. It is also reasonable to assume that the majority of these firms would locate on sites of less than one acre. Thus, the need for sites under one acre in the Downtown, Commercial and Employment land designations would be between 55 and 75.

SHORT-TERM SITE NEEDS

Because Ashland is part of an MPO, it must address the short-term supply requirement of the Goal 9 Administrative Rule (OAR 660-009-0025(3). As discussed in the buildable lands inventory section, all of the industrial and other employment sites are serviced or serviceable within one year. Based on the identified land needs, the City does not have a need for any certified industrial sites.

Implications

This chapter provides a brief summary of the implications of the economic opportunities needs analysis for the City of Ashland. This study looked at economic trends and land needs from a regional and local perspective. This chapter includes a general comparison of land supply and demand. The buildable lands analysis is followed by a discussion of the key implications of the EOA for the City of Ashland.

COMPARISON OF LAND CAPACITY AND DEMAND

This section compares land demand and capacity. 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 comparison is based on data presented Sections III and IV of this report.

Table 14 shows a comparison of land supply and need in terms of sites and acres. The results show a deficit of about 47 sites and six acres. However, the deficit is not in all size categories.

Table 14. Comparison of vacant land supply and site needs, Ashland UGB, 2006-2027

	Vacant Land Supply		Land Need		Surplus/(Deficit)	
Site Size	Number of Sites	Net Acres	Needed Sites	Needed Acres	Sites	Acres
<1 ac	66	21.9	100-125	33.0	(44)	(11.1)
1-2 ac	19	27.6	15-25	26.0	(1)	1.6
2-5 ac	3	46.9	12-15	42.0	(11)	4.9
5-10 ac	14	49.0	2-4	22.5	11	26.5
10 or more ac	1	9.8	2-4	37.5	(2)	(27.7)
Total	103	155.1	131-173	161.0	(47)	(5.9)

Source: ECONorthwest.

The data in Table 14 address vacant and partially vacant land. While the analysis in Table 14 shows a deficit in many of the size categories, it does not account for several other factors:

- *Redevelopment.* The City's buildable lands inventory identified 43 acres of redevelopable land—primarily in the commercial and employment plan designations. Redevelopable lands have capacity for 700 to 800 additional employees.

- *Employment that does not require vacant land*. ECO assumed that 20% of employment would not require any vacant land. This would include

employment that locates in residential areas as well as employment that locates on land that is already classified as developed.

The presence of the Croman Mill site will adequately meet the industrial site needs of the community for the 20-year planning period. The remainder of site needs can be met through redevelopment and employment that does not require vacant land. The data also suggest that Ashland could justify a small UGB expansion to add employment land if that is a desired policy direction.

IMPLICATIONS

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

- *Economic growth.* The City can expect more of the same type of economic growth that it has experienced in the past 15 years. It is remarkable how well the 1989 Economic Element update anticipated development trends in the City. While this is a rather obvious and mundane conclusion, it is consistent with the vision established in the Comprehensive Plan. A significant deviation from the plan would be bigger issue for the City because it would either mean (a) the development vision and implementing policies were not effective; or (b) the EOA did not correctly anticipate development trends.

- *Buildable lands.* The City appears to have a close match between land needs and supply. While the site needs analysis identified a deficit of vacant land designated for employment, historically a lot of employment has located in residential areas. Moreover, 700 to 800 jobs could be accommodated on redevelopable lands. The results also suggest the City could justify a small UGB expansion for retail and services uses. One issue with expanding the UGB is that land on the fringe will not be ideally located for retail and service uses.

- *Demand for industrial land*. The EOA clearly demonstrates a need for industrial land in the community. This is an identified change from past trends, but a logical one that takes advantage of a key community resource: the Croman Mill site. ECO recommends that Ashland retain the Croman Mill site in an industrial designation. If this site is converted to other uses, the City will no longer have an industrial land base. Adding new industrial land will be challenging.

- *Plan for industrial uses that are compatible with the City's economic development objectives*. The Croman site is presently zone M-1; the M-1 zone permits a broad range of industrial activities—some of which, in our opinion, are not compatible with the site and surrounding uses. The City should consider preparing a master plan for the site that evaluates

appropriate uses and incorporates sustainable development concepts. One option is to develop an "eco-industrial park."[8]

- *Monitor development and land supply*. Land supply monitoring is relatively simple using the existing GIS land base, building permit, and the Quarterly Census Of Employment And Wages (QCEW) databases. The City should monitor where employment locates, what rate vacant land is being absorbed, and how much new employment is occurring by industry.

The Economic Opportunities Analysis suggests that Ashland will need to plan for a modest amount of new employment—and land to accommodate that employment. The City may want to review its economic development vision and strategies as a result of this study—as well as make some code changes to reflect economic development potential and ensure that it gets the type of employment growth that it wants.

[8] There is a wealth of literature and case studies on Eco-industrial parks. The Smartgrowth network has compiled a series of case studies that help define the concept and how it has been applied in other communities: http://www.smartgrowth.org/library/eco_ind_case_intro.html.

Review of National, State, Regional, County, and Local Trends

Appendix A

This appendix summarizes national, state, regional, county, and local trends affecting Ashland. It presents a demographic and socioeconomic profile of Ashland (relative to Jackson County and Oregon) and describes trends that will influence the potential for economic growth in Ashland. This chapter covers recent and current economic conditions in the City, and forecasts from the State Employment Department for employment growth in Jackson County. This appendix meets the intent of OAR 660-009-0015(1).

NATIONAL, STATE, REGIONAL TRENDS

Economic development in Ashland will be effected by national, state, and regional economic trends over the next twenty to fifty years. This section presents a summary of significant long-term trends that may affect Ashland's economy.

NATIONAL TRENDS

Economic development in Ashland 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 with 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.[9]

- **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.[10]

[9] 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.

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

- **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.[11]

- **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.[12]

- **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.[13]

- **The impact of rising energy costs.** As energy costs rise, the share of income spent on transportation will also rise, resulting in energy conservation measures and diversification of energy sources. Changing prices will affect transportation choices by households and businesses, including travel mode and travel patterns in the short run and vehicle purchases and location decisions in the long run. [14]

- **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 energy demanded. Energy sources will diversify and the energy efficiency of automobiles, appliances, and production processes will increase.[15]

- **Continued westward and southward migration of the U.S. population.** Although there are some exceptions at the state level, a 2006 U.S. Census

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

[12] Jay M. Berman, 2005.

[13] 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.

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

[15] Energy Information Administration, 2006.

report documents an ongoing pattern of interstate population movement from the Northeast and Midwest to the South and West.[16]

- **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.[17]

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 Ashland 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 will continue to experience in-migration from other states, especially California and Washington. 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.[18] 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.[19]

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[16] 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.

[17] 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.

[18] 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.

[19] 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.

- **Concentration of population and employment in the Willamette Valley.** Nearly 70% of Oregon's population lives in the Willamette Valley. About 10% of Oregon's population lives in Southern Oregon and 8% lives in Central Oregon. 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 over 70% of Oregon's employment was located in the Willamette Valley over the period 1970-2004.

- **Shift from natural resource-based to high-tech industries.** Since 1970, 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 industry[20] and concurrent growth of employment in high-technology manufacturing industries (Industrial Machinery, Electronic Equipment, and Instruments[21]).

- **Change in the type of the industries in Oregon.** As Oregon has transitioned away from natural resource-based industries, the composition of Oregon's employment has shifted from natural resource based manufacturing and other industries to service industries. The share of Oregon's total employment in Service industries increased from its 1970s average of 19% to 30% in 2000, while employment in Manufacturing declined from an average of 18% in the 1970s to an average of 12% in 2000.

- **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.[22] A recent analysis, based on 2003 data, ranked Oregon 33rd.[23] 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.

[20] SIC 24

[21] SIC 35, 36, 38

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

[23] CFED, 2006, The Development Report Card for the States, http://www.cfed.org.

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.

ECONOMIC TRENDS IN JACKSON COUNTY AND ASHLAND

Future economic growth in Ashland 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 Ashland. In addition, the relationship between demographic and economic indicators such as population and employment can help assess the local influence of future trends and resulting economic conditions. This section addresses the following trends in Ashland: population and demographics, household and personal income, employment, and business activity.

POPULATION CHARACTERISTICS

Population growth in Oregon tends to follow economic cycles. Oregon's economy is generally more cyclical than the nation's, growing faster than the national economy during expansions and contracting more rapidly than the nation during recessions. This pattern is shown in Table A-1, which presents data on population in the U.S., Oregon, Jackson County, and Ashland over the 1980–2005 period.

Table A-1 shows Oregon grew more rapidly than the U.S. in the 1990s (which was generally an expansionary period) but lagged behind the U.S. in the 1980s. Oregon's slow growth in the 1980s was primarily due to the nationwide recession early in the decade. Oregon's population growth regained momentum in 1987, growing at annual rates of 1.4%–2.9% between 1988 and 1996. Population growth for Oregon and its regions slowed in 1997 and remained slow between 2000 and 2005, averaging 1.1% or 1.2% annually, the slowest rate since 1987.

Jackson County grew faster than Oregon during this time period. Jackson County's population increased from 132,456 in 1980 to 194,515 in 2005, an increase of 62,059 people at an average annual rate of 1.55%. About 10% of the County's increase in population happened in Ashland, which grew by 5,937 people at average annual rate of 1.35% over the twenty-five year period.

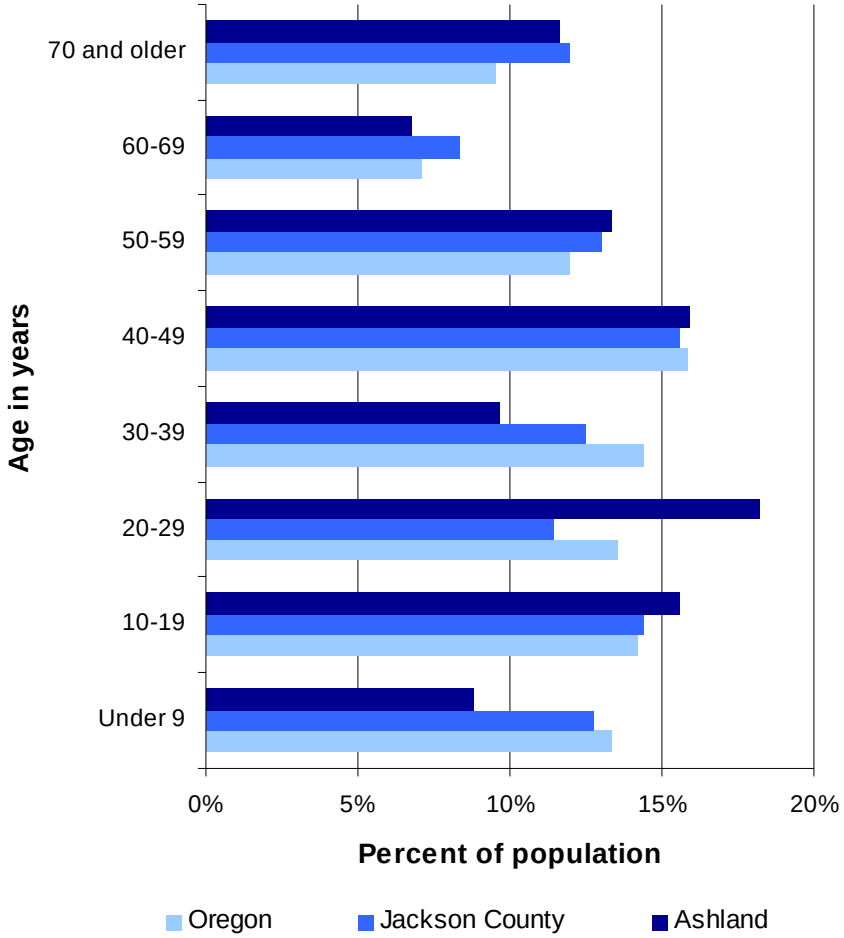
Table A-1. Population change in the U.S., Oregon, Jackson County, and Ashland, 1980-2005

	Population				Change 1980 to 2005		
Area	1980	1990	2000	2005	Number	Percent	AAGR
U.S.	226,545,805	248,709,873	281,421,906	296,410,404	69,864,599	31%	1.08%
Oregon	2,639,915	2,842,321	3,421,399	3,628,700	988,785	37%	1.28%
Jackson County	132,456	146,389	181,269	194,515	62,059	47%	1.55%
Ashland	14,943	16,234	19,522	20,880	5,937	40%	1.35%

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

Figure A-1 shows the populations of Oregon, Jackson County, and Ashland by age for 2000. The age distribution is similar for Jackson County and Oregon, except that Jackson County has a larger share of the population under age 50 than Oregon. Ashland has a greater proportion of its population aged 20 to 29 than either Jackson County or Oregon. This reflects the Southern Oregon University student population. Ashland also has a smaller share of the population under age 9 than Jackson County or Oregon.

Figure A-1. Population distribution by age, Oregon, Jackson County, and Ashland, 2000



Source: U.S. Census, 2000

Table A-2 shows the change in age distribution for Ashland between 1990 and 2000. Population increased in all age groups, except for age 25 to 44 years. The age group that increased the most was people aged 45 to 64, which grew by 2,294 people (85%). This group also grew in Jackson County but not as quickly as it did in Ashland. The smallest increases were in people aged 25 to 44, which shrank by 574 people, and people under 5 years.

Table A-2. Change in age distribution, Ashland, 1990-2000

	1990		2000		Change		
Age Group	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	793	5%	802	4%	9	1%	-1%
5-17	2,679	17%	2,874	15%	195	7%	-2%
18-24	2,712	17%	3,413	17%	701	26%	1%
25-44	5,126	32%	4,552	23%	(574)	-11%	-8%
45-64	2,691	17%	4,985	26%	2,294	85%	9%
65 and over	2,233	14%	2,896	15%	663	30%	1%
Total	**16,234**	**100%**	**19,522**	**100%**	**3,288**	**20%**	**0%**

Source: U.S. Census, 2000

Table A-3 shows the household composition for Ashland, Jackson County, and Oregon. Ashland has a lower share of households with children than Jackson County or Oregon. Ashland also has a higher share of nonfamily households than Jackson County or Oregon, possibly as a result of the presence of Southern Oregon University. The average household size and average family size are smaller in Ashland than Jackson County or Oregon.

Table A-3. Household composition, Ashland, Jackson County, and Oregon, 2000

	Ashland		Jackson County		Oregon	
Household Type	Number	Percent	Number	Percent	Number	Percent
Households with children	**2,159**	**25%**	**21,663**	**30%**	**410,803**	**31%**
Married couples	1,244	15%	15,032	21%	296,404	22%
Female householder, no husband present	727	9%	4,865	7%	83,131	6%
Other families	188	2%	1,766	2%	31,268	2%
Households without children	**6,378**	**75%**	**49,869**	**70%**	**922,920**	**69%**
Married couples	1,949	23%	23,021	32%	396,128	30%
Other families	371	4%	3,739	5%	70,740	5%
Nonfamilies	4,058	48%	23,109	32%	456,052	34%
Total Households	**8,537**	100%	**71,532**	100%	**1,333,723**	100%
Average Household Size	2.14		2.48		2.51	
Average Family Size	2.8		2.95		3.02	

Source: U.S. Census, 2000

The implications of the data presented in this section are that Ashland is attracting college aged people and people nearing retirement or are retired. The relatively small increase between 1990 and 2000 in children under 17 years and people aged 25 to 44 years suggests that Ashland is not attracting families with children. This suggestion is supported by the comparatively low average family and household sizes.

HOUSEHOLD AND PERSONAL INCOME

Table A-4 shows the median household income in 1999 for Oregon, Jackson County, and Ashland. The median income in Jackson County was 89% of Oregon's median income. Ashland's median income was lower than Jackson County's median income and about 80% of the State median income.

Table A-4 shows that the median income for householders under 25 years was lower than any other age group in Oregon, Jackson County, and Ashland. The

median income for householders under 25 year was lowest in Ashland, where people in this age group had a median income of less than $14,000. The lower median income for householders under 25 and the greater share of residents in this age group (shown in Figure A-1) explains why Ashland has a lower median than the County or State average but higher house prices than the County average. Ashland's median family income is higher than the County median and nearly the same as the State median.

Table A-3. Median household income by age and median family income, Oregon, Jackson County, and Ashland, 1999

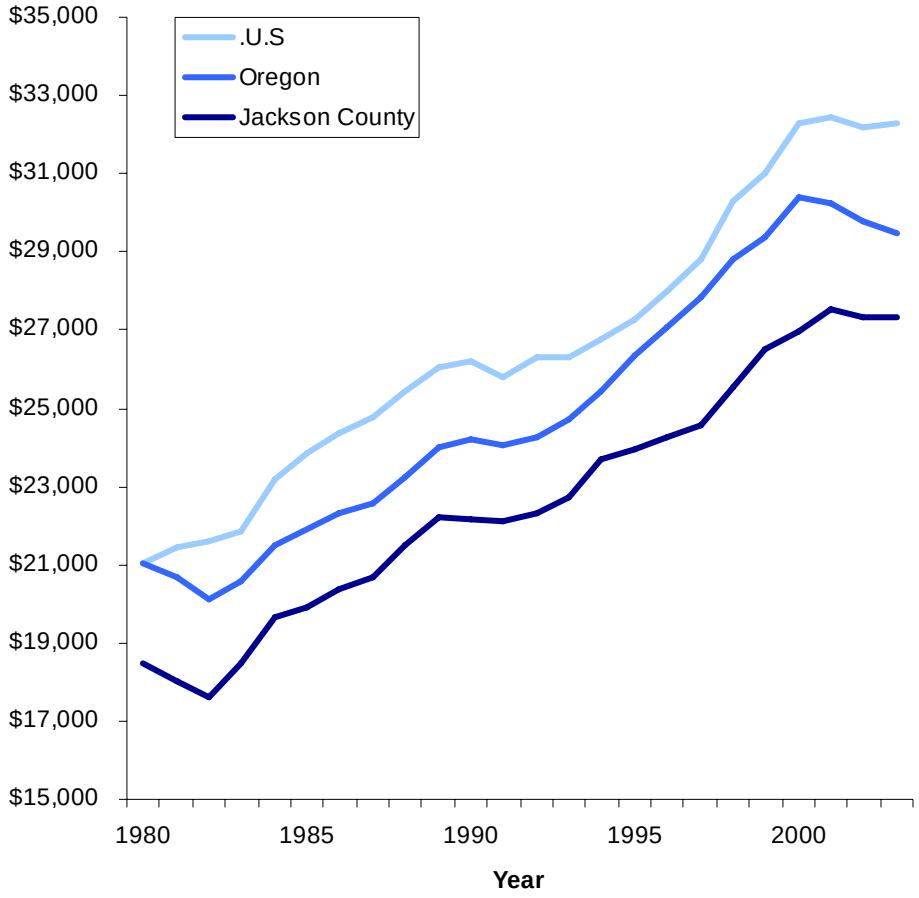
	Oregon	Jackson County	Ashland
Median household income	$40,916	$36,461	$32,670
Householder under 25 years	$22,636	$21,327	$13,796
Householder 25 to 34 years	$40,325	$34,169	$21,559
Householder 35 to 44 years	$48,538	$41,534	$38,250
Householder 45 to 54 years	$53,916	$49,437	$46,742
Householder 55 to 64 years	$46,535	$41,760	$47,531
Householder 65 to 74 years	$31,518	$31,111	$44,563
Householder 75 years and over	$23,783	$24,169	$24,385
Median family income	$48,680	$43,675	$49,647

Source: U.S. Census 2000.

Figure A-2 shows the change in per capita personal income for the U.S., Oregon, and Jackson County between 1980 and 2004. Oregon's per capita personal income is consistently lower than the U.S. personal income. Jackson County's personal income is consistently lower than Oregon's personal income. Over the twenty-three year period, per capita personal income grew at nearly the same pace in each of these areas. Fluctuations in the national economy generally resulted in larger changes in per capita personal income in Oregon and Jackson County than for the entire U.S. Jackson County's per capita personal income grew by nearly 54% during the time period, while personal income grew by 45% in Oregon and 57% nationally.

There are four basic reasons that per capita earnings are lower in Oregon and Jackson County than in the U.S.: (1) wages for similar jobs are lower; (2) the occupational mix of employment is weighted towards lower paying occupations; (3) a higher proportion of the population has transfer payments (e.g. social security payments for retirees), which are typically lower than earnings; and (4) there is a lower proportion of working age residents. To a certain degree, these factors are all true for Oregon and Jackson County. The combination of these factors results in lower per capita income for Oregon and Jackson County.

A-2. Per capita personal income in the U.S., Oregon, Jackson County, 1980-2004 (in 2004 dollars)

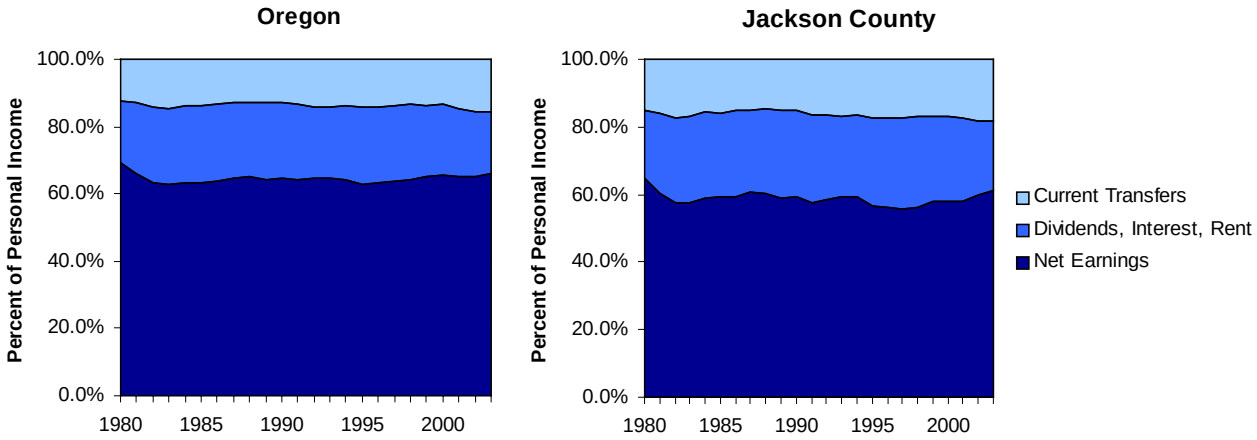


Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Figure A-3 shows the major sources of per capita personal income for Oregon and Jackson County between 1980 and 2003. The distribution of major sources of income was relatively stable over the twenty-three year period and was similar between Oregon and Jackson County. In general, Jackson County's share of personal income from net earnings was lower than for Oregon. The County's share of personal income from current transfers, as well as dividends, interest, and rent, was higher than for Oregon.

The people most likely to have personal income from current transfers and dividends, interest, and rent are retirees. Figure A-1 shows that Jackson County has a higher percentage of residents over 60 years old than the State average. In addition, the share of population aged 65 and older increased by 22% between 1990 and 2000 in Jackson County, compared with a 12% statewide increase in population 65 and older. Census data show that 26% of people who moved to Jackson County between 1995 and 2000 were aged 50 or older. Three quarters of whom came from out-of-state, including 25% who moved to Jackson County from California.

Figure A-3. Per capita personal income by major sources, Oregon and Jackson County, 1980-2003



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

The implications of the demographic data presented in this section are that (1) the increasing age distribution and popularity of the County for retirees will create additional demand for retail and service industries, and (2) this demand, coupled with external economic trends will continue to hold wages below the national and state averages. These factors will be even more significant in Ashland, which experienced a proportionately larger influx of retirees or near-retirees than the County and has lower income than the County average.

EMPLOYMENT

In 2000, the sectors with the most employment in Jackson County were Services, Retail Trade, Government, and Manufacturing. Together these industries accounted for 58,667 jobs or 80% of the total employment in Jackson County. Government and Manufacturing were the highest paying sectors, while Services and Retail Trade were the lowest paying sectors. The Finance, Insurance, and Real Estate; Mining; Transportation, Communication, and Utilities; Wholesale Trade; and Construction sectors all had annual payrolls higher than the County average.

Tables A-4 though A-6 present data from the Quarterly Census of Employment and Wages (QCEW) that show changes in sectors and industries in Jackson County between 1980 to 2004. The changes in sectors and industries shown in two tables: (1) between 1980 and 2000 and (2) between 2001 and 2005. The analysis is divided in this way because of changes in industry and sector classification that made it difficult to compare information about employment collected after 2001 with information collected prior to 2000.

Table A-4 shows the changes in covered employment by sector and industry for Jackson County for between 1980, 1990 and 2000. Total employment in the County grew from 42,626 to 73,614, adding 30,988 jobs. Moreover, every sector added jobs during this period. The sectors with the greatest change in share of

employment were Services and Retail Trade, adding 22,295 jobs. The sectors that grew slowest during this period were Wholesale Trade, Government, and Manufacturing.

Table A-4. Change in covered employment by sector in Jackson County, 1980 to 2000

				Change from 1980 to 2000			
Industry	**1980**	**1990**	**2000**	**Difference**	**Percent**	**AAGR**	**Share**
Agriculture, Forestry and Fishing	881	1,475	2,223	1,342	152%	4.7%	1%
Mining	86	83	159	73	85%	3.1%	0%
Construction	1,997	2,100	3,646	1,649	83%	3.1%	0%
Manufacturing	7,604	8,840	9,231	1,627	21%	1.0%	-5%
Trans., Comm., and Utilities	2,182	2,827	3,834	1,652	76%	2.9%	0%
Wholesale Trade	2,352	2,472	2,512	160	7%	0.3%	-2%
Retail Trade	9,752	13,647	18,865	9,113	93%	3.4%	3%
Finance, Insurance and Real Estate	1,659	2,018	2,544	885	53%	2.2%	0%
Services	7,203	12,021	20,385	13,182	183%	5.3%	11%
Nonclassifiable/all others	2	32	29	27	1350%	14.3%	0%
Government	8,908	8,704	10,186	1,278	14%	0.7%	-7%
Total	**42,626**	**54,219**	**73,614**	**30,988**	**73%**	**2.8%**	**0%**

Source: Oregon Employment Department

Table A-5 shows change in covered employment by sector for Jackson County between 2001 and 2005. Annual employment growth remained about the same during this period, from an average annual growth rate of 2.8% between 1980 and 2000 to an average annual growth rate of 2.7%. Jackson County added 8,264 jobs during this period, which is slower growth than Jackson County experienced during the 1990's. This slowing in employment growth is related to the nation-wide recession and slow growth at the beginning of this decade. The sectors that added the most employees were Construction, Health & Social Assistance, and Retail. Manufacturing lost the most employees.

Table A-5. Covered employment in Jackson County, 2001-2005.

			Change from 2001 to 2005			
Industry	**2001**	**2005**	**Difference**	**Percent**	**AAGR**	**Share**
Agriculture, Forestry, Fishing & Hunting	2,218	2,716	498	22%	5.2%	0%
Mining	158	186	28	18%	4.2%	0%
Construction	3,640	5,204	1,564	43%	9.3%	1%
Manufacturing	7,702	6,737	(965)	-13%	-3.3%	-2%
Utilities	255	200	(55)	-22%	-5.9%	0%
Wholesale	2,131	2,454	323	15%	3.6%	0%
Retail	13,238	14,321	1,083	8%	2.0%	0%
Transportation & Warehousing	2,049	2,425	376	18%	4.3%	0%
Information	1,815	1,778	(37)	-2%	-0.5%	0%
Finance & Insurance	1,845	2,341	496	27%	6.1%	0%
Real Estate Rental & Leasing	1,062	1,378	316	30%	6.7%	0%
Professional, Scientific & Technical Services	2,061	2,002	(59)	-3%	-0.7%	0%
Management of Companies	801	1,705	904	113%	20.8%	1%
Admin. Support & Cleaning Services	3,486	4,063	577	17%	3.9%	0%
Education	508	557	49	10%	2.3%	0%
Health & Social Assistance	9,643	10,847	1,204	12%	3.0%	0%
Arts, Entertainment & Recreation	1,330	1,392	62	5%	1.1%	0%
Accomodations & Food Services	7,182	7,790	608	8%	2.1%	0%
Other Services (except Public Admin.)	2,770	3,082	312	11%	2.7%	0%
Private Non-Classified	25	20	(5)	-20%	-5.4%	0%
Government	10,189	11,174	985	10%	2.3%	0%
Total Covered Employment & Payroll	**74,108**	**82,372**	**8,264**	**11%**	**2.7%**	

Source: Oregon Employment Department, Summary by industry and percentages calculated by ECONorthwest
*Note: Professional & Business Services is generally divided into the following two sectors: (1) Professional, Scientific & Technical Services and (2) Admin. & Support, Waste Mgmt & Remediation Sectors. The Oregon Employment Department presented employment estimates for these sectors together for confidentiality reasons.

Table A-6 shows a summary of confidential covered employment data for Ashland for 2004. Ashland had 9,058 jobs at 1,010 establishments in 2004. The sectors with the greatest employment are: Public Administration (18%), Accommodation and Food Services (17%), Health Care and Social Assistance (16%), and Retail Trade (14%). These sectors accounted for 5,973 or 67% of Ashland's jobs.

The sectors with the greatest employment and above average pay were Public Administration with an average pay per employee of $35,067 and Health Care and Social Assistance with an average pay per employee of $29,113. Employees in Retail Trade and Accommodation and Food Services had below average pay.

Table A-6. Covered employment in Ashland, 2004

Sector/Industry	Est.	Emp.	Payroll	Average Pay/Emp.
Agriculture, Forestry, Fishing and Hunting	**5**	**37**	**$943,149**	**$25,491**
Construction	**67**	**320**	**$11,031,765**	**$34,474**
Construction of Buildings	40	198	$7,078,478	$35,750
Heavy and Civil Engineering Construction	4	4	$112,444	$28,111
Specialty Trade Contractors	23	118	$3,840,843	$32,550
Manufacturing	**61**	**593**	**$17,186,143**	**$28,982**
Food Manufacturing	12	127	$2,526,332	$19,892
Printing and Related Support Activities	5	47	$1,376,393	$29,285
Fabricated Metal Product Manufacturing	5	47	$1,807,298	$38,453
Textile Product Mills	4	24	$519,720	$21,655
Apparel Manufacturing	3	15	$432,328	$28,822
Other Manufacturing	32	333	$10,524,072	$31,604
Wholesale Trade	**37**	**117**	**$4,931,781**	**$42,152**
Merchant Wholesalers, Durable Goods	8	54	$2,497,880	$46,257
Merchant Wholesalers, Nondurable Goods	11	39	$1,070,006	$27,436
Wholesale Electronic Markets and Agents and Brokers	18	24	$1,363,895	$56,829
Retail Trade	**138**	**1,284**	**$30,058,270**	**$23,410**
Food and Beverage Stores	11	387	$8,058,877	$20,824
Motor Vehicle and Parts Dealers	8	197	$8,164,424	$41,444
Clothing and Clothing Accessories Stores	22	136	$2,148,242	$15,796
Sporting Goods, Hobby, Book, and Music Stores	21	114	$1,539,456	$13,504
General Merchandise Stores	4	75	$1,996,228	$26,616
Gasoline Stations	10	67	$882,128	$13,166
Building Material and Garden Equipment and Supplies Dealers	10	62	$1,843,621	$29,736
Furniture and Home Furnishings Stores	9	38	$767,147	$20,188
Health and Personal Care Stores	6	35	$825,806	$23,594
Electronics and Appliance Stores	6	12	$163,959	$13,663
Miscellaneous Store Retailers	21	80	$1,158,674	$14,483
Nonstore Retailers	10	81	$2,509,708	$30,984
Transportation and Warehousing	**6**	**27**	**$800,540**	**$29,650**
Information	**31**	**172**	**$5,570,020**	**$32,384**
Finance and Insurance	**43**	**192**	**$6,416,767**	**$33,421**
Real Estate and Rental and Leasing	**46**	**146**	**$3,081,216**	**$21,104**
Professional, Scientific, and Technical Services	96	239	$11,960,491	$50,044
Management of Companies and Enterprises	3	29	$1,579,322	$54,459
Administrative & Support and Waste Mgt	**27**	**104**	**$2,999,212**	**$28,839**
Educational Services	**21**	**100**	**$2,127,757**	**$21,278**
Health Care and Social Assistance	**146**	**1,466**	**$42,680,207**	**$29,113**
Health Care	125	1,318	$40,527,763	$30,749
Social Assistance	21	148	$2,152,444	$14,544
Arts, Entertainment, and Recreation	**21**	**556**	**$15,596,548**	**$28,051**
Accommodation and Food Services	**131**	**1,581**	**$20,661,461**	**$13,069**
Food Services and Drinking Places	89	1,191	$14,824,130	$12,447
Accommodation	42	390	$5,837,331	$14,968
Other Services (except Public Administration)	**106**	**453**	**$6,920,302**	**$15,277**
Public Administration	**25**	**1,642**	**$57,580,411**	**$35,067**
Federal and State Government	14	908	$31,768,884	$34,988
Local Government	11	734	$25,811,527	$35,166
Total	**1,010**	**9,058**	**$242,125,361**	**$26,731**

Source: Oregon Employment Department

The employment summary in Table A-6 shows annual estimates of employment by sector and industry. Employment in Ashland varies through-out the year, with the highest number of jobs in June and lowest in January. The sectors with the greatest seasonal variability in 2004 included:

- **Government** varied by 633 jobs. Government had the greatest number of jobs in November and fewest jobs in July and August. The largest share of the variability is probably attributable to public education.

- **Accommodation and Food Services** varied by 415 jobs in 2004. The sector had the most jobs in July and the least jobs in January.

- **Arts, Entertainment, and Recreation** varied by 331 jobs, with the most jobs in April and the fewest jobs in November.

- **Retail Trade** varied by 107 jobs. Retail had the largest number of jobs from June through September. Employment in Retail declined for the rest of the year, especially after Christmas.

One way to assess the types of businesses that are likely to have future growth in an area is to examine relative concentration and employment growth of existing businesses. This method of analysis can help determine relationships and linkages within in industries, also called industrial clusters. Sectors that are highly concentrated (meaning there are more than the "average" number of businesses in a sector in a given area) and have had high employment growth are likely to be s successful industrial cluster. Sectors with either high concentration of businesses or high employment group may be part of an emerging cluster, with potential for future growth.

The School of Business at Southern Oregon University prepared a report titled "Industrial Clusters and Jackson and Josephine Counties." This report identified twelve industrial clusters in the Rogue Valley. The clusters that may be successful or have potential growth in Ashland include:

- **Headquarters**. This is a growing cluster in the Rogue Valley that includes Management of Companies. Firms may choose to locate in Ashland because of its comparative advantages.

- **Elder Care.** The report identified elder Community Care, which includes large retirement residences and senior foster homes, as cluster with potential for future growth in the Rogue Valley. Ashland's quality of life and access to health care make it an attractive place for elder care facilities.

- **Wood products.** The Rogue Valley has a growing amount of employment in manufacturing furniture, especially in Household and Institutional Furniture and Kitchen Cabinet Manufacturing. Firms involved in furniture manufacturing may be attracted to Ashland for its quality of life or retail opportunities.

- **Creative.** The report identifies Performing Arts Companies as a cluster with potential for future growth. Ashland's high-amenity tourism and existing performing arts businesses make it a natural place for other performing arts firms to locate. Other creative sectors that may be attracted to Ashland include Clay Production and Glass and Glass Products Manufacturing, which might be able to take advantage of existing retail outlets, such as art galleries.

- **Tourism and Recreation.** The report indicates that Ashland has a higher than average concentration of firms in the Accommodation and Food Services sector. While this cluster may continue to provide employment in Ashland, it has shown slow growth over recent years and has much lower than average wages. This cluster may be more important for the services that it provides to other businesses in Ashland, rather than providing additional jobs.

- **Food and Beverage Production.** This cluster includes wine production. Wineries may be attracted to Ashland because of the presence of other tourism, high-end retail, recreational activities, and other cultural amenities.

A separate analysis of clusters specific to Ashland reinforces the conclusions of the "Industrial Clusters and Jackson and Josephine Counties" report. Table A-7 presents potential growth sectors in Ashland, based on the concentration of employment for each sector relative to Oregon and the Oregon Employment Department's forecast for growth in employment Region 8 (Jackson and Josephine Counties).

Table A-7 shows that the following are growth industries or are likely to be growth industries in Ashland: Accommodations and Food Services; Retail; Health and Social Assistance; Arts, Entertainment, and Recreation; Information; and Professional, Scientific and Technical Services.

Table A-7. Potential growth of industries in Ashland

Low Employment Growth Projection for Region 8	High Employment Growth Projection for Region 8
High Employment Concentration	
Arts, Entertainment & Recreation	Accomodations & Food Services
Other Services	Retail
Information	Health & Social Assistance
Low Employment Concentration	
Utilities	Professional, Scientific & Technical Srv.
Transportation & Warehousing	Government
Manufacturing	
Construction	
Private Education	
Real Estate Rental & Leasing	
Wholesale Trade	
Finance & Insurance	
Management of Companies	
Admin. Support & Cleaning Services	
Agriculture, Forestry, Fishing, Hunting	

Source: Oregon Employment Department; calculations by ECONorthwest

Ashland has also attracted or grown firms engaged specialty manufacturing. These firms could have located many places in the U.S. but chose to locate in Ashland because of the city's unique attributes, such as the City's high quality of life. The websites of most of these firms describe the company's dedication to environmental issues, sustainable production, and concern about the community. Some examples of specialty manufacturing firms in Ashland include:

- **Dagoba Organic Chocolates** produces a variety of chocolate products in Ashland. Dagoba purchases equitably traded ingredients and uses sustainable practices to produce its chocolate.

- **Maranatha Nut Butters** was founded in Ashland in 1982. They produce specialty organic and natural peanut, nut, and seed butters.

- **Dream Sacks** manufactures natural fiber bed linens and clothing. The materials they use include silk, bamboo, soy, and cashmere.

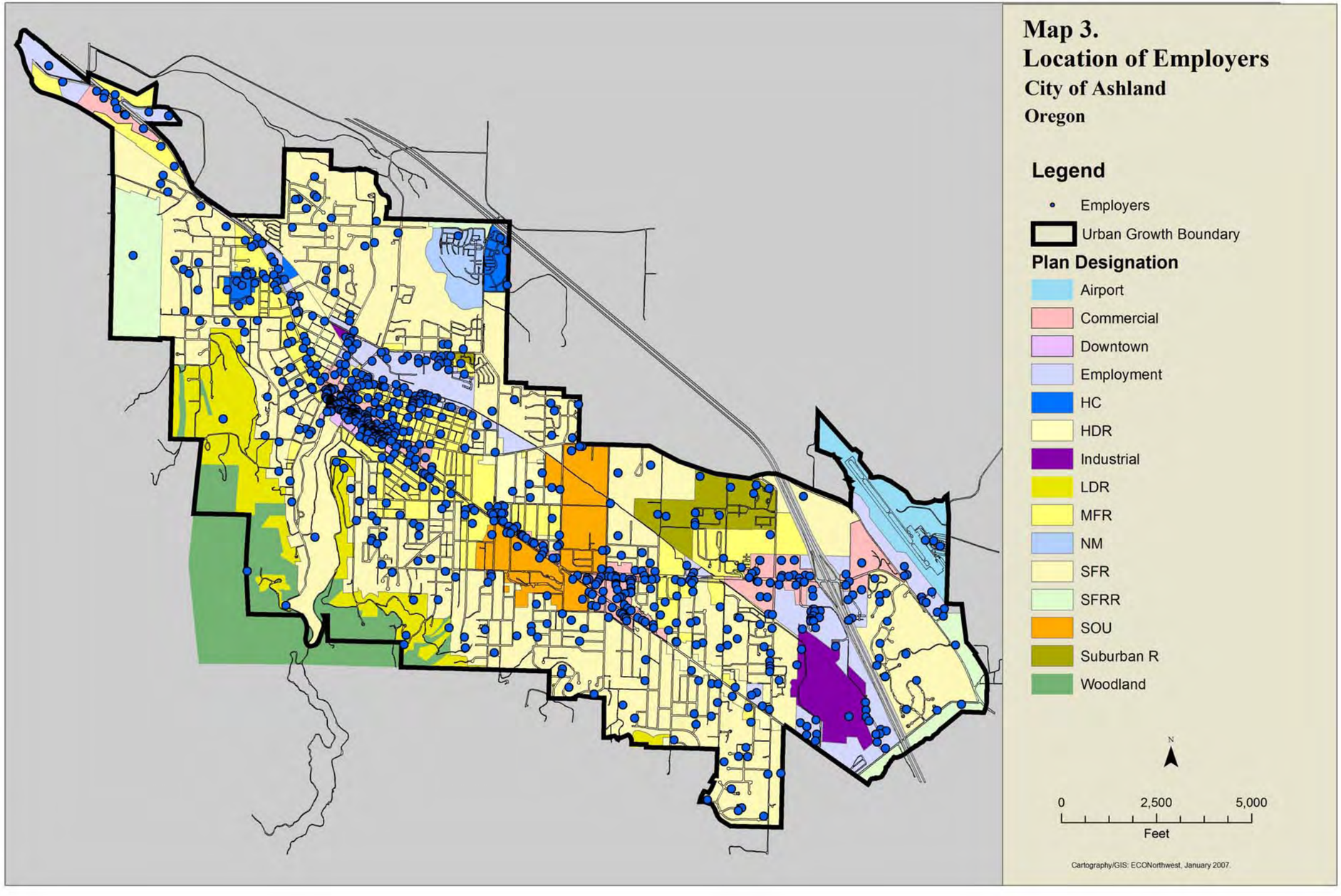
- **Sappo Hill** produces vegetable oil soaps. Sappo Hill was started in the founder's home in Ashland and manufacturing is now done in a factory in Ashland.

- **Plexis Healthcare Systems** develops and supports medical claims software. According to the Portland Business Journal, Plexis was the second fastest growing technology company in Oregon in 2005. Their customers include 80 healthcare payer organizations across the U.S. and international clients.

- **Brammo Motorsports LLC** manufactures specialty sports cars and located in Ashland in 2006. According to the Oregon Employment

Department, Brammo hopes to employ eventually approximately 100 workers in Ashland.

Map A-1 shows the location of employers in the Ashland UGB.


Map 3.
Location of Employers
City of Ashland
Oregon
Legend
Employers
Urban Growth Boundary
Plan Designation
Airport
Commercial
Downtown
Employment
HC
HDR
Industrial
LDR
MFR
NM
SFR
SFRR
SOU
Suburban R
Woodland
N
0
2,500
5,000
Feet
Cartography/GIS: ECONorthwest, January 2007.

When employment in Ashland is compared with employment in Jackson County and Oregon, the sectors with comparatively high concentration of employment in Ashland are: Health Care and Social Assistance; Arts, Entertainment, and Recreation; and Accommodations and Food Services. These sectors are likely to be growth sectors in Ashland as demand for services increases with population growth, the aging population and in-migration of older people, and continued tourism.

BUSINESS ACTIVITY

The Goal 9 administrative rule (specifically, 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 eight major employers in Ashland [24] about their plans for the next twenty years, including: (1) 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 Ashland, and whether there are infrastructure deficiencies that affect their ability to continue operations in the Ashland.

A number of the major employers plan to expand their workforce and/or expand their facilities. Of the eight firms interviewed, three firms have expansion plans and expect to add employees over the next twenty years. Four firms have no plans to add employees or expand their facilities. The remaining organization, the City of Ashland, plans to add employees but will not expand their facilities.

Most firms did not expect to add a large number or employees or purchase significant amounts of land for expansion. Most of the firms with expansion plans expect to use land they already own or purchase five acres or less of land for their expansion. The plans of the firms interviewed are summarized in Table A-8.

Table A-8. Employment and expansion plans of major employers, Ashland, 2006.

Firm name	Add jobs	Expand facilities	Purchase land for expansion
Southern Oregon University (SOU)	Yes	Yes	Probably
Oregon Shakespeare Festival Association	Yes	Yes	Yes
Ashland School District	No	Renovating	No
Ashland Community Hospital	No	No	No
Cit of Ashland	Yea	No	No
Ashland Food Cooperative	Yes	Yes	Uncertain
Ashland YMCA	No	No	No
Butler Ford	No	Relocating	No

Source: Interviews by ECONorthwest.

[24] Note: ECONorthwest also contacted Professional Tool Manufacturing, but was unable to interview this company.

The following is a list of the major employers interviewed, and their responses regarding firm expansion plans.

- **Southern Oregon University (SOU) (725+ employees):** SOU does not have immediate plans for increasing employment. The University currently has about 5,000 to 5,500 students and may have 7,000 students within ten years. If student enrollment continues to grow, they will add faculty and build additional facilities. The University is currently planning to expand build new facilities. These facilities and potential future facilities will either be located on land that SOU currently owns or on land adjacent to current facilities, which the University would purchase.

- **Oregon Shakespeare Festival Association (550+ employees):** They expect to add 10 to 20 employees over the next 20 years. They expect to replace the Black Swan Theatre with a new building on their current site that will include additional rehearsal, classroom, and office space. They also expect to expand their scenery construction shop and will need to purchase land for this expansion.

- **Ashland School District (425+ employees)** Because of declining enrollment, the school district is reducing staff levels through attrition. They have a bond measure on the November 2006 ballot to fund renovation of their aging facilities, and own 40 acres of land outside the UGB that has been set aside for a future school if the town's population increased.

- **Ashland Community Hospital (400+ employees):** The hospital does not expect to hire more employees. They are currently in the process of expanding by adding new surgical facilities. They have no other expansion plans. If they were to need to expand, they own about 1 acre of land adjacent to their current facilities that they would expand onto.

- **City of Ashland (231+ employees):** The City has had to make substantial staffing cuts in the past few years, but anticipates adding 1 to 2 jobs in the next fiscal year. The City has no plans for expanding their facilities. They own about two acres of donated residential land, but have no plans for developing those properties.

- **Ashland Food Cooperative (130+ employees):** The Coop plans to hire about 10 employees per year for the next several years. They anticipate expanding their facilities in the next few years, although do not own land or have building space available at this time. Prohibitions on the construction of parking lots, lack of enforcement of existing parking regulations, lack of affordable housing, and inactive city leadership has made doing business difficult.

- **Ashland YMCA (120+ employees):** The YMCA does not plan to add new employees, and predicts that employee numbers will continue to change because of seasonal programs. They have no expansion plans.

- **Butler Ford (80+ employees):** Butler Ford is planning to relocate one of their two Ashland dealerships to Medford because of infrastructure issues (they are very concerned with the lack of City water available to their facilities), lack of affordable housing for employees, and the lack of support for the business community in Ashland. They plan to move the dealership within 18 months; 60 employees will staff the remaining Ashland dealership.

In addition to what we learned from interviews, information available on the Oregon Labor Market Information System (OLMIS) web site indicates that other firms plan to expand or add jobs. The types of business expansion include:

- **Manufacturing**: Brammo Motorsports, an automobile maker in Ashland, plans to increase its workforce from 12 to 32 by the end of 2006. They are building several 25,000 square foot buildings on their property and plan to employ 100 more workers over the next few years.

- **Professional services**: Coldwell Banker Pro West Real Estate opened in 2005; they plan to hire between eight and 10 agents. Medford's People's Bank of Commerce opened a new branch on Siskiyou Boulevard in 2005.

The Ashland Chamber of Commerce and the City of Ashland conducted a survey to learn about the overall health of Ashland's business community and find ways to improve the business climate in Ashland. The 2005 Business Retention and Expansion Survey targeted firms involved in the following sectors: Accommodations and Food Services, Manufacturing, Retail Trade, and Health Care. Some characteristics of survey respondents included: the majority of firms' more than 1,600 employees lived in Ashland, about two-thirds of the businesses began in Ashland, and the firms were predominantly small businesses.

The survey identified the following advantages and disadvantages of doing business in Ashland:

- **Advantages** focused on quality of life issues, such as Ashland's livability, small town feel, beauty, educational system, traffic and bicycling systems, environmental quality, and access to the outdoors. Other advantages included the community and business climate, Ashland's location, and the people in Ashland.

- **Disadvantages** focused on Ashland's costs, such as high living costs, affordability, and higher costs of doing business. Other disadvantages included Ashland's small market, small labor pool, seasonality and tourism, access to transportation and air travel, land use and planning, and politics and government. The key challenges to doing business in Ashland included access to labor and lack of specialized skills in the labor market and the affordability and costs of doing business in Ashland.

OUTLOOK FOR GROWTH IN ASHLAND

Table A-9 shows the draft population forecast for Ashland and Jackson County.[25] The forecast shows Ashland growing at a slower rate compared with Jackson County. Ashland's population is expected to grow from 20,880 people in 2005 to 22,319 people in 2026, an increase of 1,439 people at an annual growth rate of 0.32%. By 2040, Ashland's population is forecast to have grown to 23,056 people, an increase of 2,176 people over the thirty-five year period.

In contrast, Jackson County's population is forecast to grow from 194,515 people in 2005 to 264,419 people by 2026, an increase of 69,904 people at an annual rate of 1.47%. By 2040, Jackson County is forecast to grow to 306,421 people. The majority of Jackson County's growth is expected to be concentrated in and around Medford and Central Point.

The City's 2026 population forecast is worth commentary. In 2006, Jackson County conducted a review of population forecasts for all incorporated cities within the County, including Ashland. The final population figures adopted by the County assume a countywide average annual growth rate of about 1%. Ashland, by contrast, has an assumed average annual growth rate of about 0.28%. This lower than average growth rate reflects the tighter land supply and higher housing costs in Ashland relative to other cities in the County. It is likely that Ashland will experience greater population growth than the County has forecasted. The City should monitor population growth over the next five years to determine the impact of actual population growth on land needs.

Table A-9. Draft population forecast for Ashland and Jackson County, 2005 to 2040

Population	Ashland	Jackson County
2005	20,880	194,515
2026	22,319	264,419
2040	23,056	306,421
Change 2005 to 2026		
Difference	1,439	69,904
% Change	7%	36%
AAGR	0.32%	1.47%
Change 2005 to 2040		
Difference	2,176	111,906
% Change	10%	58%
AAGR	0.28%	1.31%

Source: ECONorthwest, 2006

Table A-10 shows the Oregon Employment Department's ten-year forecast for employment by industry for Oregon and Region 8, which is a combination of

[25] As of the writing of this report, the population forecast was not adopted by Jackson County. The County Board of Commissioners is expected to hold public hearings about the population forecasts in January and February of 2007.

Jackson and Josephine Counties. Table A-10 shows that Oregon Employment Department forecasts that nonfarm employment growth for 2004-2014 will be faster in Region 8 than the State average. The sectors that will lead employment growth in Oregon for the ten-year period are Professional and Business Services, Health Care & Social Assistance, Leisure & Hospitality, and Retail Trade. Together, these four sectors are expected to add 146,900 new jobs or 61% of employment growth in Oregon. Employment growth in Region 8 is expected to be led by these same three sectors over the 2004-2014 period, which are expected to add 13,050 jobs or 66% of employment growth in Jackson and Josephine Counties.

Table A-10. Nonfarm employment forecast by industry in Oregon and Region 8 (Jackson and Josephine counties), 2004-2014

	Oregon		Region 8*			
Sector/ Industry	**Growth**	**% Growth**	**2004**	**2014**	**Growth**	**% Growth**
Natural Resources & Mining	-200	-2.1%	970	990	20	2.1%
Construction	14,900	18.1%	5,940	7,270	1,330	22.4%
Manufacturing	6,000	3.0%	10,010	10,870	860	8.6%
Durable Goods	6,700	4.5%	7,640	8,160	520	6.8%
Wood Product Manufacturing	-1,800	-5.6%	3,030	2,940	-90	-3.0%
Other Manufacturing	-700	-1.3%	2,370	2,710	340	14.3%
Transportation, & Utilities	8,900	15.7%	3,080	3,660	580	18.8%
Wholesale Trade	9,900	13.1%	3,130	3,590	460	14.7%
Retail Trade	27,200	14.5%	17,010	20,270	3,260	19.2%
Information	5,200	15.8%	2,170	2,570	400	18.4%
Leisure & Hospitality	28,600	18.4%	11,410	14,030	2,620	23.0%
Accomodation & Food Services	25,400	18.8%	9,730	12,120	2,390	24.6%
Other Leasure & Hospitality	3,200	15.5%	1,680	1,910	230	13.7%
Financial Activities	11,400	11.8%	5,480	6,340	860	15.7%
Professional & Business Services	48,900	27.7%	9,100	11,740	2,640	29.0%
Education	6,200	23.8%	690	920	230	33.3%
Health Care & Social Assistance	42,200	25.3%	13,870	18,400	4,530	32.7%
Other Services	6,300	11.0%	3,650	4,190	540	14.8%
Government	24,100	8.9%	15,110	16,600	1,490	9.9%
Federal Government	-1,000	-3.3%	2,040	2,050	10	0.5%
State Government	3,000	4.8%	2,780	3,010	230	8.3%
State Education	1,500	5.6%	1,480	1,580	100	6.8%
Other State Government	1,500	4.2%	1,300	1,430	130	10.0%
Local Government	22,100	12.5%	10,290	11,540	1,250	12.1%
Local Education	10,100	10.8%	6,030	6,650	620	10.3%
Other Local Government	12,000	14.4%	4,260	4,890	630	14.8%
Total Nonfarm Payroll Employment	**239,600**	**15.0%**	**101,620**	**121,440**	**19,820**	**19.5%**

Source: Oregon Employment Department. Employment Projections by Industry 2004-2014. Projections summarized by ECONorthwest.
*Note: The Oregon Employment Department issues employment forecasts by region. Region 8 is Jackson and Josephine Counties combined.

The implications for Ashland of the growth forecasts for Jackson County and Region 8 are:

- Ashland's population and economy will grow but at a slower pace than Jackson County.

- Three of the sectors with the largest share of employment in Ashland are forecast to grow the fastest in Region 8: Health Care & Social Assistance, Leisure & Hospitality (including Accommodations and Food Services), and Retail Trade.

Appendix B Factors Affecting Future Economic Growth in Ashland

Economic development opportunities in Ashland will be affected by local conditions as well as the national, state, and regional economic conditions that were addressed in Chapter 2 and Appendix A. Factors affecting future economic development in the Ashland include its location, buildable land, labor force, housing, public services, transportation, natural resources, and quality of life. Economic conditions in Ashland relative to these conditions in other portions of the Jackson County and southern Oregon form Ashland's comparative advantage for economic development. Ashland's comparative advantages have implications for the types of firms most likely to locate and expand in Ashland.

There is little that Ashland can do to influence national and regional conditions that affect economic development. Ashland 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 Ashland later in this study.

This appendix begins with a description of comparative advantage and why it is relevant for the Economic Opportunity Analysis. This appendix reviews local factors affecting economic development in Ashland and any advantages, opportunities, disadvantages, and constraints these factors may present. This appendix meets the intent of OAR 660-009-0015(4).

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.[26] An analysis of comparative advantage depends on the geographic areas being compared. Economic conditions in the Ashland will be largely shaped by national and regional economic conditions affecting Southern Oregon. Chapter 2 and Appendix B present trends and forecasts of conditions in Oregon and Ashland to

[26] OAR 660-009-0015(4) requires assessment of the "community economic development potential." This assessment must consider economic advantages and disadvantages—or what Goal 9 broadly considers "comparative advantages."

help establish the context for economic development in Ashland. Local economic factors will help determine the level and type of development in Ashland relative to other communities in Oregon.

This chapter focuses on the comparative advantages of Ashland relative to the rest of Oregon. The implications of the factors that contribute to Ashland's comparative advantage are discussed at the end of this chapter.

LOCATION, SIZE, AND BUYING POWER OF MARKETS

Ashland is a community of approximately 21,430 people. Ashland is located at the southern edge of the Medford Metropolitan Statistical Area, which has more than 198,000 residents. Ashland's location in near the border with California has played a critical role in the growth of the City and will continue to have implications for economic development in the region:

- Interstate 5 is located on Ashland's northeast edge and Highway 99 runs through Ashland.

- Ashland has access to workers and markets of the cities within the Bear Creek Valley, as well as in other parts of Southern Oregon and Northern California.

- Residents of Ashland have access to shopping, cultural activities, recreational activities, and other amenities in Ashland or Medford.

- Tourism plays an important part of the economy of Ashland. Tourists are attracted to Ashland for the following reasons: the Shakespeare Festival and other local events, the visual and musical arts, shopping opportunities, restaurants, outdoor recreational opportunities, viticulture, parks, and other amenities.

- The climate in Ashland is relatively mild and sunny. The County's climate is well suited to agriculture, especially the fruit industry.

Ashland's size and the buying power of Ashland's markets may impact the types of businesses that choose to locate in Ashland. Table B-1 shows consumer and retail expenditures by category of consumable. Total expenditures in Ashland, including household and business expenditures, was approximately $215 million. The categories with the largest expenditures included: personal insurance, contribution, tobacco, and apparel.

Table B-1. Consumer and Retail Expenditures, 2005

	Per HH	Total
Apparel	$1,949	$20,040,000
Education	$960	$3,482,000
Entertainment	$2,414	$1,062,000
Food and Beverages	$6,697	$6,531,000
Health Care	$2,811	$1,290,000
Household Furnishings and Equipment	$1,781	$1,002,000
Shelter	$8,911	$3,509,000
Household Operations	$1,491	$3,163,000
Miscellaneous Expenses	$702	$9,874,000
Personal Care	$625	$1,376,000
Reading	$152	$8,498,000
Tobacco	$331	$24,819,000
Transportation	$9,075	$6,177,000
Utilities	$3,270	$8,811,000
Gifts	$1,214	$9,831,000
Personal Insurance	$475	$68,849,000
Contributions	$1,648	$36,924,000
Total	**$44,506**	**$215,238,000**

Source: Oregon Prospector

Ashland's size, location, proximity to I-5, and mixture of urban amenities and tourist attractions are primary comparative advantages for economic development in Ashland.

AVAILABILITY OF TRANSPORTATION FACILITIES

A number of transportation options are available in Ashland, including Interstate 5 and multiple State highways, Central Oregon and Pacific Railroad, and the Rogue Valley Transportation System.

Ashland has excellent automotive access. Ashland is located along Interstate 5, the primary north-south transportation corridor on the West Coast linking Ashland to domestic markets in the United States and international markets via west Coast ports. In addition, Highway 99 runs through Ashland, connecting the City to nearby cities in Jackson County.

Traffic congestion is a problem on I-5 and several of the State highways. ODOT is working with local agencies to increase capacity on the roads near Ashland by replacing or upgrading highway interchanges, widening roads and bridges, and building new roads. According to RVCOG, some of the worst traffic problems include:

- The entire I-5 corridor in Jackson County
- Highway 99 through Ashland

Other transportation opportunities in Ashland include the Central Oregon and Pacific Railroad and the Rogue Valley Transportation System.

- The Central Oregon and Pacific Railroad provides freight service for the Ashland. The Siskiyou Line runs approximately parallel to I-5 and runs between Northern California and Eugene, Oregon.

- The Rogue Valley Transportation District (RVTD) serves each of the cities in the Bear Creek Valley, except for Eagle Point. It provides 8 fixed bus routes that operate Monday through Friday. RVTD offers a wheelchair accessible shared ride service for people whose disabilities prevent them from using the fixed route bus system.

Transportation is a comparative advantage that primarily affects the overall type of employment and its growth for the region.

PUBLIC FACILITIES AND SERVICES

This section discusses public services that are important for economic development, including public policy, tax policy, water, and wastewater.

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. Ashland's comprehensive plan includes the following goals:

- Ensuring that the City provides sufficient quantity of lands for commercial and industrial uses to provide for the employment needs of its residents and a portion of rural residents consistent with the population projection for the urban area.

- Guidelines that govern land use decisions, such as: land division and development within employment and manufacturing districts, ensuring that development densities are appropriate to the area, and providing mixed use zoning where appropriate.

- Developing and implementing an economic development program which will attempt to increase the number, variety and size of retail, service, and light industrial activity employers within the urban area, with particular emphasis on employers who pay wages at or above the median County wage and employ from 5 to 100 people, or who are locally owned. This policy also states that the City will work with regional economic development agencies on coordinating regional economic development activities.

- Ensuring that economic development can occur in a timely and efficient manner.

- Encouraging economic development of the local resources and enhance employment opportunities for existing residents to enhance the community's economic health.

- Working with Southern Oregon University to encourage the growth of research and graduate programs, especially on programs that . provide a bridge to the international marketplace.

- Discouraging businesses that are clearly unsuitable for Ashland from coming to the City. These businesses include:

    - Businesses, which use large amounts of water.

    - Businesses that emit significant amounts of air pollution.

    - Businesses that create toxic wastes that require specialized disposal techniques not available locally.

ECO conducted a number of interviews with Ashland stakeholders, including business people, developers, and real estate agents. One of the problems identified in these interviews is with Ashland's planning process, including the following issues: the complexity of the planning system, slowness of the planning process, anti-growth attitudes among residents and city staff, and lack of available land. Some stakeholders indicated that these problems were significant enough that they or their clients preferred to do business in nearby cities, such as Medford or White City.

TAX POLICY

The tax policy of a jurisdiction is an important factor in economic development policy. Table B-2 shows that Ashland's property tax rate is lower than the state average. The property tax rate in Ashland is between $14.33 and $14.51 per $1,000 of assessed value, compared with a state average of $15.37.

Table B-2. Property tax rate per $1,000 assessed value for Oregon and Ashland, 2005

Area	Tax Rate (per $1,000 assessed value)
Oregon	$15.37
Ashland	$14.33-$14.51

Source: Oregon Department of Revenue, Property Tax Annual Stats
Note: Some jurisdictions have different property tax rates for different real market areas. We have represented these differences by showing the range of property tax rates for these cities.
Note: Any city with a property tax rate over $15 per $1,000 of assessed value has a local tax levy that goes beyond the Measure 5 limitations.

WATER

According to Mike Morrison, Public Works Superintendent for the City of Ashland, the City of Ashland provides water services to the residents of Ashland. The City obtains its water from the Reeder Reservoir, at the base of Mt. Ashland. They expect water from the reservoir to meet Ashland's water needs until 2012; after 2012 they plan to obtain water from the City of Medford as well as Lost Creek. The maximum volume the City can obtain from the reservoir is between 7.5 and 8 million gallons per day. The reservoir can produce 18 million gallons of water per day, but the amount the City can obtain is limited by the size of the pipeline. They can also get one million gallons per day from the Talent Irrigation district.

The City of Ashland's water treatment plant can treat up to 8 million gallons of water per day. This amount is also limited by the size of the pipeline; the plant itself can treat up to 10 million gallons per day. Upgrades to the pipeline have recently been completed so that the City can transport 10 million gallons per day. The City is very involved in water conservation efforts and the long-term plan accounts for modest increases in population as well as increased water conservation and efficiency of water use.

The City expects the water system to support employment and population growth forecasts for the next 20 years. In the future, Ashland will address increases in water needs in the following ways: (1) expand its treatment facility to increase its capacity, (2) promote water conservation, and (3) possibly complete a connection with the Medford Water Commission to provide additional water in the event of a drought. Water service in Ashland costs more than from the Medford Water Commission, in part because Ashland's water requires more treatment.

WASTEWATER

The City of Ashland provides wastewater services for residents of Ashland. According to Terry Ellis, Wastewater & Water Reuse Supervisor for the City of Ashland, wastewater services are provided to the residents within the city limits but customers are served on a case-by-case basis if they are located outside of the city limits but within the urban growth boundary.

The capacity of the wastewater treatment plant, which was built in 2003, is 2.3 million gallons of water per day in dry weather, 3.3 million gallons per day in wet weather. Current volumes at the plant are 2.1 million gallons per day in dry weather, 2.3 million gallons per day in wet weather. Basing growth projections on an assumption that most growth occurring in the City will be residential, the City of Ashland projects that it has enough capacity to serve residents through 2025. The City has no major problems with infiltration and inflow.

ACCESS TO SUPPLIERS AND UTILITIES

Ashland has access to suppliers on the West Coast suppliers via I-5 and the Central Oregon and Pacific Railroads. Ashland can get freight from West Coast port facilities via I-5 or the railroads.

Power is provided by City of Ashland's Electric Department, natural gas is from Avista, phone service is provided by Qwest, and cable television is provided by Charter Cable or Ashland Fiber Network.

LIMITS ON DEVELOPMENT FROM FEDERAL AND STATE ENVIRONMENTAL PROTECTION LAWS

Based on the information in the buildable lands inventory, presented in Section IV of the report, there does not appear to be any limitations to industrial or other development resulting from federal or state environmental protection laws.

LABOR MARKET FACTORS

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 as well. This section examines the availability of workers for Ashland.

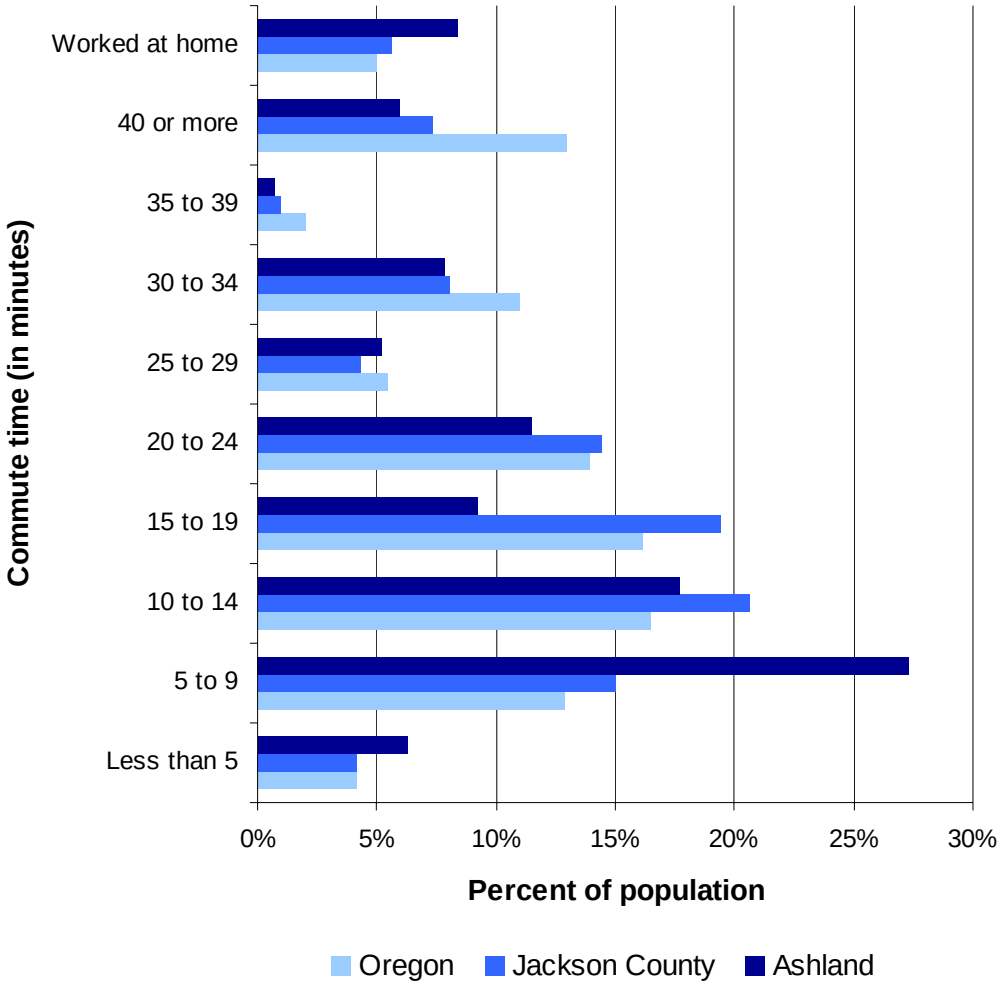
The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2000 Census, Jackson County has more than 85,000 people in its labor force and Ashland has about 10,500 in the labor force.

The unemployment rate is one indicator of the relative number of workers who are actively seeking employment. Labor force data from the Oregon Employment Department shows that unemployment in Jackson County was 6.0% of the labor force, compared with 6.1% in Oregon.[27]

Figure B-1 shows a comparison of the commute time to work for residents 16 years and older for Oregon, Jackson County, and Ashland. Residents of Ashland spend less time commuting to work than all residents of Jackson County or Oregon. Thirty-four percent of residents of Ashland commute 10 minutes or less, compared with 19% of Jackson County residents and 17% of residents of Oregon. Ashland also has a larger share of residents who worked from home (8%), compared with Jackson County (6%) and Oregon (5%).

[27] The data in Table 3-3 show that unemployment was 4.2% in Jackson County and 4.4% in Oregon in 2005. This information was produced by Claritis. ECO has presented the official unemployment rate, which is calculated by The Bureau of Labor Statistics in the U.S. Department of Labor.

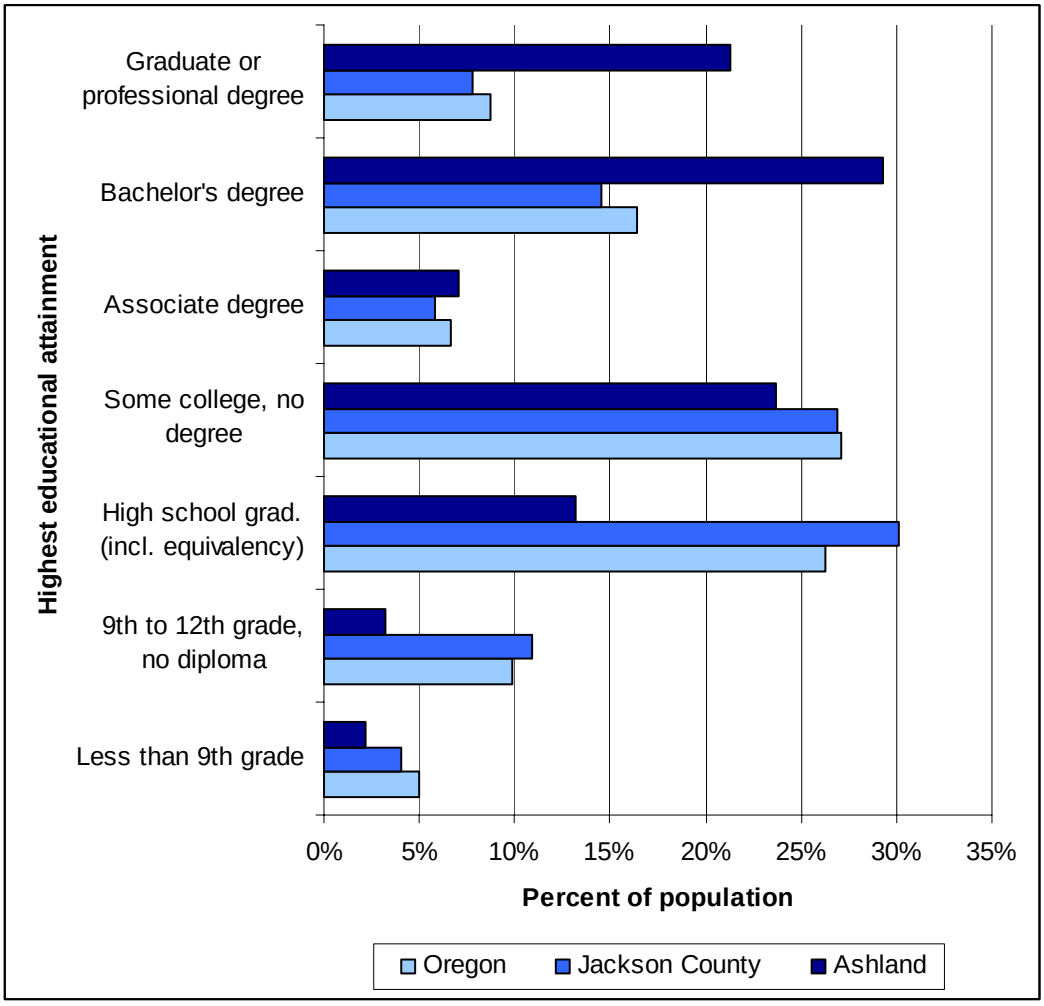
Figure B-1. Commuting time to work in minutes for residents 16 years and older, Oregon, Jackson County, and Ashland, 2000



Source: U.S. Census, 2000

Figure B-2 shows the percent of population by education level completed in the Ashland, Jackson County, and Oregon. Table B-1 shows that Ashland has a greater share of residents with an associate's degree or higher (58%) than residents of Oregon (32%) or Jackson County (28%). The large share of residents with a bachelor's degree and graduate or professional degree may be due to the presence of Southern Oregon University.

Figure B-2. Educational attainment for the population 25 years and over, Oregon, Jackson County, and Ashland, 2000

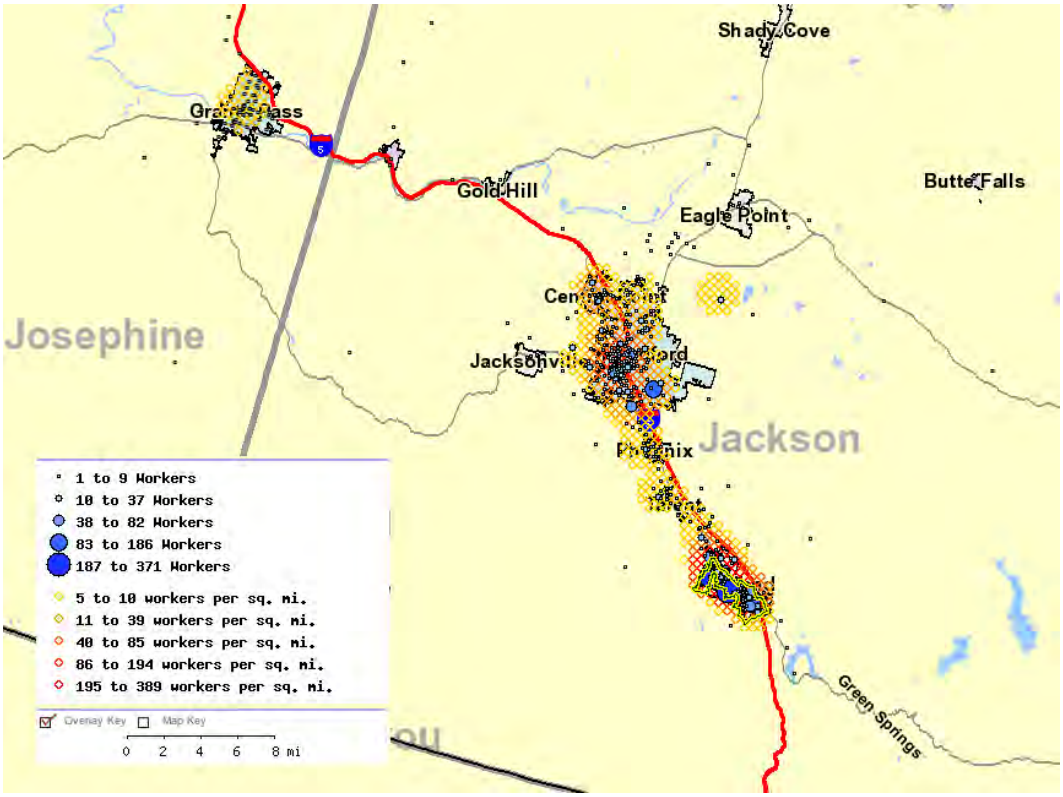


Source: U.S. Census, SF-3 2000

Respondents to the Ashland Chamber of Commerce's Business Retention and Expansion Survey indicated that labor availability and labor skills was a problem in recruiting employees. The reasons for hiring employees from outside of the region included need for qualified labor or need for specialized skills.

Figure B-3 and Table B-3 show the where residents of Ashland work in 2003. Figure B-3 and Table B-3 show that 83% of Ashland's residents were employed in Jackson County, with 52% of Ashland's residents working in Ashland and 20% working in Medford.

Figure B-3. Places that residents of Ashland were employed, 2003



Sources: US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2003)
Notes: No census designated geography available through the On the Map website approximates the Bear Creek Valley. ECONorthwest used the freehand tool in the On the Map Website to specify a geography which approximates the Valley for the purposes of calculating a labor and commute sheds.

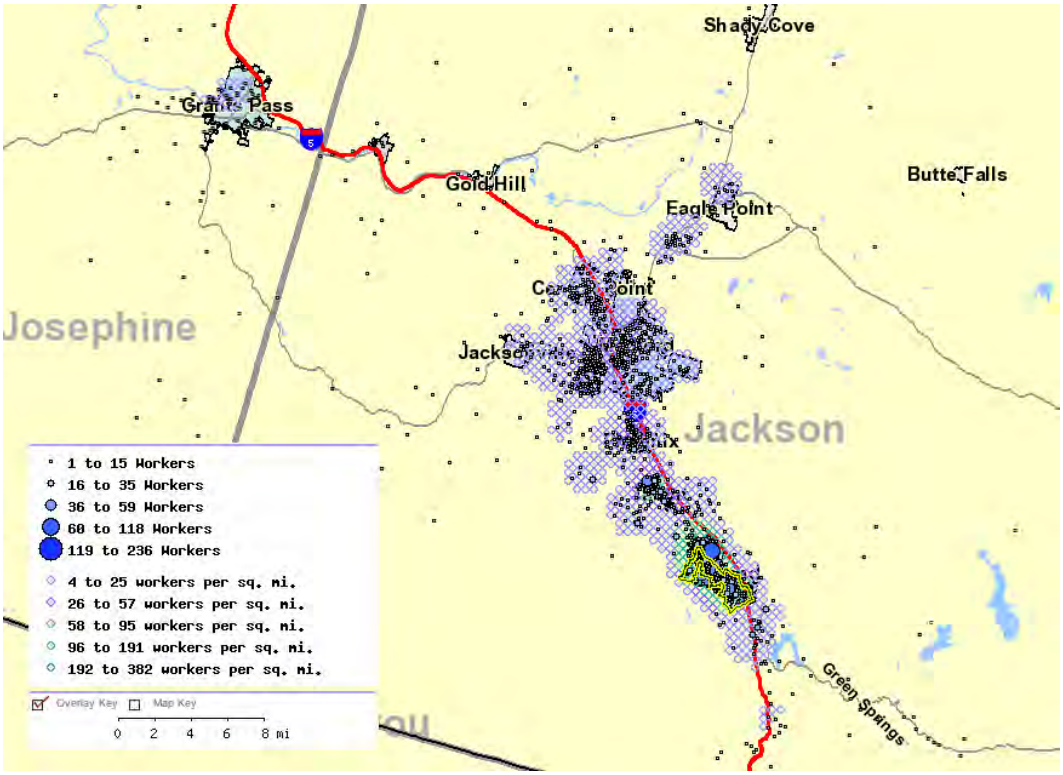
Table B-3. Places that residents of Ashland were employed, 2003

	Number	Percent
Jackson County	2,861	83%
Ashland	1,780	52%
Medford	704	20%
Josephine County	95	3%
Lane County	78	2%
All Other Locations	407	12%
Total	**3,441**	**100%**

Sources: US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2003)
Notes: No census designated geography available through the On the Map website approximates the Bear Creek Valley. ECONorthwest used the freehand tool in the On the Map Website to specify a geography which approximates the Valley for the purposes of calculating a labor and commute sheds.

Figure B-4 and Table B-4 show where employees of firms located in Ashland lived in 2003. Eighty-four percent of Ashland's workers lived in Jackson County and 44% lived in Ashland. About 20% of Ashland's workers lived in unincorporated areas of Jackson County and 13% lived in Medford. Workers may be more likely to live outside of Ashland because of the high cost of housing and tight supply of rental housing.

Figure B-4. Places where workers in Ashland lived, 2003



Sources: US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2003)
Notes: No census designated geography available through the On the Map website approximates the Bear Creek Valley. ECONorthwest used the freehand tool in the On the Map Website to specify a geography which approximates the Valley for the purposes of calculating a labor and commute sheds.

Table B-4. Places where workers in Ashland lived, 2003

	Number	Percent
Jackson County	4,524	84%
Ashland	2,389	44%
Medford	688	13%
Talent	276	5%
Unincorporated Areas	1,100	20%
Josephine County	125	2%
Out-of-State	311	6%
All Other Locations	433	8%
Total	**5,393**	**100%**

Sources: US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2003)
Notes: No census designated geography available through the On the Map website approximates the Bear Creek Valley. ECONorthwest used the freehand tool in the On the Map Website to specify a geography which approximates the Valley for the purposes of calculating a labor and commute sheds.

Table B-5 shows changes in ethnicity Oregon, Jackson County, and Ashland between 1990 and 2000. This table shows that the Ashland has a lower proportion of Hispanic or Latino residents than Jackson County and Oregon in 2000. Between 1990 and 2000, Ashland's Hispanic and Latino population decreased by 18% (152 people), compared with growth in the Hispanic and Latino population of 104% in Jackson County and 144% in Oregon.

Table B-5. Changes in ethnicity, Oregon, Jackson County, and Ashland, 1990 and 2000

	Oregon	Jackson County	Ashland
1990			
Total Population	2,842,321	140,440	23,162
Hispanic or Latino	112,707	5,949	847
Percent Hispanic or Latino	4.0%	4.2%	3.7%
2000			
Total Population	3,421,399	181,269	19,522
Hispanic or Latino	275,314	12,126	695
Percent Hispanic or Latino	8.0%	6.7%	3.6%
Change 1900-2000			
Hispanic or Latino	162,607	6,177	(152)
Percent Hispanic or Latino	144%	104%	-18%

Source: U.S. Census

The workforce in Ashland differs from the workforce in Jackson County and Oregon in terms of educational attainment and ethnicity. Residents of Ashland are less likely to be Hispanic or Latino, and more likely to have a college degree.

Commuting is common in Ashland. Nearly half of the people who live in Ashland commute outside of Ashland for work. Less than half of Ashland's workers live in Ashland. The implication of this workforce analysis is that, while a substantial amount of Ashland's workforce lives within the City, Ashland is able to attract educated workers from most of Jackson County and surrounding areas.

It does not appear that workforce will be a constraint on employment growth in Ashland, but if energy prices increase significantly enough to curtail commuting, workforce availability could constrain employment growth. However, firms in the region have indicated that they have had problems recruiting qualified employees. Firms needing specialized skills or employees with specific qualifications may need to hire employees from outside of the region.

EDUCATIONAL AND TECHNICAL TRAINING PROGRAMS

The following is a summary of educational and training programs located in or near Ashland.

- **Southern Oregon University, Ashland:** SOU is a four-year public university of approximately 5,000 students specializing in liberal arts, sciences, and select graduate and professional programs. SOU's main campus is located in Ashland. (http://www.sou.edu/)

- **Oregon Health Sciences University School of Nursing, Ashland:** OHSU School of Nursing offers both undergraduate degree and graduate degree programs in a variety of formats, locations, and specialties. OHSU School of Nursing has several branch campuses across Oregon. The

Ashland Campus is located on the campus of SOU. (http://www.sou.edu/cgi/deptcat3.cgi?dept=NUR)

- **Abdill Career College Inc., Medford:** Abdill Career College offers courses in dental assisting, medical assisting, medical from office management, medical transcription, legal assistant, accountant clerk, office clerk, and phlebotomy. (http://www.abdill.com/)

- **Rogue Community College, Medford:** Rogue community college has several branch campuses across southern Oregon. The main campus (the Redwood campus) is located in Grants pass. The two branch campuses are located in Medford (the Riverside campus) and White City (the Table Rock campus). As a comprehensive two-year community college, RCC offers Academic and professional technical programs, college transfer courses, basic skill programs for adults, courses for personal enrichment, and courses for continuing education. (http://www.roguecc.edu/)

- **Pacific Bible College, Medford:** Pacific Bible College is a non-accredited institution that offers a One-Year Certificate of Christian Ministry and a Two-Year Associate of Biblical Studies. (http://www.pacificbible.com/)

HOUSING

Housing is an important component of any 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.

Housing choices includes choices about location and the type of housing. When making location decisions, households may consider many factors: 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, price, and tenure (own/rent).

Housing type and tenure are important components of housing choice. Table B-6 shows dwelling units by type in the Ashland, Jackson County and Oregon in 2000 as reported by the Census. Ashland has a smaller proportion of single-family dwelling units than Jackson County and Oregon. It has a smaller share of manufactured and mobile dwellings and larger share of multifamily dwellings than Oregon. Homeownership rates in Ashland are lower than Oregon and Jackson County.

Table B-6. Dwelling units by type and tenure, Ashland, Jackson County and Oregon, 2000

	Ashland		Jackson County		Oregon	
	Number	Percent	Number	Percent	Number	Percent
Total Housing Units	9,053	100%	75,737	100%	1,452,709	100%
Single-family	5,375	59%	50,159	66%	959,266	66%
Multifamily	3,453	38%	13,624	18%	334,897	23%
Manufactured/Mobile	225	2%	11,954	16%	158,546	11%
Occupied Housing Units	8,552	100%	71,532	100%	1,333,723	100%
Owner Occupied	4,450	52%	47,564	66%	856,951	64%
Renter Occupied	4,102	48%	23,968	34%	476,772	36%

Source: US Census of Population and Housing

Housing prices are an important factor in a business's choice about where to locate. Businesses may choose to relocate from an area with high housing costs to an area with lower housing costs. Table B-7 shows a comparison of the median sales price of homes for selected MSAs in the West, including the Medford-Ashland MSA. Table 3-7 shows that the median sales price in the Medford-Ashland MSA was *lower* than the median sales price in the following MSAs: Seattle, WA; Sacramento, CA; Los Angeles, CA; and San Francisco, CA.

Table B-7. Median sales price residences for selected Metropolitan Statistical Areas, fourth quarter 2004 and 2005

Area	Median Sales Price 4th Quarter 2004	Median Sales Price 4th Quarter 2005
San Francisco-San mateo-Redwood City, CA	$680,000	$750,000
Los Angeles-Long Beach-Glendale, CA	$415,000	$500,000
Sacramento--Arden-Arcade--Roseville, CA	$360,000	$415,000
Seattle-Bellevue-Everett, WA	$274,000	$324,000
Medford-Ashland, OR*	**$215,000**	**$270,000**
Phoenix-Mesa-Scottsdale, AZ	$183,000	$255,000
Portland-Vancouver-Beaverton, OR-WA	$201,000	$244,000
Denver-Aurora, CO	$220,000	$230,000
Boise City-Nampa, ID	$181,000	$222,000
Salt Lake City, UT	$183,000	$218,000

Source: National Association of Home Builders, 2006
*Note: the Medford-Ashland MSA includes all of Jackson County.

An examination of housing prices within Jackson County shows that housing prices have increased significantly over the past five years, making housing less affordable. A recent housing needs analysis that ECONorthwest conducted for the Bear Creek Valley showed that one-third of Jackson County's households paid 30% or more of their income for housing. The rate was much higher for renters (47%) than for homeowners (25%).[28]

A breakdown by location provides a picture of how sales prices are changing within the region. Table B-8 shows the recorded sales price of single-family residences by city and year. The results show that single-family home prices

[28] U.S. Census, 2000

increased in all cities but that housing prices within the Bear Creek Valley were highest in Ashland and Jacksonville.

Table B-8. Median and average recorded sales price of single-family residences by city and year, Jackson County, 11/02 – 4/06

	Year				Increase (2002-2005)	
CITY	2002	2003	2004	2005	Dollars	Percent
Median Sales Price						
Ashland	251,000	277,000	315,000	389,000	138,000	55%
Central Point	143,900	156,000	198,000	242,000	98,100	68%
Eagle Point	142,700	139,900	194,000	259,900	117,200	82%
Jacksonville	223,000	269,950	343,667	417,000	194,000	87%
Medford	145,250	161,000	190,000	245,000	99,750	69%
Phoenix	150,900	178,800	195,750	242,000	91,100	60%
Talent	149,900	160,000	181,450	250,000	100,100	67%
Rest of County	125,000	127,555	158,900	201,500	76,500	61%
Average Sales Price						
Ashland	300,897	310,437	360,637	428,058	127,161	42%
Central Point	142,548	161,582	293,489	261,578	119,031	84%
Eagle Point	170,932	165,350	233,984	295,074	124,142	73%
Jacksonville	269,918	271,656	361,739	534,588	264,670	98%
Medford	164,875	179,774	239,041	273,474	108,599	66%
Phoenix	159,521	175,964	206,800	248,892	89,371	56%
Talent	145,670	176,891	188,177	266,182	120,512	83%
Rest of County	150,457	153,087	197,561	237,345	86,887	58%

Source: Jackson County Assessor; analysis by ECONorthwest
Note: includes property classifications 101 – 109, includes sales outside the AQMA
The Talent 2006 data does not include one sale for $2.7 million that skews the average

The implication of this housing analysis is that housing costs may be a constraint on the availability of workers. Housing costs in Ashland are the most expensive markets in Jackson County and some of the most expensive in Oregon. It would not be inappropriate to assert that high housing costs are forcing workers to live in other cities and may ultimately affect the desirability of Ashland for certain types of economic activity.

The high housing costs, increase in housing prices, and lack of workforce housing may constrain the types of people who move to Ashland, making it difficult for employers to fill lower paying jobs. Workers may have to live in communities further from Ashland, causing an increase in commuting.

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.

Ashland's quality of life, combined with it location and access to transportation, is a key comparative advantage for economic development. ECO conducted interviews with twelve stakeholders in Ashland, asking a variety of questions about Ashland, the perception of the business climate, and quality of life. The stakeholders included local business people, real estate agents, developers, and city and state officials. The following list summarizes the quality of life factors that affect the city:

- *Small town atmosphere.* Ashland has a small town atmosphere that is attractive to families with children and retirees.

- *Access to high quality education.* Stakeholders praised the quality of K-12 schools in Ashland. In addition, residents of Ashland have easy access to Southern Oregon University.

- *Cultural amenities and events.* Ashland has a number of cultural amenities, such as museums and wine tasting and vineyard activities. The city is home to a number of events, including the Shakespeare Festival.

- *Shopping opportunities.* Ashland provides diverse shopping opportunities, such as galleries, bookstores, upscale boutiques, and sporting goods stores.

- *Physical beauty of surrounding areas.* The lands surrounding Ashland are attractive to residents of Ashland and tourists. The city's parks and surrounding vistas, such as Mount Ashland, provide a beautiful setting.

- *Sunny, mild weather.* The weather in Ashland is generally sunny and mild.

- *Outdoor recreational activities.* There are a number of outdoor recreational opportunities available near Ashland, including: hiking, fishing and boating on the Rogue River, the Bear Creek Greenway (which runs along the Bear Creek from Ashland to the Rogue River), skiing, and other activities.

- *Ease of auto access.* Although some of the roads near Ashland suffer from congestion, Ashland has excellent automobile access, especially to I-5.

- *Access to the Oregon Coast and Crater Lake.* Ashland is located a few hours drive from the Oregon Coast and Crater Lake.

- *Local hospital.* The Ashland Community Hospital provides local medical services; regional hospitals include the Rogue Valley Medical Center and the Providence Medford Medical Center.

The city's advantages from quality of life and location suggest that Ashland will continue to attract residents and businesses that are attracted to Southern Oregon and Northern California.

Appendix C

Employment Forecast

To provide for at least an adequate supply of commercial and industrial sites consistent with plan policies, Ashland 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 Ashland. The level of this business expansion activity can be measured by employment growth in Ashland. This appendix presents a projection of future employment levels in Ashland 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 Ashland's UGB presented in Appendix A. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in Ashland. 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 Ashland.** Given trends in economic activity and expected growth in Oregon, and Ashland's comparative advantages, we identify the types of firms and industries that may locate in Ashland.

3. **Project total employment.** The projection of total employment will consider a variety of factors, including historical growth rates and projections for Jackson 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

An estimate of the number of employees in Ashland is needed to forecast employment growth. Table C-1 shows an estimate of total employment in the Ashland UGB in 2007. The estimate was developed using an estimate of *covered* employment from the confidential Quarterly Census of Employment and Wages (QCEW) data provided by the Oregon Employment Department. Covered employment 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 Jackson County is only about 71% of *total* employment reported by the U.S. Department of Commerce. The comparison of *covered* employment to *total*

employment in Jackson County was used to develop an estimate of covered employment by sector in Ashland.

Table C-1 shows that Ashland had an estimated 12,816 employees within its UGB in 2004. This figure results in a relatively low population-to-employment ratio of 1.6 persons per employee. The statewide average is about 1.9 persons per employee. This result is not surprising for Ashland—the City is an employment center and draws workers from throughout the County, in part because housing is more expensive in Ashland than other parts of Jackson County.

Table C-1. Estimated total employment in Ashland UGB by land use type, 2007

	Covered Employment		Total Employment		
Land Use Type / Sector	**2004**	**2004 % of Total Emp.**	**2004**	**2007**	**% of Total 2007 Emp.**
Industrial	**1,094**	**74%**	**1,470**	**1,503**	**11%**
Agriculture, Forestry, Fishing, Hunting	37	84%	44	45	0%
Mining	-		-	-	0%
Utilities	-		-	-	0%
Construction	320	58%	550	562	4%
Manufacturing	593	85%	697	713	5%
Wholesale Trade	117	82%	142	145	1%
Transportation & Warehousing	27		37	38	0%
Retail and Commercial	**6,322**	**66%**	**9,547**	**9,764**	**74%**
Retail	1,284	80%	1,604	1,640	13%
Information	172		209	214	2%
Finance & Insurance	192	62%	308	315	2%
Real Estate Rental & Leasing	146	27%	543	555	4%
Professional, Scientific & Technical Services	239	40%	604	618	5%
Management of Companies	29		30	31	0%
Admin. Support & Cleaning Services	104		161	165	1%
Education	100		230	235	2%
Health & Social Assistance	1,466	78%	1,882	1,925	15%
Arts, Entertainment & Recreation	556		1,209	1,236	9%
Accomodations & Food Services	1,581	89%	1,769	1,809	14%
Other Services (except Public Admin.)	453	45%	998	1,021	8%
Public	**1,642**	**91%**	**1,799**	**1,840**	**14%**
Government	1,642	91%	1,799	1,840	14%
Total Employment	**9,058**	**71%**	**12,816**	**13,107**	**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 Jackson 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 2007 total employment by ECONorthwest using an annual growth rate of 0.75% over three years.

POTENTIAL GROWTH INDUSTRIES

An analysis of growth industries in Ashland should address two main questions: (1) Which industries is Ashland most likely to attract and (2) Which industries best meet Ashland economic objectives? The types of industries that Ashland wants to attract have the following attributes: high-wage, stable jobs with benefits; non-polluting industries; industries that use comparatively little water; and industries that are compatible with Ashland's community values. The analysis of economic conditions and trends in Section II and Ashland's comparative advantages in Section III have implications for the industries with potential for

growth in Ashland. Based on these assumptions, the types of firms that may locate in Ashland include the following:

Retail and Services. About three-quarters of Ashland's current employment is in retail and services. The State's forecast for nonfarm employment forecast for 2004 to 2014 (Table A-9) projects that about two-thirds of employment growth in Region 8, which includes Jackson County, will be in Retail and Services. Ashland may attract the following industries:

- Ashland may attract retail and services to serve residents, such as financial institutions, drug stores, and grocery stores.

- The aging population in Ashland, both from aging of existing residents and in-migration of retirees, may attract healthcare related firms that provide services to older people, such as assisted living facilities or retirement centers.

- Population growth, changing demographics, and tourism may drive more development of small and specialty retail shops, as well as offices for business, professional, and health care services.

- Ashland's amenities, high quality of life, and the presence of Southern Oregon University may be attractive for firms engaged in professional, scientific and technical services, such as software design, engineering, and research.

- Ashland's proximity to outdoor recreation areas and attractions like the Shakespeare Festival makes Ashland highly attractive to tourists. Industries that serve tourists, such as food services, accommodations, and specialty retail, are likely to grow if tourism increases.

Manufacturing and Light Industrial. Ashland has comparative advantages, such as location, access to transportation, access to natural resources, and high quality of live that may contribute to the growth in employment in the following light industries:

- Ashland should be attractive to small-scale light manufacturing firms. Examples include high-tech electronics, recreational equipment, furniture manufacturing, specialty apparel, and other specialty manufacturing.

- Ashland's high amenities, tourism, and proximity where fruits are grown should make Ashland attractive to viniculture and related industries.

- Ashland may be attractive to small food processing firms, especially firms specializing in organic or natural foods. Constraints on the amount of potable water available in Ashland will discourage water-intensive food processors from locating in Ashland.

Government and Institutional. As population grows in Ashland, government employment will grow. The following types of public employment may grow in Ashland:

- Demand for government services, such as education, will grow with population growth.

- Ashland will continue to be the location for regional institutions such as Southern Oregon University, the Ashland Community Hospital, Ashland City governmental offices, and local schools.

PROJECTION OF TOTAL EMPLOYMENT

Sections II and III presented economic conditions, trends, and forecasts for Ashland, Jackson County, and Oregon. Using these trends and projections to forecast the rate of total employment growth in Ashland's UGB requires that we make some qualitative judgments about future conditions:

- Employment in Jackson County has grown faster than population since 1980. Demographic and employment data shows that Jackson County the ratio of residents per job has been decreasing since 1980, meaning that there are more jobs per person in Jackson County in 2005 than there were in 1980.

- Ashland's ratio of residents per job is lower than Jackson County's. This indicates that Ashland is an employment center in Jackson County. People work in Ashland but live in other cities.

- Ashland's residential and employment markets are unique in Jackson County and possibly unique in Oregon. Housing prices and housing densities are higher in Ashland than in most places in Oregon, except the Portland Metro area. Even with the higher housing prices and densities, Ashland continues to be attractive to residents and businesses. ECO assumes that employment in Ashland will continue to grow faster than population.

- The employment capacity, described in Section IV, on vacant and partially vacant industrial and other employment lands in Ashland is between about 1,600 and 2,250 employees.

Based on these judgments, historic employment growth in Jackson County, and the population growth rates forecast for Jackson County and Ashland, it appears that an appropriate assumption for the average annual rate of total employment growth is 0.75% for the next twenty years. Table C-2 shows the result of applying this growth rate to the total employment base in Ashland estimated in Table C-1. Between 2027 to 2057, we assumed that employment growth would slow to 0.35% annually. This results in an average annual growth rate of 0.51% for the 2007-2057 period.

Table 4-2. Total employment growth in Ashland's UGB area, 2007–2057

Year	Total Employment
2007	13,107
2012	13,606
2017	14,124
2022	14,662
2027	15,220
2037	15,761
2047	16,321
2057	16,901
2007-2027	
Growth	2,113
% Growth	16%
AAGR	0.75%
2007-2057	
Growth	3,794
% Growth	29%
AAGR	0.51%

Source: ECONorthwest.
Note: shaded cells indicate assumptions by ECONorthwest.

To estimate employment growth by land use type in the Ashland UGB, ECO took the forecasted level of total employment in 2027 (15,220) and estimated the distribution of this employment among the three categories of land use types. Table C-3 shows the share of employment by land use type in 2007 and the assumed shares in 2027 and 2057. The forecast by land use category does not anticipate a significant shift in the distribution of employment between 2007 and 2027.

Table C-3. Employment growth by land use type in Ashland's UGB, 2007–2057

Land Use Type	2007 Total	% of Total	2027 Total	2057 Total	% of Total	2007-2027 Growth	2007-2057 Growth
Retail and Services	9,764	74%	10,654	11,831	70%	890	2,067
Industrial	1,503	11%	2,283	2,535	15%	780	1,032
Government	1,840	14%	2,283	2,535	15%	443	695
Total Employment	13,107	100%	15,220	16,901	100%	2,113	3,794

Source: ECONorthwest.
Note: shaded cells indicate assumptions by ECONorthwest.

ALLOCATION OF EMPLOYMENT TO LAND-USE TYPES

Employment growth in Ashland 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 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.

Typical refill deductions range from 10% in small cities to 30% or more for larger areas. For example, Portland Metro estimated refill at around 40% for 1996 and 1997 in a small empirical study they conducted. A reasonable refill rate for Ashland probably falls somewhere in the middle. Based on analysis of the City's buildable land inventory, ECO estimates that Ashland has capacity for 700-800 employees on redevelopable lands. This redevelopment potential adds 30% to 50% to the City's overall employment capacity. Moreover, the City has a high rate of employment that is not located on lands designated for employment uses. About 17% of all employees in Ashland in 2004 were located in residential zones. However, some employers (retail and manufacturing, for example) will be required to locate on employment land. Thus, it is reasonable to assume that 20% of new employment will not require vacant commercial or industrial land.

The next set of assumptions 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 25% is a reasonable assumption for employment lands. This assumption is consistent with the net to gross factor used by the City in the Buildable Lands Update.

Table C-4 shows estimated demand for employment land in the Ashland UGB by land use type for the 2007-2027 and 2007-2057 periods. The results show that Ashland will need an estimated 165 gross acres of land for employment within its UGB for the 2007-2027 period and 283 gross acres between the 2007-2057 period.

Table C-4. Estimated demand for employment land in the Ashland UGB by land use type, 2007–2027 and 2007-2057

Land Use Type	Total New Emp.	Emp. On Refill Land	Emp. on New Land	Emp. Per Net Acre	Land Need (Net Acres)	Land Need (Gross Acres)
2007-2027						
Retail and Services	890	178	712	17	41.9	55.8
Industrial	780	156	624	12	52.0	69.3
Government	443	89	354	12	29.5	39.4
Total	**2,113**	**423**	**1,690**		**123.4**	**164.6**
2007-2057						
Retail and Services	2,067	413	1,654	17	97.3	129.7
Industrial	1,032	206	826	12	68.8	91.7
Government	695	139	556	12	46.3	61.8
Total	**3,794**	**379**	**3,415**		**212.4**	**283.2**

Source: ECONorthwest.

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