Salem Economic Opportunities Analysis 2015 to 2035

Prepared for:

City of Salem

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ECONorthwest
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1 Introduction

This report is part of the Salem Economic Opportunities Analysis. The full study is contained in three documents:

- **Housing Needs Analysis and Economic Opportunities Analysis: Summary** briefly presents the key findings and conclusions of the residential and employment land studies.
- **Salem Economic Opportunities Analysis 2015 to 2035** presents the full results of the economic opportunities analysis (EOA) for the City of Salem and is intended to comply with statewide planning policies.
- **Salem Employment Land Implementation Strategy** presents recommendations for revisions to policies in Salem's Comprehensive Plan Commercial, Industrial, Economic Development, and Mixed-Use Elements and implementation measures to meet Salem's identified employment land needs.

This document presents an EOA for the City of Salem consistent with the requirements of statewide planning Goal 9, the Goal 9 administrative rules (OAR 660 Division 9) and the court decisions that have interpreted them. Goal 9 describes the EOA as "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."

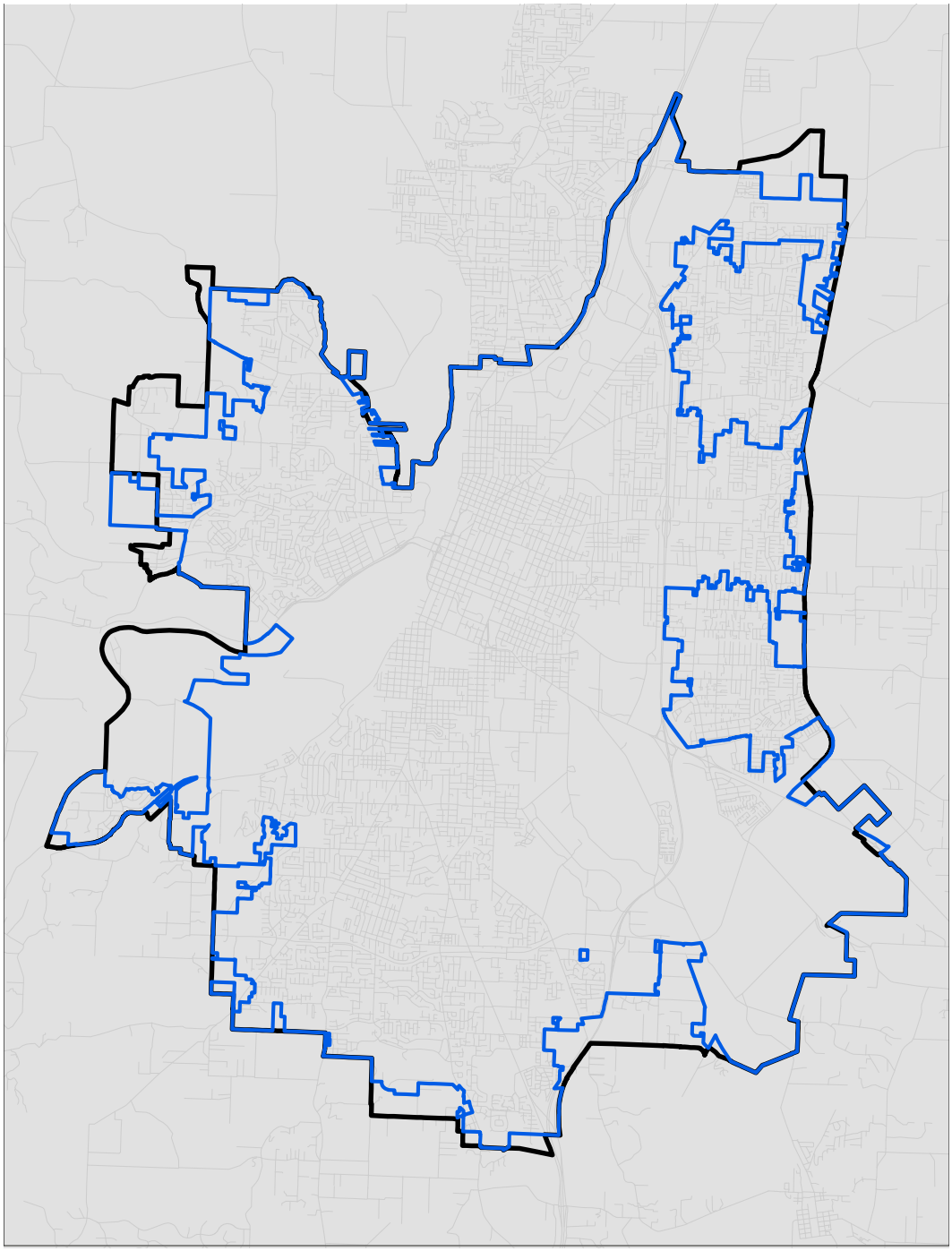
Goal 9 requires cities to state objectives for economic development (OAR 660-009-0020(1)(a)) and to identify the characteristics of sites needed to accommodate industrial and other employment uses to implement the economic development objectives (OAR 660-009-0025(1)) over the 20-year planning period. This approach could be characterized as a *site-based* approach that projects land need based on the forecast for employment growth, the City's economic development objectives and the specific needs of target industries.

This report provides Salem with a factual basis to support future planning efforts related to employment and options for addressing unmet employment needs in Salem. It builds from the *Salem-Keizer Economic Opportunities Analysis* prepared by ECONorthwest for the Salem-Keizer region. This study updates information from the Regional analysis and provides specific analysis that is required for a single jurisdiction to comply with state policies.

Map 1 shows the study area for the EOA, which includes all land within the Salem portion of the Salem-Keizer Urban Growth Boundary (UGB). This includes

land within the Salem city limits, as well as land outside the city limits but within the UGB in Marion and Polk counties.

Map 1. Salem Housing Needs Analysis and Economic Opportunities Analysis Study Area, 2014



and Economic Opportunities Assessment

Source: ECONorthwest analysis of City of Salem GIS data

FRAMEWORK FOR REGIONAL ECONOMIC OPPORTUNITIES ANALYSIS

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 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 projected 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 Salem) 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 to implement policies adopted pursuant to OAR 660-009-0020. Appropriate implementation 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 characteristics of sites needed to accommodate industrial and other

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

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.

ORGANIZATION OF THE REPORT

This report is organized as follows:

- **Chapter 2, Commercial and Industrial Buildable lands inventory** presents a summary of the inventory of commercial and industrial employment lands.
- **Chapter 3, Factors Affecting Future Economic Growth Salem** summarizes historic economic trends that affect current and future economic conditions in Salem, as well as Salem's competitive advantages for economic development.
- **Chapter 4, Employment Growth and Target Industries in Salem** presents a forecast for employment growth in Salem and describes the City's target industries.
- **Chapter 5, Land Demand and Site Needs** compares the supply of and demand for commercial and industrial land, as well as the site needs of target industries.
- **Chapter 6, Conclusions** presents the key conclusions and recommendations from the EOA.

This report also includes three appendices:

- **Appendix A, Commercial and Industrial Buildable Lands Inventory**
- **Appendix B, Economic Trends and Factors Affecting Future Economic Growth in Salem**
- **Appendix C, Salem Employment Forecast**

2 Commercial and Industrial Buildable Lands Inventory

This chapter provides a summary of the buildable lands inventory for the Salem portion of the Salem-Keizer Urban Growth Boundary (UGB). Appendix A presents the full buildable lands inventory, including the methodology for developing the inventory and the full results of the inventory.

DEFINITIONS

For the purposes of this study, the following definitions were used:

- **Developed Land** – properties with improvements that are considered committed to existing uses for the 20-year planning period.
- **Vacant Land** - properties with no current development and available for future employment development. The inventory included all land designated for employment uses and as a result is more comprehensive (e.g., includes more land) than would be inventoried using the standard definitions of vacant land in OAR 660-009-0005(14).
- **Partially Vacant Land** – properties that are partially vacant (e.g., partially developed) in the baseline inventory with an employment use and by the criteria developed for this study could support additional development.
- **Excluded** – properties where the existing land use excludes or essentially precludes any future development. Examples include publicly-owned lands; designated open spaces; GIS parcels representing water bodies; power lines, electrical substations, water towers or reservoirs, etc.; airport expansion areas. Publicly-owned lands were evaluated and many (not all) were excluded because they are not intended to convert to employment use during the planning period.
- **Constrained land** – land that is not available for development based upon one or more factors such as, environmental protections, or lands committed for public use. Constrained land was deducted from the buildable land inventory in order to determine the amount of unconstrained "buildable acres" available for development over the planning horizon. Appendix A describes the constraints identified and excluded in the BLI.

EMPLOYMENT BUILDABLE LAND INVENTORY RESULTS

Table 1 shows employment land in Salem by classification (development status). The results show that Salem has 6,868 acres in employment plan designations (including mixed-use designations that allow commercial development). By classification, about 68% of the land is classified as developed, 5% partially vacant, and 27% vacant. About 50% of employment land is in industrial designations (IND and IC); 31% in commercial designations (CB and COM), 13% in the employment center designation (EC) and 6% in mixed-use designations (MU and ROM). Note that these figures include all acres.

Table 1. Employment Land by Classification, Salem UGB, 2014

	Plan Designation							
Development Status	**MU**	**ROM**	**IND**	**IC**	**CB**	**COM**	**EC**	**Total**
Developed	3	75	1864	540	134	1673	328	4,617
Partially Vacant	46		156	19		69	66	356
Vacant	241	97	641	174	1	223	518	1,895
Total	**290**	**172**	**2661**	**733**	**136**	**1964**	**912**	**6,868**
Percent of Total	**4%**	**3%**	**39%**	**11%**	**2%**	**29%**	**13%**	**100%**

Source: ECONorthwest analysis of City of Salem GIS data
Note: MU=mixed use; ROM=river oriented mixed use; IND=Industrial; IC=Industrial-Commercial; CB=Commercial Business District; COM=Commercial; EC=Employment Center.
Note: MU is in the Fairview Mixed Use Area, where development is guided by the Fairview Training Center Redevelopment Master Plan.

Table 2 shows suitable acres (e.g., acres in taxlots after constraints are deducted) for vacant and partially vacant land by plan designation. The results show that Salem has about 1,945 suitable employment acres (including areas in mixed-use plan designations). Of this about 87% is in tax lots classified as vacant, and 13% in tax lots classified as partially vacant. About 43% of the buildable employment land (837 acres) is in industrial plan designations (IND and IC) and 14% (264 acres) in commercial plan designations (CB and COM). Twenty-nine percent (556 acres) is in the Employment Center plan designation with the remaining acreage in mixed-use designations (MU and ROM).

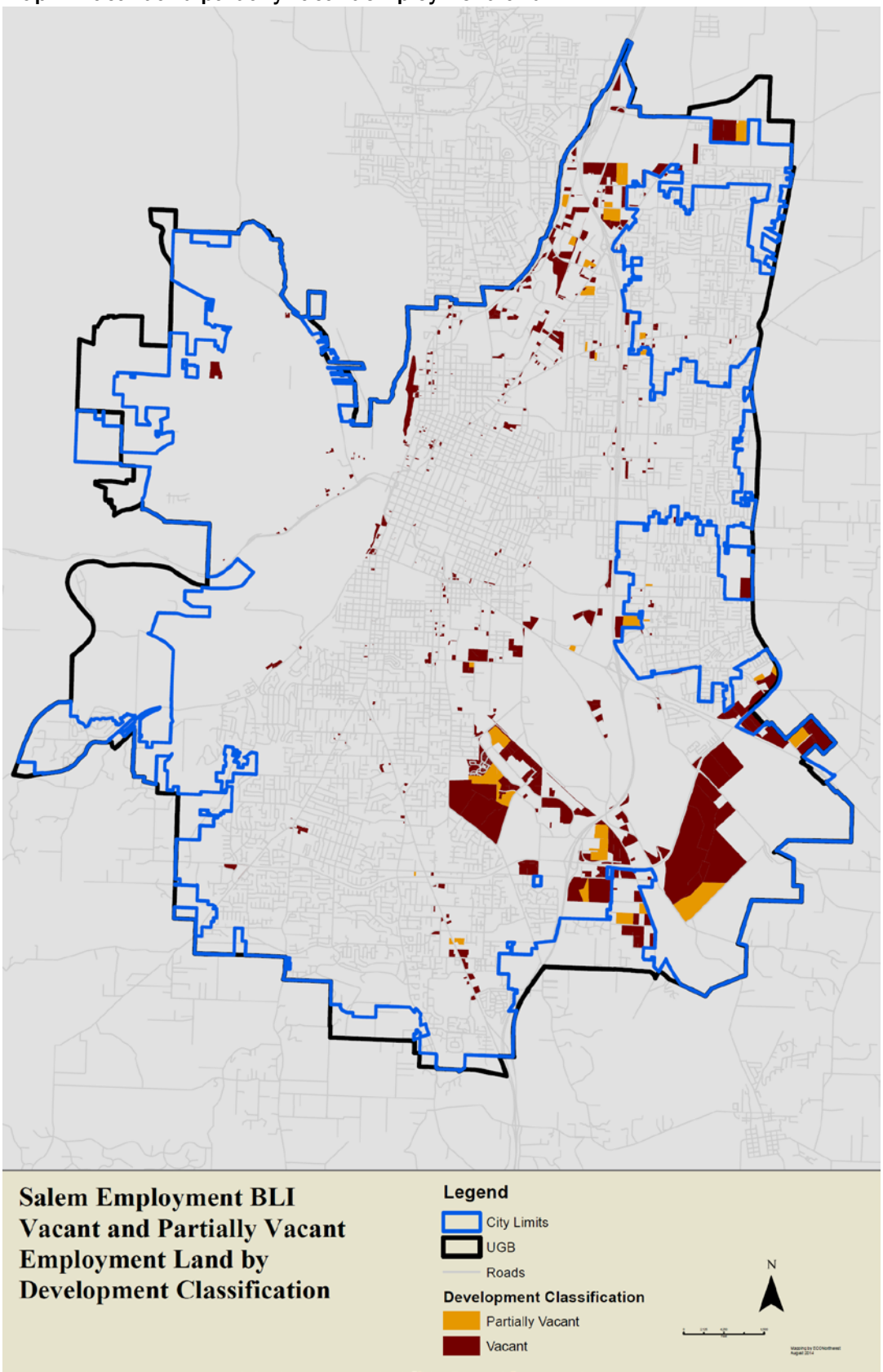
Table 2. Suitable acres in vacant and partially vacant tax lots by plan designation, Salem UGB, 2014

	Plan Designation								Percent of
Development Status	**MU**	**ROM**	**CB**	**COM**	**EC**	**IC**	**IND**	**Total**	**Total**
Partially Vacant	45			45	61	17	94	261	13%
Vacant	229	15	1	218	494	154	573	1,684	87%
Total	**274**	**15**	**1**	**263**	**556**	**170**	**667**	**1,945**	**100%**
Percent of Total	**14%**	**1%**	**0%**	**14%**	**29%**	**9%**	**34%**	**100%**	

Source: ECONorthwest analysis of City of Salem GIS data
Note: The 274 vacant acres in MU is covered by Fairview Training Center Redevelopment Master Plan shows capacity for office, retail, and commercial industrial development. The Master Plan determines the amount of employment development in this Mixed Use area.

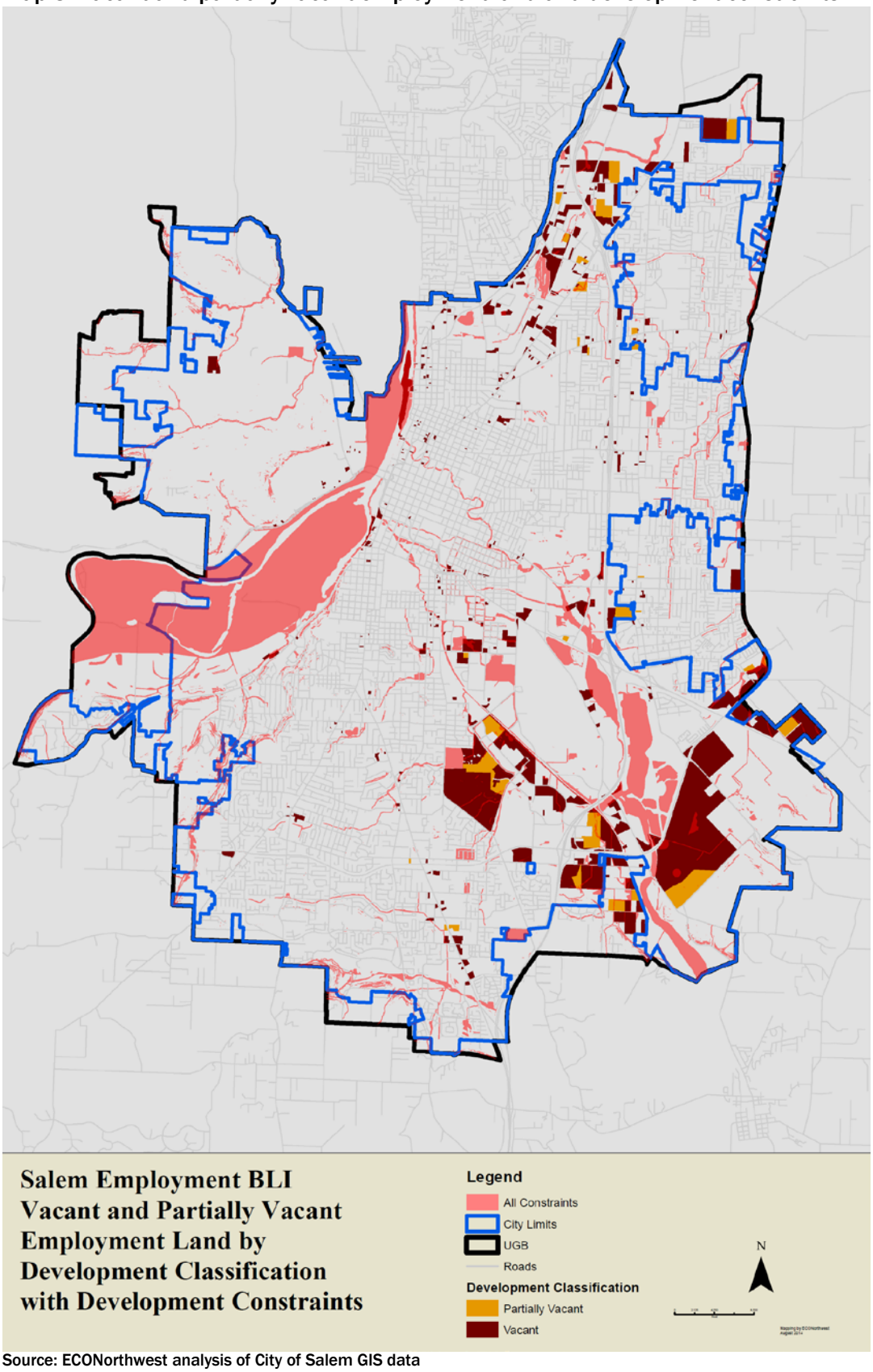
Map 1 and Map 2 show vacant and partially vacant land in Salem.

Map 2: Vacant and partially vacant employment land



Source: ECONorthwest analysis of City of Salem GIS data

Map 3: Vacant and partially vacant employment land and development constraints



Source: ECONorthwest analysis of City of Salem GIS data

3 Factors Affecting Future Economic Growth in Salem

Implications of National, State and Regional Trends on Economic Development within Salem

This section presents the implications of national, state, and regional economic trends on economic growth in Salem.

Table 3. Implications of national, state, and regional economic and demographic trends on economic growth in Salem

National, State, and Regional Economic Trends	Implications for economic growth in Salem
Moderate growth rates and recovery from the national recession According to the National Bureau of Economic Research, "The Great Recession" ended in 2009, but sluggish growth continued to affect businesses and workers alike for several years after. Unemployment at the national level has gradually declined since the height of the recession. Unemployment rates in Oregon and Marion County are typically higher than those of the nation as a whole. The federal government's economic forecast predicts a moderate pace of economic growth, with gradual increases in employment and real GDP (roughly 3% through the end of 2016). Economic growth in Oregon typically lags behind national growth.	Economic growth in Salem – in measures such as employment growth, unemployment rates, and wage growth - will be markedly improved from previous years (i.e. since 2007). The rate of employment growth in Salem will depend, in part, on the rate of employment growth in Oregon and the nation. Salem's comparative advantages, especially the city's location, access to transportation, and supply of development-ready employment land, make Salem attractive to companies who want to grow, expand, or locate in the Willamette Valley.
Growth of service-oriented sectors Increased worker productivity and the international outsourcing of routine tasks led 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 healthcare and social assistance, professional and business services, and other service industries. Construction employment will grow with the economy, but manufacturing employment will decline. These trends are also expected to affect the composition of Oregon's economy.	The changes in employment in Salem have followed similar trends as changes in national and state employment. The sectors with the greatest change in share of employment since 1980 were Services, and Health Care and Social Assistance. The Oregon Employment Department forecasts that the sectors likely to have the most employment growth in Marion, Polk, and Yamhill Counties over the 2012 to 2022 period are: Health Care, Local and State Government, Retail Trade, Professional and Business Services, and Accommodation and Food Services. These sectors represent employment opportunities for Salem.

National, State, and Regional Economic Trends	Implications for economic growth in Salem
Lack of diversity in Oregon's economy Oregon's economy has diversified since the 1960's, but Oregon continues to rank low in economic diversity among states. 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.	Data from the Oregon Employment Department shows that employment in Salem is currently concentrated in a few sectors: Government (primarily state government), Health Care and Social Assistance, Accommodations and Food Services, and Retail Trade. Employment in the Government and Health Care sectors tends to be stable and pays above Salem's average wage of $42,000. Employment in Accommodations and Food Services and Retail Trade pays below Salem's average wage and employment may be volatile. Salem's employment in traded-sectors is in both manufacturing and some services. Salem's manufacturing employment is concentrated in food processing, Computer and Electronic Products, Fabricated Metal Products, and other manufacturing. Traded-sector services in Salem are primarily in Professional Services and Administrative Support Services (e.g., call centers). Opportunities for growth of traded-sector employment include manufacturing of: technology (e.g., renewables or avionics), equipment, specialty metals, specialty food processing, and chemical manufacturing.
Importance of small businesses in Oregon's economy Small business, with 100 or fewer employees, account for 41% of private-sector employment in Oregon. Workers of small businesses typically have had lower wages than the state average.	The average size for a private business in Salem is 10.7 employees per business, compared to the State average of 11 employees per private business. Businesses with 100 or fewer employees account for roughly 71% of private employment in Salem (businesses with 9 or fewer employees account for 20% of private employment). Growth of small businesses presents opportunities for economic growth in Salem.

National, State, and Regional Economic Trends	Implications for economic growth in Salem
Availability of trained and skilled labor Businesses in Oregon are generally able to fill jobs, either from available workers living within the State or by attracting skilled workers from outside of the State. Availability of labor depends, in part, on population growth and in-migration. Oregon added more than 980,000 new residents and about 475,000 new jobs between 1990 and 2008. The population-employment ratio for the State was about 1.6 residents per job over the 18-year period. Availability of labor also depends on workers' willingness to commute. Workers in Oregon typically have a commute that is 30 minutes or shorter. Availability of skilled workers depends, in part, on education attainment. About 30% of Oregon's workers have a Bachelor's degree or higher.	Employment in the Salem MSA grew at about 1.3% annually over the 1990 to 2013 period, while population grew at about 1.7% over the same period. About 67% of workers at businesses located in Salem lived in Marion or Polk County, and 42% lived within Salem city limits. Firms in Salem attracted workers from all over the Willamette Valley. Salem's residents were less likely to have a Bachelor's degree or higher (27%) than the State average (30%).
Aging of the population The number of people age 65 and older will more than double between 2010 and 2050, while the number of people under age 65 will grow by only 20%. 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. People are retiring later than previous generations and continuing to work past 65 years old. This trend is seen both at the national and State levels. Even given this trend, the need for workers to replace retiring baby boomers will outpace job growth. Management occupations and teachers will have the greatest need for replacement workers because these occupations have older-than-average workforces.	The changes in the Salem's age structure are similar to those of the State, with the most growth observed in people 45 years and older. Salem's population is generally younger than the State's, with a larger share of its population below the age of 45. The State projects that the share of the population over the age of 60 in the Salem MSA (Marion and Polk Counties combined) will increase by 150% between 2015 and 2035. Firms in Salem will need to replace workers as they retire. Demand for replacement workers is likely to outpace job growth in Salem, consistent with State trends.
Increases in energy prices Energy prices are forecast to return to relatively high levels, such as those seen in the 2006 to 2008 period, possibly increasing further over the planning period.	Increases in energy prices are likely to affect the mode of commuting before affecting workers' willingness to commute. For example, commuters may choose to purchase a more energy efficient car, use the train, bus, or carpool. Very large increases in energy prices may affect workers' willingness to commute, especially workers living the furthest from Salem or workers with lower paying jobs.

National, State, and Regional Economic Trends	Implications for economic growth in Salem
Comparatively low wages The income of a region affects the workforce and the types of businesses attracted to the region. Average income affects workers and businesses in different ways. Workers may be attracted to a region with higher average wage or high wage jobs. Businesses, however, may prefer to locate in regions with lower wages, where the cost of doing business may be lower. Since the early 1980's, Oregon's per capita personal income has been consistently lower than the U.S. average. In 2012, Oregon's per capita wage was 90% of the national average.	Per capita income in Marion and Polk counties were lower than the State and national averages. Income in Oregon has historically been below national averages, and income in Marion and Polk counties has been below state averages. There are four basic reasons that income has been lower in Oregon and Marion and Polk counties 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) lower labor force participation among working age residents (in part due to the presence of a large number of college students). To a certain degree, these factors are all true for both Oregon and Marion and Polk counties, and result in lower income. In addition, wages in Marion and Polk County and Oregon tend to be more volatile than the national average. The major reason for this volatility is that the relative lack of diversity in the State and County economy. Wages in Oregon and Marion and Polk County are impacted more than the national average by downturns in either the national economy or in industries in Oregon and Marion and Polk counties that are dependent on natural resources (e.g., timber and wood processing or R.V. manufacturing). The lower wages in Salem may be attractive to firms that typically pay lower wages, such as call centers or firms that outsource professional services such as accounting or technical support.
Education as a determinant of wages The 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. The fastest growing of occupations requiring an academic degree will be: computer software application engineers, elementary school teachers, and accountants and auditors. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for about half of all jobs by 2018. These occupations typically have lower pay than occupations requiring an academic degree.	Salem's residents were less likely to have a Bachelor's degree or higher than the State average (27% versus 30%). Wages in Salem are relatively low compared to Oregon as a whole, and this is largely a result of the composition of the regional economy, rather than the availability of workers with an academic degree. Increasing the relatively low wages in the region is dependent on changing the composition of the regional economy, through growing or attracting businesses with higher paying occupations.

National, State, and Regional Economic Trends	Implications for economic growth in Salem
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.	The region's high quality natural resources present economic growth opportunities for Salem, ranging from food and beverage production to amenities that attract visitors and contribute to the region's high quality of life.

SALEM'S COMPETITIVE ADVANTAGES

Economic development opportunities in Salem will be affected by local conditions as well as the national and state economic conditions addressed above. Economic conditions in Salem relative to these conditions in other portions of the Willamette Valley form Salem's competitive advantage for economic development. Salem's competitive advantages have implications for the types of firms most likely to locate and expand in the Area.

There is little that metropolitan area jurisdictions can do to influence national and state conditions that affect economic development, though they can influence local factors that affect economic development. Salem's primary competitive advantages are: location, access to transportation, presence of the State government, quality of life, market buying power, and access to highly educated and skilled labor from within the region and the Willamette Valley. These factors make Salem attractive to residents and businesses that want a high quality of life where they live and work.

The local factors that form Salem's competitive advantage are summarized below.

- **Location.** Salem is located in Marion and Polk counties on Interstate 5 (I-5), less than an hour south of Portland. Salem is one of Oregon's largest cities, and it is located in one of Oregon's most populous metropolitan areas, which has more than 380,000 people in the metropolitan area or roughly 10% of the state's population. Salem is Oregon's state capital. Salem is regarded as the southern edge of the Portland metropolitan area, with relatively easy access to businesses in the southern part of the Portland region. Businesses in Salem have access to natural resources from surrounding rural areas, such as agricultural products, lumber, and other resources.

- **Transportation.** Businesses and residents in Salem have access to a variety of transportation modes and systems, but the most important is I-5. Other transportation systems are available: automotive (Highways 22 and 213, among others, and local roads); rail (freight service from Union Pacific and passenger service with Amtrak); air freight (McNary Field and the Portland International Airport); and transit (Cherriots). Businesses in Salem have relatively easy access to the Port of Portland's freight facilities.

  Firms needing passenger air transportation, such as regional corporate headquarters or professional service firms, have relatively easy access to Portland International Airport, which is about an hour's drive from Salem.

  Businesses that depend on easy access to I-5, air transportation, or rail or

port transportation may be attracted to Salem. In addition, the short distance from some industrial areas, especially those near McNary Field, to I-5 may encourage some types of firms, such as warehousing and distribution, to locate in Salem.

- **Oregon State government.** Salem is the capital of Oregon, with about 17,200 State government employees located in Salem.[1] State government offers a range of employment opportunities, from jobs requiring highly skilled and educated employees to jobs requiring little formal education. The average pay for State employees is slightly above the average pay for all employees in Salem. Growth in State government provides opportunities for expansion of employment in Salem.

- **Existing employment base.** Salem had nearly 6,500 employers with a total of more than 90,000 workers in 2012. Salem's largest employment sectors are Government (nearly 27,700 jobs), Health Care (11,400 jobs), Retail Trade (10,500 jobs), Accommodation and Food Service (7,300 jobs), and Manufacturing (5,500 jobs). Salem is the regional employment center, with about 60% of employment in Marion and Polk Counties in Salem.[2] The existing businesses and other employers in Salem create opportunities for expansion of existing businesses and growth of new related businesses.

- **Labor market.** 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, wages, and experience of available workers as well.

  Businesses in Salem have access to highly educated skilled workers, nearby college students, and unskilled workers. Commuting is common in Salem. About a third of Marion and Polk County's workers commute from outside Salem. The commuting patterns show that businesses in Salem are able to attract skilled and unskilled workers living within Salem and from the Willamette Valley and Portland Metropolitan Region.

- **Urban infrastructure and buildable lands.** Salem has 1,945 acres of unconstrained vacant and partially vacant buildable commercial and industrial land. Of this, approximately 525 acres are in the Mill Creek Corporate Center and the Salem Renewable Energy and Technology Center, with approximately 176 of those acres (about 136 acres at the Mill

[1] Oregon Employment Department, Quarterly Census of Employment and Wages, excludes home health care employees that are not located in Salem.

[2] Oregon Employment Department, Quarterly Census of Employment and Wages

Creek Corporate Center and 40 acres at Salem Renewable Energy and Technology Center) having Industrial Site Certification through the Oregon Business Development Department, or Business Oregon. These sites are serviced and ready to be developed.

Salem's supply of vacant buildable industrial land is unique within the Willamette Valley. A recent study about industrial land in the Portland metropolitan region found that there are only nine sites larger than 25 acres in the Portland region that are available for development in 180 days or less. Of these, one is 50 to 99 acres and one is larger than 100 acres. In addition, the Portland region has 25 sites that could be made available for development in seven to 30 months, most of which are smaller than 50 acres.[3] Within this context, Salem's supply of vacant buildable industrial land is a significant asset to the City for economic development potential.

- **Economic development partnerships.** Salem's partners in economic development include SEDCOR, Business Oregon, Marion and Polk Counties, Mid Willamette Valley Council of Governments, Chemeketa Center for Business and Industry, Job Growers, Greater Portland Inc., and others. Salem is able to work with these and other regional partners to provide infrastructure and services needed to retain and attract businesses to Salem.

- **Public policy.** Public policy can impact the amount and type of economic growth in a community. The City can impact economic growth through its policies about the provision of land and redevelopment. Success at attracting or retaining firms may depend on availability of attractive sites for development and public support for redevelopment. In addition, businesses may choose to locate in Salem (rather than in a different part of the Willamette Valley) based on: development charges (i.e., systems development charges), availability of public infrastructure (i.e., transportation or sanitary sewer), and attitudes towards businesses.

- **Quality of life.** Salem's high quality of life and urban amenities are a competitive advantage for attracting businesses to the city. The Metropolitan's quality of life attributes include: cultural amenities, shopping opportunities, and access to outdoor recreation. Salem's high quality of life is likely to attract businesses and entrepreneurs that want to locate in a high-amenity area.

[3] "Regional Industrial Site Readiness Project," August 2012

4 Employment Growth and Target Industries in Salem

Goal 9 requires cities to prepare an estimate of the amount of commercial and industrial land that will be needed over a 20-year planning period. The estimate of employment land need and site characteristics for Salem is based on expected employment growth and the types of firms that are likely to locate in Salem over the 20-year period. This section presents an employment forecast and analysis of target industries that build from recent trends.

EMPLOYMENT FORECAST

Demand for commercial and industrial land will be driven by the expansion and relocation of existing businesses and new businesses locating in Salem. The level of this business expansion activity can be measured by employment growth in Salem. This section presents a projection of future employment levels in Salem for the purpose of estimating demand for commercial and industrial land.

The projection of employment has three major steps:

1. **Establish base employment for the projection.** We start with the estimate of covered employment in Salem's portion of the Salem-Keizer UGB presented in Table 4. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in Salem.
2. **Project total employment.** The projection of total employment considers forecasts and factors that may affect employment growth in Salem over the 20-year planning period.
3. **Allocate employment.** This step involves allocating employment to different land-use types.

The employment projections in this section build off of Salem's existing employment base, assuming future growth similar to the Marion and Polk Counties' past employment growth rates. The employment forecast does not take into account a major change in employment that could result from the location (or relocation) of one or more large employers in the community during the planning period. Such a major change in the community's employment would essentially be over and above the growth anticipated by the city's employment forecast and the implied land needs (for employment, but also for housing, parks, and other uses). Major economic events, such as the successful recruitment of a very large employer, are very difficult to include in a study of this nature. The implications, however, are relatively predictable: more demand for land (of all types) and public services.

Employment Base for Projection

The forecast of employment growth in Salem starts with a base of employment growth on which to build the forecast. Table 4 shows ECO's estimate of total employment in the Salem UGB in 2010. To develop the figures, ECO started with estimated covered employment in the Salem UGB from confidential QCEW (Quarterly Census of Employment and Wages) data provided by the Oregon Employment Department. Based on this information, Salem had about 92,039 covered employees in 2012.

Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Analysis of data shows that *covered* employment reported by the Oregon Employment Department for the Salem MSA is only about 77% of *total* employment reported by the U.S. Department of Commerce. We made this comparison by sector for the Salem MSA and used the resulting ratios to determine the number of non-covered employees. This allowed us to determine the total employment in Salem. Table 4 shows Salem had an estimated 119,865 *total* employees within its UGB in 2012.

Table 4. Estimated total employment in the Salem portion of the Salem-Keizer UGB by sector, 2012

		Estimated Total Employment	
Sector	Covered Employment	Total Employment	Covered % of Total
Agriculture, Forestry, Fishing & Hunting	1,292	1,688	77%
Construction	3,084	4,519	68%
Manufacturing	5,497	5,659	97%
Wholesale Trade	1,487	1,942	77%
Retail Trade	10,534	13,370	79%
Transportation & Warehousing & Utilities	1,615	2,109	77%
Information	722	1,122	64%
Finance & Insurance	3,385	6,086	56%
Real Estate & Rental & Leasing	1,194	4,845	25%
Professional, Scientific, and Technical Services	3,239	5,687	57%
Management of Companies and Enterprises	778	1,016	77%
Admin. & Support & Waste Mgt. & Remediation Srv.	4,410	6,446	68%
Private Educational Services	1,924	3,829	50%
Health Care & Social Assistance	13,380	17,045	78%
Arts, Entertainment, & Recreation	763	1,817	42%
Accommodation & Food Services	7,345	8,047	91%
Other Services (except Public Administration)	3,661	6,365	58%
Government	27,729	28,273	98%
Total	**92,039**	**119,865**	**77%**

Source: 2012 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department.
Note: Covered employment as a percent of total employment calculated by ECONorthwest using data for the Salem MSA employment from the U.S. Department of Commerce, Bureau of Economic Analysis (total), and the Oregon Employment Department (covered).

Employment Projection

The employment forecast covers the 2015 to 2035 period, requiring an estimate of total employment for Salem in 2015.

Salem does not have an existing employment forecast, and there is no required method for employment forecasting. OAR 660-024-0040(9) sets out some optional "safe harbors" that allow a city to determine employment land need.

Salem is relying on the safe harbor at OAR 660-024-0040(9)(a)(B), which allows Salem to assume that the current number of jobs in the Salem urban area will grow during the 20-year planning period at a rate equal to "the population growth rate for the urban area in the adopted 20-year coordinated population forecast."

On October 7, 2009, Marion County adopted a new coordinated population forecast for the urban areas of the county, which included a forecast for the Salem-Keizer UGB.[4] Table B-11 in in Appendix B shows that the Salem portion of the Salem-Keizer UGB will grow from 210,035 people in 2015 to 269,274 people in 2035, adding 59,239 people, at an average annual growth rate of 1.25% for the 2015 to 2035 period, based on the adopted coordinated forecast.

Table 5 shows employment growth in Salem between 2015 and 2035, for employment excluding retail and retail services (as documented in Appendix C). The forecast is based on the assumption that Salem will grow at an average annual growth rate of 1.25%.[5] Salem will have 120,119 employees within the UGB by 2035, an increase of 26,425 employees (28%) between 2015 and 2035.

Table 5. Industrial and non-retail commercial employment growth in Salem's portion of the Salem-Keizer UGB, 2015–2035

Year	Total Employment
2015	93,694
2035	120,119
Change 2015 to 2035	
Employees	26,425
Percent	28%
AAGR	1.2%

Source: ECONorthwest
The forecast excludes employment in Retail and Retail Services, as described in Appendix C.

[4] The population forecast is described in the Portland State University's Population Research Center report "Population forecasts for Marion County, its Cities and Unincorporated Areas 2010-2030."

[5] The forecast assumes that Salem's employment base in 2012 will grow at the same rate between 2012 and 2015 as the employment forecast for 2015 to 2035, 1.25% average annual growth rate.

Allocate Employment to Different Land Use Types

The next step in forecasting employment is to allocate future employment to broad categories of land use. Firms wanting to expand or locate in Salem will look for a variety of site characteristics, depending on the industry and specific circumstances. We grouped employment into four broad categories of land-use based on North American Industrial Classification System (NAICS): industrial, commercial, retail, and government.

Table 6 shows the expected share of employment by land use type in 2015 and the forecast of employment growth by land use type in 2035 in Salem's portion of the Salem-Keizer UGB.

The forecast shows growth in all categories of employment, with the most growth in industrial employment. This assumption is based on the City's economic development policies that support the growth of traded-sector businesses. The City's economic development policies target growth of industrial traded-sector businesses such as technology manufacturing, food and beverage manufacturing, equipment manufacturing, as well as other types of manufacturing. The resulting increase in the share of industrial employment reflects the expectation that the City's policy direction will lead to growth in the share of industrial jobs. This type of employment growth is consistent with the City's broad economic development goal of increasing household prosperity because industrial jobs typically have higher-than-average wages.

Table 6. Forecast of employment growth by land use type, Salem's portion of the Salem-Keizer UGB, 2015–2035

	2015		2035		Change 2015 to 2035
Land Use Type	Employment	% of Total	Employment	% of Total	
Industrial	16,521	18%	24,024	20%	7,503
Office and Commercial Services	47,826	51%	60,060	50%	12,234
Government	29,347	31%	36,036	30%	6,689
Total	93,694		120,119		26,425

Source: ECONorthwest
Note: Green shading denotes an assumption about the future change in the share of employment (as a percent of total) by land use type.
The remainder of this document does not address land needed for government employment.

Need for government land in Salem is driven, primarily, by growth in local government employment and by state government employment. Discussions with the administrative staff at the Salem-Keizer Public Schools indicate that the District is in the process of updating their Facilities Plan. According to the exiting facilities plan, the District has no immediate plans to build new schools in Salem over the 20-year period. In addition, the City has no plans for substantial expansion of City offices onto land not currently owned by the City, nor does Marion County. Discussions with staff at the Department of Administrative Services with the State of Oregon suggest that the State expects to build new office space over the 20-year period. However, State development on land that is

currently privately owned in commercial or industrial designations will be approximately offset by sales of currently-State owned land.

As a result of these discussions, the remainder of this document does not address additional land need for government employment.

TARGET INDUSTRIES

An analysis of growth industries in Salem should address two main questions: (1) Which industries are most likely to be attracted to Salem? and (2) Which industries best meet Salem's economic objectives?

Salem's Vision for Economic Development[6]

The City's broad economic development goal is to attract and retain jobs to increase the economic prosperity for Salem residents and businesses. The City's approach to accomplishing this goal is to:

- Implement an economic development strategic plan that focuses on the role of the City and other partners to create jobs and encourage economic growth.
- Attract higher density employment to downtown.
- Attract companies to the Mill Creek Corporate Center and Salem Renewable Energy and Technology Center by marketing both sites.

The City's strategies for accomplish this goal are:

- **Stay and Grow in Salem.** This strategy protects Salem's existing economic base by helping to expand and grow existing businesses and by diversifying the traded-sector businesses in Salem to support existing companies. This strategy will require Salem (and regional partners) to invest in transportation and other infrastructure improvements, ensure that Salem has the right mix of land for development, provide incentives and a range of financial resources for economic development, and to support and invest in economic development partners.
- **Rely on Strengths of Regional Partnerships.** The City will continue to emphasize regional partnerships to provide a full range of economic development services through means such as: use of federal funds to seed infrastructure improvements and leverage State of Oregon resources and

[6] The information in this section is summarized from the memorandum "Citywide Economic Development Strategy Development" dated December 7, 2012 from John Wales (Director of Urban Development) to the City Council.

incentives for jobs and other investments. The City will continue to work with local partners to retain and recruit businesses, provide utilities, prepare the workforce, and develop property. In addition, the City will collaborate with its partners on the availability of land and infrastructure development to support job creation.

- **Grow Small Businesses.** The City will support growth of small businesses through programs such as the Fairview Loan Program or by helping businesses make connections to other partners or State agencies with resources. In addition, the City will continue to diversify Salem's economy and increase local prosperity through growth of businesses in new and existing clusters and by focusing on growth of businesses in key target industries.
- **Attract New Businesses.** Available development-ready and other buildable land at the Mill Creek Corporate Center and Salem Renewable Energy and Technology Center will attract businesses considering locating in Salem or the Willamette Valley.

Industrial Target Industries

The characteristics of Salem will affect the types of businesses most likely to locate in Salem. Salem's attributes that may attract firms are: the City's proximity to I-5, proximity to the Portland region, availability of buildable land with services, access to an educated workforce, availability of skilled and semi-skilled labor, development policies and relatively low permitting costs, high quality of life, and proximity to indoor and outdoor recreational opportunities.

Historically, Growth of manufacturing in Salem has been largely driven by growth in food and beverage processing industries and, to a lesser extent, other industries that Salem has advantages in, such as metals manufacturing. Salem's vision for economic development is growth and diversification of its core manufacturing base. Salem's target industries build from the city's manufacturing base, focusing on diversifying the employment base with jobs that have higher-than-average wages.

The selection of target industries is based on Salem's economic development goals and strategies, economic conditions in Salem and Marion and Polk Counties, and the City's competitive advantages. A wider range of target industries was

considered and narrowed down the list of target industries as a result of research about the viability of target industry development in Salem.[7]

Salem's economic development policy is to assist existing companies to grow and expand within Salem, providing assistance where the City can. The industries with existing concentrations of employment in either traded-sector or higher-than-average wages are:

- **Food and beverage manufacturers.** Food and beverage manufacturing is Salem's largest existing manufacturing industry. In 2012, 45% of Salem's manufacturing employment (about 2,500 jobs) was in food and beverage manufacturers.
- **Medical services.** In 2012, about 12% of Salem's jobs were in Health Care (11,400 jobs). While Salem Hospital is the largest employer in medical services, Salem has more than 600 other private providers of medical services. Employment in medical services will grow with population growth to the extent that Salem continues to offer medical services not available in surrounding areas. The OED forecasts that Health Care will add 4,500 new jobs between 2012-2022 in Marion, Polk, and Yamhill counties.
- **Government services.** About 30% of Salem's employment in 2012 was in Government (27,700 jobs), with more than 60% of government jobs in State Government. The OED forecasts that State Government will add 1,200 new jobs between 2012-2022 in Marion, Polk, and Yamhill Counties. Most (or all) of these jobs will locate in Salem.

Salem has identified the following target industries for growth of Salem's economy. These industries are traded-sector, and the majority has average income above the average pay for employment in Salem.[8] Growing and attracting businesses in these industries will strengthen Salem's manufacturing businesses, increasing the share of employment in manufacturing industries. Most of these

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[7] This research includes:
Marion, Polk, & Yamhill Counties Regional Economic Profile and Strategic Assessment, by E.D. Hovee and Company, March 2007
Industrial Ecology, by the Sustainable Cities Initiative at the University of Oregon, Fall 2010
Salem Target Industries, by the Community Planning Workshop at the Community Service Center in the University of Oregon, June 2011
Salem Area Economic Development: Contextual Study on Current Approaches, by the City of Salem's Urban Development Department, May 14, 2012
Feasibility Analysis for a Micro-Enterprise Food Manufacturing Accelerator in Salem, by Claggett Wolfe Associates, May 2, 2013

[8] The Oregon Employment Department, Quarterly Census of Employment and Wages reports that Salem's average wage in 2012 was $42,098.

industries have incomes above Salem's average, with national averages for employment in these sectors ranging from $46,000 to $57,000.[9]

- **Technology manufacturing.** Businesses in this target industry include manufacturers of renewable energy equipment, avionics, and medical devices. Salem is attractive to these types of technology manufacturers because of the City's: supply of development-ready buildable land; transportation access via I-5, rail, or the airports; existing businesses in these and related industries; and the access to a large pool of skilled and experienced workers.
- **Equipment manufacturing.** The types of equipment manufacturing who might be attracted to Salem include manufacturing of equipment for: recycling machinery, construction machinery, farm equipment, semiconductor machinery, and other machinery used by businesses in Salem and the broader Willamette Valley. Salem's access to transportation, development-ready land base, and access to skilled and educated workers make the City attractive to equipment manufacturing businesses.
- **Specialty metal manufacturing.** The existing base of metal manufacturers and related business in Salem and the broader Willamette Valley make Salem attractive to specialty metal manufacturers. The types of specialty metal manufacturing who might locate in Salem include ornamental metal manufacturers, prefabricated metal structures, structural metal, bolt and washer manufacturing, and other specialty metal manufacturing.
- **Specialty food and beverage manufacturing.** Salem's existing concentration of food and beverage manufacturing, pool of skilled workers with experience in food and beverage manufacturing, proximity and access to agricultural products, and transportation access make Salem attractive to businesses who want to grow or locate in the Willamette Valley. In addition, Salem's inventory of buildable industrial land provides opportunities for growth of small to large-scale food and beverage manufacturers.
- **Chemical manufacturing.** The types of chemical manufacturing firms that Salem wants to grow or attract are those related to existing industries that need manufacturing of chemicals for coatings, glass, films, plastics, concrete, and other manufacturing processes in the region. Salem's existing manufacturing base, who are potential customers, combine with Salem's primary competitive advantages of land available for development, access to transportation, and Salem's location make Salem attractive to these types of chemical manufacturing businesses.

[9] Based on 2012 data from the U.S. Bureau of Labor Statistics.

5 Land Demand and Site Needs

OAR 660-009-0015(2) requires the EOA to "identify the number of sites by type reasonably expected to be needed to accommodate the expected [20-year] employment growth based on the site characteristics typical of expected uses." The Goal 9 rule does not specify how jurisdictions conduct and organize this analysis.

The rule, OAR 660-009-0015(2), does state that "[i]ndustrial or other employment uses with compatible site characteristics may be grouped together into common site categories." The rule suggests, but does not require, that the City "examine existing firms in the planning area to identify the types of sites that may be needed." For example, site types can be described by: (1) plan designation (e.g., heavy or light industrial), (2) general size categories that are defined locally (e.g., small, medium, or large sites), or (3) industry or use (e.g., manufacturing sites or distribution sites). For purposes of the EOA, Salem groups its future employment uses into categories based on their need for land with a particular plan designation (i.e., industrial or commercial) and by their need for sites of a particular size.

This section provides an estimate of employment land needs based on information about the amount of employment growth that will require new land, employment densities, and land need by site size. This section provides a *demand-based* approach to estimating employment land needs. It projects employment land need using the forecast of employment growth and recent employment densities (e.g., the number of employees per acre) to estimate future commercial and industrial land demand.

This chapter includes two sections: land sufficiency and site needs for target industries.

LAND SUFFICIENCY

This section presents a comparison of the land demand, based on employment growth in Table 6, and the supply of vacant and partially vacant land in Table 2. It presents information about commercial and industrial land sufficiency, as well as Salem's short-term supply of land.

Industrial and Commercial Land Demand and Sufficiency

Appendix C presents the forecast for employment growth in Salem for Industrial, Commercial Office, and Retail and Services. Appendix C concludes that demand for employment land over the 2015 to 2035 period will be:

- **Industrial** land demand over 2015-2035 is for 441 gross acres.
- **Office and Commercial Service** land demand over 2015-2035 is for 400 gross acres.
- **Retail and Retail Services** land demand over 2015-2035 is for 273 gross acres.

Table C-9 in Appendix C allocates this land demand to groupings of plan designation in Salem, based on the location of existing employment in Salem. For example, 16% of existing industrial employment (e.g., manufacturing, construction, or warehouse and distribution) is located in commercial plan designations. Table C-9 assumes that 16% of new industrial land demand will be in commercial plan designations. Table C-9 shows the following demand for land by plan designation:

- **Industrial designations.** Demand in these designations over the 2015-2035 period will be for 486 gross acres. The majority (369 acres) will be for industrial uses, with 56 acres for office employment and 61 acres for retail employment.
- **Commercial designations.** Demand in these designations over the 2015-2035 period will be for 569 gross acres. The majority will be for office employment (319 acres) or retail employment (178 acres), with 72 acres for industrial.
- **Residential designations.** Demand in residential designations for employment uses will be 59 gross acres. About 25 of these acres will be for office uses (e.g., medical offices in residential designations) and 34 acres will be for retail uses (e.g., retail nodes in neighborhoods).

Table 7 compares Salem's supply of buildable employment land to demand for employment land:

- **Suitable Buildable Land.** Salem has 1,393 gross acres of industrial land and 298 gross acres of commercial land.

- Industrial land includes vacant land shown in Table 2 for EC (556 acres), IND (667 acres), and IC (170 acres)
- Commercial land includes the vacant land shown in Table 2 for COM (263 acres) and in CB (1 acre). It also includes 13 acres in ROM and 21 acres in MU, based on approved plans and master plans. [10]

- **Land Demand.** Salem has demand for 486 acres of land in industrial plan designations and 569 acres of land in commercial plan designations.[11]
- **Land Sufficiency.** Salem has a deficit of 271 acres of commercial land.
  - Salem has a deficit of 271 acres of **commercial land**. About 60% of Salem's commercial land demand is for office and related uses and 40% is for retail. It is reasonable to assume that about 40% of Salem's deficit of commercial land is for retail uses (about 100 acres).

    The City can address the commercial land deficit in a variety of ways, including: designating or zoning land for retail uses in or near neighborhoods, redeveloping existing commercial areas, allowing or encouraging higher density office or mixed-use development in downtown or other employment areas, or redesignating some lands to commercial designations. Filling this deficit will require additional analysis and policy development by staff and decision makers.

  - Salem has 907 acres of more **industrial land** than it will need to accommodate expected employment growth over the 2015 to 2035 period. The employment forecast (presented in Appendix C)

[10] Table 2 shows that Salem has 263 acres of vacant or partially land in the COM designation and 1 acre of land in the CB designation.
Salem has 15 acres of land in the ROM designation. About three acres in ROM is the south block of the former Boise Cascade site, where a mixed-use development has been approved. The amount of commercial space approved in the development (nearly 15,000 square feet of commercial space) is about equal to one acre of commercial land. The mixed-use development has been approved to include 115 housing units. (As of the date of this report, the developer had applied to construct an additional 70 dwelling units as part of a proposed future phase of the mixed-use development.) As a result, we count 13 acres of land in the ROM as available for commercial development.
In addition, Salem has vacant land in MU, in the Fairview MU area. The Fairview Training Center Redevelopment Master Plan shows capacity for office, retail, and commercial industrial development. Assuming development densities the same as density assumptions in Table C-8, about 21 acre of land in Fairview will be used for employment uses. This land is included in the estimate of suitable buildable land for commercial development.

[11] The methodology used to determine land demand is described in detail in Appendix C.

assumes that Salem's employment will grow at the same rate as population and that the majority of Salem's employment growth will be in commercial or state government employment (consistent with the existing distribution of employment).

Salem's economic development strategy, however, envisions that Salem will grow or attract more traded-sector employees than have historically located in Salem. The majority of these employees would be in manufacturing and would require industrial land.

A subsequent section in this chapter describes the characteristics of industrial land in Salem, focusing on Salem's "high value" industrial land, such as land in the Mill Creek Corporate Center. This land is where many traded-sector businesses may choose to locate. If Salem is very successful in achieving its economic development goals of attracting traded-sector employment, then much of Salem's "high value" industrial land could be developed over the planning period.

Table 7. Comparison of Suitable Buildable Land with Demand for Land, Salem's portion of the Salem-Keizer UGB, 2015–2035

Land Type	Suitable Buildable Land (Gross Acres)	Demand (Gross Acres)	Surplus (Deficit) (Gross Acres)
Industrial	1,393	486	907
Commercial	298	569	(271)

Source: ECONorthwest

Redevelopment potential

Salem is encouraging redevelopment of underutilized employment areas in a number of ways. Salem has seven urban renewal areas (URA), each of which has an urban renewal plan to facilitate redevelopment, including identifying financial tools to facilitate redevelopment. The majority of land in the urban renewal areas has existing development, with the exception of the Mill Creek Corporate Center. As a result, most new development in these areas will be redevelopment of underutilized areas.

- **Fairview URA.** This urban renewal area is about 390 acres. The urban renewal plan encourages expansion of industrial uses in the URA, including development of an industrial park.
- **McGilchrist URA**. This urban renewal area is about 400 acres. The urban renewal plan encourages a broad mixture of employment uses, focusing on industrial uses.

- **Mill Creek Industrial Park URA**. This urban renewal area is about 490 acres. The urban renewal plan is intended to facilitate implementation of the Salem Regional Employment Center Master Plan and Development Strategy. The type of employment expected in Mill Creek is predominantly industrial, with some office uses allowed.
- **North Gateway URA**. This urban renewal area is about 926 acres. The urban renewal plan encourages a mix of residential, commercial, and industrial development throughout the area.
- **Riverfront-Downtown URA**. This urban renewal area is about 290 acres. The urban renewal plan encourages mixed-use development, with a mixture of multifamily housing, retail, and office.
- **South Waterfront URA**. This urban renewal area is about 410 acres. The urban renewal plan encourages mixed-use development, with a mixture of multifamily housing, retail, and office.
- **West Salem URA.** This urban renewal area is about 450 acres. The urban renewal plan expects a continued mix of residential, commercial, and industrial development throughout the area.

Outside of the urban renewal areas, Salem can expect modest redevelopment of industrial areas. The most likely types of redevelopment are reuse of existing buildings. Salem staff has seen increasing interest in reuse of existing industrial buildings, both for industrial uses and for commercial or other uses. Salem's limited supply of suitable vacant industrial buildings limit opportunities for re-use.

Salem's deficit of commercial land makes redevelopment of underutilized land or commercial buildings with relatively low improvement value more likely. The factors that affect redevelopability are many, but the economics are pretty straightforward. Redevelopment occurs when achievable rents exceed the current return on investment of the land and improvements. The reality, of course, is much more complicated.

In our many conversations with commercial realtors and developers for this and other studies, the conclusion has been consistent: it is very difficult to develop reliable models of redevelopment potential. The factors are complicated and are location and time specific. Moreover, public policy can play a significant role in facilitating redevelopment.

One indicator of redevelopment potential is the improvement to land value ratio of developed areas. Table A-5 in Appendix A shows improvement to land ratios for developed commercial land in Salem. It shows that:

- 8% of Salem's developed commercial sites (142 acres of land) have an improvement to land value ratio of less than 0.25, suggesting that these sites have high redevelopment potential.

- 5% of Salem's developed land has an improvement to land ratio of between 0.25 and 0.5 (93 acres).
- 12% of Salem's land has a ratio of between 0.5 and 1.0 (221 acres).

Higher improvement to land value ratios suggest decreasing probability of redevelopment potential. If we assume that land with an improvement to land value ratio of less than 0.5 has the greatest probability of redevelopment, then about 235 acres of commercial land in Salem has a relatively high chance of redevelopment. If the increase in employment density on these lands was between 20 and 35 additional employees per acre, then these areas would have additional capacity for 4,700 to 8,200 employees.

Estimating the actual amount of redevelopment potential on these lands is challenging. Salem does not have historical information about redevelopment to support specific assumptions. It is highly improbable that all of the 235 acres will redevelop over the 20-year planning period. Given Salem's large supply of industrial land and pressure on the City to convert industrial land to commercial uses, it is likely that less than half of this land will be redeveloped over the next 20 years.

As a rough estimate, we think that it is reasonable to assume that about between about 50 to 100 acres (roughly 20% to 40%) will redevelop over the planning period, accommodating between 1,000 to 3,500 new employees. This redevelopment would help address the deficit of commercial land shown in Table 7. Land located in urban renewal areas is more likely to redevelop than land outside of urban renewal areas because of the infrastructure improvements and redevelopment tools available in the urban renewal districts.

Short-term land supply

This section evaluates the short-term supply of land in Salem. It begins with an overview of the policy context that requires this analysis, and then it evaluates the short-term land supply.

Policy context

The Goal 9 Administrative Rule (OAR 660-009) includes provisions that require certain cities to ensure an adequate short-term supply of industrial and other employment lands. OAR 660-009-005(10) defines short term supply as follows:

> "…means suitable land that is ready for construction within one year of an application for a building permit or request for service extension. Engineering feasibility is sufficient to qualify land for the short-term supply of land. Funding availability is not required. "Competitive Short-term Supply" means the short-term supply of land provides a range of site sizes and locations to accommodate

> the market needs of a variety of industrial and other employment uses."

The Goal 9 rule also requires cities in a Metropolitan Planning Organization (MPO, which includes Salem, Keizer, and Turner) to make a commitment to provide a competitive short-term supply of land and establishes targets for the short-term supply of land. Specifically, OAR 660-009-0020(1)(b) states:

> "Cities and counties within a Metropolitan Planning Organization must adopt a policy stating that a competitive short-term supply of land as a community economic development objective for the industrial and other employment uses selected through the economic opportunities analysis pursuant to OAR 660-009-0015."

The rule goes on to clarify short-term land supply targets for cities in an MPO (OAR 660-009-0025):

> (3) Short-Term Supply of Land. 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. Cities and counties may maintain the short-term supply of land according to the strategies adopted pursuant to OAR 660-009-0020(2).
>
> (a) Except as provided for in subsections (b) and (c), cities and counties subject to this section must provide at least 25% of the total land supply within the urban growth boundary designated for industrial and other employment uses as short-term supply.
>
> (b) Affected cities and counties that are unable to achieve the target in subsection (a) above may set an alternative target based on their economic opportunities analysis.
>
> (c) A planning area with 10 percent or more of the total land supply enrolled in Oregon's industrial site certification program pursuant to ORS 284.565 satisfies the requirements of this section.

In summary, the rule requires Salem to assess the short-term supply of land based on the criteria that land can be ready for construction within one year. The determination is based on "engineering feasibility."

Analysis of short-term supply of land

Table 2 shows that there are about 1,945 acres of vacant and partially vacant, unconstrained commercial and industrial land in Salem. According to Goal 9, cities must provide at least 25 percent of the total land supply within the urban

growth boundary designated for industrial and other employment uses as short-term supply (OAR 660-009-0025(3)(a).

Salem has about 176 acres of land on State Certified sites, in the Mill Creek Corporate Center and the Salem Renewable Energy and Technology Center.[12] In addition, the following vacant or partially vacant land could be serviced within a year: about 160 additional acres in the Mill Creek Corporate Center, about 80 acres at the Salem Municipal Airport, and about 95 acres in the Fairview Urban Renewal Area. In total, about 510 or about 26% of Salem's vacant and partially vacant employment land is either ready for development or could be serviced within one year. Based on this information, Salem meets the Goal 9 requirements for short-term supply of land.

SITE NEEDS FOR TARGET INDUSTRIES

Chapter 4 describes potential growth industries (described in this chapter as economic opportunities) for Salem, based on the city's economic advantages. These target industries focus on manufacturing, including technology, equipment, metal, food and beverage, and chemical manufacturing. This section focuses on the site needs for these target industries, as well as established industries, such as medical services. It also considers land needs from the broad range of commercial and industrial businesses, from small retail or service businesses to large-scale manufacturers.

Typical site needs of large employers

Businesses considering locating in Oregon and in Salem will consider many factors before selecting a location (e.g., access to markets, availability of skilled workers, and availability of suitable land).

One of the key factors that businesses consider when making decisions about where to locate is the availability of vacant, large, and flat parcels of land. Table 8 shows examples of traded-sector firms that considered locating in Oregon and Southern Washington since 1997. Table 8 shows that firms looking for office or flex space required sites from 30 acres up to more than 100 acres. Warehouse and distribution firms looked for sites between about 50 and 200 acres. Manufacturing firms required sites from 25 acres to 250 acres in size.

[12] According to Oregon Prospector, the State's official economic development web site, there are three areas in Salem with the State's Industrial Site Certification: Mill Creek Corporate Center (136 acres) and the Salem Renewable Energy and Technology Center 5700 Block Gaffin Road (40 acres).

These firms worked with Business Oregon to find suitable sites in Oregon. Some of the firms chose to locate in Oregon and some chose to locate elsewhere. One of the key factors that influenced decisions to locate elsewhere was availability of large parcels of land with infrastructure services (e.g., transportation access, wastewater, etc.).

Table 8. Examples of firms that considered locating in Oregon and Southern Washington between 1997 and 2010

Type of business	General Location Considered	Site size (acres)	Building Size (square feet)	Located in Oregon ?
Office or Flex space				
Private technology firm	Northern Oregon I-5	100+	1 msf	
Facebook Data Center	Prineville	118	147,000 sf	Yes
Siltronics	Portland Harbor	35		
Nautilus	Vancouver	35	489,000	Yes
Google Data Center	The Dalles	30		Yes
Warehouse and Distribution				
Lowes	Lebanon	204	1.3 to 2.2 msf	Yes
NOAH-PepsiCo	Albany	204	2.5 msf	No
Wal-Mart	Hermiston	200	1.3 msf	Yes
Target	Albany	175	1.3 msf	Yes
Fed Ex	Troutdale	78	500,000 sf	Yes
Dollar-Tree	Ridgefield, Wa	75	800,000 sf	
Home Depot	Salem	50 to 100	400,000+	Yes
Manufacturing				
Apricus	Northern Oregon	250	Very large	No
Navitas	Oregon	150 to 200		No
Pacific Ethanol	Boardman	137		Yes
SolarWorld	Hillsboro	75	1 msf	Yes
Schott Solar	I-5 corridor	50+	up to 800,000 sf	No
Genentech	Hillsboro	50	500,000 sf	Yes
Amy's Kitchen	White City	50		Yes
Sanyo Solar	Salem	25	150,000 sf	Yes
Spectrawatt	Hillsboro	25	225,000 sf	No

Source: Business Oregon

Table 9 shows examples of manufacturers of clean energy technologies, such as solar panel manufacturers, that announced plans to build new manufacturing plants in 2009 or 2010. More than one-third of these firms considered locating in Oregon. The site size requirements of these firms ranged from 50 to nearly 500 acres, with an average site size of around 100 acres. These firms are within one of the potential growth industries identified in Chapter 4, renewable energy manufacturing.

Table 9. Examples of clean energy technologies that announced plans to build new manufacturing plants in 2009 or 2010

Company	Site Size (Acres)	Location	Industry
Tokuyama*	494	Malaysia	Solar
Vestas*	300	Colorado	Wind
US REG - A Power	150	Nevada	Wind
REC*	150	Singapore	Solar
Tindall	144	Kansas	Wind
Green2V	124	New Mexico	Solar
LG Chem Ltd.	120	Michigan	Batteries
Autoport/ AC Propulsoin	102	Delaware	Electric Vehicles
Energy Composites Corps	94	Wisconsin	Wind
Tesla	90	California	Electric Cars
Mitsubishi Heavy Industries*	90	Arkansas	Wind
Schott Solar*	80	New Mexico	Solar
Enerdel	75	Indiana	Batteries
Energy Composites Corporation	54	Wisconsin	Wind
Proterra*	50	South Carolina	Electric Buses
Confluence	50	Tennessee	Solar

Source: Business Oregon
*Note: These firms considered locating in Oregon.

Table 10 shows the characteristics required to make a site competitive for businesses considering locating or expanding in Oregon, based on information from Business Oregon. Sites for most manufacturing uses are generally between 10 acres to 50 acres. Some large industrial uses, such as businesses in the renewable and clean energy sector, require sites of 100 acres. Regional distribution centers require sites of 200 acres. Industrial users need sites that are relatively flat, generally with a slope of 5% or less.

Table 10. Site characteristics of common business types in Oregon

Industry Sector	Site size* (Acres)	Site topography (Slope)	Site Access Max distance in miles to interstate or major arterial	Utilities (Min. line size in inches) Water / Sanitary Sewer
Regionally to Nationally Scaled Clean-Tech Manufacturer	50	0-5%	10	10 / 10
Globally Scaled Clean Technology Campus	100	0-5%	10	10 / 10
Heavy Industrial/ Manufacturing	25	0-5%	10	8 / 8
General Manufacturing	10	0-5%	20	8 / 8
Food Processing	20	0-5%	30	10 / 10
High-tech Manufacturing or Campus Industrial	25	0-7%	15	10 / 10
Regional (multistate) Distribution Center	200	0-5%	5 Only Interstate highway or equivalent	4 / 4
Warehouse/ Distribution	25	0-5%	5 Only Interstate highway or equivalent	4 / 4

Source: Business Oregon
*Note: Site size is the competitive acreage that would meet the site selection requirements of the majority of industries in this sector

Some industrial and large-scale commercial businesses may prefer to locate in an industrial or business park. Business parks are developments with multiple buildings, designed to accommodate a range of uses, from heavy industry to light industry to office uses. Most industrial parks, a subset of business parks, have large-scale manufacturing, distribution, and other industrial uses, with relatively little office space.

Table 11 shows examples of business park sites in the Portland Metro area. Business parks in the Portland area generally range in size from 25 acres to 75 or 100 acres in size. Some of the business parks are primarily industrial (e.g., Beaverton Creek, Columbia Commerce Park, or Southshore Corporate Park), some are primarily commercial (e.g., Creekside Corporate Park or Nimbus Corporate Center), and some are office and flex space (e.g., Cornell Oaks Corporate Center)

Table 11. Examples of business park sites, Portland Metro area

Business Park	Site Acres	Building Square Feet
AmberGlen Business Center	72	572,685
AmberGlen East and West	44	536,000
Beaverton Creek	56	512,852
Columbia Commerce Park	31	562,888
Cornell Oaks Corporate Center	107	684,000
Creekside Corporate Park	50	615,113
Kruse Woods Corporate Center	76	1,652,105
Lincoln Center	22	728,770
Nimbus Corporate Park	47	688,632
Oregon Business Park 1	36	782,294
Oregon Business Park 3	35	501,029
PacTrust Business Center	40	570,539
Pacific Business Park (South)	26	340,864
Pacific Corporate Center	56	601,542
Parkside Business Center	52	687,829
Southshore Corporate Park	312	1,630,000
Tualatin Business Center I and II	33	383,305
Wilsonville Business Center	30	710,000
Woodside Corporate Park	37	579,845

Source: Metro UGR, Appendix 5 Multi-tenant (business park)/Large lot analysis

In addition, the Portland Metro area has the following types of major employment sites, on sites ranging from 25 acres to more than 500 acres:[13]

- **General industrial.** The Portland region has 21 general industrial major employment sites, ranging in size from 25 acres to 164 acres and averaging 53 acres. Firms on these sites range from beverage manufacturers to construction product manufacturers to specialty manufacturing enterprises.
- **Warehouse and distribution.** The Portland region has 15 warehouse and distribution major employment sites, ranging in size from 25 acres to 452 acres and averaging 74 acres. Firms on these sites range from wholesalers to general warehouse and distribution to company-specific distributors.
- **Flex.** The Portland region has 14 flex major employment sites, ranging in size from 25 acres to 522 acres and averaging 112 acres. Firms on these sites include small and large semiconductor manufacturing and other high tech manufacturing.

[13] These examples are documented in the Portland Metro 2009-2030 Urban Growth Report, Appendix 4

Site needs

The Goal 9 Administrative Rule (OAR 660-009) requires that jurisdictions describe the characteristics of opportunity sites (OAR 660-009-0025(1)). The Administrative Rule defines site characteristics as follows in OAR 660-009-0005(11):

> (11) "Site Characteristics" means the attributes of a site necessary for a particular industrial or other employment use to operate. Site characteristics include, but are not limited to, a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes.

Table 12 presents the site characteristics needed for the operation of major traded-sector industries, as well as for clusters of commercial and mixed-use development. Table 12 groups potential growth industries by site category (e.g., large industrial and flex). Any of the potential growth industries, however, may occur at a variety of sizes. For example, food processing companies could range from large food processors to small processors of specialty food products and could use sites from five acres to over 25 acres. Warehouse and distribution firms could range from large, regional distributors to distributors of local products. The opportunity sites in each potential growth industry will vary by size of the firms and the firm's activities.

Table 13 presents site infrastructure requirements necessary for the operations of potential growth industries. There are some common service requirements, regardless of the type of industry. For example, nearly all firms need access to roads, telecommunications, water and wastewater, and electricity. Some potential growth industries have specific service requirements for their operations. For example, food processors generally need access to large amounts of water and wastewater capacity or data centers need access to a large amount of electricity and redundant electricity sources.

Table 12. Summary of site characteristics for potential growth industries and clusters of commercial development

Site Category	Example Industries (Target Industries in bold)	Typical Site Size (acres)	Topology	Parcel configuration	Land Use Buffers	Visibility
Large Industrial and Flex	**Technology Manufacturing** Renewable Energy Warehouse and distribution	50 to 250	0% to 5% slope	Preference for single parcels or parcels with two owners	Compatible with industrial or agricultural uses	No
Medium Industrial and Flex	**Food Processing** **Technology Manufacturing** **Equipment Manufacturing** **Chemical Manufacturing** **Metals Manufacturing** Renewable Energy Warehouse and distribution	10 to 75	0% to 5% slope	Preference for single parcels or parcels with two owners	Compatible with industrial or agricultural uses	No
Small Industrial	Small Scale or specialty firms **Food Processing** **Technology Manufacturing** **Equipment Manufacturing** **Chemical Manufacturing** **Metals Manufacturing** Renewable Energy Warehouse and distribution	Less than 10	Less than 10% slope	Preference for single parcels or parcels with two owners	Compatible with some commercial, industrial, or agricultural uses	No
Large Commercial /Office	State Government Mixed use Regional and community retail Big box retail Information Technology and Backoffice	10 to 50	Less than 10% slope	Preference for single parcels or parcels with two owners	Compatible with commercial and mixed uses	Yes
Medium Commercial /Office	Information Technology and Backoffice Large medical offices Mixed use Neighborhood retail Other services	5 to 20	Less than 15% slope	Preference for single parcels or parcels with three owners	Compatible with commercial and mixed uses	Yes
Small Commercial /Office	Small medical offices Retail and services	Less than 2	Less than 15% slope	Preference for single parcels or parcels with three owners	Compatible with commercial, mixed uses, and residential	Yes

Source: ECONorthwest research, City of Salem analysis, and Business Oregon Industrial Development Competitiveness Matrix

Table 13. Summary of site infrastructure needs for potential growth industries and clusters of commercial development

Site Category	Transportation	Rail	Transit, Ped, Bike	Water and Sewer Meter Size (inches)	Gas (annual therms)	Electrical Demand (annual KWhr)	Telecom
Large Industrial and Flex	Direct access to an arterial; less than 10 miles from I-5	Preferred	Preferred	4 to 10 High Pressure Preferred	10,000 – 80,000	10,000 – 100,000 + Secondary system dependency may be required	High speed Internet and phones
Medium Industrial and Flex	Direct access to an arterial; less than 10 miles from I-5	Preferred	Preferred	3 to 6 High Pressure Preferred	10,000 – 80,000	10,000 – 100,000 + Secondary system dependency may be required	High speed Internet and phones
Small Industrial	Access to a major collector	Not required	Preferred	0.75 to 2	10,000 – 30,000	10,000 to 30,000	High speed Internet and phones
Large Commercial	Direct access to an arterial or major collector	Not required	Preferred	2 to 4	Standard commercial usage	10,000 – 100,000 + Secondary system dependency may be required	High speed Internet and phones Possible requirement for large amount of telecom. access
Medium Commercial	Direct access to an arterial or major collector	Not required	Preferred	1 to 3	Standard commercial usage	Standard commercial usage	High speed Internet and phones
Small Commercial	Access to a major collector	Not required	Preferred	1.5 or smaller	Standard commercial usage	Standard commercial usage	High speed Internet and phones

Source: ECONorthwest research, City of Salem analysis, and Business Oregon Industrial Development Competitiveness Matrix

High value industrial land

High value industrial land has unique characteristics, making it highly desirable for manufacturing and other traded-sector employment. High value industrial land has the following characteristics: it is designated for industrial uses, is in flat parcels, is most frequently in large parcels at least 10 acres in size, is located within an industrial district, has direct access to a state highway or I-5, and is serviced or has plans to be serviced with water and wastewater infrastructure. Table 14 presents a list of high-value industrial sites in Salem, including their key characteristics and why it is important to preserve these sites for industrial uses.

Table 14. High value industrial land, Salem portion of the UGB, 2014

Site Name	Key Characteristics	Why it is Important to Preserve for Industrial Uses
Mill Creek Corporate Center	It has about 488 acres of relatively flat vacant land available for development. About 136 acres is serviced and development ready. The City expects the majority of land in the Mill Creek Corporate Center to be development-ready over the planning period, as upgrades to public infrastructure is completed. The Mill Creek Corporate Center is within two miles of I-5 and adjacent to Highway 22. That gives Mill Creek Corporate Center excellent transportation access. It is owned by the State of Oregon, who is interested in seeing development happen at the Mill Creek Corporate Center.	The Mill Creek Corporate Center accounts for about one-third of vacant suitable industrial land in Salem. The City of Salem and the State of Oregon have invested millions in infrastructure and wetland mitigation, with the expectation that the area will develop for traded-sector uses.
Salem Renewable Energy and Technology Center	It has about 48 total acres, 40 acres of which are certified development ready. It is adjacent to Highway 22 and near I-5, and the property is zoned Industrial Business Campus for manufacturing uses. It is owned by the City of Salem.	A broad range of sites are available adjacent to Panasonic and a Portland General Electric substation, with easy access to critical transportation routes.
North Gateway Urban Renewal Area and north Salem	It has about 140 acres of relatively flat vacant or partially vacant land. There are a variety of zones and uses throughout the area. The area includes a significant transportation route to Portland and a long-term concentration of industrial and manufacturing businesses.	The area has transportation access and a significant cluster of manufacturing and industrial uses.
McGilchrist Urban Renewal Area	It has about 40 acres of relatively flat vacant land. There is a long-term concentration of industrial and manufacturing uses.	The area has planned future URA investments, transportation, and concentration of industrial businesses.

Site Name	Key Characteristics	Why it is Important to Preserve for Industrial Uses
Fairview Urban Renewal Area	It has 390 acres of mixed industrial properties, with a range of vacant lots available. It also has quick access to Highway 22 and the Salem Municipal Airport.	Millions of dollars have been invested in public infrastructure and wetland mitigation. There is a significant concentration of a broad range of industrial businesses.
West Salem Urban Renewal Area	It includes a variety of lot sizes, zones, and uses. It has access to Highway 22 and Wallace Road. There is a concentration of long-term industrial employers.	There is a concentration of long-term industrial employers and accessibility.
North Downtown Area	It includes a variety of lot sizes, zones, and uses. It has access to downtown Salem. There is a concentration of long-term industrial employers.	There is a concentration of long-term industrial employers.
Salem Municipal Airport	It has 80 acres of unconstrained vacant or partially vacant land There is a cargo, business, and personal airplane node. It has quick transportation access to I5 and Highway 22. There is a concentration of industrial employers.	There is a cargo, business, and personal airplane node. It generates hundreds of millions in economic benefits for the region. Federal, State, and City investments in infrastructure support a range of transportation options in the area and support area businesses.

While it is important to preserve industrial areas in Salem, not all existing industrial land is best suited for industrial development and must be preserved. The City should consider allowing industrial properties to convert to commercial uses if they have some or all of the following characteristics:

- Fringe location: Located outside of industrial areas or isolated from other industrial uses
- Incompatible land uses: Largely surrounded by incompatible uses such as housing
- Adjacent conversions: Located adjacent to properties that have converted to commercial uses
- Poor transportation access: Does not have access to an arterial street, collector street, or highway
- No rail access: Not located near the railroad or does not have the potential to access the railroad

Characteristics of Needed Sites for Manufacturing

Salem's target industries are all manufacturing, including technology, equipment, metal, food and beverage, and chemical manufacturing. This section presents the needed characteristics for manufacturing sites.

Friends of Yamhill County v. City of Newberg, 62 Or LUBA 5 (2010), established a two-prong test for establishing relevant "site characteristics" as follows: (1) that

the attribute be "typical of the industrial or employment use," and (2) that it have "some meaningful connection with the operation of the industrial or employment use." The first of those prongs, that the attributes be "typical," appears expressly in OAR 660-009-0015(2), which refers to "site characteristics typical of expected uses." In upholding LUBA's two prong test, the Court of Appeals agreed, "[t]hat 'necessary' site characteristics are those attributes that are reasonably necessary to the successful operation of particular industrial or employment uses, in the sense that they bear some important relationship to that operation." *Friends of Yamhill County v. City of Newberg*, 240 Or App 738, 747 (2011).

The following summarizes the site characteristics for manufacturing and provides an overview of the two-prong test established for site characteristics under *Friends of Yamhill County v. City of Newberg, 62 Or LUBA 5 (2010), aff'd 240 Or App 738 (2011).*

1. **Site size.** Sites for manufacturing firms range in size from 10 to 25 acres. Some manufacturing firms may prefer to locate in a manufacturing or flex business park, which range in size from about 25 acres or several hundred acres.

    - Attribute is "typical of the industrial or employment use" - OAR 660-009-0005(11) specifically cites "a minimum acreage" as a site characteristic. Business Oregon finds that competitively-sized general manufacturing firms have sites 10 acres in size. Competitive sites for heavy manufacturing, high-tech manufacturing, or campus industrial manufacturing require 25-acre sites.

      Some businesses will prefer to locate in manufacturing to flex business parks. Business parks are typically at least 25 acres in size to allow for development of multiple buildings and associated parking. In the Portland area, these parks generally range in size from about 25 acres to 50 acres, with a few examples of parks around 75, 100, or 300 acres.

      Major employment sites with general industrial uses in the Portland Metro area range in size from 25 to 160 acres and average about 50 acres in size. Businesses parks will need to be at least 25 to 50 acres and possibly as large as 75 to 100 acres.

    - Attribute has "some meaningful connection with the operation of the industrial or employment use" – Site size is important to general industrial users. The site needs to be large enough to accommodate the needed built space, as well as to accommodate storage space or space for future expansion. In addition, the site needs to be large enough to accommodate not only the general

industrial uses, but also parking, on-site circulation, connections to public transportation, rail connections, and other access to the transportation network.

2. **Land ownership.** Sites with two or fewer owners are necessary to reduce the cost and uncertainty of land assembly.

    - Attribute is "typical of the industrial or employment use" - OAR 660-009-0005(11) specifically cites the "site configuration" as a site characteristic. Developing an industrial building on a site with more than two owners requires negotiating land assembly and purchase from multiple owners. Land assembly is difficult and often costly for a number of reasons. People own land for a variety of reasons, such as the desire to develop the land, keep the land undeveloped, or sell the land for a profit. Getting landowners to sell land can be difficult, especially if the ownership is legally disputed, as is the case with some inheritances. If a landowner is a willing seller, they may have an unrealistic expectation of their land's value, in the context of comparable land values. In addition, one parcel of land may have multiple owners, compounding the issues described above.

      Developers attempting land assembly often have difficulty assembling a site at a cost that makes development economically viable. When assembling land, developers often find that owners of key sites are not willing sellers, have unrealistic expectations of the value of their land, or cannot get agreement among multiple owners to sell the land. As a result, developers of industrial buildings typically choose to develop sites with one or two owners.

    - Attribute has "some meaningful connection with the operation of the industrial or employment use" – The cost of land assembly, in financial terms and in terms of extra time needed for site assembly, can make developing an industrial site with multiple land owners financially infeasible.

3. **Automotive access.** Manufacturing buildings generally are located on arterial or major collector streets. Traffic from the industrial development should not be routed through residential neighborhoods. The ideal site would have direct access to an arterial or state highway.

    - Attribute is "typical of the industrial or employment use" - OAR 660-009-0005(11) specifically cites the "proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes" as a site characteristic. Business Oregon

finds that manufacturing and industrial firms need to be located relatively close to an interstate highway or principle arterial road, generally within 20 miles or less.

- Attribute has "some meaningful connection with the operation of the industrial or employment use" – This site characteristic helps to minimize the amount of traffic on local streets, minimize freight traffic in residential neighborhoods, improve mobility, minimize adverse effects on urban land use and travel patterns, and provide for efficient long distance travel, which are all necessary for effective industrial operations.

4. **Topography.** Manufacturing sites should be relatively flat, with slopes of not more than 7%.

    - Attribute is "typical of the industrial or employment use" - OAR 660-009-0005(11) specifically cites "site configuration including shape and topography" as a site characteristic. Business Oregon finds that competitive sites generally have a slope of 5% or less, except high tech manufacturing and campus industrial, which have a slope of 7% or less.

    - Attribute has "some meaningful connection with the operation of the industrial or employment use" – Industrial buildings require level floorplates to reduce costs and offer maximum flexibility, as well as level areas to provide for freight access and pedestrian walkways that meet ADA standards. The real estate development literature describes the increases in development costs and other difficulties associated with industrial development on a sloped site.

5. **Access to services.** City services should be directly accessible to the site, including sanitary sewer, and municipal water.

    - Attribute is "typical of the industrial or employment use" - OAR 660-009-0005(11) specifically cites the "specific types or levels of public facilities, services or energy infrastructure" as a site characteristic. Business Oregon finds that competitive sites must have access to urban services, including water, wastewater, natural gas, electricity, and major telecommunications facilities.

    - Attribute has "some meaningful connection with the operation of the industrial or employment use" – Industrial buildings require access to municipal water, municipal sanitary sewer, and electricity/gas. Developing a site with direct access to municipal

services is substantially more cost-effective than extending municipal services to an unserviced site.[14]

6. **Surrounding land uses.** Industrial buildings are directly compatible with other industrial uses, commercial uses, and agricultural uses.

    - Attribute is "typical of the industrial or employment use" - OAR 660-009-0025(6) strongly encourages cities to manage encroachment and intrusion of incompatible uses with employment uses. Industrial uses are generally compatible with other industrial uses, commercial uses, and some public uses. Industrial uses may be compatible with agricultural uses, provided that the industrial use does not encroach on the agricultural uses.
    - Attribute has "some meaningful connection with the operation of the industrial or employment use" - Industrial uses are able to operate efficiency where they are not in conflicts with adjacent land uses that could disrupt industrial business activity. Noise or odor conflicts may make some industrial uses incompatible with nearby residential uses.

[14] Miles, Mike E., Haney, Richard L., Bernes, Gayle, "Real Estate Development: Principles and Process," The Urban Land Institute, 1997.

Assessment of the Capacity of Salem's Employment Land Capacity to Provide Needed Sites for Target Industries

Salem's target industries are all manufacturing. Manufacturers typically need relatively flat sites between 10 and 25 acres that are within 10 miles of an interstate highway and have urban services.

Table 14 shows key sites that provide opportunities for employment growth in Salem in "high value employment" areas. These sites have sufficient land in large enough parcels to meet the requirements for Salem's target industries. While some of these areas are development-ready, some require additional infrastructure investment to be ready for development.

- **The Mill Creek Corporate Center** has about 488 acres of relatively flat buildable, suitable industrial land. Parcels range in size from 2 acres up to over 100 acres. The Mill Creek Corporate Center is owned by the State of Oregon.

  The Mill Creek Corporate Center is less than two miles from I-5 via Kuebler Boulevard. Water and wastewater infrastructure are available to portions of Mill Creek. About 136 acres of land in Mill Creek is certified development ready. The City expects to continue to construct infrastructure for the other 352 acres as businesses locate to the area over the next several years.

  The Mill Creek Corporate Center is zoned Employment Center (EC), which allows for a mix of commercial and light industrial including warehousing, light manufacturing, and business parks. The Mill Creek Corporate Center provides opportunities for development by all types businesses in the target industries, especially for manufacturers or other businesses that need sites 25 acres and larger.

- **Salem Renewable Energy and Technology Center** has about 40 acres of relatively flat buildable, suitable industrial land. The site has been subdivided into a mix of 2- to 5-acre parcels and 10- to 15-acre parcels. It is owned by the City of Salem.

  The Salem Renewable Energy and Technology Center is development-ready and located off of Highway 22, near I-5. The property is zoned Industrial Business Campus (IBC), which allows a mix of light industrial, employment, and office uses.

  The center provides opportunities for development of businesses in the target industries, especially technology manufacturing or other manufacturing.

- **North Gateway Urban Renewal Area and north Salem.** The North Gateway URA has 143 acres of relatively flat buildable, suitable industrial land. The area includes a variety of zones and uses, with a significant cluster of existing manufacturing and other industrial uses. The primary advantage of this area is the transportation access that provides a significant connection that is comparatively close to the Portland region.
- **McGilchrist Urban Renewal Area.** The McGilchrist URA has 39 acres of relatively flat buildable, suitable industrial land. The area has an existing concentration of manufacturing and other industrial uses. The City has long-term plans for future infrastructure investments that will make this area attractive to manufacturing and other traded-sector industrial uses.
- **Fairview Urban Renewal Area and north Salem.** The Fairview URA has 95 acres of relatively flat buildable, suitable industrial land. The area includes a mix of industrial properties with a range of vacant lot sizes, with an existing concentration of industrial businesses. The City has made significant investments in public infrastructure and wetland mitigation. Fairview has easy access to Highway 22 and the Salem Municipal Airport, making it attractive to industrial firms that need access to automotive or air transportation.
- **West Salem Urban Renewal Area and north Salem.** The West Salem URA has 5 acres of relatively flat buildable, suitable industrial land. The area includes a variety of zones and lot sizes. West Salem has a concentration of industrial businesses that have been located in West Salem for a long time. West Salem has easy access to Highway 22, making it attractive to industrial firms that need access to a state highway.
- **North Downtown Area.** This area is of high value because of existing development, rather than potential for new development. The area includes a variety of zones and lot sizes. The area has a concentration of industrial businesses that have been located in the area for a long time.
- **Salem Municipal Airport.** The Salem Municipal Airport has 80 acres of relatively flat buildable, suitable industrial land. The airport provides opportunities for cargo transportation and personal airplanes. It has easy access to I-5 and Highway 22, and there is a concentration of existing industrial businesses.

Our assessment is that Salem has sufficient land with the characteristics necessary to accommodate growth in the target industries over the 2015 to 2035 period. Salem should also consider long-range planning for other employment land to refresh the pipeline of high value opportunity sites once the existing high value sites are developed.

Salem may need to begin to plan for servicing areas outside of the City's service area and the UGB during the planning period. These sites may include areas along Kuebler Boulevard. Making necessary transportation, water, wastewater, and stormwater infrastructure improvements to serve these areas will take a substantial amount of time and money.

6 Conclusions and Recommendations

The key finding of the EOA is that:

- **Salem has a deficit of commercial land** of 271 gross acres for the 2015 to 2035 period. About 60% of this deficit is for office and commercial services (about 170 acres) and about 40% is for retail and retail services (about 100 acres).
- **Salem has enough industrial land to accommodate industrial employment growth over the 2015 to 2035 period.** Salem's industrial land base is about 900 gross acres larger than the forecast of employment growth shows that Salem will need for the 2015 to 2035 period.

The deficit of commercial land is an ongoing problem that was documented in the Salem-Keizer Regional EOA (2011). The dearth of commercial land has been resulting in requests to convert industrial land to plan designations that allow commercial uses, such as the IBC or IC zones. In the context of this issue and the conditions in Salem, we offer the following recommendations.

- **Identify and preserve key employment lands for traded-sector uses.** Salem's employment land base is unique within the Willamette Valley. Salem has nearly 1,400 acres of vacant or partially vacant industrial land, with nearly 900 acres in "high value" areas. Our observation in working with most mid-sized cities in the Willamette Valley is that no other city in Western Oregon has an employment land base similar to Salem's industrial land inventory. The shortage of large and mid-sized development-ready industrial sites in the Portland region is well-documented.[15]

  Salem has multiple mid-sized and large sites that are certified by the State's Industrial Site Certification or that the City expects to invest in infrastructure to service high value sites over the course of the next five to 10 years. In addition, Salem has smaller and mid-sized employment sites in urban renewal areas, with plans to address infrastructure deficiencies. Preserving these key sites provides opportunities for future development of traded-sector businesses, which generally provide jobs with higher-than-average wages.

  Salem has made substantial financial investments in many of the

[15] *Industrial Site Readiness Project*, August 2012, Group Mackenzie.

industrial areas, such as urban renewal areas or in the Mill Creek Corporate Center. Preserving these areas for traded-sector uses, especially industrial uses, will ensure that the public investments in infrastructure in these areas are used to support growth of jobs, many of which will be at or above average wages.

ECO recommends the City develop policies to protect these areas from converting to commercial uses, especially retail uses. The "Employment Land Implementation Plan" memorandum offers recommendations about policies to preserve industrial land.

- **Provide a variety of types of sites for employment.** Not all traded-sector employment is industrial or will locate in industrial areas. Traded-sector businesses are businesses that produce goods or services that are exported out of the community, bringing money into the community. Some examples of traded-sector businesses in office settings include software development, professional and technical services that provide services outside of the community, or finance and insurance businesses that provide services outside of the community.

  These types of traded-sector employment may locate in a variety of locations and building types, such as in tall office buildings in downtown, in a campus environment, or in a suburban-style office park. By implication, Salem will need to provide a variety of opportunities for employment growth in industrial areas, in commercial areas, and in mixed-use areas like downtown. Salem has sufficient land in industrial areas and Salem's downtown allows for a range of dense employment opportunities. Salem lacks enough opportunities for commercial office development to meet demand for growth.
- **Identify areas for conversion from industrial uses to commercial uses.** Some of Salem's industrial land has characteristics that make it less attractive to industrial users, such as being surrounded by commercial uses or areas located far from I-5. ECO recommends that the City identify industrial areas that are "ripe" for conversion to commercial uses and allow conversion of these areas, preferably for commercial office uses (rather than retail uses).
- **Identify nodes for neighborhood retail development.** Some residential areas within Salem lack retail development, such as in West Salem or in developing areas of south or southeast Salem. We recommend that the City identify sites of about two to five acres in these areas for development of retail to serve the surrounding neighborhood(s).
- **Encourage redevelopment of existing industrial and commercial areas.** The City may be able reasonably meet between 50 to 100 acres of the

commercial land deficit through redevelopment. The City has policies to facilitate redevelopment of employment areas, such as designating areas as urban renewal areas.

The City can also encourage redevelopment by limiting land available for development. This approach is most effective at encouraging retail and retail service redevelopment. Redevelopment generally occurs because the achievable rents on a specific site exceed the costs of development, making development financially feasible. In addition, a business may want to locate in a specific district or location.

Salem can encourage redevelopment of older, underutilized retail areas or in downtown by limiting the supply of land available for retail development. Given the deficit of commercial land, limiting land available for retail development is a reasonable way to encourage redevelopment of land for retail uses.

- **Monitor and report on conversions of industrial land to commercial uses.** While it may be desirable to selectively convert some industrial land to commercial uses, the City should monitor and report on conversion of land to commercial uses. Monitoring can help the City understand where there is commercial land pressure, allowing the City to better respond to the market. Monitoring also allows the City to track the amount of industrial land converted to commercial uses, as a means to ensure a long-term supply of industrial land.
- **Plan for long-term growth.** While Salem has enough industrial land to accommodate growth and meet economic development objectives, existing industrial land will eventually develop. Once the City's supply of industrial land is developed, the City will need to identify other areas for industrial development and plan for the infrastructure investments necessary to make land development-ready. Planning for infrastructure and capital improvements takes time. In addition, expanding the City's urban growth boundary generally takes two years or longer.

Appendix A. Commercial and Industrial Buildable Land Inventory

In 2011, the Mid-Willamette Valley Council of Governments (MWVCOG) completed an inventory of buildable employment lands located within the Salem Keizer Urban Growth Boundary (UGB) as part of the regional Economic Opportunities Analysis. The COG inventory estimated how much employment land was suitable for development. The inventory also addresses requirements for buildable land inventories found in statewide planning goals 9 (Economy) and 14 (Urbanization).

ECO updated the 2011 inventory using 2014 data for this report. The approach generally follows the methods used by the MVWCOG in the 2011 inventory. This chapter provides an overview of the buildable land inventory methodology and results.

OVERVIEW OF THE METHODOLOGY

The buildable land inventory for the Economic Opportunities Assessment was completed through two (2) general phases of analysis. Phase One included an analysis of whether or not land was considered to be vacant or developed. Phase Two included an analysis of constrained land that was deducted from the inventory of buildable land.

For the purposes of this study, the following definitions were used:

> ***Developed Land*** – properties with improvements that are considered committed to existing uses for the 20-year planning period.
>
> ***Vacant Land*** - properties with no current development and available for future employment development. The inventory included all land designated for employment uses and as a result is more comprehensive (e.g., includes more land) than would be inventoried using the standard definitions of vacant land in OAR 660-009-0005(14).[16]

[16] OAR 660-009-005(14) "Vacant Land" means a lot or parcel:

(a) Equal to or larger than one half-acre not currently containing permanent buildings or improvements; or

(b) Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements.

Partially Vacant Land – properties that are partially vacant (e.g., partially developed) in the baseline inventory with a residential use and by the criteria developed for this study could support additional development.

Excluded – properties where the existing land use excludes or essentially precludes any future development. Examples include publicly owned lands; designated open spaces; GIS parcels representing water bodies; power lines, electrical substations, water towers or reservoirs, etc.; airport expansion areas. Publicly owned lands were evaluated and many (not all) were excluded because they are not intended to convert to employment use during the planning period.

Constrained land includes land that is not available for development based upon one or more factors such as environmental protections or lands committed for public use. Constrained land was deducted from the buildable land inventory in order to determine the amount of unconstrained "buildable acres" available for development over the planning horizon. The following constraints were identified and excluded from the buildable land inventory:

- Publicly-owned lands, not intended for residential use,
- Designated open spaces,
- Utilities (e.g. power lines, electric substations, water towers, reservoirs, wastewater facility and treatment plant),
- Floodways,
- Wetlands,
- Water bodies and water features,
- Riparian corridors (defined as 25 feet on either side of open mapped waterways), and
- Slopes greater than 25 percent.

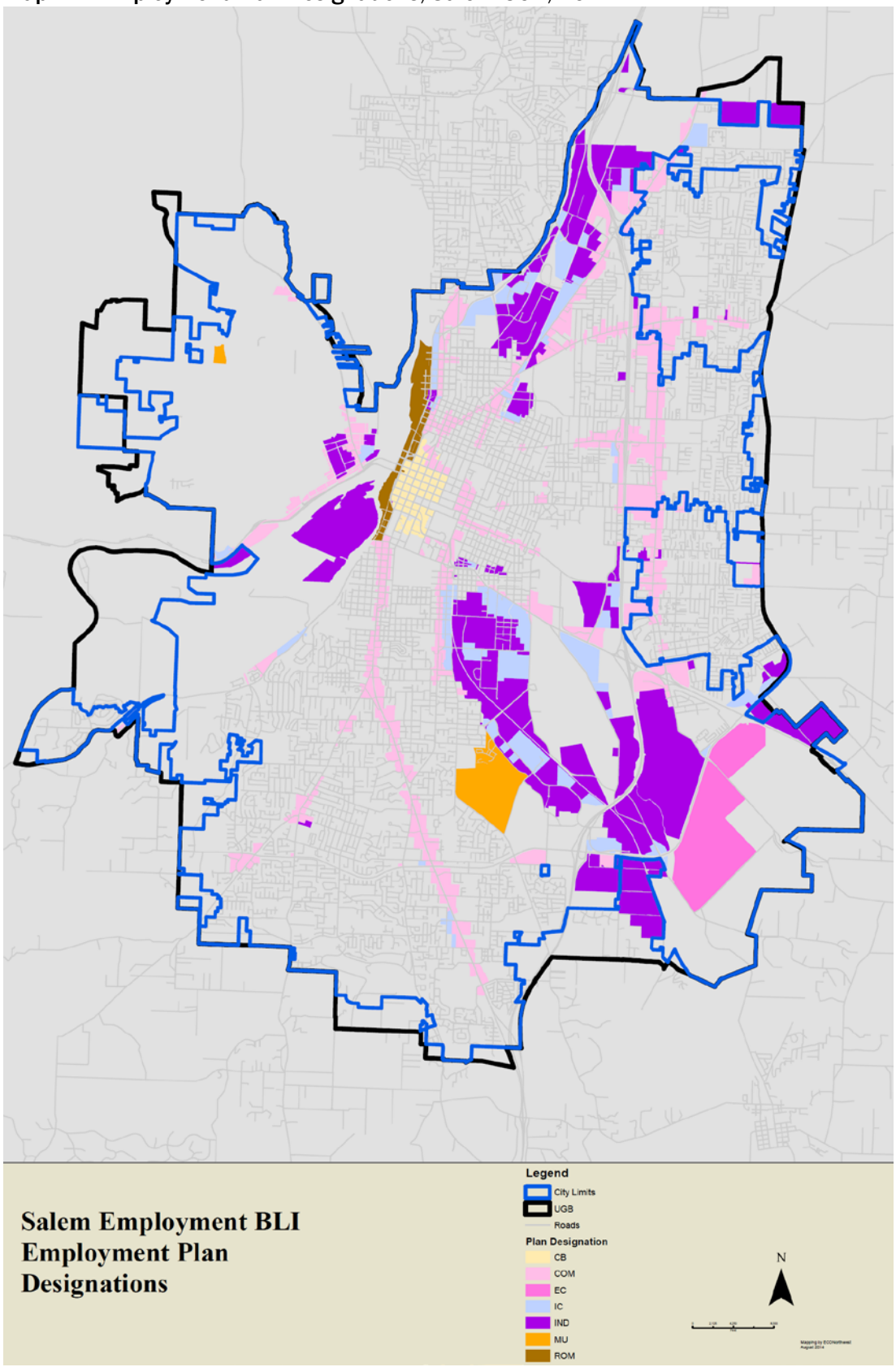
The inventory was completed primarily using Geographic Information Systems (GIS) mapping technology. The output of this analysis is a database of land inventory information, which is summarized in both tabular and map format. Although data for the inventory was gathered and evaluated at the parcel level, the inventory does not present a parcel-level analysis of lot availability and suitability. The results of the inventory have been aggregated by comprehensive plan designations, consistent with state planning requirements. As such, the inventory is considered to be accurate in the aggregate only and not at the parcel-level.

The Employment Land Inventory includes a review of the following residential comprehensive plan designations:

- Commercial (COM)
- Commercial Business District (CB)
- Employment Center (EC)
- Industrial (IND)
- Industrial-Commercial (IC)
- Mixed Use (MU)
- River-Oriented Mixed Use (ROM)

Note that the Mixed-Use and River-Oriented Mixed Use also have residential development capacity. Map A-1 shows lands in employment plan designations in the Salem UGB.

Map A-1: Employment Plan Designations, Salem UGB, 2014



Source: ECONorthwest analysis of City of Salem GIS data

Table A-1 shows employment land in Salem by classification (development status). The results show that Salem has 17,659 acres in employment plan designations (including mixed-use designations that allow residential development). By classification, about 68% of the land is classified as developed, 5% partially vacant, and 27% vacant. About 50% of employment land is in industrial designations (IND and IC); 31% in commercial designations (CB and COM), 13% in the employment center designation (EC) and 6% in mixed-use designations (MU and ROM). Note that these figures include all acres.

Table A-1: Employment Land by Classification, Salem UGB, 2014

	Plan Designation							
Development Status	**MU**	**ROM**	**IND**	**IC**	**CB**	**COM**	**EC**	**Total**
Developed	3	75	1864	540	134	1673	328	4,617
Partially Vacant	46		156	19		69	66	356
Vacant	241	97	641	174	1	223	518	1,895
Total	**290**	**124**	**2661**	**733**	**136**	**1,964**	**912**	**6,820**
Percent of Total	**4%**	**2%**	**39%**	**11%**	**2%**	**29%**	**13%**	**100%**

Source: ECONorthwest analysis of City of Salem GIS data
Note: MU=mixed use; ROM=river oriented mixed use; IND=Industrial; IC=Industrial-Commercial; CB=Commercial Business District; COM=Commercial; EC=Employment Center.
Note: MU is in the Fairview Mixed Use Area, where development is guided by the Fairview Training Center Redevelopment Master Plan.

Table A-2 shows land in all employment plan designations by development and constraint status. Salem has 6,868 acres in 5,762 tax lots in employment plan designations. About 61% of total employment land (4,206 acres) is developed, 10% (717 acres) is constrained, and 28% (1,945 acres) are suitable for development.

Table A-2: Employment Land by Plan Designation and Development Status

Plan Designation	**Tax Lots**	**Total Acres**	**Developed Acres**	**Constrained Acres**	**Suitable Acres**
CB - Commercial Business	511	136	131	3	1
COM Commercial	3,141	1,964	1,659	42	263
EC - Employment Center	14	912	315	42	556
IC - Industrial-Commercial	549	733	470	93	170
IND - Industrial	1,087	2,661	1,566	428	667
MU - Mixed Use	193	290	3	13	274
ROM - River Oriented Mixed Use	267	172	62	95	15
Total	**5,762**	**6,868**	**4,206**	**717**	**1,945**
Percent of Total		**100%**	**61%**	**10%**	**28%**

Source: ECONorthwest analysis of City of Salem GIS data
Note: The 274 vacant acres in MU is covered by Fairview Training Center Redevelopment Master Plan shows capacity for office, retail, and commercial industrial development. The Master Plan determines the amount of employment development in this Mixed Use area.

Table A-3 shows suitable acres (e.g., acres in taxlots after constraints are deducted) for vacant and partially vacant land by plan designation. The results show that Salem has about 1,945 suitable employment acres (including areas in mixed-use plan designations). Of this, about 87% is in tax lots classified as vacant, and 13%

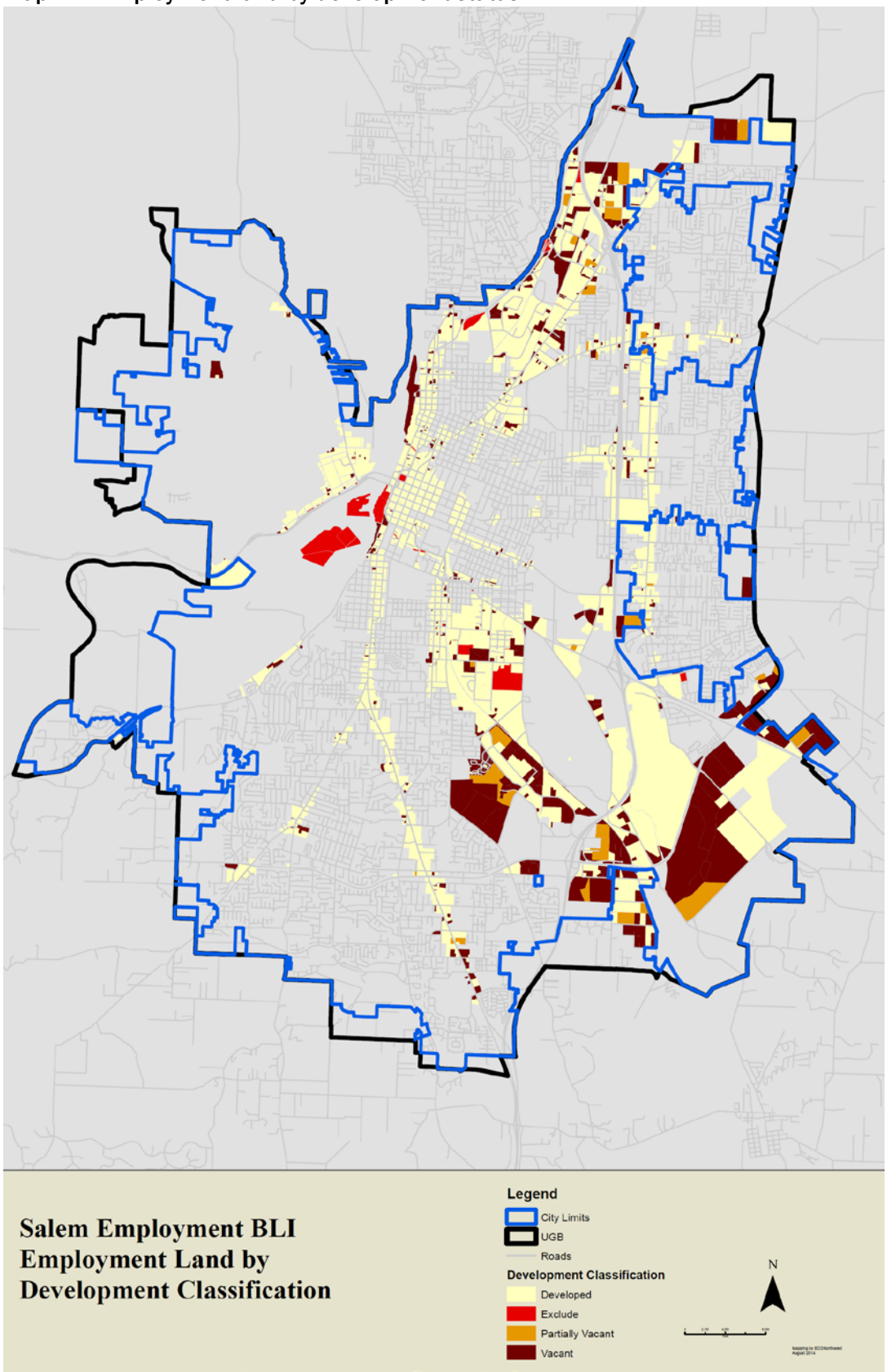
in tax lots classified as partially vacant. About 43% of the buildable employment land (837 acres) is in industrial plan designations (IND and IC) and 14% (264 acres) in commercial plan designations (CB and COM). Twenty-nine percent (556 acres) is in the Employment Center plan designation with the remaining acreage in mixed-use designations (MU and ROM).

Table A-3: Suitable acres in vacant and partially vacant tax lots by plan designation, Salem UGB, 2014

	Plan Designation								Percent of
Development Status	**MU**	**ROM**	**CB**	**COM**	**EC**	**IC**	**IND**	**Total**	**Total**
Partially Vacant	45			45	61	17	94	261	13%
Vacant	229	15	1	218	494	154	573	1,684	87%
Total	**274**	**15**	**1**	**263**	**556**	**170**	**667**	**1,945**	**100%**
Percent of Total	**14%**	**1%**	**0%**	**14%**	**29%**	**9%**	**34%**	**100%**	

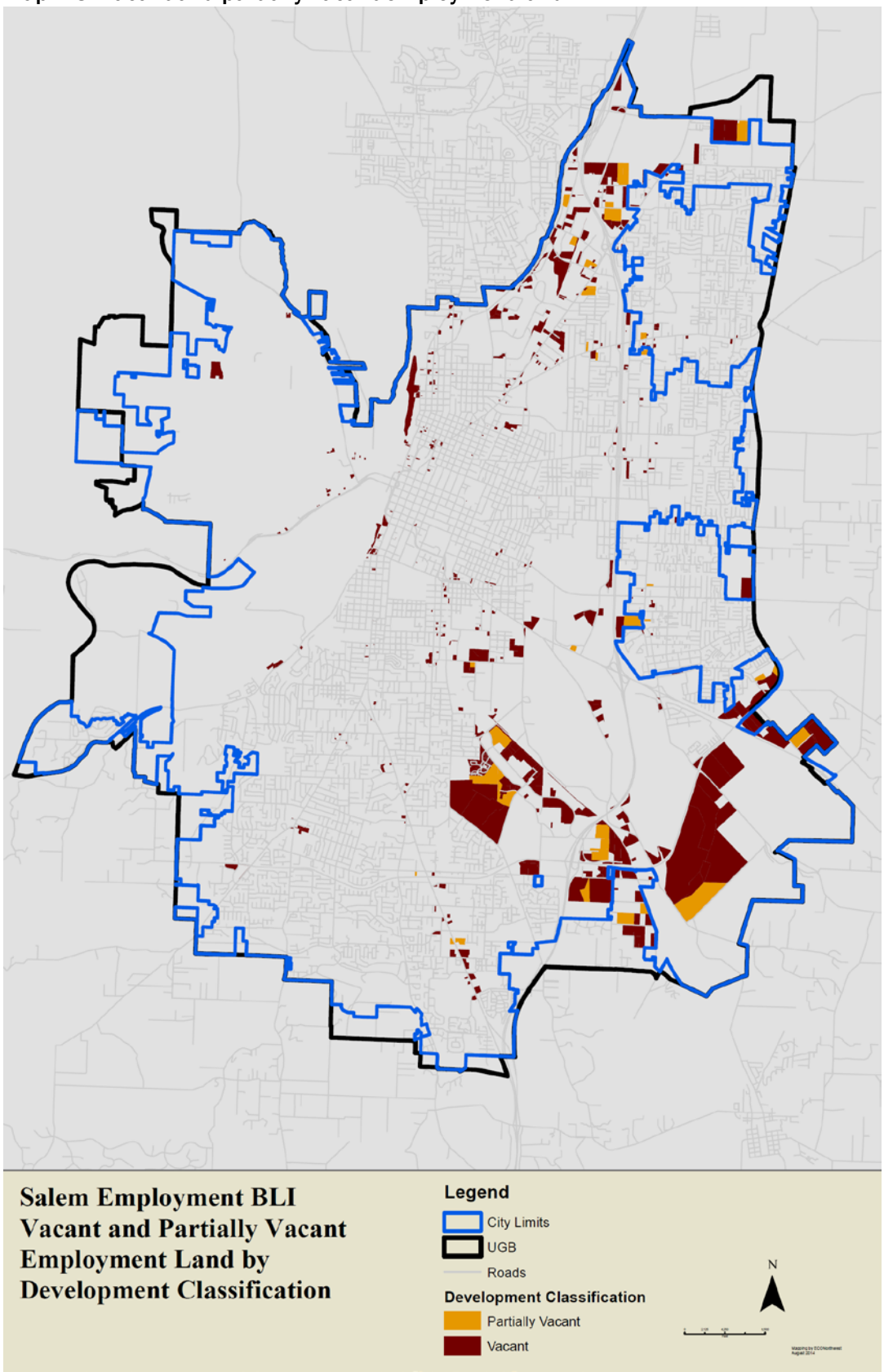
Source: ECONorthwest analysis of City of Salem GIS data
Note: The 274 vacant acres in MU is covered by Fairview Training Center Redevelopment Master Plan shows capacity for office, retail, and commercial industrial development. The Master Plan determines the amount of employment development in this Mixed Use area.

Map A-2: Employment land by development status



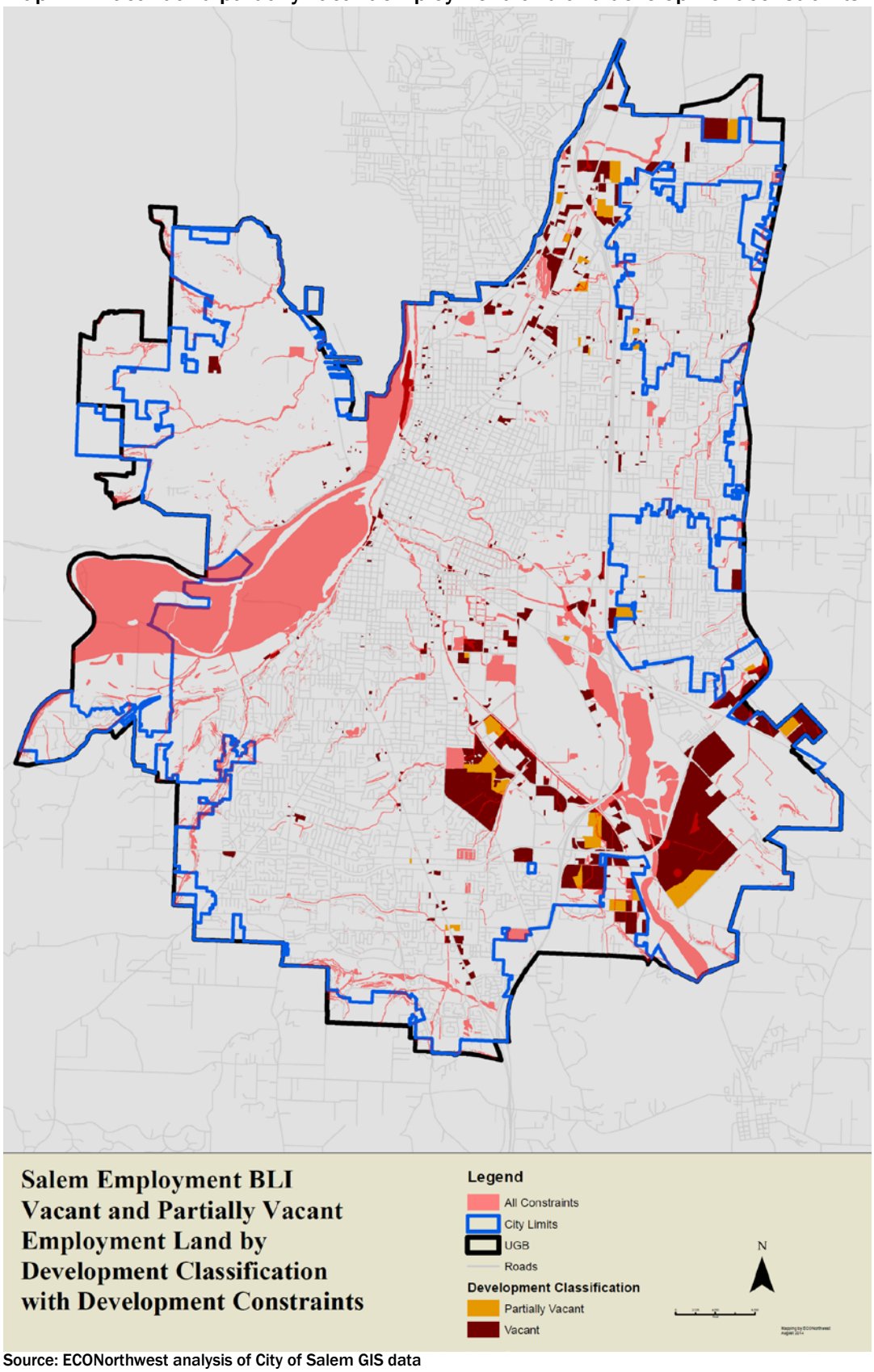
Source: ECONorthwest analysis of City of Salem GIS data

Map A-3: Vacant and partially vacant employment land



Source: ECONorthwest analysis of City of Salem GIS data

Map A-4: Vacant and partially vacant employment land and development constraints



Source: ECONorthwest analysis of City of Salem GIS data

Table A-4 shows the size of lots by plan designations for suitable employment land. Salem has 720 lots that are smaller than 2 acres (with 258 suitable acres of land). Salem has 107 lots between 2 and 10 acres (504 suitable acres of land), 18 lots between 10 and 20 acres in size (247 acres of land), and 24 lots 20 acres and larger (958 acres of land).

Table A-4: Lot size by plan designation, suitable acres, Salem UGB, 2014

	Suitable Acres in Tax Lot									
Plan Designation	<0.25	>=0.25 and <0.50	>=0.50 and <1.00	>=1.00 and <2.00	>=2.00 and <5.00	>=5.00 and <10.00	>=10.00 and <20.00	>=20.00 and <50.00	>50.00	Total
Acres										
CB	1	1	0	0	0	0	0	0	0	1
COM	13	23	34	27	66	43	57	0	0	263
EC	0	0	0	0	0	9	16	136	395	556
IC	5	6	11	22	43	42	41	25	0	195
IND	15	9	26	30	112	172	114	193	0	671
MU	12	2	8	6	6	11	19	102	108	274
ROM	1	2	0	4	0	0	0	0	0	7
Total	**47**	**44**	**79**	**88**	**227**	**277**	**247**	**456**	**503**	**1967**
Tax Lots										
CB	8	2	0	0	0	0	0	0	0	10
COM	117	62	47	20	20	6	4	0	0	276
EC	0	0	0	0	0	1	1	4	4	10
IC	48	17	15	16	15	6	3	1	0	121
IND	81	25	36	22	32	23	9	7	0	235
MU	147	5	12	4	2	2	1	4	2	179
ROM	27	7	0	2	0	0	0	0	0	36
Total	**428**	**118**	**110**	**64**	**69**	**38**	**18**	**16**	**6**	**867**

Source: ECONorthwest analysis of City of Salem GIS data

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. Different studies have used different improvement to land value ratio thresholds to identify redevelopment potential.

One of the key issues in preparing an accurate inventory of employment lands in Salem is how to identify and inventory underutilized or redevelopable lands. For the purpose of this study, ECO does not make a distinction between underutilized and redevelopable sites. The inventory consistently uses the term "redevelopable" since it is consistent with the terminology of the statewide land use program.[17] For the purpose of this study, however, the definition of

[17] In this instance, the terminology is a little confusing. OAR 660-009-0005(1) defines redevelopment as follows: "Developed Land" means non-vacant land that is likely to be

"redevelopable" land is considered synonymous with "underutilized" properties.

In the context of the Salem commercial and industrial buildable lands inventory, redevelopment potential addresses land that was initially 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 factors that affect redevelopability are many, but the economics are pretty straightforward. Redevelopment occurs when achievable rents exceed the current return on investment of the land and improvements. The reality, of course, is much more complicated. One way to think about the market for land is "highest and best use," which is a function of:

1. Achievable Pricing – Given the product type and location, what lease rates or sales prices are achievable?
2. Entitlements – What do local regulations allow to be built?
3. Development Cost – What is the cost to build the range of product types allowed (entitled) at that location?
4. Financing – What is the cost of capital, as well as the desired returns necessary to induce development of that form?

In our many conversations with commercial realtors and developers for this and other studies, the conclusion has been consistent: it is very difficult to develop reliable models of redevelopment potential. The factors are complicated and are location and time specific. Moreover, public policy can play a significant role in facilitating redevelopment.

In previous studies, ECO has explored supply side approaches using GIS datasets. The problem with supply side approaches is that the base data available to conduct empirical analyses is quite coarse, and as a result, the analyses are limited and the results have varying levels of inaccuracy. The improvement to land value approach has some problems; for example, it does not make distinctions for land intensive employment uses that require minimal built

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redeveloped during the planning period. For the purpose of clarity, we use the term developed to mean land committed to existing productive employment uses and redevelopable as lands that have potential for redevelopment during the planning period.

structure investments. Despite this limitation, it has utility in identifying districts that may be worth focusing resources on.

More robust approaches can consider employment densities, floor area ratios, and other factors. Often, however, the quality of the data is a limiting factor and the cost of generating new or cleaning existing data sets is prohibitive. For this study, we attempted to use employment density combined with improvement to land value ratios. Our assessment was that the results were unreliable and unsuitable as a valid indicator of redevelopment potential.

Thus, this study uses a demand-based approach to estimating how much land will be redeveloped over the 20-year planning period. ECO typically approaches the issue from the demand side by making deductions from total employment growth to account for new employment that will not need any new land.

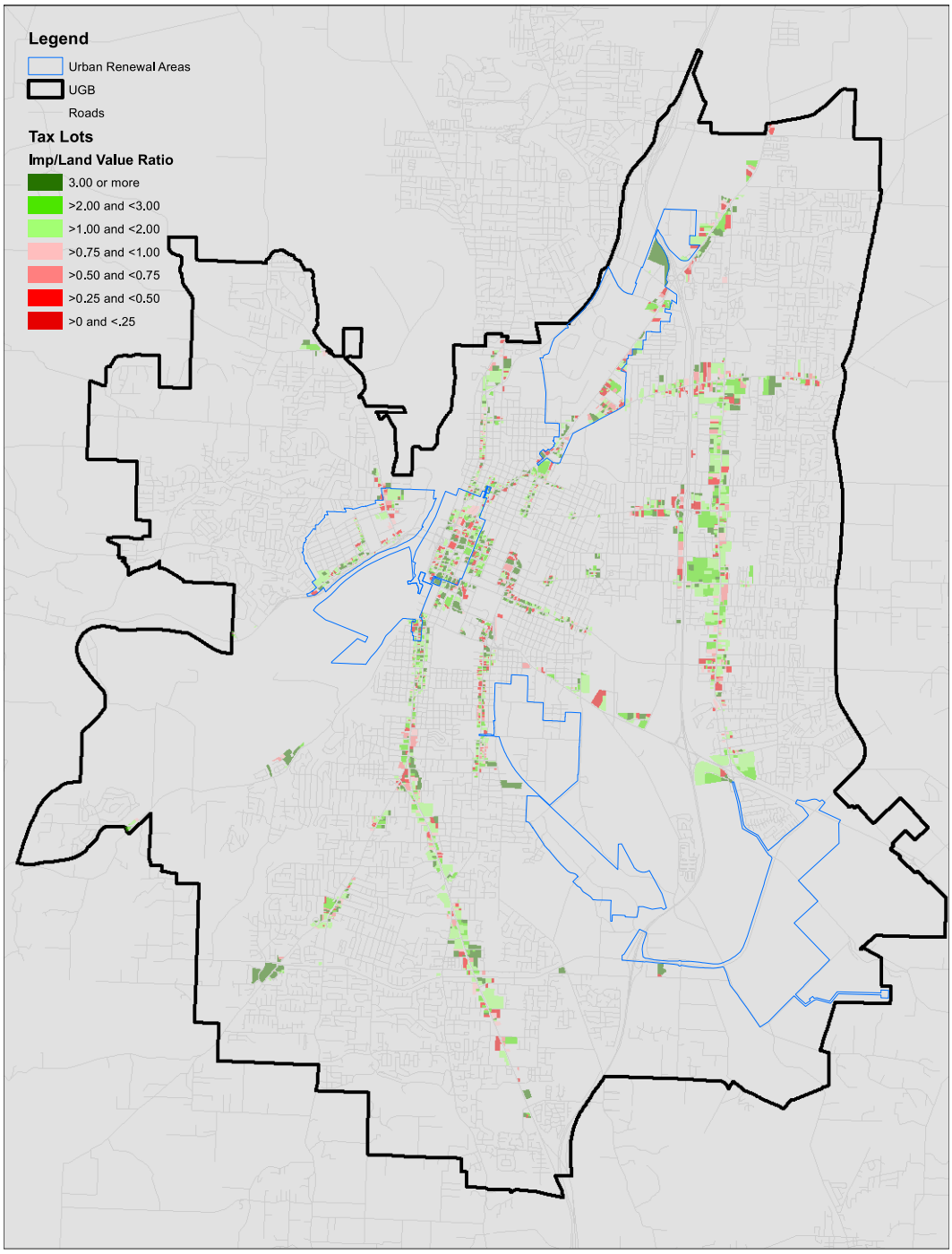
Table A-5 shows improvement to land ratios for developed commercial land in Salem. About 8% of Salem's developed commercial sites (142 acres of land) have an improvement to land value ratio of less than 0.25, suggesting that these sites have high redevelopment potential. Another 5% of Salem's developed land has an improvement to land ratio of between 0.25 and 0.5 (93 acres), and 12% of Salem's land has a ratio of between 0.5 and 1.0 (221 acres). Higher improvement to land value ratios suggest decreasing probability of redevelopment potential.

Table A-5: Improvement to land value ratio, commercial land classified as "developed," Salem UGB, 2012

	Improvement to Land Value Ratio								
Plan Designation	>0.00 - <0.25	>=0.25 - 0.50	>=0.50 - <0.75	>=0.75 - <1.00	and <2.00	>=2.00 - <3.00	>=3.00	No Data	Total
Acres									
Commercial Business District	11	10	3	9	22	23	41	14	134
Commercial	130	83	102	107	551	292	312	95	1,673
Total	**142**	**93**	**105**	**116**	**573**	**315**	**353**	**109**	**1,807**
Percent of Acres	**8%**	**5%**	**6%**	**6%**	**32%**	**17%**	**20%**	**6%**	**100%**
Tax Lots									
Commercial Business District	51	16	10	16	66	45	98	199	501
Commercial	308	187	175	259	853	364	428	291	2,865
Total	**359**	**203**	**185**	**275**	**919**	**409**	**526**	**490**	**3,366**
Percent of Tax Lots	**11%**	**6%**	**5%**	**8%**	**27%**	**12%**	**16%**	**15%**	**100%**

Source: ECONorthwest analysis of City of Salem GIS data

Map A-5: Improvement to land value ratios, developed lands in commercial plan designations, Salem UGB, 2012



Source: ECONorthwest analysis of City of Salem GIS data

Appendix B. Economic Trends and Factors Affecting Future Economic Growth in Salem

Salem exists as part of the larger economy of the Willamette Valley and is strongly influenced by regional economic conditions. For many factors, such as labor, Salem does not differ significantly from the broader region. For other factors, such as income, it does. Thus, Salem benefits from being a part of the larger regional economy and plays a specific role in the regional economy.

This chapter summarizes national, state, county, and local trends and other factors affecting economic growth in Salem. Each heading in this chapter represents a key trend or economic factor that will affect Salem's economy and economic development potential.

National, State, and Regional Trends

Short-term Trends

The focus of the economic opportunities analysis is long-term economic opportunities and need for land to accommodate employment growth. The EOA generally focuses on long-term economic cycles (Goal 9 requires a 20-year forecast). The recent recession, however, is severe enough that it may continue to affect Oregon's economy over the next five years, possibly longer. This section briefly summarizes big-picture, short-term economic trends.

The U.S. economy continues to recover from the deepest recession since World War II. The recession was brought about by instability of financial and housing markets and has impacted Oregon in a variety of ways, most notably with the labor market showing high unemployment and the housing market's oversupply of homes. While the national economy may begin to recover from the recession in 2010, the recovery may be a "jobless" recovery, where job growth is sluggish, even as production of goods and services begin to increase and the housing market begins to show signs of recovery. Oregon has seen gradual employment increases since the beginning of 2010.[18]

According to the Oregon Employment Department, Oregon's employment peaked in the first quarter of 2008 (at more than 1.74 million jobs) and hit its lowest point in the first quarter of 2010 (at about 1.59 million jobs), losing 146,000

[18] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2012, Vol. XXXII, No. 3., Page 6-7. http://www.oregon.gov/DAS/OEA/docs/economic/forecast0912.pdf

jobs over the two-year period. Between early 2010 and December 2012, Oregon added about 52,000 jobs.

According to the Oregon Office of Economic Analysis (OEA), job growth since mid-2011 has been slow but continuous, at about 1.2% per year, which is less than half of the average growth rate during an expansion year. The OEA predicts continued slow growth.

Nationally, housing demand decreased precipitously during 2008 and continued to decline through 2009. This decrease is the result of a number of factors, including the sub-prime lending crisis, difficulties with the financial industry and resulting tightening of credit availability, the impact of decreases in home value for existing homeowners, and the impact of job losses.

The national housing market appears to be stabilizing, with housing starts beginning to increase. While housing prices are increasing in some markets, they are holding stable or continuing to decrease in some housing markets. The OEA expects that Oregon's housing market should recover more easily than other states that had greater increases in housing prices during the recent housing boom.[19]

The Oregon Index of Leading Indicators grew in late 2011 through early 2012 but declined sharply in June 2012. The overall decline was driven by large decreases in a few indicators, particularly those related to global economic slowdown in the manufacturing sector. In general, recent trends in the index suggest near-term economic growth.[20]

Governments across the globe attempted to stabilize the economy through economic stimulus. In the U.S., government stimulation that has directly impacted Oregon includes government subsidies for the housing market and the return of federal timber payments to Oregon's counties. But the federal timber payments were phased out over a four-year period, which ended in 2011. The withdrawal of these forms of stimulus may have adverse impacts on economic activity. [21]

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[19] Office of Economic Analysis. Oregon Economic and Revenue Forecast, March 2010, Vol. XXX, No. 1, Page 6-7. http://www.oregon.gov/DAS/OEA/docs/economic/forecast0310.pdf. Page 11.

[20] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2012, Vol. XXXII, No. 3., Page 6-7. http://www.oregon.gov/DAS/OEA/docs/economic/forecast0912.pdf , page 46.

[21] Ibid., 50.

Oregon's economic health is dependent on the export market. Oregon's exports in the first half of 2012 decreased by 5.1% relative to 2011 levels. [22] The countries that Oregon has the most exports to are China, Canada, Malaysia, Japan, and Taiwan. These economies were all affected by the global recession. Exports to China and Malaysia, which accounted for 30% of Oregon's exports in 2011, are down 28% in the first half of 2012. The manufacturing slowdown in China and the euro zone recession have negatively impacted Oregon exports. As foreign economies recover from the recession, their increased purchasing power will aid U.S. producers looking to export, including export firms in Oregon.

Long-term National Trends

Economic development in Salem over the next 20 years will occur in the context of long-run national trends. The most important of these trends include:

- **Economic growth will continue at a moderate pace.** Analysis from the Congressional Budget Office (CBO) predicts that, following a slow recovery from the recession, the economy will grow at a solid pace in 2014 and for the next few years. Annual growth rates (in real GDP) are projected to be roughly 3% through 2017.

  Unemployment rates have also improved with the recovery, and CBO expects continued decline, but CBO estimates that it will remain above 6.0% until late 2016.

  Beyond 2017, CBO projects that economic growth will decline to a pace below the average seen over the past several decades. This expectation reflects long-term trends—in particular, slower growth in the labor force due to the aging of the population.
- **The aging of the baby boom generation, accompanied by increases in life expectancy.** The number of people age 65 and older will more than double by 2050, while the number of working age people under age 65 will grow only 19%. 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.[23]

  Baby boomers are expecting to work longer than previous generations. An increasing proportion of people in their early to mid-50s expect to work full-time after age 65. In 2004, about 40% of these workers expect

[22] Ibid., 19-22.

[23] The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2011, *The 2011 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, May 13, 2011.

to work full-time after age 65, compared with about 30% in 1992.[24] This trend can be seen in Oregon, where the share of workers 65 years and older grew from 2.9% of the workforce in 2000 to 4.1% of the workforce in 2010, an increase of 41%. Over the same ten-year period, workers 45 to 64 years increased by 15%.[25]

- **Need for replacement workers.** The need for workers to replace retiring baby boomers will outpace job growth. According to the Bureau of Labor Statistics, net replacement needs will be 33.7 million job openings over the 2010-2020 period, compared with growth in employment of 21.1 million jobs. The occupations with the greatest need for replacement workers includes: retail sales, food service, registered nurses, office workers and teachers.[26]
- **The 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. The fastest growing occupations requiring an academic degree will be: health care service, computer programing, management and business services, college teachers, and architectural and engineering services. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for more than two-thirds of all new jobs by 2020. These occupations typically have lower pay than occupations requiring an academic degree.[27]

  The national median income in 2013 was about $43,004. Workers without a high school diploma earned $18,460 less than the median income, and workers with a high school diploma earned $9,152 less than median income. Workers with some college earned slightly less than median, and workers with a bachelor's degree earned $14,612 more than median. Workers in Oregon experience the same patterns as the nation, but pay is generally lower in Oregon than the national average.[28]

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[24] "The Health and Retirement Study," 2007, National Institute of Aging, National Institutes of Health, U.S. Department of Health and Human Services.

[25] Analysis of 2000 Decennial Census data and 2010 U.S. Census American Community Survey, 1-Year Estimates for the table Sex by Age by Employment Status for the Population 16 Years and Over

[26] "Occupational Employment Projections to 2010-2020," Bureau of Labor Statistics, February 2012.

[27] "Occupational Employment Projections to 2010-2020," Bureau of Labor Statistics, February 2012.

[28] Bureau of Labor Statistics, Employment Projections, March 2014. http://www.bls.gov/emp/ep_chart_001.htm

- **Need for diversity in the skills of workers.** While workers with academic degree or "high" skills are forecast to continue to be in demand (e.g., managers, lawyers, engineers, or health care practitioners), businesses will need other skilled workers. These workers, termed "middle-skill," are in occupations such as sales, administrative support, construction, maintenance, or transportation. Middle-skill workers may have a high school diploma or may have completed an Associate's degree but are less likely to have a Bachelor's degree. Middle-skill workers have specialized skills and need more training than a high school diploma.

  The Oregon Department of Employment projects that about 28% of job openings in Oregon between 2010 and 2020 will be in middle-skill occupations.[29]

- **Increases in labor productivity.** Productivity, as measured by output per hour, increased over the 1995 to 2005 period. The largest increases in productivity occurred over the 1995 to 2000 period, led by industries that produced, sold, or intensively used information technology products. Productivity increased over the 2000 to 2005 period but at a slower rate than during the later half of the 1990's. The sectors that experienced the largest productivity increases over the 2000 to 2005 period were: Information, Manufacturing, Retail Trade, and Wholesale Trade. Productivity in mining decreased over the five-year period. [30]

- **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 healthcare and social assistance, professional and business services, and other service industries. Construction employment will also grow but manufacturing employment will decline.[31]

- **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. High-quality natural resources continue to be important in some states, especially in the Western U.S. Increases in the population and in households'

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[29] "A careful Analysis of Oregon's middle-Skill Jobs," July 2012 Oregon Employment Department.

[30] Corey Holman, Bobbie Joyeaux, and Christopher Kask, "Labor Productivity trends since 2000, by sector and industry," Bureau of Labor Statistics *Monthly Labor Review*, February 2008.

[31] "Occupational Employment Projections to 2010-2020," Bureau of Labor Statistics, February 2012.

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.[32]

- **Continued increase in demand for energy.** Energy prices are forecast to remain at relatively high levels, with continued, gradual increased prices over the planning period. While energy use per capita is expected to decrease to 2040, total energy consumption will increase with rising population. Energy consumption is expected to grow primarily from industrial and (to a lesser extent) commercial users, and remain relatively flat by residential users. Energy consumption for transportation is expected to decrease, as federal standards for energy efficiency in vehicles increases.

  Energy consumption by type of fuel is expected to change over the planning period. By 2040, the U.S. will consume a little less oil and more natural gas and renewables. Despite increases in energy efficiency and decreases in demand for energy by some industries, demand for energy is expected to increase over the 2013 to 2040 period because of increases in population and economic activity.[33]
- **Impact of rising energy prices on commuting patterns.** Energy prices may continue to be high (relative to historic energy prices) or continue to rise over the planning period.[34] The increases in energy prices may impact willingness to commute long distances.
- **Possible effect of rising transportation and fuel prices on globalization.** Increases in globalization are related to the cost of transportation: When transportation is less expensive, companies move production to areas with lower labor costs. Oregon has benefited from this trend, with domestic outsourcing of call centers and other back office functions. In other cases, businesses in Oregon (and the nation) have "off-shored" employment to other countries, most frequently manufacturing jobs.

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[32] 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.

[33] Energy Information Administration, 2013, *Annual Energy Outlook 2013 with Projections to 2040 Early Release Overview*, U.S. Department of Energy, December 2012.

[34] Energy Information Administration, 2014, *Annual Energy Outlook 2014 with Projections to 2040 Early Release Overview*, U.S. Department of Energy, April 2014.

Increases in either transportation or labor costs may impact globalization. When the wage gap between two areas is larger than the additional costs of transporting goods, companies are likely to shift operations to an area with lower labor costs. Conversely, when transportation costs increase, companies may have incentive to relocate to be closer to suppliers or consumers.

This effect occurs incrementally over time, and it is difficult to measure the impact in the short-term. If fuel prices and transportation costs decrease over the planning period, businesses may not make the decision to relocate (based on transportation costs) because the benefits of being closer to suppliers and markets may not exceed the costs of relocation.

- **Growing opportunities for "green" businesses.** Businesses are increasingly concerned with "green" business opportunities and practices. These business practices include "the design, commercialization, and use of processes and products that are feasible and economical while reducing the generation of pollution at the source and minimizing the risk to human health and the environment."[35]

  Defining what constitutes a green job or business is difficult because most industries can have jobs or business practices that are comparatively environmentally beneficial. A 2009 study by the Pew Charitable Trust defines the clean energy economy as an economy that "generates jobs, businesses and investments while expanding clean energy production, increasing energy efficiency, reducing greenhouse gas emissions, waste and pollution, and conserving water and other natural resources."[36]

- **Potential impacts of global climate change.** There is a consensus among the scientific community that global climate change is occurring and will have important ecological, social, and economic consequences over the next decades and beyond.[37] Extensive research shows that Oregon and

[35] Urban Green Partnership at urbangreenpartnership.org

[36] "The Clean Energy Economy: Repowering Jobs, Businesses and Investments Across America." The Pew Charitable Trusts. June 2009. Pages 8-11. http://www.pewcenteronthestates.org/uploadedFiles/Clean_Economy_Report_Web.pdf

[37] Karl, T.R., J.M. Melillo, and T.C. Peterson, eds. 2009. *Global Climate Change Impacts in the United States.* U.S. Global Change Research Program. June. Retrieved June 16, 2009, from www.globalchange.gov/usimpacts; and Pachauri, R.K. and A. Reisinger, eds. 2007. *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.*

other western states already have experienced noticeable changes in climate and predicts that more change will occur in the future.[38]

In the Pacific Northwest, climate change is likely to (1) increase average annual temperatures, (2) increase the number and duration of heat waves, (3) increase the amount of precipitation falling as rain during the year, (4) increase the intensity of rainfall events, and 5) increase sea level. These changes are also likely to reduce winter snowpack and shift the timing of spring runoff earlier in the year.[39]

These anticipated changes point toward some of the ways that climate change is likely to impact ecological systems and the goods and services they provide. There is considerable uncertainty about how long it would take for some of the impacts to materialize and the magnitude of the associated economic consequences. Assuming climate change proceeds as today's models predict, however, some of the potential economic impacts of climate change in the Pacific Northwest will likely include:[40]

- *Potential impact on agriculture and forestry.* Climate change may impact Oregon's agriculture through changes in: growing season, temperature ranges, and water availability.[41] Climate change may

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[38] Doppelt, B., R. Hamilton, C. Deacon Williams, et al. 2009. *Preparing for Climate Change in the Upper Willamette River Basin of Western Oregon.* Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon. March. Retrieved June 16, 2009, from http://climlead.uoregon.edu/pdfs/willamette_report3.11FINAL.pdf and Doppelt, B., R. Hamilton, C. Deacon Williams, et al. 2009. *Preparing for Climate Change in the Rogue River Basin of Southwest Oregon.* Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon. March. Retrieved June 16, 2009 from http://climlead.uoregon.edu/pdfs/ROGUE%20WS_FINAL.pdf

[39] Mote, P., E. Salathe, V. Duliere, and E. Jump. 2008. *Scenarios of Future Climate for the Pacific Northwest.* Climate Impacts Group, University of Washington. March. Retrieved June 16, 2009, from http://cses.washington.edu/db/pdf/moteetal2008scenarios628.pdf; Littell, J.S., M. McGuire Elsner, L.C. Whitely Binder, and A.K. Snover (eds). 2009. "The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate - Executive Summary." *In The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate*, Climate Impacts Group, University of Washington. Retrieved June 16, 2009, from www.cses.washington.edu/db/pdf/wacciaexecsummary638.pdf; Madsen, T. and E. Figdor. 2007. *When it Rains, it Pours: Global Warming and the Rising Frequency of Extreme Precipitation in the United States.* Environment America Research & Policy Center and Frontier Group.; and Mote, P.W. 2006. "Climate-driven variability and trends in mountain snowpack in western North America." *Journal of Climate* 19(23): 6209-6220.

[40] The issue of global climate change is complex and there is a substantial amount of uncertainty about climate change. This discussion is not intended to describe all potential impacts of climate change but to present a few ways that climate change may impact the economy of cities in Oregon and the Pacific Northwest.

[41] "The Economic Impacts of Climate Change in Oregon: A preliminary Assessment," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

impact Oregon's forestry through increases in wildfires, decreases in the rate of tree growth, changes in mix of tree species, and increases in disease and pests that damage trees.[42]

- *Potential impact on tourism and recreation.* Impacts on tourism and recreation may range from: (1) decreases in snow-based recreation if snow-pack in the Cascades decreases, (2) negative impacts to tourism along the Oregon Coast as a result of damage and beach erosion from rising sea levels,[43] (3) negative impacts on the availability of water and summer river recreation (e.g., river rafting or sports fishing) as a result of lower summer river flows, and (4) negative impacts on the availability of water for domestic and business uses.

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 2008 and 2009 following declines in the housing market and the mortgage banking crisis. The result of the economic downturn has been a decrease in employment related to the housing market, such as construction and real estate. Employment in these industries will recover as the housing market recovers and 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, Regional, and Local Trends

State, regional, and local trends will also affect economic development in Salem over the next 20 years. The most important of these trends includes: continued in-migration from other states, distribution of population and employment across the state, and change in the types of industries in Oregon.

- **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*

[42] "Economic Impacts of Climate Change on Forest Resources in Oregon: A Preliminary Analysis," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, May 2007.

[43] "The Economic Impacts of Climate Change in Oregon: A preliminary Assessment," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

Oregon) during the period 1990-2010. Oregon had an annual average of 26,290 more in-migrants than out-migrants during the period 1990-2000, while the annual average dropped to 9,800 during the period 2000-2010. Between 2010 and 2013, the annual average was 15,612 a year. [44]

- **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, 9% lives in Central Oregon, and 6% live in coastal counties. The Oregon Office of Economic Analysis (OEA) forecasts that population will continue to be concentrated in the Willamette Valley through 2040, increasing slightly to 71% of Oregon's population.

  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 1970-2006 but over 70% of Oregon's employment was located in the Willamette Valley.

- **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 45% in 2011, while employment in Manufacturing declined from an average of 18% in the 1970s to an average of 10% in 2011.

- **Shift in manufacturing from natural resource-based to high-tech and other manufacturing 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 and concurrent growth of employment in other manufacturing industries, such as high-technology manufacturing (Industrial Machinery, Electronic Equipment, and Instruments), Transportation Equipment manufacturing, and Printing and Publishing. [45]

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[44] Portland State University Population Research Center, Population Report, Components of Population Change for 1990-2000, 2000-2010, and 2010-2013. http://pdx.edu/prc/annual-oregon-population-report

[45] Although Oregon's economy has diversified since the 1970's, natural resource-based manufacturing accounts for more than nearly 40% of employment in manufacturing in Oregon in 2010, with the most employment in Wood Product and Food manufacturing.

- **Continued importance of manufacturing to Oregon's economy.** Oregon's exports totaled $19.4 billion in 2008, nearly doubling since 2000. Oregon's largest export industries were computer and electronic products and agricultural products, which accounted for nearly 60% of Oregon's exports. Manufacturing employment is concentrated in five counties in the Willamette Valley or Portland area: Washington, Multnomah, Lane, Clackamas, and Marion Counties.[46]
- **Small businesses continue to account for a large share of employment in Oregon**. While small firms played a large part in Oregon's expansion between 2003 and 2007, they also suffered disproportionately in the recession and its aftermath (64% of the net jobs lost between 2008 and 2010 were from small businesses).

  In 2011, small businesses (those with 100 or fewer employees) accounted for 96% of all businesses and 41% of all private-sector employment in Oregon. Said differently, most businesses in Oregon are small (in fact, 77% of all businesses have fewer than 10 employees), but the largest share of Oregon's workers work for large businesses.

  The average annualized payroll per employee at small businesses was $33,404 in 2011, which is considerably less than that at large businesses ($47,661) and the statewide average for all businesses ($41,802).[47]
- **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.

[46] Business Oregon, *"Economic Data Packet"*

[47] U.S Census Bureau, 2011 Statistics of U.S. Businesses, Annual Data, Enterprise Employment Size, U.S and States

Availability of Labor

The availability of trained workers in Salem will impact development of Salem's economy over the planning period. Key trends that will affect the workforce in Salem over the next 20 years include its growing population, aging population, and commuting trends.

Growing Population

Population growth in Oregon tends to follow economic cycles. Historically, Oregon's economy is more cyclical than the nation's, growing faster than the national economy during expansions, and contracting more rapidly than the nation during recessions. Oregon grew more rapidly than the U.S. in the 1990s (which was generally an expansionary period) but lagged behind the U.S. in the 1980s. Oregon's slow growth in the 1980s was primarily due to the nationwide recession early in the decade. As the nation's economic growth slowed during 2007, Oregon's population growth began to slow.

Oregon's population grew from 2.8 million people in 1990 to 3.9 million people in 2012, an increase of over 1,000,000 people at an average annual rate of 1.43%. Oregon's growth rate slowed to 1.06% annual growth between 2000 and 2012.

Table B-1 shows that Salem's population grew faster than the State's between 1990 and 2013, expanding by 1.7% annually and adding over 50,000 people. Salem's population also grew faster than Marion County as a whole, which grew by 1.5% annually and added 94,397 residents over the 22-year period, but slower than Polk County, which grew at 1.9% annually and added 27,524 residents.

Table B-1. Population in the U.S., Oregon, Marion County, Polk County, Salem 1990-2013

	Population			Change 1990 to 2013		
Area	1990	2000	2013	Number	Percent	AAGR
U.S.	248,709,873	281,421,906	316,364,000	67,654,127	27%	1.1%
Oregon	2,842,321	3,421,399	3,919,020	1,076,699	38%	1.4%
Marion County	228,483	284,834	322,880	94,397	41%	1.5%
Polk County	49,541	62,380	77,065	27,524	56%	1.9%
Salem	106,786	136,924	157,770	50,984	48%	1.7%

Source: Portland State University, Population Research Center
Note: AAGR is average annual growth rate.

Migration is the largest component of population growth in Oregon. Between 1990 and 2010, in-migration accounted for 68% of Oregon's population growth. Over the same period, in-migration accounted for 77% of population growth in the Salem MSA, adding more than 66,000 residents over the 20-year period.

Aging Population

The number of people age 65 and older in the U.S. is expected to 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, need for workers to replace retirees, aging of the workforce for seniors that continue working after age 65, an increase in the demand for healthcare services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.[48]

The average age of Salem residents is increasing. Table B-2 shows the change in age distribution between 2000 and 2010. All age groups gained population. The age group that experienced the largest growth—in population as well as percentage change—were those between the ages of 45 and 64, gaining 34% or 9,597 people over the 10-year period. This trend is consistent with statewide trends.

Table B-2. Population by age, Salem, 2000 and 2010

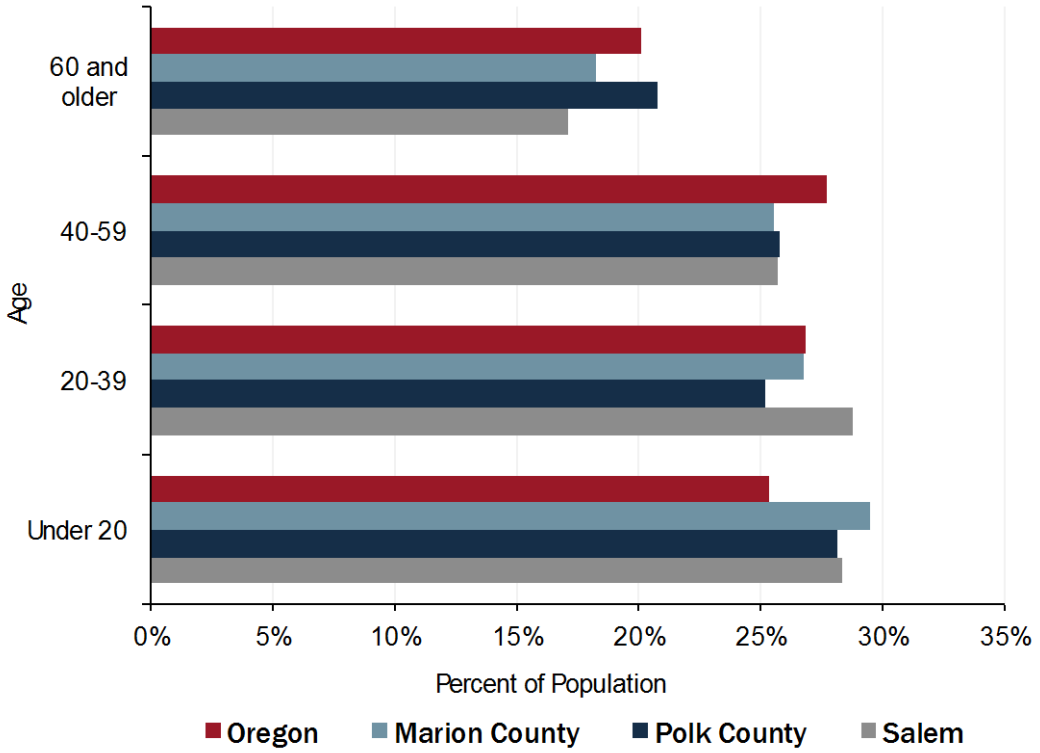
	2000		2010		Change 2000-2010		
Age Group	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	10,190	7%	11,407	7%	1,217	12%	0%
5-17	24,629	18%	27,529	18%	2,900	12%	0%
18-24	15,646	11%	16,615	11%	969	6%	-1%
25-44	41,198	30%	42,779	28%	1,581	4%	-2%
45-64	28,222	21%	37,819	24%	9,597	34%	4%
65 and over	17,039	12%	18,488	12%	1,449	9%	0%
Total	136,924	100%	154,637	100%	17,713	13%	0%

Source: U.S. Census 2000 Table P12, U.S. Census 2010 Table P12

[48] The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2008, *The 2008 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, April 10, 2008. *The Budget and Economic Outlook: Fiscal Years 2007 to 2016*, January; and Congressional Budget Office, 2005, *The Long-Term Budget Outlook*, December.

Figure B- 1 shows the age structure for Oregon, Marion County, Polk County, and Salem in 2010. Salem has a larger share of residents between the ages of 20 and 39 than Marion County, Polk County and the State. Salem also has a comparatively smaller share of residents aged 60 years and older.

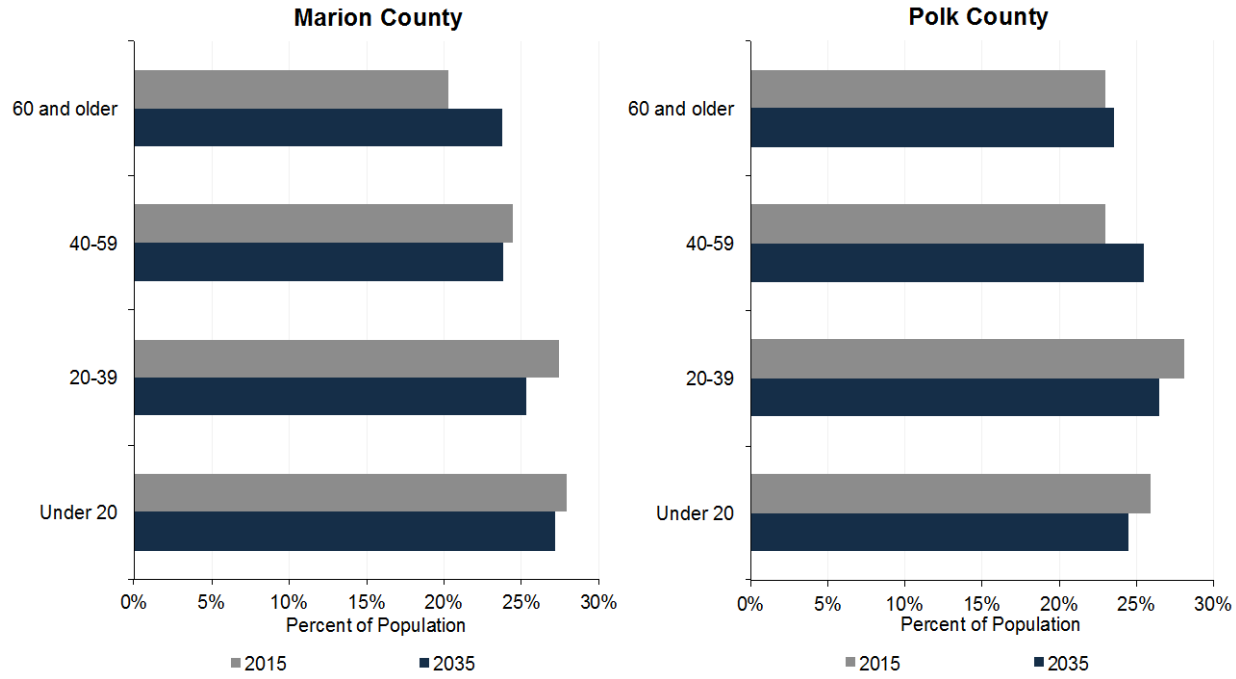
Figure B- 1. Population distribution by age, Oregon, Marion County, Polk County, and Salem, 2010



Source: U.S. Census 2010, Profile of General Population and Housing Characteristics

Figure B-2 shows the Oregon Office of Economic Analysis' (OEA) projection of the age structure in Marion and Polk counties in 2015 and 2035. The OEA projects the share of the population over the age of 60 in Marion County will grow from 20% in 2015 to 24% in 2035, while Polk County will similarly experience an increase in the 40-59 age group (23% in 2015 to 25% in 2035).

Figure B-2. Current and projected population by age, Marion County and Polk County, 2015 and 2035



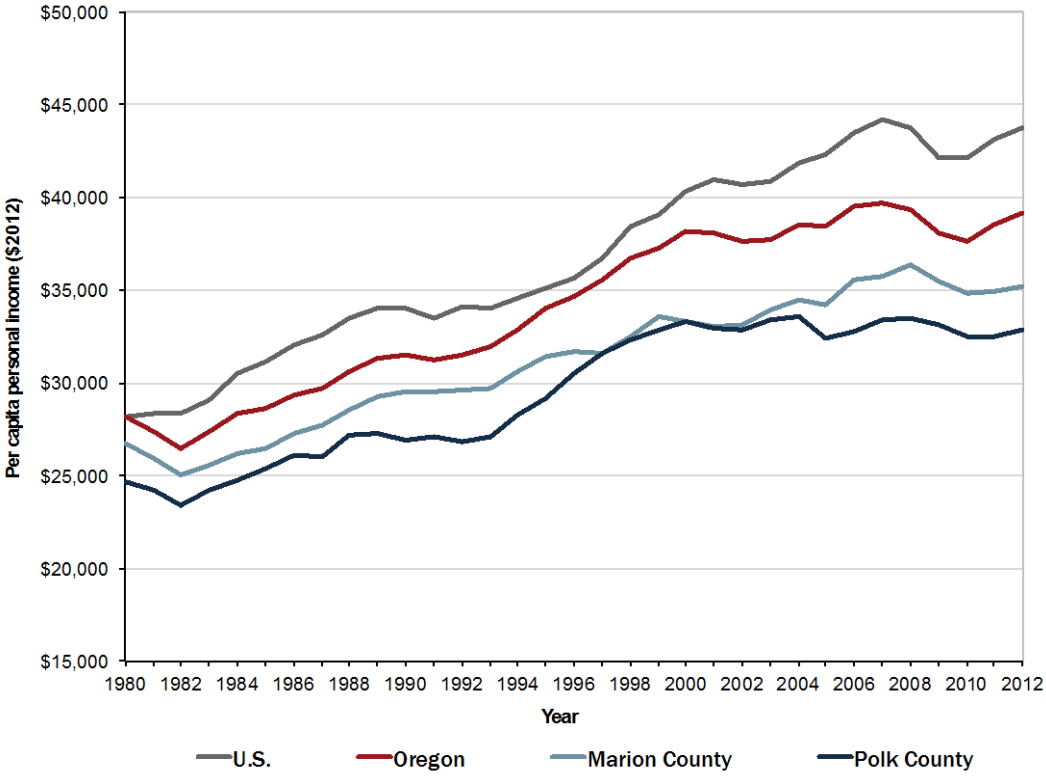
Source: Oregon Office of Economic Analysis.
http://www.oregon.gov/DAS/OEA/docs/demographic/pop_by_ageandsex.xls

Income

Figure B-3 shows the change in per capita personal income for the U.S., Oregon, Marion County, and Polk County between 1980 and 2012 (in constant 2012 dollars). Per capita income grew most years during the 31-year period, with the exception of a decrease during the 2007-2009 recession. Since 1980, Oregon's per capita personal income was consistently lower than the U.S. average. In 1980, Oregon's per capita person income was 100% of the national average. By 2012, Oregon's per capita income was 90% of the national average.

Marion and Polk counties' per capita incomes have consistently been lower than State and national averages. In 1980, Marion County's per capita income was 95% of the national average, decreasing to 80% by 2012. In 1980, Polk County's per capita income was 88% of the national average, decreasing to 75% by 2012.

Figure B-3. Per capita personal income in the U.S., Oregon, and Marion and Polk County, 1980-2012, (2012 dollars)



Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce, Table CA1-3. http://www.bea.gov/iTable/iTable.cfm?ReqID=70&step=1.

Table B-3 shows three measures of income in 2012 for Oregon, Marion County, Polk County and Salem: per capita income, median household income, and median family income. Salem's incomes are lower than the State averages.

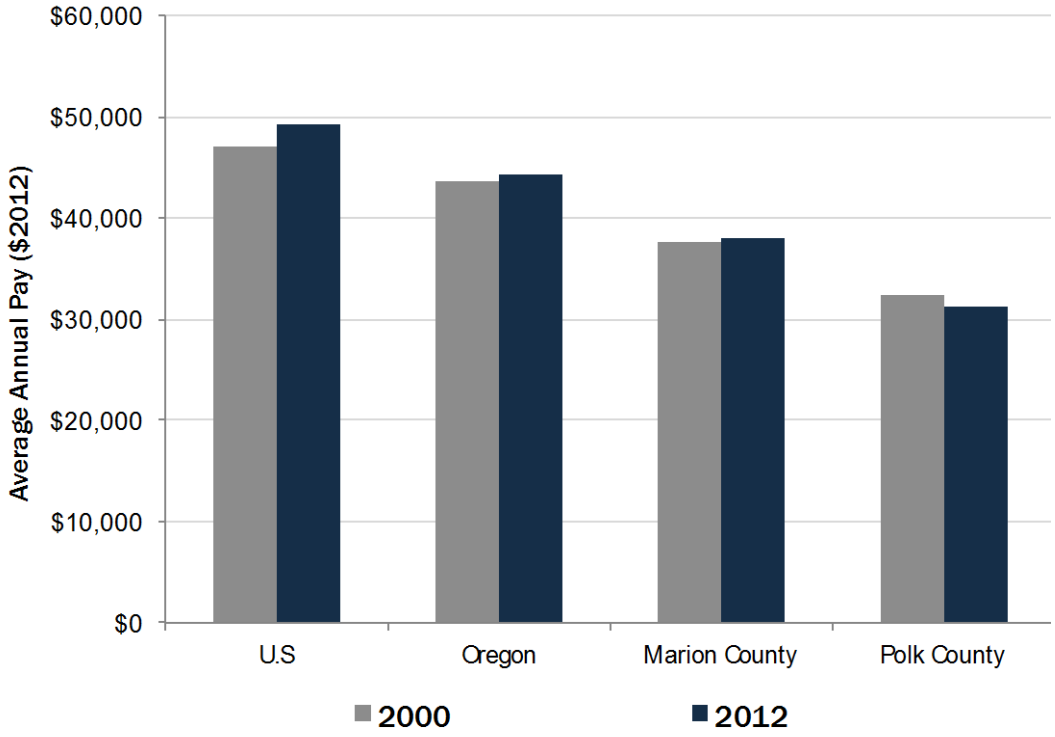
Table B-3. Per Capita Income, Median Household Income, Median Family Income, Oregon, Marion County, Polk County, and Salem, 2012

	Per Capita Income	Median Household Income	Median Family Income
Oregon	$26,011	$49,161	$59,476
Marion County	$20,992	$45,422	$53,938
Polk County	$22,502	$46,827	$55,794
Salem	$21,459	$46,479	$55,007

Source: 2012 American Community Survey, DP03

Figure B-4 shows average annual pay per employee in the U.S., Oregon, Marion County, and Polk County between 2000 and 2012. The national average wage grew more than State or County averages. The average U.S. wage increased by 5% (more than $2,000), compared to the State increase of 1% ($530), Marion County's increase of 2% (nearly $569), and Polk County's *decrease* of -4% (declining by over $1,000). Wages in Marion County decreased by roughly 2% over the 12-year period relative to the U.S. Marion County's average pay stayed relatively constant (roughly 86%), relative to the state average.

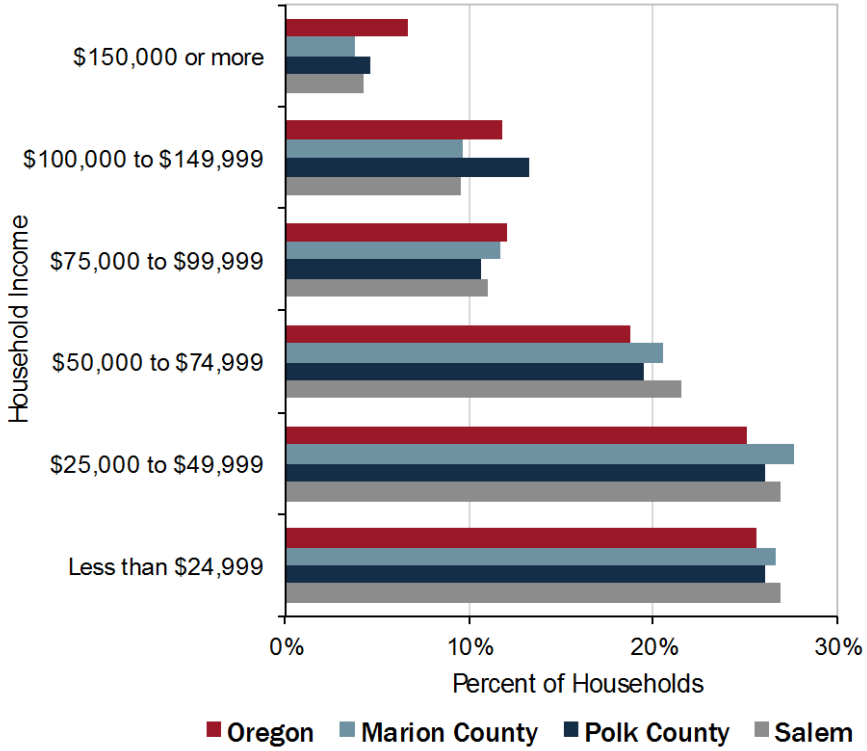
Figure B-4. Average Annual Pay, U.S., Oregon, Marion County, and Polk County, 2000-2012 (2012 Dollars)



Source: Oregon Employment Department, http://www.qualityinfo.org/olmisj/CEP, and U.S. Bureau of Labor Statistics, http://www.bls.gov/cew/

Figure B-5 shows the distribution of household income in Oregon, Marion County, Polk County and Salem in 2012. About 54% of Salem's households had income of less than $50,000, compared with 51% of State households.

Figure B-5. Household Income, Oregon, Marion County, Polk County, and Salem, 2012

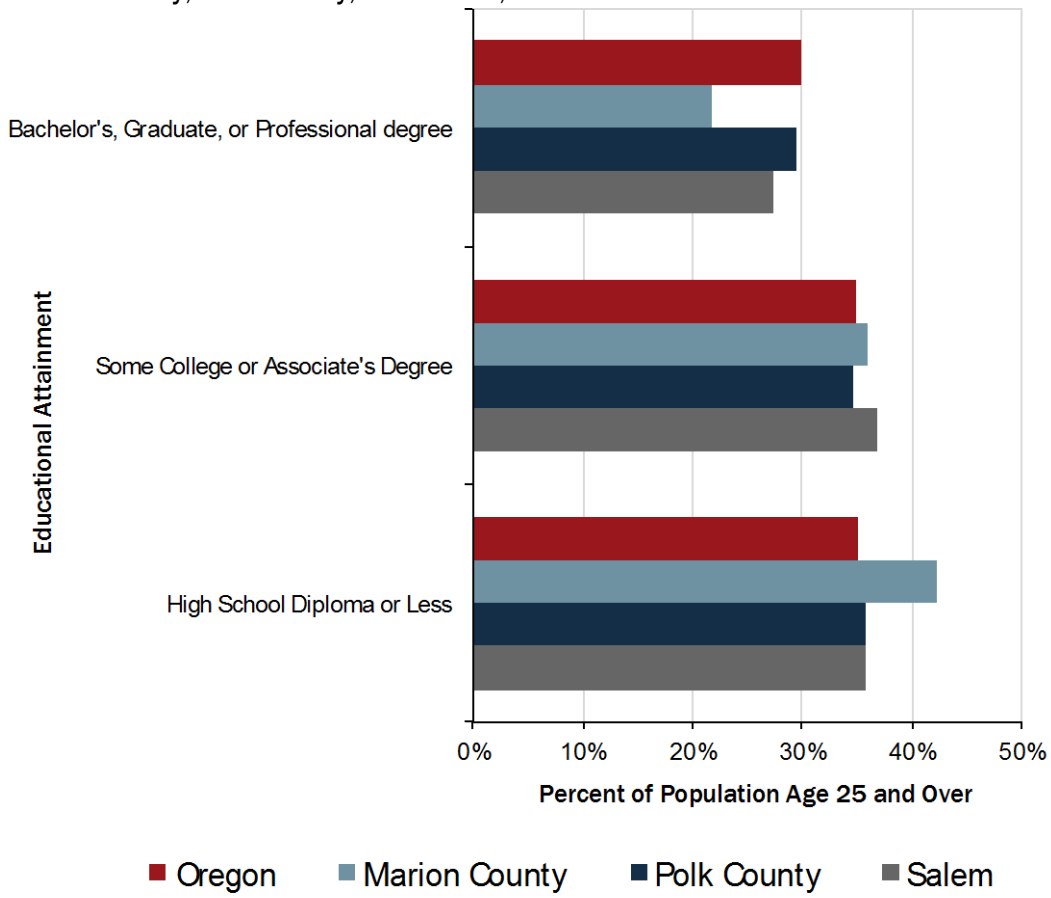


Source: American Community Survey, 2012; Table B19001

Educational Attainment

The availability of trained, educated workers affects the quality of labor in a community. Educational attainment is an important labor force factor because firms need to be able to find educated workers. Figure B-6 shows the share of population by education level completed in Oregon, Marion County, Polk County, and Salem in 2012. In 2012, Salem had a slightly higher share of residents above the age of 25 with some college or an associate degree (37%) than Oregon residents (35%), and a slightly lower share of residents with a bachelor's degree or higher (27%) than state residents (30%). Marion County had a higher share of residents with a high school diploma or less (15%) than the state as a whole (10%), and a lower share with a bachelor's degree or higher (22% versus 30%).

Figure B-6. Educational attainment for the population 25 years and over, Oregon, Marion County, Polk County, and Salem, 2012



Source: 2012 American Community Survey, B15003

Workforce Participation and Unemployment

The current labor force participation rate is an important consideration in the availability of labor. 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 2012 American Community Survey, Salem has over 78,000 people in its labor force (Table B-4). Sixty-five percent of Salem's working age population is in the labor force, compared to 62% of the state's population.

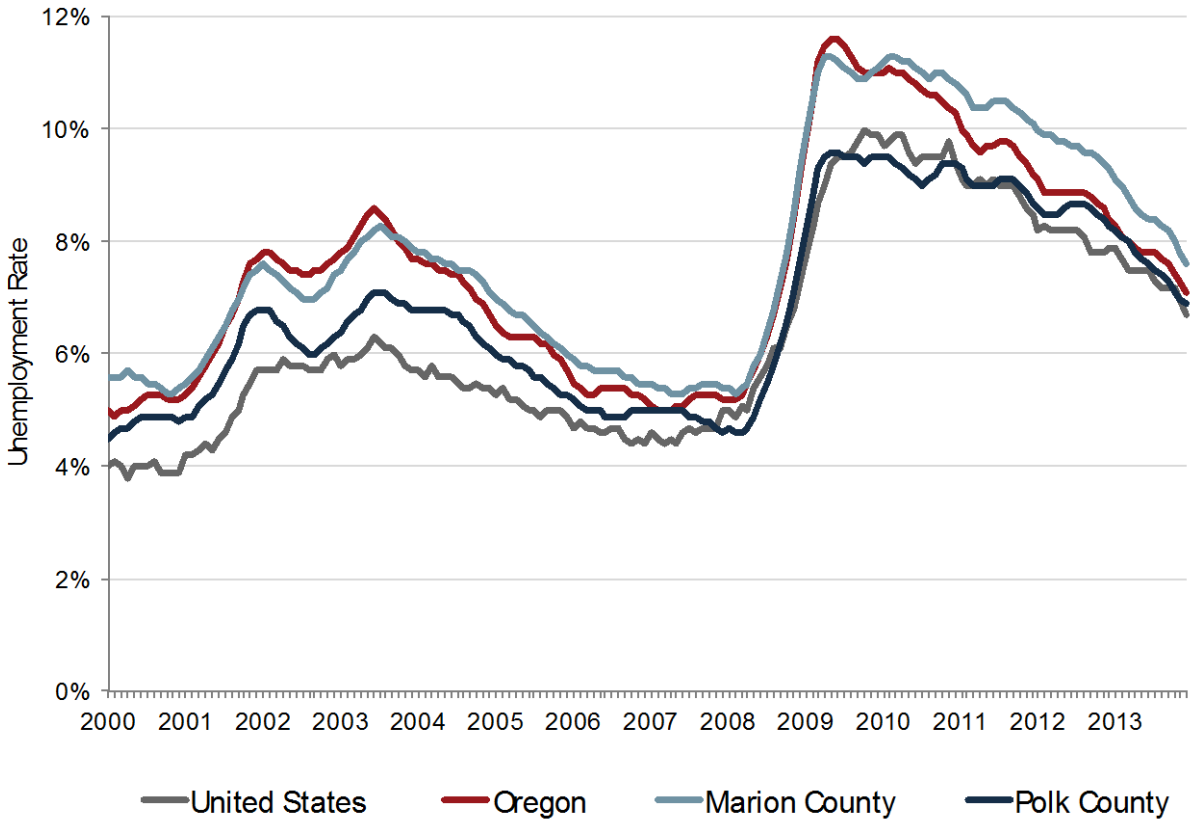
Table B-4. Labor force status for population 16 years and older, Oregon, Marion County, Polk County, and Salem, 2012

Labor Force Status	Oregon	Marion County	Polk County	Salem
In workforce	62%	64%	59%	65%

Source: 2012 American Community Survey, B23001

The unemployment rate is one indicator of the relative number of workers who are actively seeking employment. Figure B-7 shows the unemployment rate for the U.S., Oregon, Marion County, and Polk County between 2000 and 2013. Over this period, unemployment rates in Oregon and Marion County tracked one another closely, and were always higher than the rate observed for the nation as a whole. Polk County's unemployment rate was generally lower than those of Marion County and the State, but slightly higher than the national rate.

Figure B-7. Unemployment Rate, U.S., Oregon, Marion County, and Polk County, 2000-2013

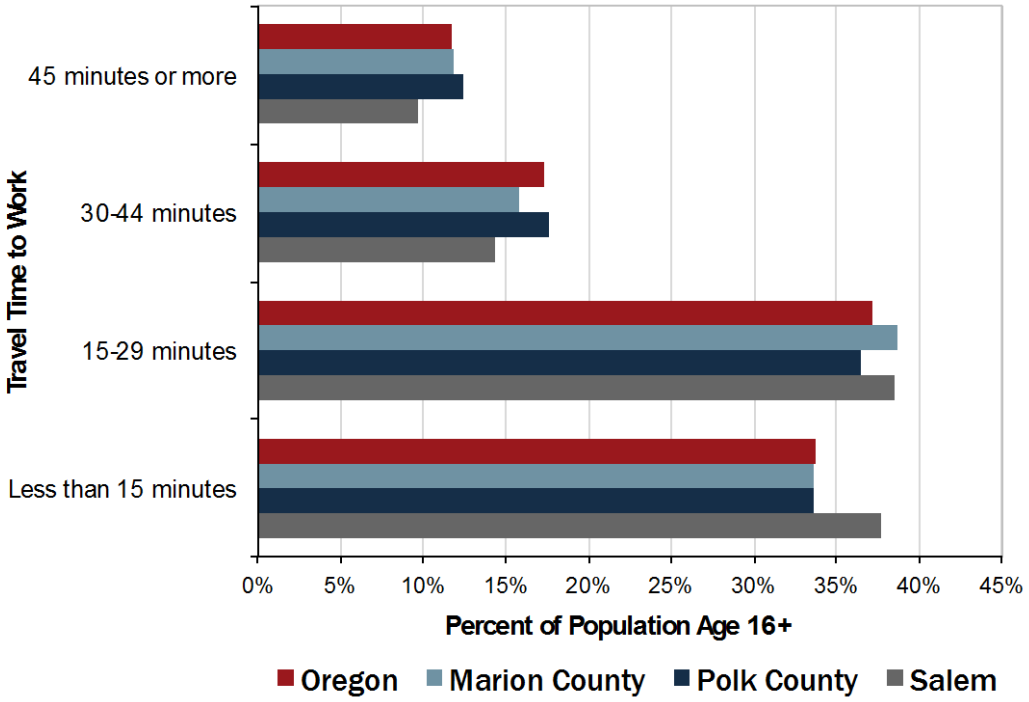


Source: Bureau of Labor Statistics, via Oregon Labor Market Information System: http://www.qualityinfo.org/olmisj/labforce

Commuting Patterns

Commuting plays an important role in Salem's economy because employers in Salem are able to access workers from people living in Salem, as well as the broader Willamette Valley. Figure B-8 shows a comparison of the commute time to work for residents 16 years and older for Oregon, Marion County, Polk County, and Salem in 2012. Seventy-six percent of Salem residents have a commute of less than 30 minutes compared to 72% of Marion County residents, 72% of Polk County residents and 71% of Oregon residents.

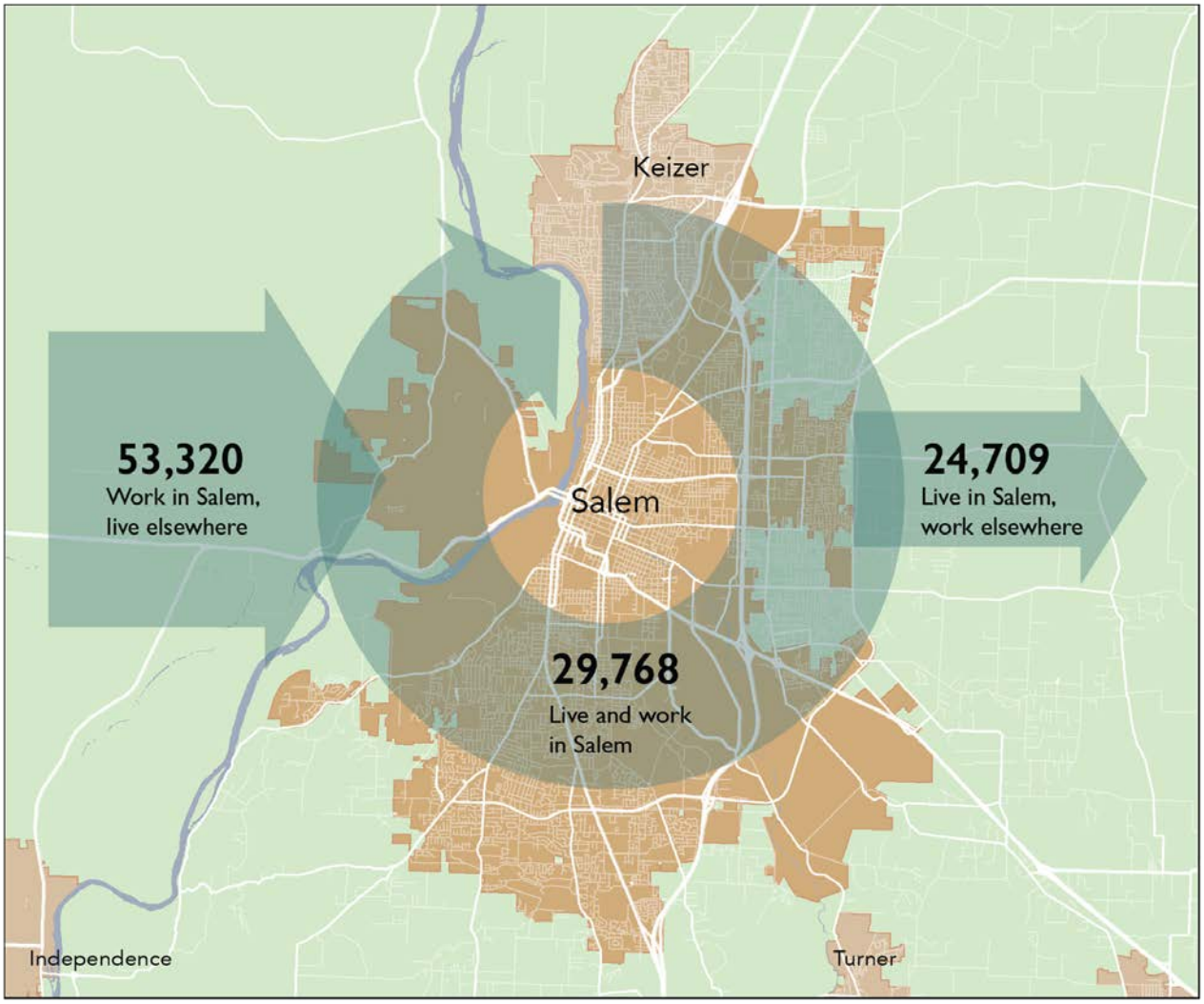
Figure B-8. Commuting time to work for residents 16 years and older, Oregon, Polk and Marion Counties, Salem, 2012



Source: 2012 American Community Survey, B08303

Figure B-9 shows the inflow and outflow patterns of workers and resident of Salem in 2012. Nearly two-thirds of the people who work in Salem commute into the City. This in-commuting pattern is consistent with other cities in the Willamette Valley. Net inflow into Salem is approximately 28,611 people; that is, many more people commute to Salem for work from outside than leave to work outside of the city.

Figure B-9. Inflow and outflow of labor in Salem, 2012



Source: U.S. Census Bureau: LED on the Map, http://lehdmap3.did.census.gov/themap3/

Table B-5 shows where employees of firms located in Salem lived in 2011. Fifty-five percent of Salem's workers lived in Marion County, and 42% lived in Salem. Roughly 33% of Salem's workers lived outside of Marion and Polk counties.

Table B-5. Places where workers in Salem lived, 2011

Location	Number	Percent
Counties		
Marion County	45,755	55%
Polk County	10,015	12%
Linn County	3,670	4%
Multnomah County	3,507	4%
Washington County	3,304	4%
Clackamas County	3,010	4%
Lane County	2,900	3%
Yamhill County	2,002	2%
Benton County	1,450	2%
All other counties	7,475	9%
Cities		
Salem	35,177	42%
Keizer	6,488	8%
Portland	2,714	3%
Albany	1,726	2%
Dallas	1,367	2%
All other cities	35,616	43%
Total	83,088	100%

Source: U.S. Census Bureau: LED on the Map, http://lehdmap3.did.census.gov/themap3/

Table B-6 shows the places where residents of Salem were employed in 2011. Sixty-six percent of Salem's 54,477 working residents worked in Marion County, 6% worked in Polk County, and 58% worked within Salem city limits.

Table B-6. Places that residents of Salem were employed, 2011

Location	Number	Percent
Counties		
Marion County	36,125	66%
Multnomah County	3,632	7%
Polk County	3,386	6%
Washington County	3,286	6%
Clackamas County	1,926	4%
Linn County	1,255	2%
Yamhill County	975	2%
Lane County	941	2%
All other counties	2,951	5%
Cities		
Salem	31,670	58%
Portland	3,179	6%
Keizer	1,491	3%
Woodburn	826	2%
Tigard	773	1%
All other cities	16,538	30%
Total	54,477	100%

Source: U.S. Census Bureau: LED on the Map, http://lehdmap3.did.census.gov/themap3/

These commuting patterns show that Salem firms have access to workforce living throughout the region. Even though commutes in Salem are generally shorter than the State average, these commuting patterns create demand for automotive and other forms of transportation, both within Salem and on roads throughout the region.

Increasing energy prices may impact commuting patterns within Salem. The impact is most likely to be greatest for workers living in the smaller cities around the Salem area because the commute to Salem is longer from these outlying cities and areas. Willingness to commute by most workers living and working within Salem is likely to have relatively little impact from fuel prices, unless prices increase dramatically.

Changes in Employment

The economy of the nation changed substantially between 1980 and 2014. These changes affected the composition of Oregon's economy, including Salem. At the national level, the most striking change was the shift from manufacturing employment to services. The most important shift in Oregon (including Salem) during this period has been the shift from a timber-based economy to a more diverse economy, with the greatest employment in services.

Employment Trends in Salem

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 led 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. An important 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[49] and concurrent growth of employment in high-technology manufacturing industries (Industrial Machinery, Electronic Equipment, and Instruments).[50]

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% of total employment in the 1970s to an average of 12% in 2000.

The long-term employment trends in the Salem MSA are similar to those observed for national and state employment. Table B-7 and Table B-8present data from the Oregon Employment Department that show changes in covered employment for the Salem MSA between 1980 and 2013. [51] The changes in sectors and industries are shown in two tables: (1) between 1980 and 2000 and (2) between 2001 and 2013. The analysis is divided in this way because of changes in

[49] Lumber and Wood Products manufacturing is in Standard Industrial Classification (SIC) 24

[50] SIC 35, 36, 38

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

industry and sector classification that made it difficult to compare information about employment collected after 2001 with information collected prior to 2000.

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

Table B-7 shows changes in covered employment by sector in the Salem MSA between 1980 and 2000. Covered employment in the Marion and Polk Counties grew from 88,113 to 143,540, an increase of 63% or 55,427 jobs. Every sector added jobs during this period, except for the 'nonclassifiable/all others' category. The private sectors with the greatest change in employment were Services, Retail Trade, and Agriculture, Forestry & Fishing, adding a total of 35,537 jobs or about 65% of all new jobs. Manufacturing grew by 3,483 jobs during the 20-year period.

Table B-7. Covered employment by Industry, Salem MSA, 1980-2000

				Change 1980 to 2000			
Sector	1980	1990	2000	Difference	Percent	AAGR	Share
Agriculture, Forestry & Fishing	**3,985**	**7,520**	**9,992**	**6,007**	**151%**	**4.7%**	**2%**
Mining	59	73	276	217	368%	8.0%	0%
Construction	4,247	4,714	7,469	3,222	76%	2.9%	0%
Manufacturing	14,315	16,000	17,798	3,483	24%	1.1%	-4%
Trans., Comm., & Utilities	2,718	2,896	4,448	1,730	64%	2.5%	0%
Wholesale Trade	3,189	4,086	4,403	1,214	38%	1.6%	-1%
Retail Trade	**15,993**	**19,730**	**24,906**	**8,913**	**56%**	**2.2%**	**-1%**
Finance, Insurance & Real Estate	4,693	5,029	5,882	1,189	25%	1.1%	-1%
Services	**12,949**	**21,681**	**33,566**	**20,617**	**159%**	**4.9%**	**9%**
Nonclassifiable/ all others	91	99	61	-30	-33%	-2.0%	0%
Government	**25,874**	**30,026**	**34,739**	**8,865**	**34%**	**1.5%**	**-5%**
Total	88,113	111,854	143,540	55,427	63%	2.5%	

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages, http://www.qualityinfo.org/olmisj/CEP. Summary by industry and percentages calculated by ECONorthwest

Table B-8 shows the change in covered employment by sector for the Salem MSA between 2001 and 2013. Employment increased by 9,478 jobs, or 7%, during this period. The private sectors with the largest increases in numbers of employees were Health and Social Assistance, Accommodations and Food Services, Natural Resources and Mining, and Retail. The Manufacturing sector, meanwhile, lost 3,330 jobs during this period.

Table B-8. Covered employment by Industry, Salem MSA, 2001-2013

			Change 2001 to 2013			
Sector	2001	2013	Difference	Percent	AAGR	Share
Natural Resources and Mining	**10,534**	**11,609**	**1,075**	**9%**	**0.8%**	**0%**
Construction	6,759	6,711	-48	-1%	-0.1%	0%
Manufacturing	**15,014**	**11,684**	**-3,330**	**-29%**	**-2.1%**	**-3%**
Wholesale	3,354	3,488	134	4%	0.3%	0%
Retail	**15,646**	**16,724**	**1,078**	**6%**	**0.6%**	**0%**
Transportation & Warehousing	3,172	3,774	602	16%	1.5%	0%
Information	1,929	1,025	-904	-88%	-5.1%	-1%
Finance & Insurance	3,579	4,161	582	14%	1.3%	0%
Real Estate Rental & Leasing	2,434	1,906	-528	-28%	-2.0%	0%
Professional, Scientific & Tech. Srv.	3,569	4,125	556	13%	1.2%	0%
Management of Companies	660	1,367	707	52%	6.3%	0%
Admin. Support & Cleaning Srv.	5,628	6,355	727	11%	1.0%	0%
Education	1,819	2,345	526	22%	2.1%	0%
Health & Social Assistance	**14,692**	**19,608**	**4,916**	**25%**	**2.4%**	**3%**
Arts, Entertainment & Recreation	1,473	1,465	-8	-1%	0.0%	0%
Accomodations & Food Services	**9,836**	**11,528**	**1,692**	**15%**	**1.3%**	**1%**
Other Services	5,289	5,741	452	8%	0.7%	0%
Private Non-Classified	39	40	1	3%	0.2%	0%
Government	**37,264**	**38,512**	**1,248**	**3%**	**0.3%**	**-1%**
Total	142,690	152,168	9,478	7%	0.5%	

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages, http://www.qualityinfo.org/olmisj/CEP. Summary by industry and percentages calculated by ECONorthwest

Employment in Salem

Table B-9 shows a summary of confidential employment data for the Salem portion of the Salem-Keizer UGB in 2012. Salem had 92,036 jobs at 6,496 establishments in 2010, with an average firm size of 14 employees. The sectors with the greatest employees were: Government (30%), Health Care and Social Assistance (15%), Retail (11%), Accommodation and Food Service (8%), and Manufacturing (6%). These sectors accounted for 64,485 or 70% of Salem's jobs.

Table B-9. Covered employment in the Salem portion of the Salem-Keizer UGB, 2012

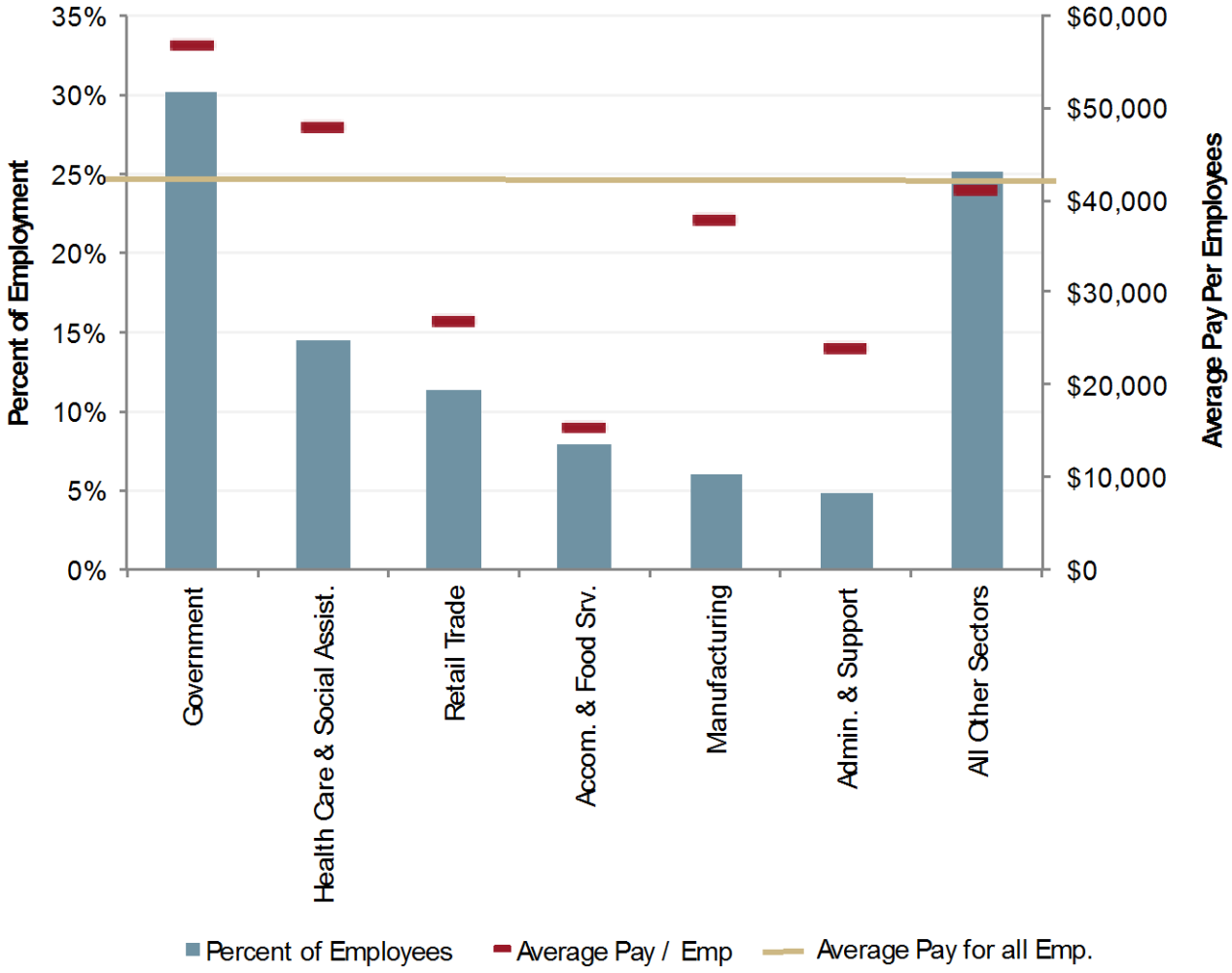
		Employees		Payroll	
Sector / Industry	Establish-ments	Number	% of Total Emp.	Total	Average Pay per Employee
Agriculture, Forestry, Fishing & Hunting	**64**	**1,292**	**1%**	**$28,363,721**	**$21,953**
Construction	**540**	**3,084**	**3%**	**$145,502,003**	**$47,180**
Manufacturing	**226**	**5,497**	**6%**	**$208,364,216**	**$37,905**
Food Manufacturing	36	2,474	3%	$79,217,646	$32,020
Computer and Electronic Product Manufacturing	12	609	1%	$32,008,475	$52,559
Fabricated Metal Product Manufacturing	29	474	1%	$21,778,735	$45,947
Printing and Related Support Activities	19	266	0%	$9,763,167	$36,704
Chemical Manufacturing	11	221	0%	$10,448,103	$47,276
Machinery Manufacturing	12	218	0%	$10,292,983	$47,216
Furniture and Related Product Manufacturing	19	209	0%	$7,030,256	$33,638
Other Manufacturing	88	1,026	1%	$37,824,851	$36,866
Wholesale Trade	**233**	**1,487**	**2%**	**$74,369,834**	**$50,013**
Retail Trade	**691**	**10,534**	**11%**	**$281,867,428**	**$26,758**
Transportation & Warehousing & Utilities	**122**	**1,615**	**2%**	**$67,341,743**	**$41,698**
Information	**63**	**722**	**1%**	**$34,531,767**	**$47,828**
Finance & Insurance	**351**	**3,385**	**4%**	**$170,976,847**	**$50,510**
Real Estate & Rental & Leasing	**319**	**1,194**	**1%**	**$40,749,388**	**$34,128**
Professional, Scientific, and Technical Services	**632**	**3,239**	**4%**	**$171,625,104**	**$52,987**
Management of Companies and Enterprises	**45**	**778**	**1%**	**$44,891,666**	**$57,701**
Admin. & Support & Waste Mgt. & Remediation Srv.	**283**	**4,410**	**5%**	**$105,815,314**	**$23,994**
Private Educational Services	**67**	**1,924**	**2%**	**$71,742,570**	**$37,288**
Health Care & Social Assistance	**761**	**13,380**	**15%**	**$641,612,688**	**$47,953**
Health Care	606	11,398	12%	$595,898,428	$52,281
Social Assistance	155	1,982	2%	$45,714,260	$23,065
Arts, Entertainment, & Recreation	**62**	**763**	**1%**	**$12,581,878**	**$16,490**
Accommodation & Food Services	**500**	**7,345**	**8%**	**$113,647,350**	**$15,473**
Food Services and Drinking Places	470	6,923	8%	$106,302,178	$15,355
Accommodation	30	422	0%	$7,345,172	$17,406
Other Services (except Public Administration)	**1,070**	**3,661**	**4%**	**$91,193,022**	**$24,909**
Government	**467**	**27,729**	**30%**	**$1,569,460,064**	**$56,600**
Federal Government	24	822	1%	$51,314,997	$62,427
State Government	249	17,193	19%	$1,066,858,833	$62,052
Local Government	194	9,714	11%	$451,286,234	$46,457
Total	6,496	92,039	100%	$3,874,636,603	$ 42,098

Source: Oregon Employment Department Quarterly Census of Employment and Wages (QCEW). Summary by industry and percentages calculated by ECONorthwest

Figure B-10 shows the percent of all employment and average pay per employee for sectors with 5% or more of employment in Salem in 2012. Figure B-10 shows average pay for all employees ($42,000) as a light brown line across the graph and average pay for individual sectors as short red lines. Figure B-10 shows:

- The sectors with more than 5% of employment and *above* average pay are: Government ($56,600 average pay per employee) and Health Care and Social Assistance ($48,000).
- The sectors with more than 5% of employment and below average pay are: Retail Trade ($26,800), Accommodations and Food Services ($15,500), Manufacturing ($37,900), and Administrative and Support and Waste Management ($24,000).

Figure B-10. Percent of employment and average pay per employee for selected sectors, Salem, 2012



Source: Oregon Employment Department Quarterly Census of Employment and Wages (QCEW)

Regional business clusters

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 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 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 March 2007 report "Marion, Polk, & Yamhill Counties Regional Economic Profile and Strategic Assessment" (E.D. Hovee and Company) provided an extensive analysis and discussion of business clusters with growth potential in the three-county region. The business clusters identified in this report were:

- **Agriculture, Food & Beverage Products.** This cluster includes two separate agriculture clusters: food process & agriculture and nursery products. Agricultural products are an important part of the economy in Marion and Polk counties, providing opportunities for production of export products, such as wine or organic foods. State initiatives, such as the Oregon Innovation Council, provide firms in these businesses with opportunities to collaborate with similar businesses.
- **Traded-Sector Services.** This cluster includes creative services and professional services. Examples of these services include: social, economic, or educational research; testing laboratories; specialized legal services; drafting services; and other professional, scientific, and technical services.
- **Metals, Machinery, and Equipment.** This cluster consists of firms producing primary and fabricated metals. Opportunities in this cluster include: producing fabricated metals for specialty markets, manufacturing machinery, and refining metals.
- **Forest Products.** Production of forest products, wood, and paper continue to a significant employment cluster in Oregon. Oregon is the dominant producer of softwood plywood, softwood veneer, engineered wood products, and lumber. Emerging forest products include generation of renewable electric energy and producing transportation bio-fuels from woody biomass.
- **Specialty Materials Manufacturing.** This potential cluster includes industrial activities such as materials, fabrics, aggregate materials, and petro-chemical products. The Marion, Polk, and Yamhill County region has a concentration in the production of construction materials, such as sand and gravel, asphalt, or plastic and concrete pipes. Other

opportunities in this cluster include production of non-durable consumer products, such as fertilizer, paint, synthetic dyes and pigments, or laminated plastics.

Outlook for Growth in Salem

Table B-10 shows the population forecast developed by the Office of Economic Analysis for Oregon and Marion and Polk Counties for 2015 through 2050. Polk County is forecast to grow at a faster rate than Marion County, and both counties are predicted to grow at a faster rate than the statewide average during this period. The forecast shows that Marion County's population will grow by about 167,000 people over the 35-year period (a 50% increase), while Polk County's population will grow by 55,673 people over the same period (representing a 69% increase). Over the same period, Oregon is forecast to grow by roughly 1.6 million people, a 40% increase.

Table B-10. State population forecast, Oregon, Marion and Polk Counties, 2015 to 2050

Year	Oregon	Marion County	Polk County
2015	4,001,600	331,643	80,204
2020	4,252,100	355,189	88,081
2025	4,516,200	381,089	96,731
2030	4,768,000	406,612	105,274
2035	4,995,200	430,652	113,348
2040	5,203,000	453,557	121,044
2045	5,398,800	476,060	128,496
2050	5,588,500	498,624	135,877
Change 2015 to 2050			
Amount	1,586,900	166,981	55,673
% Change	40%	50%	69%
AAGR	1.0%	1.2%	1.5%

Source: Office of Economic Analysis, http://www.oregon.gov/DAS/OEA/demographic.shtml

On October 7, 2009, Marion County adopted a new coordinated population forecast for the urban areas of the county. That forecast includes an adopted projection of population growth in the Salem-Keizer UGB for 2010 to 2030, but does not allocate population within the UGB to the cities of Salem and Keizer.

Keizer adopted a population forecast for 2010 and 2032 on May 7, 2012.[52] **Error! Reference source not found.** shows that Keizer's adopted population forecast shows Keizer (including the Keizer portion of the Salem-Keizer UGB) growing to 48,089 people by 2032. Between 2010 and 2032, Keizer's forecast shows the city growing at an average annual growth rate of 1.26%.

[52] Keizer ordinance number 2012-656.

Salem's housing needs analysis requires a forecast for the 2015 to 2035 period and are documented in this because the employment forecast (in Appendix C) assumes that employment will grow at the same rate as population. The steps to develop the forecast of population were:

1. Extrapolate the population growth of the Salem portion of the UGB from 2010 to 2015 at the adopted growth rate for the full UGB, 1.25% average annual growth. The result shows that the Salem portion of the UGB will have 210,035 people by 2015.
2. Extrapolate the Salem-Keizer UGB forecast from 2030 to 2035 based on the adopted average annual growth rate for the 2010 to 2030 period of 1.25%. The result shows that the Salem-Keizer UGB will have 319,203 people by 2035.
3. Extrapolate the population for the Keizer portion of the UGB from 2032 to 2035 using Keizer's adopted average annual growth rate of 1.26%. The result shows that the Keizer portion of the UGB will have 49,930 people by 2035.
4. Extrapolate the population for the Salem portion of the UGB from 2015 to 2035 the adopted growth rate for the full UGB, 1.25% average annual growth. The result shows that the Salem portion of the UGB will have 269,274 people by 2035.

   When added together, the Salem and Keizer populations in 2035 equal the Salem-Keizer UGB population of 319,203 people in 2035.

Table B-11. Population forecast, Salem-Keizer UGB, 2010 to 2035

Year	Keizer	Salem	Salem-Keizer UGB
2010	36,478	197,386	233,864
2015		210,035	
2030	46,900	253,080	299,980
2032	48,089	-	
2035	49,930	269,274	319,203
Average Annual Growth Rates			
2010-2030	1.26%	1.25%	1.25%
2015-2035			
AAGR		1.25%	0.00%
People		59,239	-

Source: 2010 population is based on: "Population forecasts for Marion County, its Cities and Unincorporated Areas 2010-2030" Prepared by the Population Research Center, College of Urban and Prepared by the Population Research Center, College of Urban and Affairs, Portland State University.
2030 population for the Salem-Keizer UGB is based on the report: "Population forecasts for Marion County, its Cities and Unincorporated Areas 2010-2030"
2030 population for the cities of Keizer and Salem is based on Marion County work on allocating the UGB population to Salem and Keizer, shown in Exhibit B, Table 24 of Marion County's "Background Information for the 2030 Population Forecast." See the webpage: http://www.co.marion.or.us/NR/rdonlyres/4A4325AB-F86C-4910-A891-D1FC6CF33FEF/23513/exhibitbbackgroundinventoryskugb.pdf
The 2032 population forecast for Keizer is based on Keizer's adopted population forecast, documented in Ordinance number 2012-656, adopted by Keizer on May 7, 2012

Table B-12 shows the Oregon Employment Department's forecast for employment growth by industry for Region 3 (Marion, Polk, and Yamhill County) over the 2012 to 2022 period. The sectors that will lead employment growth in the region for the 10-year period are Educational and health services (adding 5,800 jobs), Trade, Transportation and Utilities (adding 2,900 jobs), Professional and Business Services (adding 2,900 jobs) and Local Government (adding 2,400 jobs). Together, these sectors are expected to add 14,000 new jobs or 42% of employment growth in the Region.

Table B-12. Regional Employment Projections by Industry & Occupation 2012-2022

			Change 2012-2022		
Industry Sector	2012	2022	Number	Percent	AAGR
Natural resources and mining	14,700	16,800	2,100	14%	1.3%
Mining and logging	1,300	1,500	200	15%	1.4%
Construction	7,300	9,500	2,200	30%	2.7%
Manufacturing	17,500	19,800	2,300	13%	1.2%
Durable goods	8,600	9,800	1,200	14%	1.3%
Wood product manufacturing	1,700	2,000	300	18%	1.6%
Nondurable goods	8,900	10,000	1,100	12%	1.2%
Food manufacturing	5,300	5,800	500	9%	0.9%
Trade, transportation, and utilities	27,800	30,700	2,900	10%	1.0%
Wholesale trade	4,000	4,400	400	10%	1.0%
Retail trade	19,500	21,500	2,000	10%	1.0%
Transportation, warehousing, and utilities	4,300	4,800	500	12%	1.1%
Information	1,200	1,200	0	0%	0.0%
Financial activities	8,100	9,200	1,100	14%	1.3%
Professional and business services	13,000	15,900	2,900	22%	2.0%
Administrative and support services	6,300	8,000	1,700	27%	2.4%
Educational and health services	28,400	34,200	5,800	20%	1.9%
Health care and social assistance	23,000	28,100	5,100	22%	2.0%
Health care	19,700	24,200	4,500	23%	2.1%
Leisure and hospitality	15,300	17,400	2,100	14%	1.3%
Accommodation and food services	13,600	15,500	1,900	14%	1.3%
Accommodation	1,700	1,200	-500	-29%	-3.4%
Other services	6,100	6,700	600	10%	0.9%
Federal government	1,900	1,800	-100	-5%	-0.5%
State government	20,800	22,000	1,200	6%	0.6%
Local government	21,100	23,500	2,400	11%	1.1%
Total payroll employment	183,200	216,400	33,200	18%	1.7%

Source: Oregon Employment Department. Employment Projections by Industry 2012-2022. http://www.qualityinfo.org/pubs/projections/r5.pdf. Projections summarized by ECONorthwest.

FACTORS AFFECTING FUTURE ECONOMIC GROWTH IN SALEM

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 at a lower cost, 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.[53] An analysis of competitive advantage depends on the geographic areas being compared. In general, economic conditions in Salem will be largely shaped by national and Pacific Northwest regional economic conditions affecting Oregon and the Willamette Valley.

The previous section presents trends and forecasts of conditions in Oregon and Salem to help establish the context for economic development in Salem. Local economic factors will help determine the amount and type of development in Salem relative to other communities in the Willamette Valley and Oregon. This section focuses on the competitive advantages of Salem for attracting businesses relative to the Willamette Valley and Oregon.

Location

Salem is the third largest city in Oregon with a population of approximately 157,770 people in 2013. Interstate 5 runs through the eastern portions of Salem. Highway 99E breaks off of I-5 in northeastern Salem and parallels I-5 north through Canby. Highway 22 runs east-west through Salem, and Highway 213 runs northeast out of Salem. The majority of the city is located east of the Willamette River, though a portion of Salem is located west of the river. Salem's location will impact the area's future economic development:

- As Oregon's state capital, Salem is home to many departmental offices that attract employees and visitors from across the region and the subsequent economic activity they create.

[53] 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."

- Salem has easy access to the State's highway system and other transportation opportunities. In addition to the multiple freeways running by and through the city, residents and businesses can access other modes of transportation in Salem, including Cherriots (Salem-Keizer Transit) Greyhound bus service, and Amtrak passenger rail service. Salem's airport, McNary Field does not provide commercial passenger service, but the City is making improvements to the airport to attract commercial air service. Salem is less than 60 miles from Portland International Airport.
- Salem is located at the central portion of the Willamette Valley, about an hour from Portland. It is the largest metropolitan area on I-5 between Portland and Sacramento.
- Residents of Salem have easy access to shopping, cultural activities, indoor and outdoor recreational activities, and other amenities in Salem and rural Marion and Polk counties. The easy access contributes to the area's overall quality of life.
- Residents of Salem have several nearby opportunities for post-secondary education: Willamette University, Western Oregon University, Corban University, and Chemeketa Community College, among others.
- Businesses in Salem have access to natural resources, such as wood products or agricultural products, from resource lands in western Oregon.
- Salem's location, access to I-5, urban amenities, the presence of the State Capital, and access to natural resources are primary comparative advantages for economic development in the city.

Availability of Transportation Facilities

Businesses and residents in Salem have access to a variety of modes of transportation: automotive (Interstate 5, multiple State highways and local roads); rail (Union Pacific and Amtrak); and transit (Salem Area Transit District).

All firms are heavily dependent upon surface transportation for efficient movement of goods, customers, and workers. Access to an adequate highway and arterial roadway network is needed for all industries. Close proximity to a highway or arterial roadway is critical for firms that generate a large volume of truck or auto trips as well as firms that rely on visibility from passing traffic to help generate business. This need for proximity explains much of the highway strip development prevalent in urban areas today.

Oregon's primary transportation corridor is Interstate 5, and proximity to it is an important comparative advantage for the city. Salem has excellent automotive access for commuting and freight movement. Salem is located along Interstate 5, the primary north-south transportation corridor on the West Coast, linking Salem to domestic markets in the United States and international markets via West Coast ports.

In addition to access to I-5, Salem is situated along Highway 22, connecting Salem with the Oregon Coast and Central Oregon cities of Bend and Redmond.

Other transportation systems in Salem are:

Rail. Rail access can be very important to certain types of heavy industries. Union Pacific rail lines serve Salem, providing freight service. Amtrak passenger service is also available, connecting Salem to cities all across the west coast. The train station is located immediately southeast of downtown Salem near Willamette University. Union Pacific Railroad provides freight service to metropolitan area businesses.

Transit. The Salem Area Transit District (Cherriots) provides transit services within the urban growth boundary of Salem and Keizer. Cherriots serves Salem with multiple weekday-operating bus lines, both within Salem and connecting Salem to Keizer and other outlying communities such as Wilsonville and Grand Ronde. In addition, there is a private bus service to Tualatin, as well as Valley Van Pool services run by the State with service to and from Portland and Corvallis

Air. Proximity to air transportation is important for some firms engaged in manufacturing, finance, or business services. McNary Field in Salem provides freight service for metropolitan area residents and businesses. The airport is served by four cargo airlines, Ameriflight, Empire Airlines, FedEx, and UPS. In

addition, the Portland International Airport is about one hour's drive from Salem, providing wider access to passenger and freight air service.

Transportation access is a comparative advantage that primarily affects the overall type of employment and its growth in Salem.

Public Facilities and Services

Provision of public facilities and services can impact a firm's decision regarding location within a region, but ECO's past research has shown that businesses make locational decisions primarily based on factors that are similar within a region. These factors are: the availability and cost of labor, transportation, raw materials, and capital. The availability and cost of these production factors are usually similar within a region.

Once a business has chosen to locate within a region, they consider the factors that local governments can most directly affect: tax rates, the cost and quality of public services, and regulatory policies. Economists generally agree that these factors do affect economic development, but the effects on economic development are modest. Thus, most of the strategies available to local governments have only a modest affect on the level and type of economic development in the community.

Water

The City of Salem's source of potable water is the North Santiam River. The current transmission capacity of the water system is 66 million gallons per day, with a water treatment plant capacity of 84 million gallons per day. The average water demand is 27 million gallons per day, with a summer peak demand for about 47 million gallons per day. The City expects to have sufficient water to service a population of about 230,000.

In the summer of 2014, the City completed development of the Mill Creek Reservoir, a $5.74 million investment. The reservoir will serve land in and around the Mill Creek Corporate Center, servicing a portion of southeastern Salem (southwest of Deer Park Drive SE, behind Corban University). In addition to providing water service to the Mill Creek Corporate Center, the new reservoir will eventually serve industrial land in southeastern Salem, which is currently outside of the City's urban services area.

The reservoir has a 2.2 million gallon capacity and will be connected with the Mill Creek S-1 pressure zone, in part, to create redundancies in the water system. This reservoir provides water service that is essential to making larger portions of the Mill Creek Corporate Center development ready.

Wastewater

The City of Salem provides wastewater service for Salem, Keizer, and Turner. Salem has two wastewater treatment plants: Willow Lake and River Road. The the existing wastewater treatment plants treats an average of about 34.6 million gallons of waste per day. The amount of waste treated daily varies substantially, with infiltration in the rainy season increasing effluent substantially. The existing treatment plants have a capacity to treat about 205 million gallons per day. The Salem Wastewater Management Master Plan was last amended in 2005 and identifies about $571 million of maintenance and upgrade projects that will be necessary to service a population of about 270,000.

Land Supply

Salem has about 1,945 acres of vacant and partially vacant commercial and industrial land. Nearly 1,400 acres of Salem's vacant land is designated for industrial uses, and 298 acres is designated for commercial uses. More than 700 acres of Salem's industrial land is in plan designations that allow some types of office employment, such as the Employment Center or Industrial Commercial designations.

About 488 acres of Salem's vacant land is at Mill Creek, where 136 acres of land is certified by the State as development ready. In addition, the Salem Renewable Energy and Technology Center has 40 acres of land certified development ready.

Businesses locating or growing in Salem require land with a wide range of site characteristics. OAR 660-009 describes site characteristics as including (but not limited to): "a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes." Each business has preferences for site characteristics that are unique to the business.

Businesses' locational decisions are an indicator of whether Salem's land base meets the needs of businesses that want to expand or locate within the Willamette Valley in general and in Salem in particular. Many businesses have grown, expanded, and located in Salem over the past decade.

Salem's supply of employment land, especially industrially-designated employment land, make the city an attractive location for businesses considering expanding or locating in the Salem region. Salem's supply of industrial land, including relatively large parcels of development-ready industrial land, is unique within the Willamette Valley. Other cities in Western Oregon, from Portland to Eugene, lack such a large supply of industrial land, either with or without services.

Appendix C. Salem Employment Forecast

This appendix presents the methodology and forecast of demand for retail land and commercial and industrial land.

RETAIL LAND DEMAND

Locally derived demand for retail commercial land is driven by local and regional population growth and consumer spending. From an analytical standpoint, land demand is derived from demand for built space. In short, land demand is not directly a function of growth in population and consumer spending; land demand is a byproduct of demand for built space.

This section presents an analysis of demand for retail land, based on growth in consumer spending (which is, in part influenced by the growth of households and population) in Salem and the surrounding region.[54] The analysis assumes that as the number of households in the region grows, new consumer spending increases the demand for retail commercial land. The steps to forecasting this demand are:

1. **Household growth.** Local and regional household growth will drive retail demand. This section estimates household growth for Salem and for the broader region (Marion, Polk, and Yamhill Counties) from which households are likely to shop in Salem.

2. **Household expenditures.** A key assumption necessary to estimate demand for retail land to serve new households is estimating the current and future total retail spending of households. This section estimates retail spending for households who shop in Salem.

3. **Demand for retail space.** Retail space demand can be estimated based on a ratio of retail sales per square foot of retail space. This section estimates the square feet of retail built space that will be required to serve projected consumer expenditures.

4. **Retail land demand.** Converting the number of square feet of retail space to land demand (in acres) requires making assumptions about land needed for the retail building and supporting infrastructure, primarily for

[54] We include the surrounding region because Salem is the regional service center for Marion, Polk, and Yamhill Counties.

parking. This section estimates the amount of land that will be required to accommodate expected retail growth.

The remainder of this section follows this outline to estimate demand for retail space within Salem.

Household growth

Growth in population and households will drive retail growth. Growth forecasts generally forecast population growth, which can be easily converted into household growth through an assumption about average household size.

- **Salem.** The Salem Housing Needs Analysis shows growth of 23,355 new households between 2015 and 2035.[55]
- **Marion, Polk, and Yamhill Counties**. Salem is a regional retail center and attracts retail customers from outside of the city. The Oregon Office of Economic Analysis forecasts that these three counties will grow by a combined 170,746 people over the 2015 to 2035 period.[56][57] This new population will result in approximately 63,710 new households.[58]

Household expenditures

Claritas—a private database vendor— provides household expenditures by category for the Salem Oregon Metropolitan Statistical Area (MSA), which includes all of Marion and Polk counties. Households in the Salem MSA spent an average of $49,183 per household in 2014, exclusive of housing. Based on the categorization of expenditures, ECONorthwest estimated that about $38,221 of this total was spent on the retail goods shown in Table C-1. Table C-1 shows average household expenditures for retail goods in the Salem MSA in 2014 on a per-household basis.

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[55] This forecast is based on Marion County's adopted population forecast, which is documented in: "Population forecasts for Marion County, its Cities and Unincorporated Areas 2010-2030" Prepared by the Population Research Center, College of Urban and prepared by the Population Research Center, College of Urban and Affairs, Portland State University. It uses the 2010 Decennial Census' average household size of 2.55 persons per household in Salem.

[56] The Office of Economic Analysis' 2013 *Long-term Oregon State's County Population Forecast, 2010-2050* forecasts population growth by county and is available from: http://www.oregon.gov/DAS/OEA/docs/demographic/County_forecast_March_2013.xls

[57] Between 2015 and 2035, the Office of Economic Analysis' forecast shows Marion County growing by 99,010 people, Polk County growing by 33,144 people, and Yamhill County growing by 38,592 people.

[58] This estimate is based on the 2010 Decennial Census' average household size of 2.7 persons per household in Marion County, 2.6 persons per household in Polk County, and 2.7 persons per household in Yamhill County.

Table C-1. Average household expenditures for retail goods and services, Salem MSA, 2014

	2014 Expenditures per Household
Food	$6,240
Food service	$2,934
Clothing and accessories	$3,235
Shoes	$567
Home furnishings	$1,319
Home appliances/music	$2,138
Building Materials/Garden	$1,225
Automotive	$10,641
Hobby/special interest	$1,797
Gifts/Specialty	$535
Liquor	$1,015
Drugs	$2,571
Other Retail	$2,065
Personal Service	$1,938
Total Expenditures	**$38,221**

Source: Claritas

A key assumption in this analysis is estimating the current and future total retail spending. Estimating total retail spending for households within Salem and the three-county region is relatively simple. It is just a matter of multiplying the number of households in 2014 by the average household expenditure by category (shown in Table C-2).

Table C-2 shows total retail spending in 2015 and 2035 for all households in Salem and a portion of households in the larger three-county region. Table C-2 shows spending in 2014 dollars and does not assume that the share of spending by category will change over the 20-year period. Salem, however, also serves as a retail center for residents in the surrounding region.

ECONorthwest assumed the following capture rates for retail housing spending:

- **Households within Salem: 60%.** This capture rate is based on the assumption that the majority of retail spending for households within Salem will occur in Salem. Some spending, however, will occur outside

the metropolitan area, such as in Portland or purchases from catalogues or on-line merchants.[59]

- **Households in Marion, Polk, and Yamhill Counties but outside of the metropolitan area: 25%.** This estimate assumes that households in the three-county region (excluding households in Salem) travel into Salem to shop for items available in Salem but not in other parts of the three-county region.

Table C-2. Total household expenditures for retail goods and services, households in Salem and a portion of households in Marion, Polk, and Yamhill Counties, 2015 and 2035

	Total Retail Spending (2014 Dollars)		Change in Retail Spending 2015-2035 (2014 Dollars)	
	2015	2035	Amount	Percent
Food	$433,304,290	$583,712,012	$150,407,722	35%
Food service	$203,728,754	$274,446,674	$70,717,919	35%
Clothing and accessories	$224,600,538	$302,563,430	$77,962,891	35%
Shoes	$39,385,501	$53,056,917	$13,671,417	35%
Home furnishings	$91,553,841	$123,333,828	$31,779,987	35%
Home appliances/music	$148,454,026	$199,985,092	$51,531,066	35%
Building Materials/Garden	$85,050,971	$114,573,695	$29,522,724	35%
Automotive	$738,883,953	$995,363,879	$256,479,926	35%
Hobby/special interest	$124,774,202	$168,085,574	$43,311,372	35%
Gifts/Specialty	$37,164,383	$50,064,810	$12,900,427	35%
Liquor	$70,478,048	$94,942,247	$24,464,199	35%
Drugs	$178,515,975	$240,482,084	$61,966,109	35%
Other Retail	$143,405,207	$193,183,737	$49,778,530	35%
Personal Service	$134,550,445	$181,255,328	$46,704,883	35%
Total Expenditures	**$2,653,850,136**	**$3,575,049,307**	**$921,199,171**	**35%**

Source: Claritas

[59] The assumptions about capture rate in Salem account for the growing popularity of retail spending on the Internet. According to a Census Bureau report (Quarterly Retail E-Commerce Sales, 2nd Quarter 2014), the share of retail spending via e-commerce increased from about 4% in 2010 to 6.4% in the second quarter of 2014. This increase mirror's long-term increases in spending via ecommerce since the early 2000's. It is reasonable to assume that the share of retail expenditures from e-commerce will continue to increase over the 20-year planning period.

Demand for retail space

ECONorthwest used a ratio of retail sales per square foot of retail space to determine the amount of retail space needed to serve projected consumer expenditures. This ratio shows how many dollars of spending are required to support one square foot of retail. For example, a retail shoe store requires nearly $200 in sales per square foot. If a set of households spends $2 million per year on shoes, that spending directly supports 10,000 SF of retail space ($2 million divided by $200) assuming zero retail vacancy.[60]

A normal retail vacancy rate in West Coast suburban markets is typically between 5% and 20%.[61] It is unrealistic to assume retail demand space will perfectly match the correct level supported by spending, as supply of retail space typically outweighs the demand of that space. This analysis assumed that vacancy was about 6.5%, based on the five-year average vacancy in Salem according to Co-Star. In other words, some vacant retail areas will be filled before new retail space is built.

Table C-3 shows spending-supported retail demand. ECO projects retail space demand to grow from about 9.3 million square feet to 12.5 million square feet between 2015 and 2035, an increase of about three million square feet.

Table C-3. Spending-supported retail demand, Salem, 2015-2035

Retail Category	Retail Spending (millions)		Sales per SF	Spending-Supported Retail Demand (SF)	
	2015	2035		2015	2035
Food	$433.3	$583.7	$412.21	982,847	1,324,011
Food service	$203.7	$274.4	$314.12	606,413	816,910
Clothing and accessories	$224.6	$302.6	$232.68	902,534	1,215,819
Shoes	$39.4	$53.1	$192.73	191,073	257,397
Home furnishings	$91.6	$123.3	$209.28	409,035	551,018
Home appliances/music	$148.5	$200.0	$302.20	459,313	618,749
Building Materials/Garden	$85.1	$114.6	$388.65	204,613	275,637
Automotive	$738.9	$995.4	$232.92	2,966,068	3,995,643
Hobby/special interest	$124.8	$168.1	$219.85	530,652	714,851
Gifts/Specialty	$37.2	$50.1	$170.42	203,900	274,678
Liquor	$70.5	$94.9	$396.27	166,293	224,016
Drugs	$178.5	$240.5	$429.07	389,010	524,042
Other Retail	$143.4	$193.2	$247.53	541,687	729,717
Personal Service	$134.6	$181.3	$176.87	711,283	958,182
Total	**$2,653.9**	**$3,575.0**		**9,264,721**	**12,480,673**

Source: Urban Land Institute, *Dollars and Cents of Shopping Centers: 2008*. Page 19.
Calculations by ECONorthwest
Note: Shaded cells are based on assumptions from *Dollars and Cents of Shopping Centers 2008.*
Note: SF is square feet.

[60] Urban Land Institute, *Dollars and Cents of Shopping Centers: 2008*. Page 17.

[61] Based on research from CB Richard Ellis about suburban markets in the Puget Sound in Washington and Central Valley in California.

Retail land demand

Converting the number of square feet of retail space to land demand (in acres) requires making assumptions about land needed for the retail building and supporting infrastructure, primarily for parking. In general, the square feet required for retail development encompass 25% to 40% of the total land need to support the development, or a floor area ratio (FAR) of 0.25 to 0.40. For example, a FAR of 0.3 means that for every acre of usable space, 0.3 acres are allowed for built retail space. The remaining 0.7 acres are required for uses necessary for the retail firm to function, generally parking—but also landscaping, open space, and other uses.

Empirical analysis of existing retail development in Salem shows a broad range in FAR, from a low of 0.02 to 1.0, with an average FAR of 0.2. ECO assumed a FAR of 0.30, based on the assumption that retail development will become denser over the 20-year planning period. This assumption is within the industry standard of 0.25 to 0.40 FAR for an area like Salem.

Table C-4 shows retail space demand (in square feet) and the land need (in net acres) to accommodate that demand. Consumer spending will support an increase of four million square feet of retail space. At an FAR of 0.3, this translates into new land demand of 246 net acres between 2015 and 2035. **Based on a 10% net-to-gross ratio, this translates into new land demand of 273 gross acres.**[62]

[62] As land gets divided and developed, some of the land goes for right-of-way and other public uses. One way to estimate the amount of land needed for employment including public right-of-way is to convert from *net* to *gross* acres based on assumptions about the amount of land needed for right-of-way.

OAR 660-024-0010(6) uses the following definition of net buildable acre. "Net Buildable Acre" consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads. While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

The amount of land used for rights-of-way varies based on use. This analysis uses a net-to-gross factor of 10% for retail use, which assumes that some rights-of-way area in place in areas where retail development will occur on general employment land. This net-to-gross ratio is lower than the 15% to 20% ratio we have seen in other Oregon cities because some vacant retail land is located in developed areas, which already have rights-of-way.

Table C-4. Retail space demand and retail land need, Salem, 2015-2035

Retail Category	Spending-Supported Retail Demand (SF) 2015	2035	Retail FAR	Commercial Retail Land Need (Net Acres) 2015	2035
Food	982,847	1,324,011	0.3	75	101
Food service	606,413	816,910	0.3	46	63
Clothing and accessories	902,534	1,215,819	0.3	69	93
Shoes	191,073	257,397	0.3	15	20
Home furnishings	409,035	551,018	0.3	31	42
Home appliances/music	459,313	618,749	0.3	35	47
Building Materials/Garden	204,613	275,637	0.3	16	21
Automotive	2,966,068	3,995,643	0.3	227	306
Hobby/special interest	530,652	714,851	0.3	41	55
Gifts/Specialty	203,900	274,678	0.3	16	21
Liquor	166,293	224,016	0.3	13	17
Drugs	389,010	524,042	0.3	30	40
Other Retail	541,687	729,717	0.3	41	56
Personal Service	711,283	958,182	0.3	54	73
Total	**9,264,721**	**12,480,673**		**709**	**955**
Increase 2012 and 2032	**3,215,952**			**246**	

Source: ECONorthwest
Note: Shaded cells are show assumptions about retail density.
Note: SF is square feet.

EMPLOYMENT FORECAST FOR INDUSTRIAL AND COMMERCIAL LAND

Demand for industrial and non-retail commercial land will be driven by the expansion and relocation of existing businesses and new businesses locating in Salem. This employment land demand is driven by local growth independent of broader economic opportunities, including growth of target industries.

The employment projections in this section build off of Salem's existing employment base, assuming future growth similar to the Marion and Polk counties' past employment growth rates. The employment forecast does not take into account a major change in employment that could result from the location (or relocation) of one or more large employers in the community during the planning period. Such a major change in the community's employment would essentially be over and above the growth anticipated by the City's employment forecast and the implied land needs (for employment, but also for housing, parks, and other uses). Major economic events, such as the successful recruitment of a very large employer, are very difficult to include in a study of this nature. The implications, however, are relatively predictable: more demand for land (of all types) and public services.

Projecting demand for industrial and non-retail commercial land has four major steps:

1. **Establish base employment for the projection.** We start with the estimate of covered employment in Salem's portion of the Salem-Keizer UGB presented in Table 10. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in Salem.

2. **Project total employment.** The projection of total employment considers forecasts and factors that may affect employment growth in Salem over the 20-year planning period.

3. **Allocate employment.** This step involves allocating employment to different land-use types.

4. **Estimate land demand.** This step estimates general employment land demand based on employment growth and assumptions about future employment densities.

The remainder of this section follows this outline to estimate demand for Salem.

Employment base for projection

The purpose of the employment projection presented in this appendix is to model future employment land need for general employment growth. The forecast of employment growth in Salem starts with a base of employment growth on which to build the forecast. Table C-5 shows ECO's estimate of total employment in the Salem UGB in 2012. To develop the figures, ECO started with estimated covered employment in the Salem UGB from confidential QCEW (Quarterly Census of Employment and Wages) data provided by the Oregon Employment Department. Based on this information, Salem had about 92,039 covered employees in 2012.

Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Analysis of data shows that *covered* employment reported by the Oregon Employment Department for the Salem MSA is only about 77% of *total* employment reported by the U.S. Department of Commerce. We made this comparison by sector for the Salem MSA and used the resulting ratios to determine the number of non-covered employees. This allowed us to determined the total employment in Salem. Table C-5 shows Salem had an estimated 119,865 *total* employees within its UGB in 2012.

Table C-5. Estimated total employment in the Salem portion of the Salem-Keizer UGB by sector, 2012

Sector	Covered Employment	Estimated Total Employment	
		Total Employment	Covered % of Total
Agriculture, Forestry, Fishing & Hunting	1,292	1,688	77%
Construction	3,084	4,519	68%
Manufacturing	5,497	5,659	97%
Wholesale Trade	1,487	1,942	77%
Retail Trade	10,534	13,370	79%
Transportation & Warehousing & Utilities	1,615	2,109	77%
Information	722	1,122	64%
Finance & Insurance	3,385	6,086	56%
Real Estate & Rental & Leasing	1,194	4,845	25%
Professional, Scientific, and Technical Services	3,239	5,687	57%
Management of Companies and Enterprises	778	1,016	77%
Admin. & Support & Waste Mgt. & Remediation Srv.	4,410	6,446	68%
Private Educational Services	1,924	3,829	50%
Health Care & Social Assistance	13,380	17,045	78%
Arts, Entertainment, & Recreation	763	1,817	42%
Accommodation & Food Services	7,345	8,047	91%
Other Services (except Public Administration)	3,661	6,365	58%
Government	27,729	28,273	98%
Total	**92,039**	**119,865**	**77%**

Source: 2012 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department.
Note: Covered employment as a percent of total employment calculated by ECONorthwest using data for the Salem MSA employment from the U.S. Department of Commerce, Bureau of Economic Analysis (total), and the Oregon Employment Department (covered).

Employment projection

The employment forecast covers the 2015 to 2035 period, requiring an estimate of total employment for Salem in 2015.

Salem does not have an existing employment forecast, and there is no required method for employment forecasting. OAR 660-024-0040(9) sets out some optional "safe harbors" that allow a city to determine employment land need.

Salem is relying on the safe harbor at OAR 660-024-0040(9)(a)(B), which allows Salem to assume that the current number of jobs in the Salem urban area will grow during the 20-year planning period at a rate equal to "the population growth rate for the urban area in the adopted 20-year coordinated population forecast."

On October 7, 2009, Marion County adopted a new coordinated population forecast for the urban areas of the county, which included a forecast for the Salem-Keizer UGB.[63] The adopted population forecast growth rate for the Salem-Keizer UGB is 1.25% average annual growth through 2030. The Housing Needs Analysis report shows that Salem is assuming a 1.25% average annual growth rate for the Salem portion of the UGB for the 2015 to 2035 period, based on the adopted coordinated forecast.

Table C-6 shows employment growth in Salem between 2015 and 2035, based on the assumption that Salem will grow at an average annual growth rate of 1.25%.[64] Salem will have 120,119 employees within the UGB by 2035, an increase of 26,425 employees (28%) between 2015 and 2035.

[63] The population forecast is described in the Portland State University's Population Research Center report "Population forecasts for Marion County, its Cities and Unincorporated Areas 2010-2030."

[64] The forecast in Table C-6 excludes employment Retail, Arts and Entertainment, Accommodations and Food Services, and Other Services. This employment is forecast in Table C-4. The forecast assumes that Salem's employment base in 2012 will grow at the same rate between 2012 and 2015 as the employment forecast for 2015 to 2035, 1.25% average annual growth rate.

Table C-6. Employment growth in Salem's portion of the Salem-Keizer UGB, 2015–2035

Year	Total Employment
2015	93,694
2035	120,119
Change 2015 to 2035	
Employees	26,425
Percent	28%
AAGR	1.2%

Source: ECONorthwest

Allocate employment to different land use types

The next step in forecasting employment is to allocate future employment to broad categories of land use. Firms wanting to expand or locate in Salem will look for a variety of site characteristics, depending on the industry and specific circumstances. We grouped employment into four broad categories of land-use based on North American Industrial Classification System (NAICS): industrial, commercial, retail, and government.

Table C-7 shows the expected share of employment by land use type in 2015 and the forecast of employment growth by land use type in 3035 in Salem's portion of the Salem-Keizer UGB.

The forecast shows growth in all categories of employment, with the most growth in industrial employment. This assumption is based on the City's economic development policies that support the growth of traded-sector businesses. The City's economic development policies target growth of industrial traded-sector businesses such as technology manufacturing, food and beverage manufacturing, equipment manufacturing, as well as other types of manufacturing. The resulting increase in share of industrial employment reflects the expectation that the City's policy direction will lead to growth in the city's share of industrial jobs. This type of employment growth is consistent with the City's broad economic development goal of increasing household prosperity because industrial jobs typically have higher-than-average wages.

Table C-7. Forecast of employment growth by land use type, Salem's portion of the Salem-Keizer UGB, 2015–2035

	2015		2035		Change 2015 to 2035
Land Use Type	Employment	% of Total	Employment	% of Total	
Industrial	16,521	18%	24,024	20%	7,503
Office and Commercial Services	47,826	51%	60,060	50%	12,234
Government	29,347	31%	36,036	30%	6,689
Total	**93,694**		**120,119**		**26,425**

Source: ECONorthwest

Note: Green shading denotes an assumption about the future change in the share of employment (as a percent of total) by land use type.

Need for government land in Salem is driven, primarily, by growth in local government employment and by state government employment. Discussions with the administrative staff at the Salem-Keizer Public Schools indicate that the District is in the process of updating their Facilities Plan. According to the exiting facilities plan, the District has no immediate plans to build new schools in Salem over the 20-year period. In addition, the City has no plans for substantial expansion of City offices onto land not currently owned by the City, nor does Marion County. Discussions with staff at the Department of Administrative Services with the State of Oregon suggest that the State expects to build new office space over the 20-year period. However, State development on land that is currently privately owned in commercial or industrial designations will be approximately off-set by sales of currently-State owned land.

Estimate of commercial and industrial land demand

The next step in estimating general employment land demand for the 20-year period is to estimate the employment land need based on employment density. Table C-8 shows a preliminary estimate of employment land need by land use type based on assumed employment densities.

Table C-8 shows that Salem will need about 715 net acres and about 841 gross acres of land for employment uses between 2015 and 2035.

Table C-8. Estimate of general employment land demand, Salem, 2015–2035

Land Use Type	New Emp. on Vacant Land	EPA (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	7,503	20	375	441
Office and Commercial Services	12,234	36	340	400
Total	**19,737**		**715**	**841**

Source: ECONorthwest
Note: Gross acres calculated using a net-to-gross factor of 15% for general industrial and 20% for general office. For example, general industrial gross acres was calculated using the following formula: 216/(1-.15) = 254.
Note: EPA is employees per acre

Table C-8 uses the following assumptions to convert employment into land need:

- **Employment densities are based on reasonable rules of thumb.** Employees per acre (EPA) is a measure of employment density, based on the ratio of the number of employees per acre of employment land that is developed for employment uses. Table C-8 assumes that industrial density will be 20 EPA, which is higher than the density on the region's

industrial land, which averages between 12 and 15 EPA.[65] Table C-8 assumes that future industrial development will be somewhat denser than existing development.[66] Table C-8 uses an office density based on the average commercial development density in Salem.[67]

- **Employment sites will require additional land for right-of-way and other public uses.** The EPA assumptions are employees per *net* acre (e.g., acres that are in tax lots). As land is divided and developed, some of the land goes for right-of-way and other public uses. One way to estimate the amount of land needed for employment including public right-of-way is to convert from *net* to *gross* acres based on assumptions about the amount of land needed for right-of-way.[68] A net to gross conversion is expressed as a percentage of gross acres that are in public right-of-way.

  The amount of land used for rights-of-way varies based on use. This analysis uses a net-to-gross factor of 15% for employment land.

INDUSTRIAL, COMMERCIAL, AND RETAIL LAND DEMAND BY ZONING DISTRICT

One of the key employment land management issues that the EOA is intended to provide information about is the location of employment by type of employment and comprehensive plan designation in Salem. Over the last years, Salem has had a number of requests to rezone (or redesignate) employment land from industrial uses to commercial uses. The City's analysis of employment uses in industrial areas suggests that a substantial amount of employment locating in industrial zones, especially the Industrial Commercial zone, is commercial employment.

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[65] This analysis is documented in the draft SKATS *Regional Transportation System Plan, 2035*.

[66] The industrial EPA is consistent with the rule-of-thumb density assumption for light industrial development presented in the DLCD draft guidebook for Goal 9, "Cheaper, Easier, Faster, More Relevant."

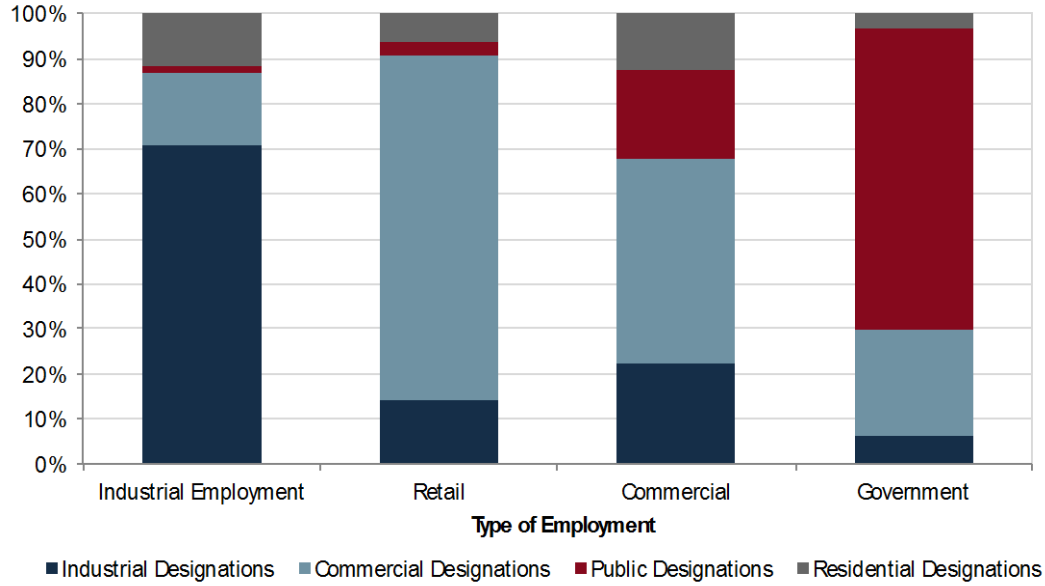
[67] The estimated average commercial development density (36 EPA) is based on ECONorthwest's analysis of development of commercial employers in the Salem-Keizer metropolitan area in the Regional EOA. This analysis is consistent with the analysis of commercial densities documented in the draft SKATS *Regional Transportation System Plan, 2035.* The RTSP analysis shows a range of densities from 27 EPA in retail areas to 73 EPA in Salem's central business area.

[68] OAR 660-024-0010(6) uses the following definition of net buildable acre. "Net Buildable Acre" consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads. While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

Figure C- 1 shows covered employment in Salem by comprehensive plan designation in Salem in 2012. Figure C- 1 shows a mixing of employment types among plan designations.

- **Industrial Employment**, including employment such as manufacturing, construction, wholesale, or warehouse and distribution. About 70% of industrial employment is located on industrial plan designations, with the majority of remaining industrial employment located in commercial or residential designations.
- **Retail Employment,** which includes employment such as retail, arts and entertainment, or accommodations and food services. More than three-quarters of retail employment is located in commercial designations. Nearly 15% of retail employment is located on industrial designations, and the remainder is located in residential or public designations.
- **Commercial Employment,** which includes employment such as health care, finance and insurance, real estate, professional and technical services, or administrative support. About 45% of commercial employment is located in commercial designations, with about 20% located in industrial or public designations, and the remaining in residential designations.
- **Government Employment,** which includes employment at publicly-owned entities. Two-thirds of government employment is located in public designations, with nearly one-quarter of government employment located in commercial designations.

Figure C- 1. Covered employment by type of employment and comprehensive plan designation, Salem, 2012



Source: ECONorthwest, using Salem Comprehensive Plan Designations and 2012 Quarterly Census of Employment and Wages data from the Oregon Employment Department
Notes: Industrial includes: General Industrial , Industrial Commercial, Industrial Business Campus, Industrial Park, Employment Center, FMU, Exclusive Farm Use
Commercial includes: Retail Commercial, Commercial Office, Central Business, General Commercial, Neighborhood Commercial, Neighborhood Center Mixed-Use
Public includes, Public and Private Health Services, Capitol Mall Area, Public Service, Public and Private Educational Facilities, Public Amusement, Public and Private Cemeteries
Residential includes: Single Family Residential, Developing Residential, Residential Agriculture, Duplex Residential, Multiple Family Residential 1, Multiple Family Residential 2, High Rise Multiple Family Residential

Figure C- 1 shows that a substantial amount of retail and commercial employment is located in industrial plan designations. About 45% of the employment in industrial plan designations is employment that can be categorized as industrial (such as manufacturing, construction, wholesale, or warehouse and distribution).

Table C-9 builds from the estimate of land demand in Table C-8 and resulting from retail space in Table C-4. Table C-9 allocates employment land demand to comprehensive plan designations, based on the ratios shown in Figure C- 1. For example, Table C-9 assumes that 16% of new industrial land demand (and employment) will locate in commercial plan designations, consistent with the ratios shown in Figure C- 1.[69]

[69] Table C-9 allocates some land demand to designations differently than the existing distribution of employment, based on reasonable assumptions about the future location of employment by plan designation. Demand for industrial employment in industrial designations includes demand that might have located in residential designations (52 acres) and demand that might have located in public designations (5 acres). Demand for employment in commercial

Table C-9 shows demand for 486 gross acres of land in industrial designations, 569 gross acres in commercial designations, and 59 acres for employment in residential designations.

Table C-9. Employment land demand by comprehensive plan designations, Salem's portion of the Salem-Keizer UGB, 2015–2035

Employment Type	Land Demand (Gross Acres)	Broad Comprehensive Plan Categories			Total
		Industrial Designations	Commercial Designations	Residential Designations	
Industrial	441	369	72		441
Office and Commercial Services	400	56	319	25	400
Retail and Retail Services	273	61	178	34	273
Total	1,115	486	569	59	1,114

Source: ECONorthwest
Note: Demand for industrial employment in industrial designations includes demand that might have located in residential designations (52 acres) and demand that might have located in public designations (5 acres). Demand for employment in commercial designations includes land in public designations for office and commercial services (12 acres) and for retail and retail services (54 acres).

designations includes land in public designations for office and commercial services (12 acres) and for retail and retail services (54 acres).