City of Springfield:

Commercial and Industrial Buildable Lands Inventory and Economic Opportunities Analysis

Prepared for

City of Springfield

by

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Draft Report

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Steering Committee

The Steering provided community and business input in the economic opportunities analysis. The Steering Committee provided guidance on developing Springfield's economic development strategy and provided input on assumptions used in the economic opportunities analysis. Steering Committee members included: City of Springfield elected or appointed officials, local business owners and business people, land-use advocacy groups, and residents of Springfield.

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Executive Summary

This report presents an Economic Opportunities Analysis (EOA) for the City of Springfield consistent with the requirements of statewide planning Goal 9 and the Goal 9 administrative rule (OAR 660-009). A goal of this project is to establish a clear economic development direction that identifies the city's strengths and opportunities, and its position in the broader Southern Willamette Valley region. This project will facilitate employment opportunities and job creation in Springfield by identifying industrial/employment land needs and developing an economic development strategy aimed at selected target industries.

TARGET INDUSTRIES

An analysis of growth industries in Springfield should address two main questions: (1) Which industries are most likely to be attracted to the Eugene-Springfield area? and (2) Which industries best meet Springfield's economic objectives? The types of industries that Springfield wants to attract have the following attributes: high-wage, stable jobs with benefits; jobs requiring skilled and unskilled labor; employers in a range of industries that will contribute to a diverse economy; and industries that are compatible with Springfield's community values.

The characteristics of Springfield will affect the types of businesses most likely to locate in Springfield. Springfield's attributes that may attract firms are: the City's proximity to I-5, high quality of life, proximity to the University of Oregon, the presence of the RiverBend campus, positive business climate, availability of skilled and semi-skilled labor, and proximity to indoor and outdoor recreational opportunities. Table S-1 shows The types of businesses that may be attracted to Springfield include:

Table S-1. Target industries, Springfield, 2010-2030

Target Industry	Types of firms	Attraction to Springfield
Medical Services	Medical firms, medical research firms, and other professional services	Development of a medical cluster at RiverBend
Services for seniors	Health services that provide services to older people, such as assisted living facilities or retirement centers	Aging population and presence of RiverBend Hospital

Target Industry	Types of firms	Attraction to Springfield
Small Scale Manufacturing	Manufacturers of: medical equipment, high-tech electronics, recreational equipment, furniture manufacturing, specialty apparel, and other specialty manufacturing	Labor force, existing businesses, land availability, proximity to natural resources
Call Centers	Call centers	Existing call center cluster and trained labor force
Back-Office Functions	Back-office functions include administrative functions, such as accounting or information technology	High quality of life, available and trained labor force, and relatively low wages
Tourism	Industries that serve tourists, such as food services and accommodations	Outdoor recreational opportunities and regional events such as the Olympic Track and Field trials, the Oregon Country Fair, or the University of Oregon Bach Festival
Specialty Food Processing	Food processing firms, such as those that specialize in organic or natural foods or wineries	Proximity to agricultural resources
High-Tech	The types of firms range from high-tech manufacturing to data centers to software development	Access to highly educated labor, access to comparatively inexpensive electricity, and high quality of life
Professional and Technical Services	Engineering, research, medical-related professionals, and other professional services that are attracted to high-quality settings	Access to highly educated labor and high quality of life
Green businesses	Green construction firms, organic food processing, sustainable logging and/or lumber products manufacturing, or alternative energy production	Access to highly educated labor, access to natural resources, and high quality of life
Corporate Headquarters	Corporate headquarters	High quality of life, location along I-5, and availability of educated workers
Services for Residents	Retail and government services, especially education	Growing population

COMPARISON OF LAND CAPACITY AND DEMAND

This section presents an analysis of land availability and capacity for employment uses in Springfield. Chapter 4 presents an analysis of potential growth industries in Springfield and the employment forecast for Springfield. Based on this analysis, Table S-2 shows a comparison of land supply and need in terms of sites by site size. The results show that Springfield has a deficit of about 6 industrial sites and 44 commercial and mixed use sites.

Table S-2. Comparison of vacant land supply and site needs, industrial and other employment land, Springfield UGB, 2010-2030

	Site Size (acres)						
	Less than 1	1 to 2	2 to 5	5 to 20	20 to 50	Greater than 50	Total
Buildable Land Inventory							
Vacant							
Industrial	72	24	20	12	0	0	128
Commercial and Mixed Use	104	14	6	4	0	0	128
Redevelopable							
Industrial	122	28	31	5	1	0	187
Commercial and Mixed Use	305	20	15	0	0	0	340
Total Buildable Sites							
Industrial	194	52	51	23	1	0	321
Commercial and Mixed Use	409	34	21	4	0	0	468
Site Needs							
Needed sites							
Industrial	5	7	13	16	4	3	48
Commercial and Mixed Use	220	53	35	14	1	0	323
Surplus (deficit) of sites							
Industrial	**189**	**45**	**38**	**7**	**(3)**	**(3)**	**273**
Commercial and Mixed Use	**189**	**(19)**	**(14)**	**(10)**	**(1)**	**0**	**145**

Source: ECONorthwest.

The data in Table S-2 address employment needs on vacant, partially vacant, and redevelopable land. In addition to employment on redevelopable land, the analysis assume that there are other reasons that some employment in Springfield will not require new land but will locate on land that is currently used. Although the analysis in Table S-2 shows a deficit in many of the size categories, it does not account for assumptions about employment that will not require new land because of infill or home occupations. ECO assumed that 24% of employment (more than 3,200 new employees) would not require any vacant land. This would include employment that will locate in residential areas as well as employment infill development that will locate on land that is already classified as developed because employment uses in some built spaces may intensify.

Table S-3 presents two scenarios for the amount of land needed in the Springfield UGB over the 2010 to 2030 period. The difference between the two scenarios is the size of needed sites 5 acres and larger (shaded in green). The Low Scenario assumes smaller average sites sizes and the High Scenario assumes larger site sizes, especially for sites larger than 50 acres.

The Low Scenario shows that Springfield has a deficit of about 531 acres, with a deficit of 330 industrial acres and 201 commercial acres. The High Scenario shows that that Springfield has a deficit of about 711 acres, with a deficit of 450 industrial acres and 261 commercial acres

Note: The final draft of the EOA will present 1 estimate of commercial and industrial land need, rather than the 2 scenarios shown in Table S-3.

Table S-3. Industrial and other employment land need, gross acres, Springfield UGB, 2010-2030

	Site Size (acres)						
	Less than 1	1 to 2	2 to 5	5 to 20	20 to 50	Greater than 50	Total
Low Scenario							
Industrial							
Estimated site size (acres)	0.5	1.5	3.0	10.0	35.0	75.0	
Land need (acres)	**0**	**0**	**0**	**0**	**105**	**225**	**330**
Commercial and Mixed Use							
Estimated site size (acres)	0.3	1.5	3.0	10.0	30.0	50.0	
Land need (acres)	**0**	**29**	**42**	**100**	**30**	**0**	**201**
Total	**0**	**29**	**42**	**100**	**135**	**225**	**531**
High Scenario							
Industrial							
Estimated site size (acres)	0.5	1.5	3.0	15.0	50.0	100.0	
Land need (acres)	**0**	**0**	**0**	**0**	**150**	**300**	**450**
Commercial and Mixed Use							
Estimated site size (acres)	0.3	1.5	3.0	15.0	40.0	50.0	
Land need (acres)	**0**	**29**	**42**	**150**	**40**	**0**	**261**
Total	**0**	**29**	**42**	**150**	**190**	**300**	**711**

Source: ECONorthwest.

Table S-3 shows that, in both scenarios, Springfield needs about 71 acres (33 sites) for commercial and mixed-use development on sites smaller than five acres. This need is likely to be accommodated within the UGB, through redevelopment of infill development over and above the assumptions about redevelopment and infill stated previously.

The land needs that the City will need to meet by looking outside of the UGB are for sites five acres and larger. Table S-3 shows that, based on the Low Scenario, Springfield needs 460 acres or 17 sites larger than five acres, about 330 acres (6 sites) for industrial uses and 130 acres (11 sites) for commercial and mixed-use. In the High Scenario, Springfield needs 640

acres or 17 sites larger than five acres, about 450 acres (6 sites) for industrial uses and 190 acres (11 sites) for commercial and mixed-use.

CHARACTERISTICS OF NEEDED SITES

The Goal 9 Administrative Rule (OAR 660-009) requires that jurisdictions describe the characteristics of needed 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.

The site needs analysis in Chapter 4 identified site needs in five types of buildings: warehousing and distribution, general industrial, office, retail, and other services. The characteristics of needed sites for each of these building types are described in Chapter 5. In general, the site characteristics for commercial and industrial sites include the following:

- **Site size.** The analysis assumes that Springfield will need to look outside of its current UGB for sites larger than five acres. Site sizes vary from five to 20 acres to greater than 50 acres.
- **Street access.** These larger sites will all need to have access to major streets within Springfield, with some sites located near an interchange on I-5. Traffic from the sites should not be routed through residential neighborhoods.
- **Topography.** The sites should be relatively flat, with not more than 15% slope and less slope for some uses.
- **Access to services.** City services should be accessible to the site, including street access, sanitary sewer, and municipal water. Other services to sites should include: electricity, phone, and high-speed telecommunications. Capacity and demand for these services will vary by uses on each site.
- **Land ownership.** Sites with a single owner are strongly preferred, to reduce the cost of land assembly.

IMPLICATIONS

The analysis of presented in the economic opportunities analysis has implications for Springfield's economic land needs.

- *Economic growth.* Decision makers and community members that participated in the economic opportunities analysis agreed that economic growth is desirable over the planning period. The employment forecast indicates Springfield will add 13,440 new employees between 2010 and 2030 using the OAR 660-024-0040(8)(a)(ii) methodology. The economic opportunities analysis assumes that Springfield will have employment growth in a wide variety of businesses, from services and retail for residents to industrial development to medical services. The City wants to diversify its economy and attract higher wage and professional jobs.

- *Buildable lands.* Springfield has 3,415 acres that are designated for industrial and other employment use. About two-thirds of the land designated for employment within Springfield's UGB is considered developed and is not expected to redevelop over the 20 year planning period. Less than 15% of this land is buildable, unconstrained land. The majority of buildable, unconstrained employment land in Springfield has existing development on it that is expected to redevelop over the planning period. Springfield has a lack of buildable large sites, with one buildable site 20 acres and larger and 23 buildable sites in the five to 20 acre size range.

- *Redevelopment potential*. The analysis of redevelopment potential and need for employment land assumes that Springfield will have substantial redevelopment over the planning period. Consistent with City Council policies, the areas that are expected to have the most redevelopment are in Glenwood, especially north of Franklin Boulevard along the McKenzie River, and in Downtown in the Urban Renewal District. All land deficiencies for sites smaller than five acres are expected to be addressed through redevelopment of existing sites. The majority of retail land needs are expected to be addressed through redevelopment.

  The City will need to make strategic investments that support redevelopment and to continue supporting redevelopment through City policies. Some areas targeted for redevelopment, such as the Downtown Urban Renewal District, may not require large infrastructure investments because of existing infrastructure. Other

redevelopment areas, such as parts of Glenwood, will require substantial infrastructure investments.

- *Need for large sites*. Springfield will be able to meet employment land needs on sites five acres and smaller within the existing UGB, through redevelopment, infill development, and employment uses on non-employment land (e.g., home occupations). The employment land needs that may not be met within the UGB are for sites five acres and larger. The City only one buildable site 20 acres or larger.

  Availability of sites 20 acres and larger is important for attracting or growing large businesses, which are often traded-sector businesses. If the City does not have these large sites, there is little chance that the City will attract these types of businesses. While it may not be clear exactly what the business opportunities may be in ten to twenty years, it is clear that these businesses will not locate in Springfield if land is not available for development. For example, in the past twenty years, most of the Gateway area developed. The area has a mix of uses including a regional mall, apartments, offices, and more recently, the PeaceHealth Campus. Twenty-years ago it would have seemed highly unlikely that PeaceHealth would build their new facility in Springfield. If the City had not had desirable, serviceable land available, PeaceHealth would probably not have located their new facility in Springfield.

- *Short-term land supply.* Based on the Goal 9 definition of short-term land supply and criteria for "engineering feasibility," the majority of buildable land within the Springfield UGB is part of the short-term land supply, assuming that funding is available to extend services. The Goal 9 rule does not account for land availability, such as whether the landowner is willing to sell it or the owner is willing to redevelop it. The Goal 9 rule also does not account for differences in site characteristics, such as site size. As a result, developers may have difficulty finding developable land with specific site characteristics, such as large sites with highway access.

Chapter 1

Introduction

This report presents an Economic Opportunities Analysis (EOA) for the City of Springfield consistent with the requirements of statewide planning Goal 9 and the Goal 9 administrative rule (OAR 660-009). 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."

BACKGROUND

In 2007, the Oregon Legislature passed House Bill 3337 which directs Springfield to establish a separate Urban Growth Boundary. The city started work on a key element of its new UGB in 2006 by initiating a residential buildable lands inventory and contracting ECONorthwest to conduct a Goal 10 housing needs analysis. With the passage of HB 3337, the City is now preparing additional studies necessary for the establishment of a separate UGB—including an economic opportunities analysis (EOA), and an economic development strategy.

The project includes two key phases:

1. An inventory of commercial and industrial lands and a projection of the acreage needed to accommodate Springfield's future commercial and industrial needs.

2. An analysis of alternative locations where the UGB might be expanded to accommodate the city's future commercial, industrial, and residential needs—if the City identifies a deficiency of lands.

This report presents the results of the economic opportunities analysis. The economic development strategy is presented in a separate document, as is the alternatives analysis.

ECONorthwest worked closely with City staff, a Technical Advisory Committee, and a Stakeholder Committee in preparing the Springfield Economic Opportunities Analysis. This report incorporates many comments provided by these groups.

FRAMEWORK FOR ECONOMIC DEVELOPMENT PLANNING IN OREGON

The content of this report is designed to meet the requirements of Oregon Statewide Planning Goal 9 and the administrative rule that implements Goal 9 (OAR 660-009). The Land Conservation and Development Commission adopted amendments to this administrative rule in December 2005.[1] 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 Springfield) must adopt policies that identify a competitive short-

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

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.

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

ORGANIZATION OF THIS REPORT

The remainder of this report is organized as follows:

- **Chapter 2, Land Available for Industrial and Other Employment Uses** presents a regional inventory of industrial and other employment lands.
- **Chapter 3, Economic Trends and Factors Affecting Future Economic Growth in Springfield** summarizes historic economic trends that affect current and future economic conditions in Springfield. It also summarizes Springfield comparative advantages formed by the mix of factors present in Springfield
- **Chapter 4, Land Demand and Site Needs in Springfield** presents the employment forecast for Springfield and an estimate of how much land is needed to accommodate the 20-year employment forecast. It also describes the types of sites that are needed to accommodate industries that are likely to locate or expand in Springfield.

- **Chapter 5, Implications** presents a comparison of land supply and site needs and discusses the implications of the Economic Opportunities Analysis.

This report also includes three appendices:

- **Appendix A, Review of National, State, Regional, County, and Local Trends** describes national, state, and local economic trends that will influence the regional economy. Appendix A presents detailed information about economic trends that may affect Springfield, which is summarized in Chapter 3.
- **Appendix B, Factors Affecting Future Economic Growth in Springfield** discusses the comparative advantages formed by the mix of factors present in Springfield. Springfield's comparative advantages are summarized in Chapter 3.
- **Appendix C, Employment Forecast and Site Needs for Industrial and Other Employment Uses** presents an employment forecast and analysis of needed sites for Springfield for the period 2010-2030 and is summarized in Chapter 4.

Chapter 2 Land Available for Industrial and Other Employment Uses

The Springfield Commercial and Industrial Buildable Lands (CIBL) inventory is intended to identify lands within the Springfield urban Growth Boundary (UGB) that are available for development and can accommodate employment growth. Buildable lands inventories are sometimes characterized as *supply* of land to accommodate growth. Population and employment growth drive *demand* for land. The amount of land needed depends, in part, on the density of development as well as assumptions about redevelopment and infill.

This chapter presents the CIBL inventory for the City of Springfield. The results are based on analysis of Geographic Information System data provided by the City of Springfield Public Works Department and the Lane Council of Governments. The buildable land inventory also used aerial orthophotographs and review by city staff for verification.

The buildable lands inventory includes lands east of the Interstate 5 center line in the Metro UGB. For the purpose of the inventory, these lands were considered to be in the Springfield portion of the UGB.[2]

ECO worked closely with City Staff, a Technical Advisory Committee, and a Stakeholder Committee during the development and review of the Springfield commercial and industrial buildable lands inventory (CIBL). ECO developed the inventory using the following steps:

- *Assemble and document datasets*. ECO identified data from the Regional Land Information Database (RLID) and GIS data from the City of Springfield and the Lane Council of Governments as primary datasets on which the inventory and analysis was built. RLID includes assessment and taxation data maintained by Lane County.

- *Preliminary analysis*. ECO conducted a preliminary analysis with the GIS and data tables selected for inclusion in the database. The purpose of this task was to work with City staff and the TAC to

[2] Springfield did not have a separate UGB at the time this study was completed. This study is intended to meet part of the requirements of H.B. 3337 which will lead to the establishment of a UGB for the City of Springfield independent of the Eugene-Springfield Metropolitan UGB.

determine the optimal definitions and supporting methodology to base the final analysis and database structure.

- *Data processing and GIS analysis.* In this step ECO performed the GIS analysis and data processing steps necessary to populate the database. Table 2-1 shows plan designations that were included in the commercial and industrial buildable lands inventory. All of the designations included in the inventory allow employment outright. The inventory, however, includes several mixed use designations that allow both employment and housing. The inventory generally uses the 2004 Metro Plan designations with two exceptions: (1) Glenwood, where a 2005 plan amendment changed the designation on approximately 47 acres from Light Medium Industrial Mixed Use to Mixed Use; and (2) the PeaceHealth site where land was redesignated from residential to designations that allow employment.

Table 2-1. Metro plan designations included in the Springfield commercial and industrial buildable lands inventory

	Allowed Land Uses (yes/no)			
Plan Designation	**Commercial**	**Industrial**	**Residential**	**In CIBL?**
Campus Industrial	yes	yes	no	yes
Commercial	yes	no	no	yes
Commercial Mixed Use	yes	no	yes	yes
Heavy Industrial	no	yes	no	yes
High Density Res Mixed Use	yes	no	yes	yes
Light Medium Industrial	no	yes	no	yes
Light Medium Industrial Mixed Use	no	yes	no	yes
Major Retail Center	yes	no	no	yes
Medium Density Res Mixed Use	yes	no	yes	yes
Mixed Use	yes	yes	yes	yes
Special Heavy Industrial	no	yes	no	yes

Note: Allowed land uses indicates what uses are allowed in each plan designation. The CIBL includes any plan designation that allows employment, including mixed use designations.

- *Verification*. ECO used to use a multi-step verification process. The initial verification occurred as part of the preliminary analysis. This step included a staff-level review of preliminary database output (maps) showing the land base and plan designations. The second round of verification involved a "rapid visual assessment" of land classifications using GIS and recent aerial photos for this analysis. The rapid visual assessment involved reviewing classifications overlaid on 2004 aerial photographs to verify uses on the ground.

ECO reviewed all tax lots included in the inventory using the rapid visual assessment methodology. The third round of verification involved city staff verifying the rapid visual assessment output. The draft inventory was then circulated for review by the TAC and the Stakeholder Committee. This review resulted in a number of changes which are reflected in the inventory as presented in this report.

In summary, ECO used a systematic process to complete the CIBL inventory that was intended to provide the greatest degree of accuracy possible.

DEFINITIONS

The first step in the buildable inventory was to develop working definitions and assumptions. ECO initially classified land using a rule-based methodology. The rules applied by ECO to classify land are described below. The accompanying maps show the results of the application of those rules, with some adjustments made based on review of 2004 aerial photos and building permit data.

ECO began the buildable lands analysis with a tax lot database provided by the City's GIS Staff. The inventory used tax lots as the unit of analysis because (1) it is a commonly accepted unit for land inventories, and (2) tax lots link directly to other data sets (e.g., assessment data, addresses, etc.) The tax lot database was current as of February 2008. The inventory builds from the tax lot-level database to estimates of buildable land by plan designation.

A key step in the buildable lands analysis was to classify each tax lot into a set of mutually exclusive categories. Consistent with accepted methods for buildable lands inventories and applicable administrative rules, all tax lots in the UGB are classified into one of the following categories:

- *Vacant land.* Tax lots that have no structures or have buildings with very little value. For the purpose of this inventory, lands with improvement values under $10,000[3] are considered vacant (not including lands that are identified as having mobile homes). [4]

[3] Improvement values were from 2008 Lane County Assessment and Taxation data and reflect the County's estimate of the market value of improvements.

[4] Note that this definition is more inclusive than what statewide planning policy requires. OAR 600-009-0005(14) provides the following definition: "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

- *Developed land.* Land that is developed at densities consistent with current zoning/plan designation and improvements that make it unlikely to redevelop during the analysis period. Lands not classified as vacant, potentially redevelopable, or public are considered developed.[5] Thus, the definition of developed land used for the CIBL is different than the definition in the administrative rule. For purposes of the CIBL, developed land is considered committed during the 20-year period and unavailable for redevelopment.

  Lands in public ownership were generally considered unavailable for development unless identified by City staff as being available for development at some time during the 20-year planning period. This includes uses such as electrical substations, parks, and private cemeteries. Lands in Federal, State, County, or City ownership were also considered committed.

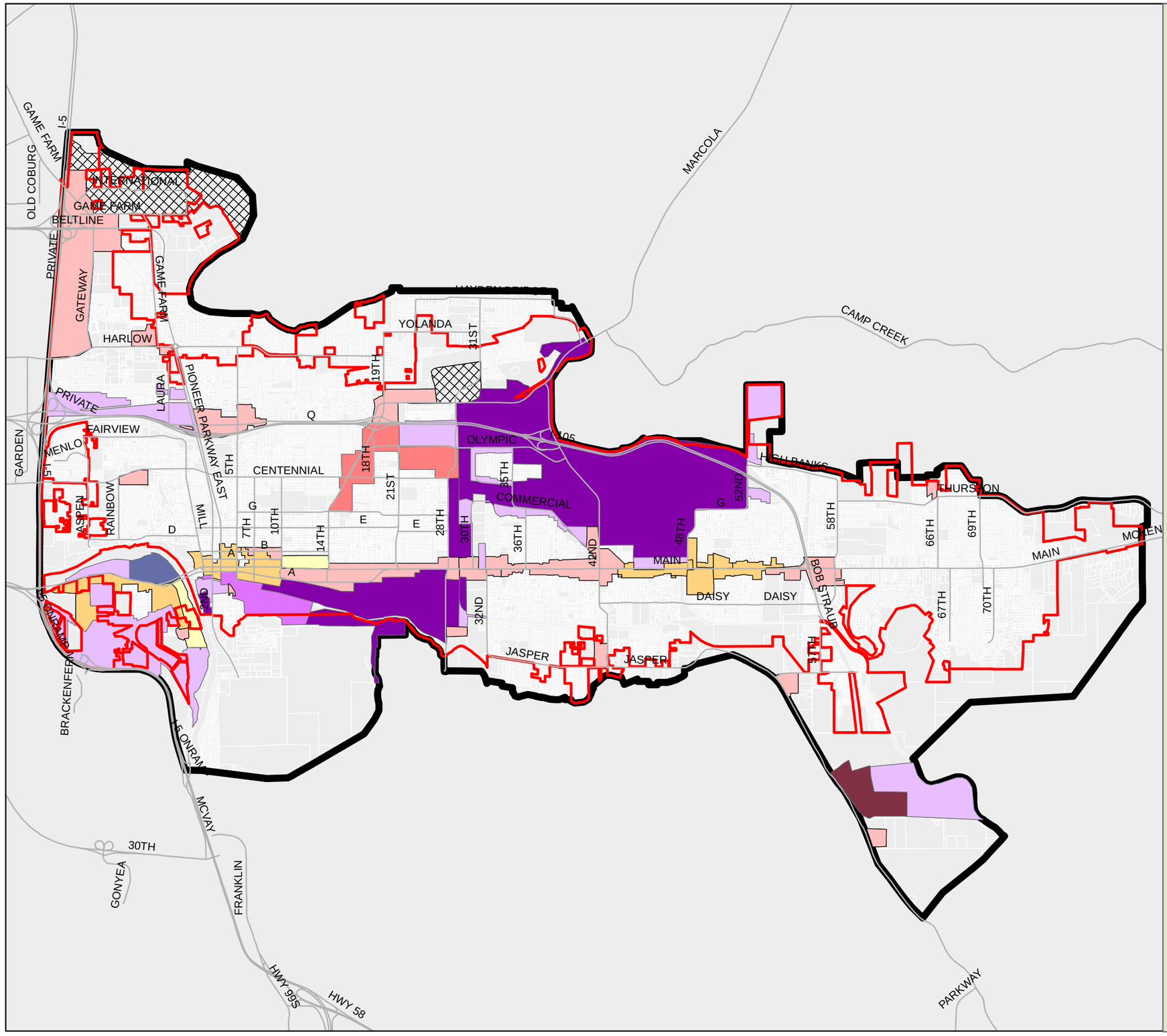
- *Potentially Redevelopable land.* Land on which development has already occurred but on which, due to present or expected market forces, there exists the potential that existing development will be converted to more intensive uses during the planning period. Redevelopable land is a subset of developed land and was identified using improvement to land value ratios and building coverage ratios. For the purpose of the CIBL, potentially redevelopable land corresponds with the definition of "developed land" as stated in OAR 660-009-0005(1). Redevelopment potential is discussed in more detail later in this chapter.

  The land classifications result in identification of lands that are vacant or potentially redevelopable. The inventory includes all lands within the Springfield UGB. Map 2-1 shows lands by plan designation within the Springfield UGB.

permanent buildings or improvements. The implication of using a more inclusive definition are that more land was considered available in the inventory than would be if the state definitions were used.

[5] Note that OAR 660-009-0005(1) uses the following definition: (1) "Developed Land" means non-vacant land that is likely to be redeveloped during the planning period. This study defines developed land as developed and defines land "likely to be redeveloped" as potentially redevelopable.

Map 2-1
Commercial and Industrial Plan Designations
City of Springfield
Oregon



Legend

- City Limits
- Urban Growth Boundary
- Tax Lots

Plan Designation

- Campus Industrial
- Commercial
- Commercial Mixed Use
- Heavy Industrial
- LIGHT MED IND MIXED USE
- Light Medium Industrial
- Major Retail Center
- Special Heavy Industrial
- Mixed-Use
- Medium Density Residential Mixed Use

Note: PeaceHeath plan amendments are not reflected in the plan designations shown on this map. The PeaceHealth Campus is considered part of the commercial and industrial land base.

0 1,150 2,300 4,600
Feet

ECONorthwest, October 2008

CONSTRAINTS

Constraints are factors that preclude land development or affect the desirability of land for development. OAR 660-009-0005(2) provides the following definition of "development constraints:"

> "Development Constraints" means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

Thus, the Administrative Rule provides a broad definition of constraints and leaves discretion for local governments in the application of the definition. For the purpose of this study, the following factors are considered absolute development constraints and are unbuildable on employment land:

1. Wetlands
2. Floodway
3. Slopes over 15%
4. Riparian resource areas

The following factors are partial development constraints. Land with these constraints is classified as "constrained" on employment land. Development can occur on "constrained" land and no deductions were made from the inventory for these factors.

1. Floodplain
2. Willamette River Greenway
3. BPA Easements

The inventory summary that follows addresses "absolute" and "constrained" constraints separately and summarizes lands as either "unbuildable acres" (e.g., no development may occur) or "constrained acres" (e.g., one or more constraints are present but those constraints do not preclude development). Portions of individual tax lots can be in one or more of the following categories: "unconstrained," "constrained," or "unbuildable."

RESULTS

LAND BASE

The first step in the CIBL inventory was to determine the land base. This step was necessary because the inventory only covers a subset of land in the Springfield UGB (lands that accommodate employment). The land base is the subset of tax lots that fall within the plan designations included in the CIBL (see Table 2-1).

Table 2-2 shows acres within the Springfield UGB and city limits in 2008. According to the City GIS data, Springfield has about 14,603 acres within its UGB. Of the 14,603 acres, 12,139 acres (about 83%) are in tax lots. Land not in tax lots is primarily in streets and waterways. Springfield has about 9,958 acres within its City Limits; of these 8,060 acres (about 81% of total acres in the City Limit) are in tax lots. Additionally, the City has about 4,655 acres between the City Limits and Urban Growth Boundary (the UGA); of this about 4,080 acres are in tax lots.

Table 2-2. Acres in Springfield UGB and City Limit, 2008

Area	Tax Lots	Total Acres	Acres in Tax Lots	Percent in Tax Lots
City Limits	19,477	9,958	8,060	81%
Urban Growth Area	3,150	4,644	4,080	88%
Total	**22,627**	**14,603**	**12,139**	**83%**

Source: City of Springfield GIS data; analysis by ECONorthwest
Note: Urban Growth Area is the unincorporated area between the City Limits and Urban Growth Boundary

Table 2-2 summarizes all land in the Springfield UGB. The next step is to identify the commercial and industrial land base (e.g., lands with plan designations that allow employment or "employment lands"). The land base includes traditional commercial and industrial designations, as well as mixed-use designations Table 2-1 provides a list of plan designations included in the land base. Note that not all of the land in mixed-use designations will be used for employment.

Table 2-3 shows that about 3,415 acres within the Springfield UGB is included in the commercial and industrial land base. Thus, about 28% of land within the Springfield UGB is included in the Commercial and Industrial land base. The database includes all land in tax lots that have any portion that is in a commercial or industrial plan designation.

Table 2-3. Lands designated for commercial and industrial uses, Springfield UGB, 2008

Area	Value
Springfield UGB	
Number of Tax Lots	22,627
Acres in Tax Lots	12,139
Springfield CIBL	
Tax Lots in Employment Desginations	2,104
Acres in Land Base in Employment Designations	3,415

Source: analysis by ECONorthwest

Table 2-4 summarizes acres by plan designation for employment lands within the Springfield UGB. Of lands designated for employment, about 65% (2,200 acres) are in industrial designations, 21% (716 acres) are in commercial designations, and 14% (495 acres) are in mixed use designations. Not all of the land in mixed use designations will be used for employment—housing is a key element of mixed use designations.

Table 2-4. Acres by employment plan designation, Springfield UGB, 2008

Plan Designation	Tax Lots	Total Acres in Tax Lots
Industrial		
Campus Industrial	43	352
Light Medium Industrial	375	541
Heavy Industrial	250	1,163
Special Heavy Industrial	5	147
Subtotal	**673**	**2,203**
Commercial		
Commercial	731	570
Community Commercial	4	30
Major Retail Center	119	116
Subtotal	**854**	**716**
Mixed Use		
Commercial Mixed Use	430	222
Light Medium Industrial Mixed Use	19	116
Medium Density Res Mixed	64	34
Mixed Use	64	123
Subtotal	**577**	**495**
Total	**2,104**	**3,415**

Source: City of Springfield GIS data; analysis by ECONorthwest

Table 2-5 shows acres by classification and constraint status for the Springfield UGB in 2008. Analysis by constraint status (the table columns) shows that about 2,039 acres are classified as built or committed (e.g., unavailable for development), 543 were classified as vacant. Not all

vacant lands are available for development—the inventory identified 189 unbuildable acres on vacant tax lots, leaving 355 acres of vacant, buildable land.

The inventory identified 669 acres that are potentially redevelopable based on the criteria described in the definitions section. All of these lands have existing improvements, but the value or character of the improvements suggests redevelopment potential. Of lands with redevelopment potential, 88 acres are unbuildable and the remaining 581 acres are buildable (e.g., they have redevelopment potential).

Table 2-5. Acres by classification, Springfield UGB, 2008

Classification	Tax Lots	Acres in Tax Lots	Developed Acres	Unbuildable Acres	Buildable Land	
					Constrained Acres	Unconstrained Acres
Developed	1,295	2,039	1,710	329	0	0
Master Plan	18	163	0	2	0	161
Potentially Redevelopable	535	669	na	88	37	544
Vacant	256	543	0	189	76	279
Total	**2,104**	**3,415**	**1,710**	**608**	**112**	**985**

Source: City of Springfield data; analysis by ECONorthwest

Map 2-2
Commercial and Industrial Land by Classification and Nodal Overlay Status
City of Springfield
Oregon

Legend
- City Limits
- Urban Growth Boundary
- Tax Lots

Classification
- Developed
- Potentially Redevelopable
- Vacant
- Master Planned

Nodal Development Overlay

Note: Master planned category includes sites with approved master plans. PeaceHealth and Marcola Meadows are included in this classification.

0 1,100 2,200 4,400
Feet

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VACANT BUILDABLE LAND

The next step in the buildable land inventory is to net out portions of vacant tax lots that are unavailable for development. Areas unavailable for development fall into two categories: (1) developed areas of partially vacant tax lots, and (2) areas with physical constraints (in this instance areas with steep slopes, waterway buffers, or wetlands).

Table 2-6 shows vacant land by development and constraint status. The data show that about 189 acres within vacant tax lots have development constraints that are unbuildable, leaving about 355 vacant buildable acres within the UGB. About 88 acres of redevelopable land has development constraints that are unbuildable, leaving about 581 buildable redevelopable acres within the UGB.

Table 2-6. Vacant land by constraint status, Springfield UGB, 2008

				Buildable Acres	
Classification	Tax Lots	Acres in Tax Lots	Unbuildable Acres	Constrained Acres	Unconstrained Acres
Vacant	256	543	189	76	279
Redevelopable	535	669	88	37	544
Total	**791**	**1,212**	**277**	**112**	**823**

Source: City of Springfield GIS data; analysis by ECONorthwest

Table 2-7 shows vacant land by plan designation. Map 2-3 shows the location of vacant land by plan designation. Map 2-4 shows vacant land with absolute constraints that are unbuildable and Map 2-5 shows vacant land with buildable constraints.

Table 2-7. Vacant land by Plan Designation, Springfield UGB, 2008

Classification	Tax Lots	Acres in Tax Lots	Unbuildable Acres	Buildable Acres	
				Constrained Acres	Unconstrained Acres
VACANT LAND					
Industrial					
Campus Industrial	14	131	77	40	14
Light Medium Industrial	65	124	33	17	74
Heavy Industrial	48	133	32	3	98
Special Heavy Industrial	1	48	39	1	8
Subtotal	**128**	**435**	**181**	**61**	**194**
Commercial					
Commercial	71	51	3	3	45
Community Commercial					
Major Retail Center	11	6	0	0	5
Subtotal	**71**	**57**	**3**	**3**	**51**
Mixed Use					
Commercial Mixed Use	27	28	2	2	24
Light Medium Industrial Mixed Use					
Medium Density Res Mixed	7	2	0	1	1
Mixed Use	12	21	3	9	9
Subtotal	**46**	**51**	**5**	**11**	**34**
Total	**245**	**543**	**189**	**76**	**279**

Source: City of Springfield GIS data; analysis by ECONorthwest

Map 2-3
Vacant Commercial and Industrial Land and Development Constraints
City of Springfield
Oregon

Legend
- City Limits
- Urban Growth Boundary
- Tax Lots

Plan Designation
- Campus Industrial
- Commercial
- Commercial Mixed Use
- Heavy Industrial
- LIGHT MED IND MIXED USE
- Light Medium Industrial
- Major Retail Center
- Medium Density Res Mixed
- Mixed Use
- Special Heavy Industrial

Note: Does not include master planned sites

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Map 2-4
Vacant Commercial and Industrial Land and Prohibitive Development Constraints

City of Springfield
O r e g o n

Legend

- City Limits
- Urban Growth Boundary
- Tax Lots

Plan Designation

- Campus Industrial
- Commercial
- Commercial Mixed Use
- Heavy Industrial
- LIGHT MED IND MIXED USE
- Light Medium Industrial
- Major Retail Center
- Medium Density Res Mixed
- Mixed Use
- Special Heavy Industrial

Prohibitive Development Constraints

- Slopes over 15%
- Wetlands
- Riparian Resource Areas
- Floodway

Note: Prohibitive development constraints are constraints that prohibit development. Lands that have one or more prohibitive constraint are removed from acreages counted as buildable.

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0 1,150 2,300 4,600
Feet

Map 2-5
Vacant Commercial and Industrial Land and Development Constraints
City of Springfield
Oregon

Legend
- City Limits
- Urban Growth Boundary
- Tax Lots

Plan Designation
- Campus Industrial
- Commercial
- Commercial Mixed Use
- Heavy Industrial
- LIGHT MED IND MIXED USE
- Light Medium Industrial
- Major Retail Center
- Medium Density Res Mixed
- Mixed Use
- Special Heavy Industrial

Development Constraints
- Willamette River Greenway
- 100-year Floodplain
- BPA Easements

Note: Development constraints shown on this map do not preclude development. These constraints may add complexity to land use review or potentially reduce development density. These areas are counted as constrained, but buildable.

0 1,050 2,100 4,200
Feet

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Table 2-8 shows vacant land by plan designation and by parcel size.[6] This analysis is useful in that it shows the distribution of vacant land by parcel size, which allows an evaluation of whether a sufficient mix of parcel sizes is available. The distribution of buildable land by parcel size varies by plan designation, with the results showing the City has no vacant tax lots 20 acres or larger.

Table 2-8. Buildable acres in vacant tax lots by plan designation and parcel size, Springfield UGB, 2008

	Lot Size (Buildable Acres)									
Plan Designation	<0.25	0.25-0.49	0.50-0.99	1.00-1.99	2.00-4.99	5.00-9.99	10.00-19.99	20.00-50.00	50+	Total
Total Acres										
Industrial										
Campus Industrial	0.2	0.3	0.0	4.7	18.6	19.7	10.8	0.0	0.0	54.3
Light Medium Industrial	3.5	5.2	9.7	15.3	20.7	6.1	30.0	0.0	0.0	90.5
Heavy Industrial	1.0	2.4	8.8	14.7	29.3	19.0	25.8	0.0	0.0	101.0
Special Heavy Industrial	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	9.1
Subtotal	**4.7**	**7.9**	**18.5**	**34.6**	**68.6**	**53.9**	**66.6**	**0.0**	**0.0**	**254.8**
Commercial										
Commercial	4.4	6.4	10.8	7.5	6.5	13.0	0.0	0.0	0.0	48.6
Community Commercial										
Major Retail Center	0.7	1.4	1.8	1.7	0.0	0.0	0.0	0.0	0.0	5.6
Subtotal	**5.0**	**7.8**	**12.6**	**9.3**	**6.5**	**13.0**	**0.0**	**0.0**	**0.0**	**54.1**
Mixed Use										
Commercial Mixed Use	1.2	1.3	1.9	5.4	7.6	8.5	0.0	0.0	0.0	25.9
Light Medium Industrial Mixed Use										
Medium Density Res Mixed	0.5	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.7
Mixed Use	0.5	0.3	0.0	4.9	7.2	5.2	0.0	0.0	0.0	18.0
Subtotal	**2.2**	**2.2**	**2.5**	**10.3**	**14.8**	**13.6**	**0.0**	**0.0**	**0.0**	**45.6**
Total	**11.9**	**17.9**	**33.6**	**54.1**	**89.9**	**80.5**	**66.6**	**0.0**	**0.0**	**354.5**
Number of Tax Lots										
Industrial										
Campus Industrial	1	1	0	3	5	3	1	0	0	14
Light Medium Industrial	19	13	12	11	7	1	2	0	0	65
Heavy Industrial	8	6	12	10	8	2	2	0	0	48
Special Heavy Industrial	0	0	0	0	0	1	0	0	0	1
Subtotal	**28**	**20**	**24**	**24**	**20**	**7**	**5**	**0**	**0**	**128**
Commercial										
Commercial	29	17	16	5	2	2	0	0	0	71
Community Commercial										
Major Retail Center	4	4	2	1	0	0	0	0	0	11
Subtotal	**33**	**21**	**18**	**6**	**2**	**2**	**0**	**0**	**0**	**82**
Mixed Use										
Commercial Mixed Use	12	5	3	4	2	1	0	0	0	27
Light Medium Industrial Mixed Use										
Medium Density Res Mixed	4	2	1	0	0	0	0	0	0	7
Mixed Use	4	1	0	4	2	1	0	0	0	12
Subtotal	**20**	**8**	**4**	**8**	**4**	**2**	**0**	**0**	**0**	**46**
Total	**81**	**49**	**46**	**38**	**26**	**11**	**5**	**0**	**0**	**256**

Source: City of Springfield GIS data; analysis by ECONorthwest
Note: Buildable acres includes "constrained" acres and "unconstrained" acres

[6] The table shows total acres in vacant tax lots (constraints are not netted out)

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 use different improvement to land value ratio thresholds.

To identify lands with redevelopment potential, ECO analyzed improvement to land value ratios and building coverage on tax lots. As a first pass, tax lots were classified using the following criteria:

Category	Criteria
Higher Redevelopment Potential	Improvement to land value ratio <=0.3:1.0
Moderate Redevelopment Potential	Building coverage <10% of total lot area and improvement value <=0.3:1.0
Lower Redevelopment Potential	Building coverage <20% of total lot area and improvement value >=0.3:1.0 and <=0.5:1.0

Table 2-9 shows the results of applying the criteria above. To better understand the implications on pre-existing employment, ECO associated the number of employees associated with each category. The results show a distribution that suggests lands in the higher and moderate categories account for a relatively small percentage of total employment in Springfield (about 3.5%). The lower potential category includes 19% of the city's employment.

Table 2-9. Tax lots by Redevelopment Potential categories

Category	Total Acres	Unconstrained Acres	% of Land Base	Employ-ment
Higher Potential	352	352	10%	478
Moderate Potential	304	236	9%	833
Lower Potential	947	947	28%	7,107
Total	1,603	1,535	47%	8,418
Vacant Acres	669	544	20%	
Total Acres in Land Base	**3,415**	**985**	**100%**	**36,706**

Source: City of Springfield GIS data; analysis by ECONorthwest

Because the improvement to land value ratio is a gross indicator, it is reasonable to assume that not all of parcels that meet this criterion for redevelopment *potential* will be assumed to redevelop during the planning period.

The results in Table 2-9 were shared with the Technical Advisory Committee (TAC) and the Stakeholder Committee for review and discussion. Both committees recommended that the higher and moderate categories be considered as part of the land base, with some caveats:

- The TAC was concerned about access management policies on East Main Street and their implications for redevelopment. They recommended that redevelopment potential be discounted on East Main.

- The Stakeholder Committee recommended that all tax lots under five acres in the higher and moderate categories be considered available for development, which 50% of tax lots larger than 5 acres be considered available for development.

Table 2-10 shows potentially redevelopable land by plan designation and by parcel size.[7] This analysis is useful in that it shows the distribution of potentially redevelopable land by parcel size, which allows an evaluation of whether a sufficient mix of parcel sizes is available. The distribution of buildable land by parcel size varies by plan designation, with the results showing the City has very few vacant tax lots (1) over 20 acres with redevelopment potential.

[7] The table shows total acres in vacant tax lots (constraints are not netted out)

Table 2-10. Buildable acres in potentially redevelopable tax lots by plan designation and parcel size, Springfield UGB, 2008

	Lot Size (Buildable Acres)									
Plan Designation	<0.25	0.25-0.49	0.50-0.99	1.00-1.99	2.00-4.99	5.00-9.99	10.00-19.99	20.00-50.00	50+	Total
Total Acres										
Industrial										
Campus Industrial	0.2	0.5	1.9	3.4	5.0	0.0	0.0	0.0	0.0	11.0
Light Medium Industrial	3.9	10.0	10.6	11.9	33.3	9.2	0.0	0.0	0.0	79.0
Heavy Industrial	1.4	2.8	8.7	24.5	53.7	16.3	11.2	0.0	0.0	118.6
Special Heavy Industrial	0.0	0.0	0.0	1.7	0.0	0.0	6.2	31.6	0.0	39.5
Subtotal	**5.5**	**13.3**	**21.2**	**41.6**	**92.0**	**25.6**	**17.4**	**31.6**	**0.0**	**248.1**
Commercial										
Commercial	7.6	13.7	21.8	12.7	20.6	0.0	0.0	0.0	0.0	76.4
Community Commercial										
Major Retail Center	1.5	1.8	0.9	0.0	0.0	0.0	0.0	0.0	0.0	4.3
Subtotal	**9.1**	**15.5**	**22.8**	**12.7**	**20.6**	**0.0**				**80.7**
Mixed Use										
Commercial Mixed Use	9.6	7.8	14.3	10.0	8.9	0.0	0.0	0.0	0.0	50.6
Light Medium Industrial Mixed Use	0.1	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Medium Density Res Mixed	0.4	0.3	2.5	1.2	9.2	0.0	0.0	0.0	0.0	13.5
Mixed Use	1.5	2.2	2.8	3.8	12.4	0.0	0.0	0.0	0.0	22.7
Subtotal	**11.6**	**10.5**	**20.2**	**15.0**	**30.5**	**0.0**	**0.0**	**0.0**		**87.9**
Total	**26.2**	**39.4**	**64.2**	**69.2**	**143.2**	**25.6**	**17.4**	**31.6**	**0.0**	**416.8**
Number of Tax Lots										
Industrial										
Campus Industrial	1	1	2	2	2	0	0	0	0	8
Light Medium Industrial	38	26	14	9	13	2	0	0	0	103
Heavy Industrial	22	6	12	16	16	3	1	0	0	80
Special Heavy Industrial	0	0	0	1	0	0	0	1	0	4
Subtotal	**61**	**33**	**28**	**28**	**31**	**5**	**1**	**1**	**0**	**195**
Commercial										
Commercial	70	37	31	9	6	0	0	0	0	153
Community Commercial										
Major Retail Center	17	6	1	0	0	0	0	0	0	24
Subtotal	**87**	**43**	**32**	**9**	**6**	**0**				**177**
Mixed Use										
Commercial Mixed Use	69	22	21	7	3	0	0	0	0	122
Light Medium Industrial Mixed Use	1	1	1	0	0	0	0	0	0	3
Medium Density Res Mixed	2	1	3	1	2	0	0	0	0	9
Mixed Use	11	7	4	3	4	0	0	0	0	29
Subtotal	**83**	**31**	**29**	**11**	**9**	**0**	**0**	**0**		**163**
Total	**231**	**107**	**89**	**48**	**46**	**5**	**1**	**1**	**0**	**535**

Source: City of Springfield GIS data; analysis by ECONorthwest
Note: Buildable acres includes “constrained” acres and “unconstrained” acres

Map 2-6
Potentially Redevelopable Commercial and Industrial Land
City of Springfield
Oregon

Legend
- City Limits
- Urban Growth Boundary
- Tax Lots

Plan Designation
- Campus Industrial
- Commercial
- Commercial Mixed Use
- Heavy Industrial
- LIGHT MED IND MIXED USE
- Light Medium Industrial
- Major Retail Center
- Medium Density Res Mixed
- Special Heavy Industrial
- Mixed Use

Note: Redevelopment potential uses the Medium range assumptions recommended by the TAC and includes lots that meet the following criteria:

Improvement to Land Value Ratio <=0.3

OR

Building Coverage <10%

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0 1,200 2,400 4,800
Feet

SHORT-TERM LAND SUPPLY

This section evaluates the short-term supply of land in the Springfield portion of the Metropolitan UGB. It begins with an overview of the policy context that requires this analysis, and then 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 Springfield) make a commitment to providing 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 percent 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 Springfield 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

The short-term supply analysis includes all lands within the Springfield portion of the Metropolitan UGB. To analyze the short term supply of land available for industrial and other employment uses, ECO worked closely with staff from the Springfield Public Works and Development Services Departments. A number of service issues were identified through this process that affect many different sites within the city. Identified deficiencies spanned the range of services, including water, wastewater, stormwater and transportation.

Despite the issues staff identified, all areas within the Springfield UGB can be considered to technically meet the Goal 9 Rule criteria of "engineering feasibility." Staff did not identify any areas where it was not possible to extend services within one year—provided that funding is available. Funding is a much broader and more complicated issue, but falls outside of the Goal 9 rule as written.

The analysis did identify the Jasper-Natron area as unlikely to meet the short-term supply criteria. This is due to a combination of wetlands that make drainage an issue as well as the distance from existing water and sewer trunk lines (more than one mile from the nearest 18" sewer line to the north end of the site).

Table 2-11 summarizes the number of vacant and potentially redevelopable acres in the short-term land supply. The results indicate that 91% of the vacant commercial and industrial land is considered available as short-term supply, and 85% of land with redevelopment

potential is available as short-term supply. Buildable land in the Jasper-Natron area is not considered part of the short-term land supply.

Table 2-11. Short-term land supply

Category/Plan Designation	Buildable Acres	Acres in Short-Term Supply	Percent in Short Term Supply
Vacant			
Commercial	54	46	84%
Industrial	255	232	91%
Mixed Use	46	46	100%
Subtotal	**355**	**323**	**91%**
Potentially Redevelopable			
Commercial	81	81	100%
Industrial	412	326	79%
Mixed Use	88	88	100%
Subtotal	**581**	**494**	**85%**

Source: City of Springfield GIS data; analysis by ECONorthwest

Chapter 3 Economic Trends and Factors Affecting Future Economic Growth in Springfield

Springfield exists as part of the larger economy of the southern Willamette Valley and is strongly influenced by regional economic conditions. For many factors, such as labor, Springfield does not differ significantly from the broader region. For other factors, such as income, it does. Thus, Springfield 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 Springfield. Each heading in this chapter represents a key trend or economic factor that will affect Springfield's economy and economic development potential. A more detailed analysis of economic trends and factors affecting Springfield's future economic growth is presented in Appendices A and B.

AVAILABILITY OF LABOR

The availability of trained workers in Springfield will impact development of Springfield's economy over the planning period. Key trends that will affect the workforce in Springfield over the next 20-years include Springfield's growing population, aging population, relatively low income, 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.

Table 3-1 shows population growth in the U.S., Oregon, the Willamette Valley, Lane County, Eugene, and Springfield for the 1990 to 2007 period. Lane County grew slower than the State average between 1990 and 2007, growing at 1.1% annually and adding more than 60,000 people. More than 60% of the County's population lived in the Eugene-Springfield area in 2007, with about 17% of the County's population in the Springfield city limits. Springfield's population grew faster than the County average, at 1.5% annually, adding 12,637 residents over the seventeen-year period.

Table 3-1. Population in the U.S., Oregon, the Willamette Valley, Lane County, Springfield, and Eugene, 1990-2007

Area	Population			Change 1990 to 2007		
	1990	2000	2007	Number	Percent	AAGR
U.S.	248,709,873	281,421,906	301,621,157	52,911,284	21%	1.1%
Oregon	2,842,321	3,421,399	3,745,455	903,134	32%	1.6%
Willamette Valley	1,962,816	2,380,606	2,602,790	639,974	33%	1.7%
Lane County	282,912	322,959	343,140	60,228	21%	1.1%
Springfield	44,683	52,864	57,320	12,637	28%	1.5%
Eugene	112,669	137,893	153,690	41,021	36%	1.8%

Source: U.S. Census, the Population Research Center at Portland State University.
Notes: Benton, Clackamas, Lane, Linn, Marion, Multnomah, Polk, Washington, and Yamhill Counties represent the Willamette Valley Region. Figures for Springfield and Eugene are for areas inside their respective city limits.

Migration is the largest component of population growth in Oregon. Between 1990 and 2007, in-migration accounted for 70% of Oregon's population growth. Over the same period, in-migration accounted for 74% of population growth in Lane County, adding nearly 44,500 residents over the seventeen-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.[8]

The average age of Springfield residents is increasing. According to the US Census, Springfield's average age was 32 in 2000, 30 in 1990, and 26 in 1980. Table 3-2 shows the change in age distribution for Springfield between 2000 and 2008. Population increased in all age groups. The age group that increased the most was people aged 45 to 64, which grew by 2,540 people (24%). This age group's proportion of the total population increased from 20% to 23% during this time period. The largest percentage decrease was in people aged 18 to 24, which shrunk by 913 people (16%).

[8] 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.

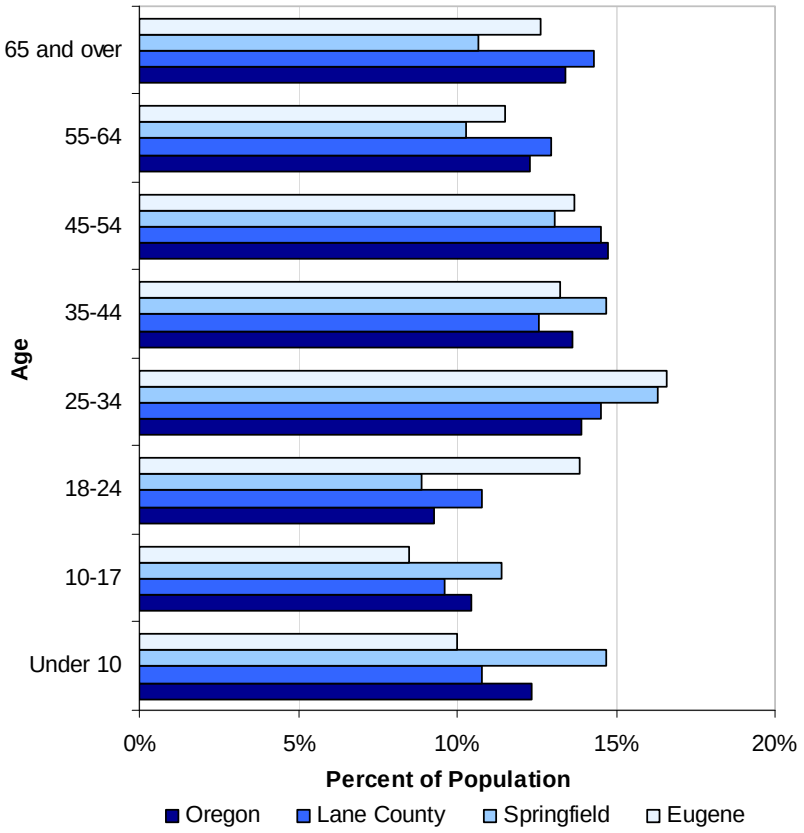
Table 3-2. Change in age distribution, Springfield, 2000-2008

	2000		2008		Change 2000 to 2008		
Age Group	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	4,327	8%	4,121	7%	-206	-5%	-1%
5-17	10,069	19%	10,477	19%	408	4%	0%
18-24	5,890	11%	4,977	9%	-913	-16%	-2%
25-44	16,609	31%	17,372	31%	763	5%	0%
45-64	10,546	20%	13,086	23%	2,540	24%	3%
65 and over	5,423	10%	5,983	11%	560	10%	0%
Total	**52,864**	**100%**	**56,016**	**100%**	**3,152**	**6%**	**0%**

Source: U.S. Census 2000 and Claritas 2008

Springfield's population was younger than the County or State averages in 2008. Figure 3-1 shows the age structure for Oregon, Lane County, Eugene, and Springfield in 2008. Springfield had a greater proportion of its population under 44 years of age (66%) than Eugene (62%), Lane County (58%), or Oregon (60%). Springfield also had a smaller share of population aged 55 and older, 21% of Springfield's population, compared to 24% in Eugene, 27% in the County, 26% in the State.

Figure 3-1. Population by age, Oregon, Lane County, Eugene, and Springfield, 2008



Source: Claritas 2008, percentages calculated by ECONorthwest.

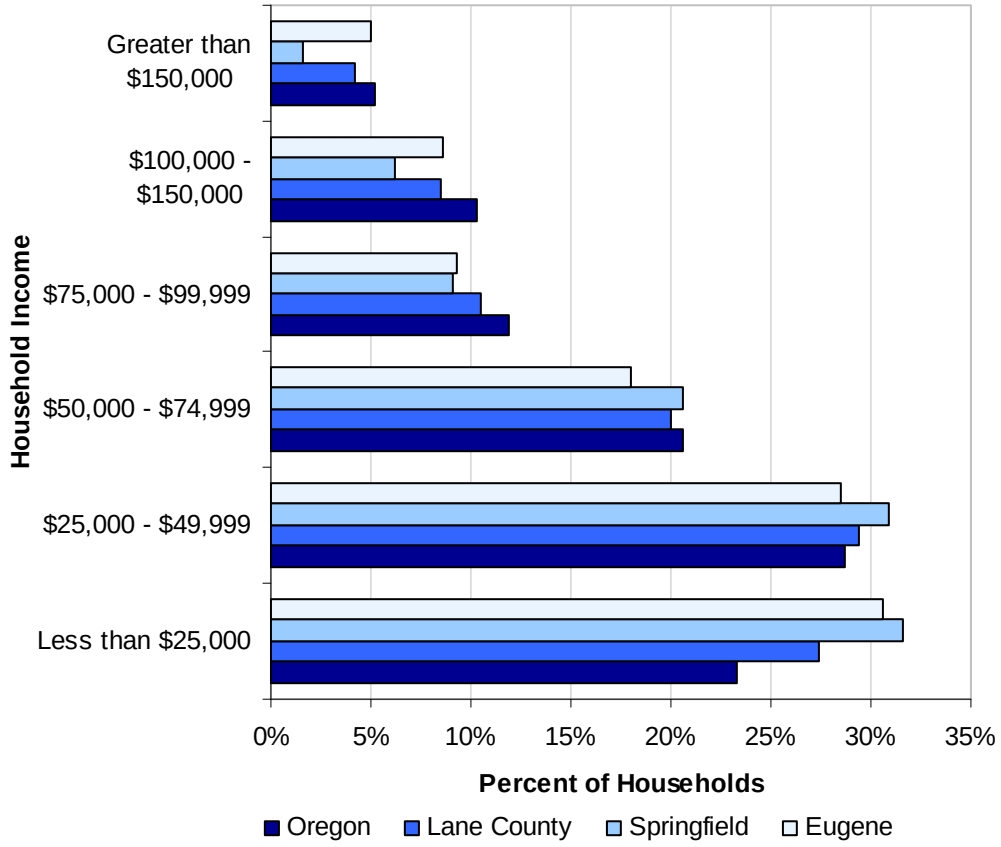
INCOME

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

In addition, wages in Lane 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 Lane County are impacted more than the national average by downturns in either the national economy or in industries in Oregon that are dependant on natural resources (e.g., timber and wood processing or R.V. manufacturing).

Lane County's median household income in 2006 was $42,127, compared with $46,230 for Oregon and the national average of $48,451. Figure 3-2 shows the distribution of household income in Oregon, Lane County, Eugene, and Springfield in 2008. Figure 3-2 shows that a larger share of households in Springfield (32%) had an income of $25,000 or less, compared to Lane County (27%) or the State (23%). Springfield also has a lower share of households with income above $75,000 (17%), compared to Eugene (23%), the County (23%), or the State (27%).

Figure 3-2. Distribution of household income of U.S., Oregon, and Lane County, 2008



Source: Claritas 2008

The low average income in Lane County and Springfield, relative to Oregon and the U.S., make Springfield attractive to some firms considering moving within the U.S. Firms continue to outsource back-office functions, such as call centers or administrative functions, within the U.S. Lane County's relatively low labor costs and the availability of trained workers make Lane County attractive to firms considering relocating back-office functions.

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. In 2007, 26% of Springfield's residents had an associate's degree or higher, compared to the County average of 37% and Eugene's average of 47% of residents with an associate's degree or higher. Firms locating in Springfield will be able to attract employees from within Springfield and across the Eugene-Springfield region.

WORKFORCE PARTICIPATION

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.

In 2007, Springfield's labor participation rate was 67% of their over-16 population of over 43,000. Of their 67% in the labor force, 10% were unemployed. In comparison, Lane County had 63% labor force participation, 8% of whom were unemployed. Labor force participation rates have dropped by about 1% since 2000, when Springfield's labor participation rate was 68%, compared to the State average of 64%.

COMMUTING PATTERNS

Commuting plays an important role in Springfield's economy. Springfield residents generally have a shorter commute than residents of Lane County or Oregon. Eighty percent of Springfield residents commute 29 minutes or less, compared to 77% of Lane County residents and 69% of Oregonians. Residents of Springfield are less likely to have a long commute, with 7% of Springfield's residents commuting 45 minutes or more, compared to 10% of Oregonians.

The majority of Springfield's workforce (79%) lives in Lane County, with 29% in Springfield and 23% in Eugene. The majority of Springfield residents (81%) work in Lane County, with 25% working in Springfield and 40% working in Eugene.

The implication of this data is that most people living or working in Springfield commute within the Eugene-Springfield area. This commuting pattern gives Springfield firms access to the workforce within the Eugene-Springfield region. Even though commutes in Springfield are generally shorter than the State average, these commuting patterns create demand for automotive and other forms of transportation, both within Springfield and on roads throughout the Eugene-Springfield region.

Increasing energy prices may impact commuting patterns within the Eugene-Springfield area. The impact is most likely to be greatest for residents living in the smaller cities around the Eugene-Springfield area (e.g., Veneta or Oakridge) because the commute to Springfield is longer from these outlying cities. Willingness to commute by most workers living

and working within Eugene and Springfield is likely to have relatively little impact from fuel prices, unless prices increase dramatically.

CHANGES IN EMPLOYMENT

The economy of the nation changed in the 1980 to 2006 period. These changes affected the composition of Oregon's economy, including Lane County and Springfield. The most important shift during this period at the national-level was the shift in employment from a focus on manufacturing to services. The most important shift in Oregon, including Lane County and Springfield, has been the shift from a timber-based economy to a more diverse economy, with the greatest employment in services. The most important trends and changes in employment for Springfield over the next 20-years are: shifts in employment, growing importance of health care, continued importance of manufacturing, and outlook for growth in Springfield.

SHIFTS IN EMPLOYMENT

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

In the 1970s Oregon started to transition away from reliance on traditional resource-extraction industries. 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[9] and concurrent growth of employment in high-technology manufacturing industries (Industrial Machinery, Electronic Equipment, and Instruments[10]).

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.

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

[10] SIC 35, 36, 38

The changes in employment in Lane County have followed similar trends as changes in national and state employment. Between 1980 and 2006, Lane County added more than 53,000 jobs. The sectors with the greatest change in share of employment were Services and Retail Trade, adding more than 38,500 or 73% of new jobs. Over the 26-year period, manufacturing added more than 4,000 jobs (8% of new jobs), with the greatest growth in: Transportation Equipment manufacturing (R.V. manufacturing), Computer and Electronics manufacturing, and Machinery manufacturing.

Some industries in the region's employment base have volatile employment cycles. These industries typically have boom and bust cycles, which result cycles of hiring and layoffs. The lumber and wood products industry is tied to national housing market cycles, with decreased productivity and employment in slow housing markets. The RV manufacturing industry is tied to broader national economic trends and energy price changes. Finally, the region's high-tech companies are subject to market trends in the high-tech industry, including changes in production methods and consumer purchasing patterns. Two major high-tech firms, Hynix and Sony, located in the Eugene-Springfield region and closed their production facilities between the mid-1990's and 2008.

The average pay per employee in Lane County in 2006 was $33,240. The sectors with above average pay and high employment were: Construction, Manufacturing, Government, and Health and Social Services. The sectors with below average pay and high employment were: Retail, Accommodations and Food Services, and Administration and Support and Waste Management.

In 2006, Springfield had 27,310 jobs at 1,819 establishments, with an average firm size of 15 employees. The sectors with the greatest employees were: Retail (13%), Government (13%), Health Care and Social Assistance (11%), and Manufacturing (10%). These sectors accounted for 17,863 or 65% of Springfield's jobs.

OUTLOOK FOR GROWTH IN SPRINGFIELD

The State forecasts that employment will continue growing in Lane County at 1.4% average annual growth, compared with the State average of 1.3% average annual growth. The sectors that will lead employment growth in Lane County for the ten-year period are: Health Care & Social Assistance (adding 5,600 jobs), Government (adding 3,600 jobs), Professional and Business Services (adding 3,000 jobs), Leisure & Hospitality (adding 2,800 jobs), and Retail Trade (adding 2,400 jobs). Together, these sectors are expected to add 17,400 new jobs or 76% of

employment growth in Lane County. Springfield has a high concentration of employment in Health Care & Social Assistance, especially with the relocation of PeaceHealth's regional hospital to RiverBend. Springfield's concentration of employment in health care may further increase based on where McKenzie-Willamette Medical Center relocates to and the size of the new hospital.

One way to determine opportunities for economic development is to determine the sectors with the greatest expected growth in the region (based on the Oregon Employment Department's forecast for employment growth in Lane County between 2006 and 2016) and the greatest concentration of existing employment in the community (based on a comparison of employment data in Springfield and the State in 2006). Sectors with high employment concentration in Springfield and high growth forecasts are the industries most likely to grow. These sectors in Springfield are: Health and Social Assistance; Administrative and Support and Waste Management Services; Construction; and Accommodations and Food Services.

Springfield may have opportunities for growth in other sectors that the State forecasts will have high growth. Springfield, however, does not currently have high concentrations in some of these sectors: Arts, Entertainment, and Recreation; Management of Companies and Enterprises; Professional, Scientific, and Technical Services; and Private Educational Services.

It is unclear what long-term impact rising fuel and transportation costs will have on Oregon's economy, including Springfield. Globalization and outsourcing of jobs, especially manufacturing jobs, has occurred since the 1980's, changing the state's economy. Globalization depends, in part, on inexpensive transportation of materials and manufactured goods. Businesses have relocated from areas with lower labor costs, in part, because transportation costs were low.

Increases in fuel prices have resulted in higher transportation costs, decreasing the benefits of lower wages. It is possible that, if fuel and transportation costs remain high and/or increase, companies may move 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.

REGIONAL BUSINESS ACTIVITY

GROWING IMPORTANCE OF HEALTHCARE

PeaceHealth has recently relocated its main hospital to the Gateway area in Springfield. The RiverBend campus will have 2,500 PeaceHealth employees by the end of 2008, in occupations including: physicians, nurses, medical technicians, other medical staff, environmental services staff, and food services staff. PeaceHealth started relocating administrative and other staff to the RiverBend Annex in 2006 (located in the former Sony disc manufacturing building), which has 700 employees.

The RiverBend campus will attract additional firms. For example, Oregon Medical Labs, Oregon Imaging Center, and the Northwest Specialty Clinics will have approximately 350 staff and physicians at the RiverBend campus. The RiverBend Pavillion will have about 300 employees, at the Oregon Medical Group, Oregon Imaging, and other medical businesses.

Employment in health care may also increase in Springfield, depending on where McKenzie-Willamette Medical Center locates its new facility. If the new facility is located in Springfield and if the facility is bigger and employs more people than the existing hospital, Springfield will have another major healthcare center as well as more healthcare employment.

CONTINUED IMPORTANCE OF MANUFACTURING

Manufacturing continues to be important to the economy in Springfield and in Lane County. Manufacturing accounted for 14% of employment (more than 20,000 jobs) in Lane County and 10% of employment (more than 2,700 jobs) in Springfield in 2006. [11] Manufacturing industries continue to offer jobs with above-average wages, making these jobs more desirable.

Manufacturing grew slowly in Lane County between 1980 and 2006, at an average annual rate of 0.3%, adding more than 4,000 jobs. The State forecasts continued growth in manufacturing at the same rate over the 2006 to 2016 period.

Manufacturing is a traded sector industry, which brings revenue into Oregon and Lane County from outside the State. The following manufacturing industries accounted for two-thirds ($11 billion) of revenue from exports in Oregon in 2007: Computer & Electronic Production,

[11] Oregon Employment Department

Transportation Equipment, Machinery Manufacturers, Chemical Manufacture, and Primary Metal Manufacturers.[12] These industries are all present in Lane County, accounting for 44% of manufacturing employment in the County.

Continuing changes in the economy may impact manufacturing in Lane County. For example, high energy prices may have been a factor in the decrease of RV manufacturing in Lane County, which has resulted in the layoff of employees beginning in 2006. In addition, the economic downturn and consolidation of the paper manufacturing industry may result in layoffs in firms that manufacture wood products and paper.

Although much of this employment is located outside of Springfield, it affects residents of Springfield, either directly through job layoffs or indirectly through decreases in economic activity.

TOURISM IN LANE COUNTY

Tourism brings economic activity into Lane County from outside sources. Tourism expenditures in Lane County in 2006 grew 7.5%, to $553 million, exceeding the statewide tourism growth rate for the year. Tourism accounts for about 7,500 jobs in Lane County.

A major source of tourism spending is overnight accommodations. In 2008, the Eugene-Springfield Region had 3,118 total rooms. Occupancy rates varied from 59% in fiscal year 2002 and 2003 to 72% in fiscal year 2006. Springfield levies a 9.5% transient lodging tax on overnight accommodations. Between 2000 and 2008, Springfield's lodging tax revenue varied from $1.2 million in fiscal year 2004 to $1.6 million in fiscal year 2007. Springfield's transient lodging tax revenues accounted for about one-quarter of total County lodging tax revenues.

SIGNIFICANCE OF AGRICULTURE IN LANE COUNTY

Agriculture continues to be important in Lane County's economy. In 2002, Lane County had approximately $88 million in total gross sales from agriculture. The top five agricultural products in Lane County in 2002 were: Nursery and greenhouse ($21 million); milk and dairy ($10.3 million): cattle and calves ($7.6 million), fruits, tree nuts, and berries ($6.7 million); and vegetables, melons, potatoes, and sweet potatoes ($5.6 million).

[12] "Economic Data Packet, Mary 2008," Oregon Economic And Community Development Department

While agriculture is an important source of economic activity in Lane County, Springfield has relatively little agricultural employment within the UGB. In 2006, about 1% of Springfield's covered employment (282 employees) were employed in the Agriculture, Forestry, Fishing, and Mining sectors. About half of these jobs (136 employees) were in Forestry and Logging. Consistent with statewide land use policy, land within the Springfield UGB is committed for future urban uses, rather than agricultural uses.

SPRINGFIELD'S COMPARATIVE ADVANTAGES

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

There is little that Springfield can do to influence national and state conditions that affect economic development. Springfield can influence local factors that affect economic development. Springfield's primary comparative advantages are its location on I-5, proximity to Eugene, access to skilled labor and cost of labor, and high quality of life. These factors make Springfield attractive to residents and businesses that want a high quality of life where they live and work.

The local factors that form Springfield's comparative advantage are summarized below and described in detail in Appendix B.

- **Location.** Springfield is located in the Southern Willamette Valley, next to Eugene, between the Willamette River (to the south) and McKenzie River (to the north). Interstate 5 runs to the west of Springfield and Highway 126 runs east-west through Springfield.

  Springfield's location, access to I-5 and Highway 126, and proximity to Eugene are primary comparative advantages for economic development in Springfield. These factors make Springfield attractive to businesses, especially those wanting to locate in the Willamette Valley.

- **Buying Power of Markets.** The buying power of Springfield and the Eugene-Springfield area forms part of Springfield's comparative advantage by providing a market for goods and services. According to estimates on household spending by Claritas, households in Springfield are expected to spend about $937 million in 2008, about 14% of total household expenditures in the Eugene-Springfield Region. Springfield households spend an average of $42,700 on commonly purchased items, not including housing, Springfield's households spent less than the regional and nation averages, with about 91% of the $47,000 average expenditures for all households in the Eugene-Springfield MSA and 84% of national average household expenditures (Claritas, 2008).

  The buying power of households in the Eugene-Springfield region provides Springfield with a comparative advantage. Access to households in the Eugene-Springfield Region provides businesses in Springfield with greater sales potential than other, smaller cities in the Southern Willamette Valley. As the population in Springfield (and the Eugene-Springfield region) grows, Springfield will need to provide more land for firms that provide services to residents and businesses. The majority of this land will be in areas of growth, such as in the Mohawk area.

- **Transportation.** Businesses and residents in Springfield have access to a variety of modes of transportation: automotive (Interstate 5, multiple State highways, and local roads); rail (Union Pacific and Amtrak); transit (LTD); and air (Eugene Airport). Springfield has excellent automotive access for commuting and freight movement. Springfield is located along Interstate 5, the primary north-south transportation corridor on the West Coast, linking Springfield to domestic markets in the United States and international markets visa West Coast ports. Springfield has developed along Highway 126, Highway 126 is the primary east-west highway in Lane County, running from Florence to Redmond.

  Other transportation options in Springfield include: multiple Union Pacific rail lines provide freight service; transit service from the Lane Transit District provides bus service within Springfield and connects Springfield with Eugene; and the Eugene Airport provides both passenger and freight service.

Springfield's access to multiple modes of transportation provides Springfield with advantages in attracting businesses that need easy access to I-5 for automotive or some types of freight movement. Springfield may have disadvantages in attracting businesses that need large lots and easy access to I-5 (e.g., warehousing and transportation) because of the lack of buildable industrial land along I-5 near Highway interchanges.

- **Public Facilities and Services.** Provision of public facilities and services can impact a firm's decision on location 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.

  Springfield's property tax rate ranges from $16.32 and $18.65 per $1,000 of assessed value, compared with a state average of $15.20. The property tax rate in Eugene is more variable than Springfield's, ranging from $10.31 (possibly located in an area outside of Eugene's city limits) to $24.68 per $1,000 of assessed value.[13]

  The City has sufficient water to meet expected residential and employment needs. The local water provider, Springfield Utility Board (SUB), is not concerned about its ability to supply water to any type of industry, including water-intensive industries like food processing. SUB has lower water rates than the national average. The combination of available and lower cost water may be an advantage to attracting some types of businesses to Springfield.

  Springfield expects to be able to meet demand for wastewater services resulting from expected growth. The City expects to provide service to 6,100 new equivalent dwelling units, which includes residences and businesses, over the next 20-years.

- **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, redevelopment, and infill development. Success at attracting or retaining firms may depend on availability of

[13] Property tax rates for Springfield and Eugene are a composite of the rates for all properties with an address in Eugene or Springfield. It is almost certain that some of these properties is located outside of both the Eugene and Springfield urban growth boundaries and are subject to unincorporated Lane County tax rates.

attractive sites for development, especially large sites. For example, Springfield was attractive as a location of PeaceHealth's new hospital because the City had a large, relatively flat site located relatively near to Interstate 5 and Beltline Highway.

Springfield's decisionmakers articulated their support for provision of employment land through the economic development strategy and in other policy choices. Objectives in the economic development strategy supporting the provision of employment land include objectives to: (1) provide employment land in a variety of locations, configurations, and site sizes for industrial and other employment uses, (2) provide an adequate competitive short-term supply of suitable land to respond to economic development opportunities as they arise, (3) reserve sites over 20-acres for special developments and industries that require large sites, and (4) provide adequate infrastructure to sites.

The economic development strategy also includes objectives that support redevelopment of existing land within the UGB, especially in Downtown and in Glenwood, and infill development. In addition, the City is promoting redevelopment in Downtown through the creation of the Urban Renewal District in Downtown Springfield.

- **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, and experience of available workers as well.

  Commuting is common in Springfield. About 40%of the people who live in Springfield commute to Eugene for work. Less than one-third of Springfield's workers live in Springfield. The implication of this workforce analysis is that, while only one-third of Springfield's workforce lives within the City, Springfield are able to attract educated workers from most of Eugene and surrounding areas in Lane County.

  It does not appear that workforce will be a constraint on employment growth in Springfield. Springfield should be able to continue to draw on residents of Eugene for workers, even if energy prices continue to rise but Springfield's ability to attract workers from outside of the Eugene-Springfield area may be negatively impacted by continued increases in energy prices.

Opportunities for workforce training and post-secondary education for residents of the Eugene-Springfield area include: the University of Oregon, Lane Community College, Northwest Christian College, and Gutenberg College.

Land Demand and Site Needs in Springfield

OAR 660-009 requires cities to maintain a 20-year inventory of sites designated for employment. To provide for at least a 20-year supply of commercial and industrial sites consistent with local community development objectives, Springfield needs an estimate of the amount of commercial and industrial land that will be needed over the planning period. Demand for commercial and industrial land will be driven by the expansion and relocation of existing businesses and new businesses locating in Springfield. The level of this business expansion activity can be measured by employment growth in Springfield.

POTENTIAL GROWTH INDUSTRIES

An analysis of growth industries in Springfield should address two main questions: (1) Which industries are most likely to be attracted to the Eugene-Springfield area? and (2) Which industries best meet Springfield's economic objectives? The types of industries that Springfield wants to attract have the following attributes: high-wage, stable jobs with benefits; jobs requiring skilled and unskilled labor; employers in a range of industries that will contribute to a diverse economy; and industries that are compatible with Springfield's community values.

KEY TRENDS AFFECTING EMPLOYMENT GROWTH

Previous chapters reviewed historical growth trends by industry in the Eugene-Springfield Region and Lane County since 1980 and employment in Springfield. A review of key historical trends in employment in the Eugene-Springfield Region can help identify potential growth industries in Springfield. In other words, economic opportunities in Springfield are a function of regional historical trends and future economic shifts.

While nearly all sectors of the economy in the Region experienced growth over this period, some sectors grew faster than others, resulting in a shift in the distribution of employment by sector. Key **historical trends** include in the 1980 to 2007 period include:

- A substantial increase in the share of employment in Services, which increased from 23% to 42% of covered employment in Lane County.

- A decrease in the share of employment in Retail Trade, from 21% to 13%. The number of jobs in retail did not decrease substantially over the 27-year period (a loss of nearly 550 retail jobs) but growth in retail jobs lagged behind growth in other sectors, especially service sectors.

- A decline in the share of employment in Manufacturing, which fell from 20% to 13% of covered employment.

- A decline in the share of employment in Government, which decreased from 20% to 16% of covered employment

Together, these sectors represent about 84% of employment in the County. Other sectors of the County's economy have a relatively stable and small share of the County's employment.

Historical employment trends show a substantial shift in the Region's economy that mirrored shifts in the State and national economies, specifically the substantial growth in Services and decline of Manufacturing. While these trends are expected to continue into the future, **future shifts** are not expected to be as dramatic as those experienced over the past twenty years. There are several reasons for this expectation (e.g., that the future will be somewhat different that the past):

- Growth in the Services sector has matured and should track more closely with overall employment and population growth rather than continuing to gain a substantial share of total employment.

- The decline in Manufacturing was due, in part, to decreased timber harvests and the outsourcing of production to facilities in countries with lower costs. Timber harvests are expected to level off and increase in the future as commercial forests that were replanted since the 1970s grow to a harvestable size. While outsourcing will continue, much of what can be outsourced has already gone. Remaining Manufacturing firms are tied to their region to be near supplies or markets, or manufacture specialized goods were small production quantities, fast turn-around times, and the need for quality limit the ability to outsource.

- The mix of Manufacturing jobs in the Eugene-Springfield Region changed over the past twenty years with declines in Wood Products and the growth of employment in Recreational Vehicle (RV) manufacturing, machinery manufacturing, metals manufacturing, and high-tech industries, such as Computer and Electronics Manufacturing.

BUSINESS CLUSTERS IN SPRINGFIELD

One way to assess the types of businesses that are likely to have future growth in an area is to examine relative concentration and employment growth of existing businesses. This method of analysis can help determine relationships and linkages within in industries, also called industrial clusters. Sectors that are highly concentrated (meaning there are more than the "average" number of businesses in a sector in a given area) and have had high employment growth are likely to be 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 sectors with the most growth potential (identified in Chapter 3) are: Health and Social Assistance; Administrative and Support; Construction; and Accommodations and Food Services. Other sectors with growth opportunities are: Arts, Entertainment, and Recreation; Management of Companies and Enterprises; Professional, Scientific, and Technical Services; and Private Educational Services.

Table 4-1 shows existing and potential business clusters in Springfield. The clusters identified in Table 4-1 are based on employment trends, Springfield's comparative advantages, the OED's employment forecast for Lane County, the types of firms that have considered locating in Springfield, and analysis of existing and developing business clusters in Springfield and Lane County.

Table 4-1. Existing and potential business clusters in Springfield

Cluster	Employment Potential	Secondary Employment	Site Needs
Medical Services	Associated with RiverBend: 3,400 new jobs in 2008 Additional medical services Additional services Employment at a new McKenzie-Willamette Facility	Associated with RiverBend: Medical Services and Suppliers Research and Education Non-medical office space Services like retail, restaurants, financial services, etc.	Small sites (2 acres or less) on the RiverBend Campus or in the Gateway area Potential for a site of 20 acres or more for McKenzie-Willamette Hospital Small sites (2 acres or less) distributed in neighborhood or community commercial centers

Cluster	Employment Potential	Secondary Employment	Site Needs
Small Scale Manufacturing	Growth potential depends on firms choosing to locate in Springfield. Types of firms include: • Organic food processing • Cottage industries such as jewelry, apparel, or personal care products • Plastics manufacturing	Manufacturing of related or complementary products Additional small scale manufacturing	Sites on industrial land, in business parks, or in commercial areas. Site sizes may range from less than 1 acre to 10 acres.
Call Centers	Growth potential depends on firms choosing to locate in Springfield. Eugene and Springfield have advantages for attracting call centers because of the pool of trained call center workers.	Back-office functions for companies with call centers Services like retail, restaurants, financial services, etc.	Space in commercial buildings Firms may need a range of site sizes, ranging from fewer than 5 acres to about 20 acres. Some firms may use existing office space.
Back-Office Functions	Growth potential depends on firms choosing to locate in Springfield. There is a lot of national competition for these functions.	Related back-office functions (if a cluster grows) Services like retail, restaurants, financial services, etc.	Space in commercial buildings Most firms are likely to need sites of 5 acres or smaller or use existing office space
Tourism	Growth potential depends on holding events in the Eugene-Springfield area that attract visitors. Growth may also depend on development of infrastructure to attract and service visitors, such as hotels or outdoor activities.	Services like hotels, retail, restaurants, arts and entertainment, etc.	Site needs range from sites of less than 1 acre in existing developments to larger sites (5 acres or more) for hotels
High-tech	Growth potential depends on firms growing locally or choosing to locate in Springfield. Types of firms include: • Software development • Computer electronics • Computer service providers • Data centers	Service and materials providers Services like retail, restaurants, financial services, etc.	Site needs range from sites of 1 acre or less in existing developments to large sites (50 acres or more) for large existing businesses or data centers.
Wood Products	Growth potential depends on the international demand for wood products. The existing wood products and paper manufacturing cluster may be diminishing.	Services like retail, restaurants, financial services, etc.	Site needs range from sites of 2 acres or less to industrial sites of 20 acres or more

Cluster	Employment Potential	Secondary Employment	Site Needs
Biotech	Growth potential depends on firms choosing to locate in Springfield. There is a lot of national competition for these firms. Springfield has advantages in attracting these firms because of the University of Oregon's Biotech Program, presence of Invitrogen, and national growth in the industry.	Related biotech firms Suppliers or other specialized service providers	Site needs range from sites 1 acre or less to large sites of 20 acres or more.

TARGET INDUSTRIES

The characteristics of Springfield will affect the types of businesses most likely to locate in Springfield. Springfield's attributes that may attract firms are: the City's proximity to I-5, high quality of life, proximity to the University of Oregon, the presence of the RiverBend campus, positive business climate, availability of skilled and semi-skilled labor, and proximity to indoor and outdoor recreational opportunities. The types of businesses that may be attractive to Springfield include:

- **Medical Services.** The development of a medical cluster at RiverBend presents an opportunity to attract medical firms, medical research firms, and other professional services. PeaceHealth is in the process of attracting these firms, through development of a research-oriented relationship with OHSU and the University of Oregon. The possible siting of a new facility for McKenzie-Willamette Medical Center in Springfield presents additional opportunities for attracting medical services and employment in healthcare.

- **Services for seniors.** Springfield's growing population of retirees or near retirees, may attract or create demand for health services that provide services to older people, such as assisted living facilities or retirement centers. These facilities may prefer to locate in relatively close proximity to RiverBend.

- **Small Scale Manufacturing.** Springfield's attributes may attract small scale manufacturing firms (e.g., firms with fewer than 50 employees). Springfield may also be attractive to large manufacturing firms, provided that land is available for development. Examples of manufacturing include medical equipment, high-tech electronics, recreational equipment, furniture

manufacturing, specialty apparel, and other specialty manufacturing.

- **Call Centers**. The existing call center cluster may attract call centers to Springfield. The potential for growth in call centers in the Eugene-Springfield area will be dependent of the availability of skilled labor.

- **Back-Office Functions.** Springfield's high quality of life and relatively low wages may attract back-office functions, such as the Levi Strauss financial center in Eugene. Back-office functions include administrative functions, such as accounting or information technology. The potential for growth in back-office functions may be limited by national competition for this type of employment. Springfield may be more successful at attracting back-office functions for firms that have a reason to locate in the Region, such as firms with corporate headquarters on the West Coast or firms that do a substantial amount of business in the Willamette Valley.

- **Tourism.** Visitors may be attracted to Springfield to take advantage of recreational opportunities and other amenities. They may also be attracted as a result of regional events, such as the Olympic Track and Field trials, the Oregon Country Fair, or the University of Oregon Bach Festival. Industries that serve tourists, such as food services and accommodations, are likely to grow if tourism increases.

- **Specialty Food Processing.** Springfield's proximity to agricultural resources may make the City attractive to specialty food processing firms, such as those that specialize in organic or natural foods or wineries.

- **High-Tech.** Springfield's access to highly educated labor, access to comparatively inexpensive electricity, and high quality of life may make Springfield attractive to high-tech firms. The types of firms that may be attracted to Springfield range from high-tech manufacturing to data centers to software development.

- **Professional and Technical Services.** Springfield's attributes make it attractive to businesses that need access to educated workers and want a high quality of life. These types of businesses could include engineering, research, and other professional services that are attracted to high-quality settings.

Springfield's reputation as a blue-collar community may present challenges in attracting these types of businesses. Recent trends and efforts by the City suggest the reputation as a blue-collar community is in the process of changing. The City can facilitate this change through building off of the medical cluster forming at RiverBend and through promoting Springfield as a good place to locate professional service firms.

- **Green businesses.** There is no clear definition of what constitutes a green industry or business. In general, green businesses are those that produce products or services that improve or maintain environmental quality, as described in Appendix A. Opportunities for environmentally conscious businesses are growing. The types of green businesses that may choose to locate or expand in Springfield includes: green construction firms (e.g., firms that use LEED-certified building practices), organic food processing, sustainable logging and/or lumber products manufacturing, or alternative energy production (e.g., manufacturing solar panels or bio-fuels)

- **Corporate Headquarters.** Springfield's quality of life, location along I-5, and availability of educated workers may make Springfield attractive as a place to locate corporate headquarters. These same qualities, combined with the relatively low cost of semi-skilled labor and cluster of call centers, make Springfield attractive as a place to locate back-office functions, such as call centers.

- **Services for Residents.** Population growth will drive development of retail and government services, especially education, in Springfield.

- **Government and Public Services.** Springfield will continue to be the location for institutions such as: Springfield City Services, State services such as the Department of Motor Vehicles and Oregon Department of Transportation offices, the Springfield School District, and the Springfield Utility Board.

EMPLOYMENT FORECAST

To provide for an adequate supply of commercial and industrial sites consistent with plan policies, Springfield needs an estimate of the amount of commercial and industrial land that will be needed over the planning period. Goal 9 requires cities identify "the number of sites by type reasonably expected to be needed to accommodate the expected employment growth based on the site characteristics typical of expected

uses." The number of needed sites is dependent on the site requirements of employers. The estimate of land need is presented in the site needs analysis in the next section.

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

Appendix C presents the process used to arrive at the employment forecast for Springfield. Table 4-2 shows that employment is forecast to grow by 13,440 employees (a 32% increase) between 2010 and 2030.

Table 4-2. Employment growth in Springfield's UGB, 2010–2040

Year	Total Employment
2008	41,133
2010	42,284
2030	55,724
2030	55,724
2031	56,498
2032	57,283
2033	58,079
2034	58,886
2035	59,704
2036	60,534
2037	61,375
2038	62,228
2039	63,093
2040	63,970
Change 2010 to 2030	
Employees	13,440
Percent	32%
AAGR	1.4%

Source: ECONorthwest

Springfield is part of the regional economic center in the Eugene-Springfield region. The ratio of population to employment will decrease from 1.6 people per job to 1.5 people per job between 2008 and 2030. This change shows that employment will grow faster than population in Springfield, suggesting that some Springfield will continue to have employees who commute from Eugene or other cities in the region.

Table 4-3 shows the forecast of employment growth by building type in Springfield's UGB in 2030. In 2010, a total of about 60% of Springfield's employment is in office and other services' building types. About 18% is in retail, 15% is in general industrial and 7% is in warehousing and distribution.

Table 4-3. Forecast of employment growth in by building type, Springfield UGB, 2010-2030

	2010		2030		Change 2010 to 2030
Building Type	Employment	% of Total	Employment	% of Total	
Industrial					
Warehousing & Distribution	2,954	7.0%	3,343	6.0%	389
General Industrial	6,457	15.3%	7,523	13.5%	1,066
Commercial					
Office	12,561	29.7%	17,274	31.0%	4,713
Retail	7,709	18.2%	9,752	17.5%	2,043
Other Services	12,603	29.8%	17,832	32.0%	5,229
Total	**42,284**	**100.0%**	**55,724**	**100.0%**	**13,440**

Source: ECONorthwest
Note: Green shading denotes an assumption by ECONorthwest
Note: The forecast assumes that the share of employment in other services' building types will increase by about 2.2% over the 20-year period. We expect that medical employment will grow faster than government employment, based on historical trends that show government accounting for a decreasing share of employment and the growing medical cluster in Springfield.

The forecast in Table 4-3 assumes that Springfield will have growth in all categories of employment. It also assumes that the share of employment will increase in other services (2.2% increase in share) and office (1.3% increase in share). At the same time, the share of employment will decrease in general industrial (1.8% decrease in share), warehousing and distribution (1.0% decrease in share), and retail (0.7% decrease in share). The rationale supporting these assumptions is presented in Appendix C.

SITE NEEDS

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

Firms wanting to expand or locate in Springfield will be looking for a variety of site and building characteristics, depending on the industry and specific circumstances. Previous research conducted by ECO has found that while there are always specific criteria that are industry-dependent and specific firm, many firms share at least a few common site criteria. In general, all firms need sites that are relatively flat, free of natural or regulatory constraints on development, with good transportation access and adequate public services. The exact amount, quality, and relative importance of these factors vary among different types of firms. This section discusses the site requirements for firms in industries with growth potential in the Eugene-Springfield Region, as indicated by the Oregon Employment Department forecast (see Table A-12 in Appendix A for the regional forecast).

Appendix C discusses the productive factors that affect business' locational decisions and the implications of these factors for businesses that may locate in Springfield. The appendix also discusses the characteristics of sites needed to accommodate employment growth and Springfield's ability to provide sites with these characteristics.

LONG-TERM LAND AND SITE NEEDS

Appendix C presents the process for converting between the employment forecast to site needs. Table 4-4 presents the estimate of needed sites by site size and type of building. The results show that Springfield needs approximately 371 sites. Most sites are small, 2-acres or less. Springfield needs approximately 8 sites larger than 20-acres.

Table 4-4. Estimated needed sites by site size and building type, Springfield, 2010 to 2030

	Site Size (acres)						
Building Type	Less than 1	1 to 2	2 to 5	5 to 20	20 to 50	Greater than 50	Total Sites
Warehousing & Distribution			3	5	1		9
General Industrial	5	7	10	11	3	3	39
Office	100	20	20	5	1		146
Retail	70	15	10	4			99
Other Services	50	18	5	5			78
Total	**225**	**60**	**48**	**30**	**5**	**3**	**371**

Source: ECONorthwest

The identified site needs shown in Table 4-4 do not distinguish sites by comprehensive plan designation. It is reasonable to assume that industrial uses will primarily locate in industrial zones. Retail and service uses could locate in commercial zones, mixed use zones, and residential zones.

SHORT-TERM SITE NEEDS

Springfield has three large-scale developments in the planning process: RiverBend, Marcola Meadows, and redevelopment in Glenwood. These projects are at different stages of the development process. The hospital at RiverBend recently opened. The projects at Marcola Meadows and in Glenwood are still in the planning stages.

- **RiverBend.** The relocation of PeaceHealth's main hospital and relocation or expansion of medical firms to the RiverBend campus will be completed by the end of 2008. In addition to these uses, PeaceHealth plans further development of the RiverBend campus, which is about 72 acres in size. Other uses may include a mixture of residential development, office and commercial support services, retail, and educational and research functions to support collaborations with Oregon Health Services University and the University of Oregon. Studies for the RiverBend master plan indicated that there may be demand for additional office development (400,000-500,000 square feet) and commercial retail services (50,000 to 70,000 square feet).

- **Marcola Meadows.** Marcola Meadows is a proposed mixed-use project located on a vacant 100-acre parcel in Springfield. The project is expected to include about 190 single unit detached homes, about 120 townhouses, about 120 homes in apartments, and 54 homes for senior living. The total proposed land requirement of the residential villages would be 39 acres.

  Marcola Meadows is also expected to have commercial development, anchored by a Lowe's Home Improvement store, and including professional offices and retail. The commercial development will occupy about 44 acres, have more than 409,000 square feet of built space, and require more than 1,200 parking spaces. The remaining land in the development will be used for common open space and streets.[14]

- **Glenwood.** Glenwood currently has a mixture of residential, commercial, and industrial zoning, with areas that are underdeveloped or undeveloped. Glenwood's current development pattern is: 83 acres of industrial land, 64 acres of retail, 66 acres of manufactured dwellings, 37 acres of single-family dwellings, and 167 acres of vacant land.

[14] Marcola Meadows Pre Plan.

Redevelopment of Glenwood is in the planning stages. Goals for redevelopment include developing residential and mixed use areas, providing transition between residential and industrial areas, and capitalizing on Glenwood's location between Eugene and Springfield and riverfront land.[15]

[15] Glenwood Refinement Plan. November 1999.

Land Capacity and Demand

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

COMPARISON OF LAND CAPACITY AND DEMAND

This section presents an analysis of land availability and capacity for employment uses in Springfield. Chapter 4 presents an analysis of potential growth industries in Springfield and the employment forecast for Springfield. Based on this analysis, Table 5-1 shows a comparison of land supply and need in terms of sites by site size. The results show that Springfield has a deficit of about 6 industrial sites and 44 commercial and mixed use sites.

Table 5-1. Comparison of vacant land supply and site needs, industrial and other employment land, Springfield UGB, 2010-2010

	Site Size (acres)						
	Less than 1	1 to 2	2 to 5	5 to 20	20 to 50	Greater than 50	Total
Buildable Land Inventory							
Vacant							
Industrial	72	24	20	12	0	0	128
Commercial and Mixed Use	104	14	6	4	0	0	128
Redevelopable							
Industrial	122	28	31	5	1	0	187
Commercial and Mixed Use	305	20	15	0	0	0	340
Total Buildable Sites							
Industrial	194	52	51	23	1	0	321
Commercial and Mixed Use	409	34	21	4	0	0	468
Site Needs							
Needed sites							
Industrial	5	7	13	16	4	3	48
Commercial and Mixed Use	220	53	35	14	1	0	323
Surplus (deficit) of sites							
Industrial	**189**	**45**	**38**	**7**	**(3)**	**(3)**	**273**
Commercial and Mixed Use	**189**	**(19)**	**(14)**	**(10)**	**(1)**	**0**	**145**

Source: ECONorthwest.

The data in Table 5-1 address employment needs on vacant and partially vacant land. Some employment in Springfield will not require new land but will locate on land that is currently used. Although the analysis in Table 5-1 shows a deficit in many of the size categories, it does not account

for assumptions about employment that will not require new land. ECO assumed that 24% of employment (more than 3,200 new employees) would not require any vacant land. This would include employment that will locate in residential areas as well as employment that will locate on land that is already classified as developed because employment uses in some built spaces may intensify.

Table 5-2 presents two scenarios for the amount of land needed in the Springfield UGB over the 2010 to 2030 period. The difference between the two scenarios is the size of needed sites 5 acres and larger (shaded in green). The Low Scenario assumes smaller average sites sizes and the High Scenario assumes larger site sizes, especially for sites larger than 50 acres.

The Low Scenario shows that Springfield has a deficit of about 531 acres, with a deficit of 330 industrial acres and 201 commercial acres. The High Scenario shows that that Springfield has a deficit of about 711 acres, with a deficit of 450 industrial acres and 261 commercial acres

Note: The final draft of the EOA will present 1 estimate of commercial and industrial land need, rather than the 2 scenarios shown in Table 5-2.

Table 5-2. Industrial and other employment land need, gross acres, Springfield UGB, 2010-2030

	Site Size (acres)						
	Less than 1	1 to 2	2 to 5	5 to 20	20 to 50	Greater than 50	Total
Low Scenario							
Industrial							
Estimated site size (acres)	0.5	1.5	3.0	10.0	35.0	75.0	
Land need (acres)	**0**	**0**	**0**	**0**	**105**	**225**	**330**
Commercial and Mixed Use							
Estimated site size (acres)	0.3	1.5	3.0	10.0	30.0	50.0	
Land need (acres)	**0**	**29**	**42**	**100**	**30**	**0**	**201**
Total	**0**	**29**	**42**	**100**	**135**	**225**	**531**
High Scenario							
Industrial							
Estimated site size (acres)	0.5	1.5	3.0	15.0	50.0	100.0	
Land need (acres)	**0**	**0**	**0**	**0**	**150**	**300**	**450**
Commercial and Mixed Use							
Estimated site size (acres)	0.3	1.5	3.0	15.0	40.0	50.0	
Land need (acres)	**0**	**29**	**42**	**150**	**40**	**0**	**261**
Total	**0**	**29**	**42**	**150**	**190**	**300**	**711**

Source: ECONorthwest.

Table 5-2 shows that, in both scenarios, Springfield needs about 71 acres (33 sites) for commercial and mixed-use development on sites smaller than five acres. This need is likely to be accommodated within the UGB,

through redevelopment of infill development over and above the assumptions about redevelopment and infill stated previously.

The land needs that the City will need to meet by looking outside of the UGB are for sites five acres and larger. Table 5-2 shows that, based on the Low Scenario, Springfield needs 460 acres or 17 sites larger than five acres, about 330 acres (6 sites) for industrial uses and 130 acres (11 sites) for commercial and mixed-use. In the High Scenario, Springfield needs 640 acres or 17 sites larger than five acres, about 450 acres (6 sites) for industrial uses and 190 acres (11 sites) for commercial and mixed-use.

CHARACTERISTICS OF NEEDED SITES

The Goal 9 Administrative Rule (OAR 660-009) requires that jurisdictions describe the characteristics of needed 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.

The site needs analysis in Chapter 4 identified site needs in five types of buildings: warehousing and distribution, general industrial, office, retail, and other services. The characteristics of needed sites for each of these building types are described below.

WAREHOUSING AND DISTRIBUTION

The site needs analysis (Table 4-4) identified a need for six sites larger than five acres for warehousing and distribution. Based on the analysis of land supply and site needs in Table 5-1, Springfield will need one site for warehousing and distribution over the 2010-2030 period.

- **Site size.** Springfield will need one site between 20 and 50 acres, requiring approximately 35 to 50 acres.
- **Street access.** Warehousing and distribution sites should be located on an arterial street within ½ mile of an Interstate 5 interchange. The freight traffic from the site should not be routed through residential neighborhoods.

- **Topography.** Warehousing and distribution sites should be relatively flat, preferably not more than 5% slope
- **Access to services.** City services should be accessible to the site, including arterial street access, sanitary sewer, and municipal water. Other services that office sites will need are: electricity, phone, and high-speed telecommunications.
- **Land ownership.** Sites with a single owner are strongly preferred, to reduce the cost of land assembly.
- **Surrounding land uses.** The warehousing and distribution site should be located near compatible uses, such as industrial uses or some types of commercial uses, such as a business park.

GENERAL INDUSTRIAL

The site needs analysis (Table 4-4) identified a need for 17 sites larger than five acres for general industrial uses. Based on the analysis of land supply and site needs in Table 5-1, Springfield will need five sites 20 acres and larger for general industrial over the 2010-2030 period. Industrial sites may be used for one firm or may be used for an industrial park, to provide space for multiple, smaller firms.

- **Site size.** Springfield will need five sites 20 acres and larger for general industrial use.
    - Springfield will need two sites between 20 and 50 acres, approximately 35 to 50 acres each.
    - Springfield will need three sites larger than 50 acres, approximately 100 acres each. One of these sites should be a large site between 100 and 250 acres.
- **Street access.** Industrial sites should be located on an arterial street that provides access to an Interstate 5 interchange. The freight traffic from industrial sites should not be routed through residential neighborhoods.
- **Rail access.** Some industrial uses may benefit from rail access, especially businesses that ship bulky, inexpensive items over long distances. Access to a rail line, or the possibility of developing a rail spur, may be an advantage for some businesses.
- **Topography.** Industrial sites should be relatively flat, preferably not more than 5% slope and not more than 10% slope.
- **Access to services.** City services should be accessible to the site, including arterial street access, sanitary sewer, and municipal water. Other services that office sites will need are: electricity,

phone, and high-speed telecommunications. Some businesses may need higher capacity water or wastewater services (such as food processors) or higher capacity electricity (such as high-tech firms). If the site has access to services, the need for higher capacity services could be addressed when a business chooses to locate at the site.

- **Land ownership.** Sites with a single owner are strongly preferred, to reduce the cost of land assembly.
- **Surrounding land uses.** General industrial sites should be located near compatible uses, such as other industrial uses, warehousing and distribution, or some types of commercial uses, such as a business park.

OFFICE

The site needs analysis (Table 4-4) identified a need for six sites larger than five acres for office uses. Based on the analysis of land supply and site needs in Table 5-1, Springfield will need six sites 20 acres and larger for office over the 2010-2030 period. These larger office sites could have a variety of uses: a campus site for a large business, a business park, a mixed office and light industrial park, or other groupings of office buildings.

- **Site size.** Springfield will need five sites 5 to 20 acres and one site 20 and 50 acres for office uses.
    - Springfield will need five sites between 5 and 20 acres, approximately 10 to 15 acres each.
    - Springfield will need one site between 20 and 50 acres, approximately 30 to 40 acres. This site should be dedicated to an office park.
- **Street access.** Office sites should be located on an arterial or collector streets. Traffic from office sites should not be routed through residential neighborhoods.
- **Topography.** Office sites should be relatively flat, preferably not more than 10% slope and not more than 15% slope.
- **Access to services.** City services should be accessible to the site, including street access, sanitary sewer, and municipal water. Other services that office sites will need are: electricity, phone, and high-speed telecommunications.
- **Land ownership.** Sites with a single owner are strongly preferred, to reduce the cost of land assembly.

- **Surrounding land uses.** Office uses may be compatible with light industrial uses, retail, other services, or high-density residential uses.

RETAIL

The site needs analysis (Table 4-4) identified a need for four sites larger than five acres for retail uses. Based on the analysis of land supply and site needs in Table 5-1, Springfield will need one site 20 to 50 acres for retail use over the 2010-2030 period. This site is expected to provide opportunities for large-scale retail development for multiple retail businesses.

- **Site size.** Springfield will need one site 5 to 20 acres for retail, approximately 10 to 15 acres.
- **Street access.** The retail site should be located on an arterial or collector streets. Traffic from the site should not be routed through residential neighborhoods.
- **Topography.** The retail sites should be relatively flat, preferably not more than 5% slope and not more than 10% slope.
- **Access to services.** City services should be accessible to the site, including street access, sanitary sewer, and municipal water. Other services that office sites will need are: electricity, phone, and high-speed telecommunications.
- **Land ownership.** Sites with a single owner are strongly preferred, to reduce the cost of land assembly.
- **Surrounding land uses.** Retail uses may be compatible with office, other services, or high-density residential uses.
- **Visibility.** Retailers will need sites that are highly visible from major roads or Interstate 5.

OTHER SERVICES

The site needs analysis (Table 4-4) identified a need for five sites larger than five acres for other services. Based on the analysis of land supply and site needs in Table 5-1, Springfield will need four sites 20 to 50 acres for other services over the 2010-2030 period. These sites are expected to provide opportunities for services, such as medical services, government facilities, and other service employers.

- **Site size.** Springfield will need four sites 5 to 20 acres for retail, approximately 10 to 15 acres each.

- **Street access.** Other service sites should be located on an arterial or collector streets. Traffic from the sites should not be routed through residential neighborhoods.
- **Topography.** The sites should be relatively flat, preferably not more than 10% slope and not more than 15% slope.
- **Access to services.** City services should be accessible to the site, including street access, sanitary sewer, and municipal water. Other services that office sites will need are: electricity, phone, and high-speed telecommunications.
- **Land ownership.** Sites with a single owner are strongly preferred, to reduce the cost of land assembly.
- **Surrounding land uses.** Other service sites uses may be compatible with office, retail, or high-density residential uses.
- **Visibility.** Some services may prefer sites that are highly visible from major roads or Interstate 5.

IMPLICATIONS

The analysis of presented in the economic opportunities analysis has implications for Springfield's economic land needs.

- *Economic growth.* Decision makers and community members that participated in the economic opportunities analysis agreed that economic growth is desirable over the planning period. The employment forecast indicates Springfield will add 13,440 new employees between 2010 and 2030 using the OAR 660-024-0040(8)(a)(ii) methodology. The economic opportunities analysis assumes that Springfield will have employment growth in a wide variety of businesses, from services and retail for residents to industrial development to medical services. The City wants to diversify its economy and attract higher wage and professional jobs.

- *Buildable lands.* Springfield has 3,415 acres that are designated for industrial and other employment use. About two-thirds of the land designated for employment within Springfield's UGB is considered developed and is not expected to redevelop over the 20 year planning period. Less than 15% of this land is buildable, unconstrained land. The majority of buildable, unconstrained employment land in Springfield has existing development on it that is expected to redevelop over the planning period. Springfield has a

lack of buildable large sites, with one buildable site 20 acres and larger and 23 buildable sites in the five to 20 acre size range.

- *Redevelopment potential*. The analysis of redevelopment potential and need for employment land assumes that Springfield will have substantial redevelopment over the planning period. Consistent with City Council policies, the areas that are expected to have the most redevelopment are in Glenwood, especially north of Franklin Boulevard along the McKenzie River, and in Downtown in the Urban Renewal District. All land deficiencies for sites smaller than five acres are expected to be addressed through redevelopment of existing sites. The majority of retail land needs are expected to be addressed through redevelopment.

  The City will need to make strategic investments that support redevelopment and to continue supporting redevelopment through City policies. Some areas targeted for redevelopment, such as the Downtown Urban Renewal District, may not require large infrastructure investments because of existing infrastructure. Other redevelopment areas, such as parts of Glenwood, will require substantial infrastructure investments.

- *Need for large sites*. Springfield will be able to meet employment land needs on sites five acres and smaller within the existing UGB, through redevelopment, infill development, and employment uses on non-employment land (e.g., home occupations). The employment land needs that may not be met within the UGB are for sites five acres and larger. The City only one buildable site 20 acres or larger.

  Availability of sites 20 acres and larger is important for attracting or growing large businesses, which are often traded-sector businesses. If the City does not have these large sites, there is little chance that the City will attract these types of businesses. While it may not be clear exactly what the business opportunities may be in ten to twenty years, it is clear that these businesses will not locate in Springfield if land is not available for development. For example, in the past twenty years, most of the Gateway area developed. The area has a mix of uses including a regional mall, apartments, offices, and more recently, the PeaceHealth Campus. Twenty-years ago it would have seemed highly unlikely that PeaceHealth would build their new facility in Springfield. If the City had not had desirable, serviceable land available, PeaceHealth would probably not have located their new facility in Springfield.

- *Short-term land supply.* Based on the Goal 9 definition of short-term land supply and criteria for "engineering feasibility," the majority of buildable land within the Springfield UGB is part of the short-term land supply, assuming that funding is available to extend services. The Goal 9 rule does not account for land availability, such as whether the landowner is willing to sell it or the owner is willing to redevelop it. The Goal 9 rule also does not account for differences in site characteristics, such as site size. As a result, developers may have difficulty finding developable land with specific site characteristics, such as large sites with highway access.

Appendix A

National, State, County, and Local Trends

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

NATIONAL, STATE, AND REGIONAL TRENDS

NATIONAL TRENDS

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

- **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 people under age 65 with grow only 22 percent. The economic effects of this demographic change include a slowing of the growth of the labor force, an increase in the demand for healthcare services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.[16]

  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 to work full-time after age 65, compared with about 30% in 1992.[17] This trend can be seen in Oregon, where the share of workers 65 years and older grew from 2% of the workforce

[16] 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.

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

in 1992 to 3% of the workforce in 2002, an increase of 64%. Over the same ten-year period, workers 45 to 64 years increased by 70%.[18]

- **Tightening labor force.** Growth in the labor force is projected to slow over the 2006-2016 period as a result of: (1) aging and retirement of the baby boomer generation and (2) the labor force participation by women has peaked. Job growth is expected to outpace population growth, with a 10% increase in employment (15.6 million jobs) compared to a 9% increase in civilian noninstitutional population 16 years and older (22 million people).[19]

- **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 33.4 million job openings over the 2006-2016 period, more than twice the growth in employment of 15.6 million jobs. Management occupations and teachers will have the greatest need for replacement workers because these occupations have older-than-average workforce.[20]

- **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. [21]

- **Continued trend towards domestic outsourcing.** Businesses continue to outsource work to less expensive markets. Outsourcing generally falls into two categories: (1) moving jobs from relatively expensive areas to less expensive areas within the U.S. and (2) moving jobs outside of the U.S. to countries with lower labor costs.

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[18] "Growing Numbers of Older Workers in Oregon," Oregon Employment Department.

[19] Arlene Dohm and Lyn Shniper, "Occupational Employment Projections to 2016," *Monthly Labor Review*, November 2007, pp. 86-125.

[20] Arlene Dohm and Lyn Shniper, "Occupational Employment Projections to 2016," *Monthly Labor Review*, November 2007, pp. 86-125.

[21] 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.

About three-quarters of layoffs in the U.S. between 1995 and 2004 were the result of domestic relocation, involving movement of work within the same company. The industries with the largest amounts of domestic outsourcing were: manufacturing, retail trade, and information.[22]

- **Continued growth in global trade and the globalization of business activity.** With increased global trade, both exports and imports rise. Faced with increasing domestic and international competition, firms will seek to reduce costs through implementing quality- and productivity-enhancing technologies, such as robotics or factor automation. In addition, some production processes will be outsourced offshore.[23]

- **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.[24]

- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. Increases in the population and in households' incomes, plus changes in tastes and preferences, have dramatically increased demands for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such amenities contribute to a region's quality of life and play an important role in attracting both households and firms.[25]

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[22] Sharon P. Brown and Lewis B. Siegel, "Mass Layoff Data Indicate Outsourcing and Offshoring Work," *Monthly Labor Review*, August 2005, pp. 3-10.

[23] Eric B. Figueroa and Rose A. Woods, 2007, "Industry Output and Employment Projections to 2016," *Monthly Labor Review*, November 2007, pp. 53-85.

[24] Eric B. Figueroa and Rose A. Woods, 2007, "Industry Output and Employment Projections to 2016," *Monthly Labor Review*, November 2007, pp. 53-85.; Arlene Dohm and Lyn Shniper, "Occupational Employment Projections to 2016," *Monthly Labor Review*, November 2007, pp. 86-125.

[25] 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.

- **Continued westward and southward migration of the U.S. population.** Although there are some exceptions at the state level, a 2006 U.S. Census report documents an ongoing pattern of interstate population movement from the Northeast and Midwest to the South and West.[26]

- **The growing importance of education as a determinant of wages and household income.** According to the Bureau of Labor Statistics, a majority of the fastest growing occupations will require an academic degree, and on average they will yield higher incomes than occupations that do not require an academic degree. 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 2016. These occupations typically have lower pay than occupations requiring an academic degree. [27]

  The national median income in 2006 was about $32,000. Workers without a high school diploma earned $13,000 less than the median income and workers with a high school diploma earned $6,000 less than median income. Workers with some college earned slightly less than median and workers with a bachelor's degree earned $13,000 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]

- **Continued increase in demand for energy.** Energy prices are forecast to remain at relatively high levels, as seen in the 2006 to 2008 period, possibly increasing further over the planning period. Output from the most energy-intensive industries is expected to decline, but growth in the population and in the economy is expected to increase the total amount of energy demanded. Energy sources are expected to diversify and the energy efficiency of

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"Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes." *Growth and Change* 36 (2): 273-297.

[26] Marc J. Perry, 2006, *Domestic Net Migration in the United States: 2000 to 2004*, Washington, DC, Current Population Reports, P25-1135, U.S. Census Bureau.

[27] Arlene Dohm and Lyn Shniper, "Occupational Employment Projections to 2016," *Monthly Labor Review*, November 2007, pp. 86-125.

[28] "Growing Number of Older Workers in Oregon," Oregon Employment Department and American Community Survey, U.S. Census, 2006.

automobiles, appliances, and production processes are projected to increase. Despite increases in energy efficiency and decreases in demand for energy by some industries, demand for energy is expected to increase over the 2008 to 2030 period because of increases in population and economic activity. [29]

- **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.[30] The increases in energy prices may impact willingness to commute long distances. There is some indication that increases in fuel prices have resulted in decreased suburban housing price (i.e., housing demand), especially in large urban areas (e.g., Los Angeles or Chicago) and suburbs far from the center city. If this pattern continues, the area in Oregon most likely to be most impacted is Portland, which has the largest area of urban and suburban development in the state.[31]

- **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.

  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

[29] Energy Information Administration, 2008, *Annual Energy Outlook 2008 with Projections to 2030*, U.S. Department of Energy, DOE/EIA-0383(2008), April.

[30] Energy Information Administration, 2008, *Annual Energy Outlook 2008 with Projections to 2030*, U.S. Department of Energy, DOE/EIA-0383(2008), April

[31] Cortright, Joe. "Driven to the Brink: How the Gas Price Spike Popped the Housing Bubble and devalued the Suburbs," May 2008.

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 are concerned with "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."[32]

  Green business opportunities have historically been at the mercy of feasibility and economics; if a firm ignores feasibility and economics while trying to be green, the firm may not be able to afford to operate long enough to learn how to make green businesses feasible. The three types of green business opportunities are products, processes, and education.

  - *Producing green products.* Green products perform the function of regular products, but do it in a way that uses fewer resources or creates less pollution. For example, hybrid vehicles are green because they use less gasoline to operate and add fewer pollutants to the air. Yet hybrid vehicles serve the same function as non-hybrid cars. Another example is bamboo fencing and lumber, which is green because bamboo is more renewable than traditional lumber. Bamboo products have the strength necessary for building.

  - *Providing education about green practices or products.* Green education is often closely related to producing green products and is often done by consultants or nonprofits. Examples of companies involved in green education include the U.S. Green Building Council, which certifies buildings as green (LEED certification), or a consulting firm that writes a green (or sustainable) plan for a city or business.

  - *Using green business practices.* Green business practices are alternative methods of doing business that promote resource conservation, prevent or reduce pollution, or have other beneficial environmental effects. Examples of green business processes include: buying products locally to reduce shipping distance, recycling waste products (where

[32] Urban Green Partnership at urbangreenpartnership.org

possible), or maximizing the use of natural lighting to reduce use of electricity and light bulbs.

For example, ECONorthwest is a green educator because we help our clients manage natural resources effectively and take all costs and benefits of a particular action into account in order to properly judge the correct course of action. A frequent method of marketing green products involves green education. It is much easier to sell a hybrid car to a customer who knows the environmental benefits of owning a hybrid, so educating potential customers can aid greatly in increasing sales.

- **Potential impacts of global climate change.** There is growing support for but not a consensus about whether global climate change is occurring as a result of greenhouse gas emissions. There is a lot of uncertainty surrounding global climate change, including the pace of climate change and the ecological and economic impacts of climate changes. Climate change may result in the following changes in the Pacific Northwest: (1) increase in average temperatures, (2) shift in the type of precipitation, with more winter precipitation falling as rain, (3) decrease in mountain snow-pack and earlier spring thaw and (4) increases in carbon dioxide in the air.[33] Assuming that global climate change is occurring and will continue to occur over the next 20-years, a few broad, potential economic impacts for the nation and Pacific Northwest include:[34]

    - *Potential impact on agriculture and forestry.* Climate change may impact Oregon's agriculture through changes in: growing season, temperature ranges, and water availability.[35] Climate change may impact Oregon's forestry through increase in wildfires, decrease in the rate of tree growth, change in mix of tree species, and increases in disease and pests that damage trees.[36]

[33] "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.

[34] 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.

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

[36] "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.

- 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,[37] (3) negative impacts on availability of water 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.

- *Potential changes in government policies*. There is currently no substantial national public policy response to global climate change. States and regional associations of states are in the process of formulating policy responses to address climate change including: increasing renewable energy generation, selling agricultural carbon sequestration credits, and encouraging energy efficiency.[38] Without clear indications of the government policies that may be adopted, it is not possible to assess the impact of government policies on the economy.

Global climate change may offer economic opportunities. The search for alternative energy sources may result in increased investment and employment in "green" energy sources, such as wind, solar, and biofuels. Firms in the Northwest are well positioned to lead efforts on climate change mitigation, which may result in export products, such as renewable technologies or green manufacturing. [39]

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 2007 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

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

[38] Pew Center on Global Climate Change website: http://www.pewclimate.org/what_s_being_done/in_the_states/

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

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 TRENDS

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

- **Continued in-migration from other states.** Oregon will continue to experience in-migration from other states, especially California and Washington. According to a U.S. Census study, Oregon had net interstate in-migration (more people moved *to* Oregon than moved *from* Oregon) during the period 1990-2004.[40] Oregon had an annual average of 26,290 more in-migrants than out-migrants during the period 1990-2000. The annual average dropped to 12,880 during the period 2000-2004.[41] Most in-migrants come from California, Washington, and other western states.[42]

- **Concentration of population and employment in the Willamette Valley.** Nearly 70% of Oregon's population lives in the Willamette Valley. About 10% of Oregon's population lives in Southern Oregon and 9% lives in Central Oregon. 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

[40] Marc J. Perry, 2006, *Domestic Net Migration in the United States: 2000 to 2004*, Washington, DC, Current Population Reports, P25-1135, U.S. Census Bureau.

[41] In contrast, California had net interstate *out-migration* over the same period. During 1990-2000, California had an annual average of 220,871 more out-migrants than in-migrants. The net outmigration slowed to 99,039 per year during 2000-2004.

[42] Oregon Department of Motor Vehicles collects data about state-of-origin for drivers licenses surrendered by people applying for an Oregon drivers license from out-of-state. Between 2000 and 2007, about one-third of licenses surrendered were from California, 15% to 18% were surrendered from Washington, and about 17% to 19% were from the following states: Arizona, Idaho, Nevada, Colorado, and Texas.

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 30% in 2000, while employment in Manufacturing declined from an average of 18% in the 1970s to an average of 10% in 2005.

- **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. [43]

- **Continued importance of manufacturing to Oregon's economy.** Revenue from exports totaled $16.5 million in 2007, an increase of $5.1 million or 45% since 2000. Four of the five industries that accounted for more than three-quarters of revenue from exports in 2007 ($12.6 million) were manufacturing industries: Computers and Electronic Production ($6.3 million); Crop Production ($2.2 million); Transportation Equipment ($1.7 million); Machinery Manufacturers ($1.7 million); and Chemical Manufacturers ($0.7 million).Manufacturing employment is concentrated in five counties in the Willamette Valley or Portland area: Washington, Multnomah, Lane, Clackamas, and Marion Counties. Average wages for employees of manufacturing firms in these counties in 2006 ranged from $71,500 to $34,200 and were generally above the state's average (about $38,000) [44]

[43] Although Oregon's economy has diversified since the 1970's, natural resource-based manufacturing accounts for more than one-third of employment in manufacturing in Oregon in 2006, with the most employment in Wood Product and Food manufacturing.

[44] OECDD, *"Economic Data Packet, March 2008."*

- **Small businesses continue to account for over 50% of employment in Oregon.** Small business, with 100 or fewer employees, account for 51% of private sector employment in Oregon, up from about 50.2% of private employment in 2000 and down from 52.5% in 1996. Workers of small businesses typically had lower wages than the state average, with average wages of $33,130 compared to the statewide average of about $38,000 in 2006.

- **Continued lack of diversity in the State Economy.** While the transition from Lumber and Wood Products manufacturing to high-tech manufacturing has increased the diversity of employment within Oregon, it has not significantly improved Oregon's diversity relative to the national economy. Oregon's relative diversity has historically ranked low among states. Oregon ranked 35th in diversity (1st = most diversified) based on Gross State Product data for 1963–1986, and 32nd based on data for the 1977–1996 period.[45] A recent analysis, based on 2006 data, ranked Oregon 31st.[46] These rankings suggest that Oregon is still heavily dependent on a limited number of industries. Relatively low economic diversity increases the risk of economic volatility as measured by changes in output or employment.

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

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

[46] CFED, 2007, The Development Report Card for the States, http://www.cfed.org.

ECONOMIC TRENDS IN LANE COUNTY AND SPRINGFIELD

Future economic growth in Springfield will be affected in part by demographic and economic trends in the city and surrounding region. A review of historical demographic and economic trends provides a context for establishing a reasonable expectation of future growth in Springfield. In addition, the relationship between demographic and economic indicators such as population and employment can help assess the local influence of future trends and resulting economic conditions. This section addresses the following trends in Springfield:

- Population and demographics
- Household and personal income
- Employment
- Business activity
- Outlook for growth in Springfield

POPULATION AND DEMOGRAPHIC CHARACTERISTICS

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 has slowed during 2007, Oregon's population growth began to slow.

Oregon's population grew from 2.8 million people in 1990 to 3.7 million people in 2007, an increase of more than 900,000 people at an average annual rate of 1.6%. Oregon's growth rate slowed to 1.3% annual growth between 2000 and 2007.

Lane County grew slower than the State average between 1990 and 2007, growing at 1.1% annually and adding more than 60,000 people. More than 60% of the County's population lived in the Eugene-Springfield area in 2007, with about 17% of the County's population in Springfield. Springfield's population grew faster than the County average, at 1.5% annually, adding 12,637 residents over the seventeen-year period.

Table A-1. Population in the U.S., Oregon, the Willamette Valley, Lane County, Springfield, and Eugene, 1990-2007

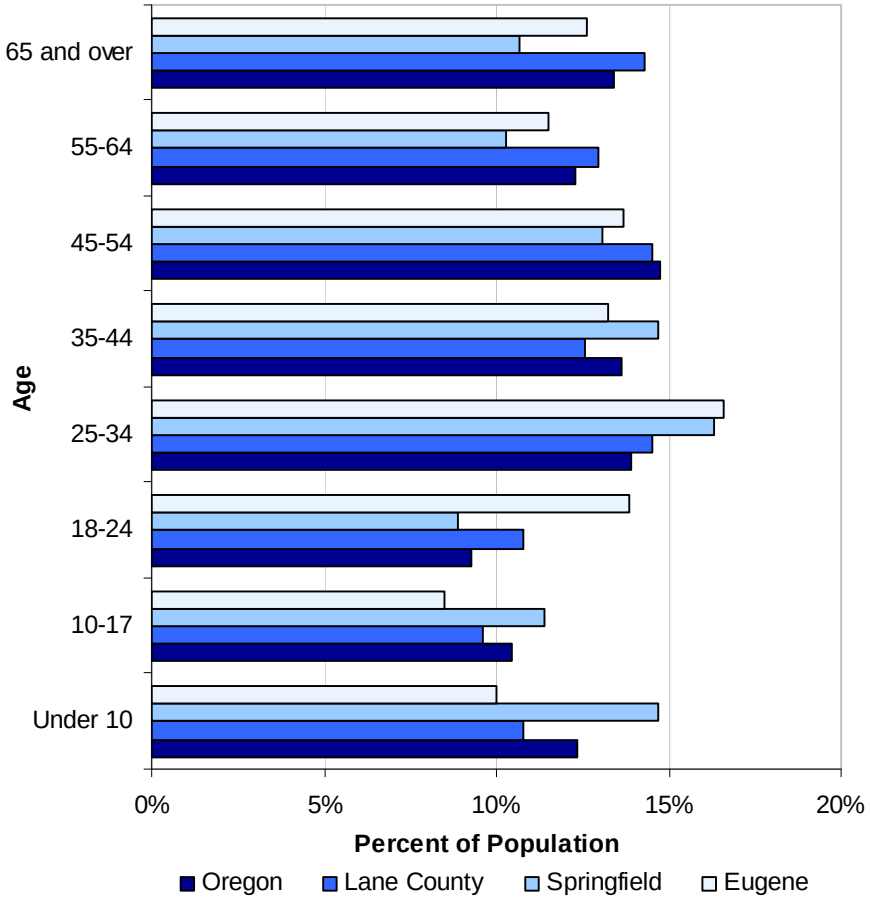
Area	Population			Change 1990 to 2007		
	1990	2000	2007	Number	Percent	AAGR
U.S.	248,709,873	281,421,906	301,621,157	52,911,284	21%	1.1%
Oregon	2,842,321	3,421,399	3,745,455	903,134	32%	1.6%
Willamette Valley	1,962,816	2,380,606	2,602,790	639,974	33%	1.7%
Lane County	282,912	322,959	343,140	60,228	21%	1.1%
Springfield	44,683	52,864	57,320	12,637	28%	1.5%
Eugene	112,669	137,893	153,690	41,021	36%	1.8%

Source: U.S. Census, the Population Research Center at Portland State University.
Notes: Benton, Clackamas, Lane, Linn, Marion, Multnomah, Polk, Washington, and Yamhill Counties represent the Willamette Valley Region.

Migration is the largest component of population growth in Oregon. Between 1990 and 2007, in-migration accounted for 70% of Oregon's population growth. Over the same period, in-migration accounted for 74% of population growth in Lane County, adding nearly 44,500 residents over the seventeen-year period.

Springfield's population was younger than the County or State averages in 2008. Figure A-1 shows the age structure for Oregon, Lane County, Eugene, and Springfield in 2008. Springfield had a greater proportion of its population under 44 years of age (66%) than Eugene (62%), Lane County (58%), or Oregon (60%). Springfield also had a smaller share of population aged 55 and older, 21% of Springfield's population, compared to 24% in Eugene, 27% in the County, 26% in the State.

Figure A-1. Population by age, Oregon, Lane County, Eugene, and Springfield, 2008



Source: Claritas 2008, percentages calculated by ECONorthwest.

The average age of Springfield residents is increasing. According to the US Census, Springfield's average age was 32 in 2000, 30 in 1990, and 26 in 1980. Table A-2 shows the change in age distribution for Springfield between 2000 and 2008. Population increased in all age groups. The age group that increased the most was people aged 45 to 64, which grew by 2,540 people (24%). This age group's proportion of the total population increased from 20% to 23% during this time period. The largest percentage decrease was in people aged 18 to 24, which shrunk by 913 people (16%).

Table A-2. Change in age distribution, Springfield, 2000-2008

	2000		2008		Change 2000 to 2008		
Age Group	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	4,327	8%	4,121	7%	-206	-5%	-1%
5-17	10,069	19%	10,477	19%	408	4%	0%
18-24	5,890	11%	4,977	9%	-913	-16%	-2%
25-44	16,609	31%	17,372	31%	763	5%	0%
45-64	10,546	20%	13,086	23%	2,540	24%	3%
65 and over	5,423	10%	5,983	11%	560	10%	0%
Total	**52,864**	**100%**	**56,016**	**100%**	**3,152**	**6%**	**0%**

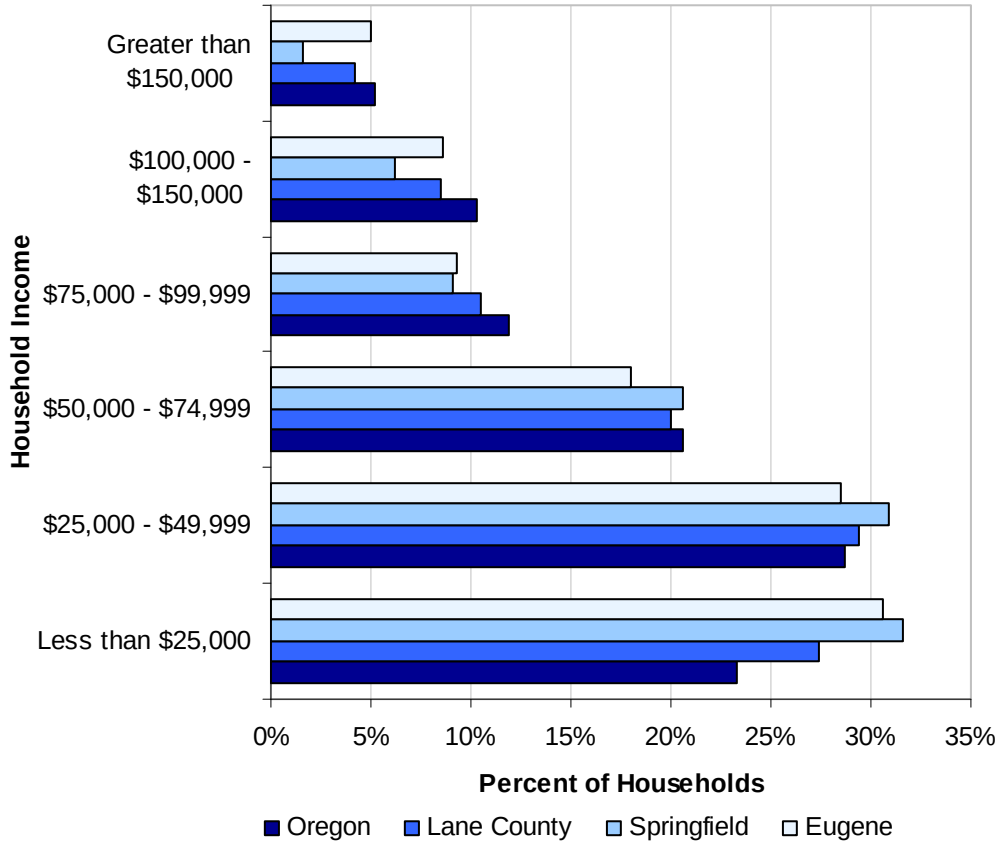
Source: U.S. Census, 2000, Claritas 2008

HOUSEHOLD AND PERSONAL INCOME

Income in Lane County and Springfield has historically been lower than the State or national averages. Lane County's median household income in 2006 was $42,127, compared with $46,230 for Oregon and the national average of $48,451. The median household income in Springfield in 1999 was $33,031, 89% of the County average of $36,942.

Lane County's median household income in 2006 was $42,127, compared with $46,230 for Oregon and the national average of $48,451. Figure A-2 shows the distribution of household income in Oregon, Lane County, Eugene, and Springfield in 2008. Figure A-2 shows that a larger share of households in Springfield (32%) had an income of $25,000 or less, compared to Lane County (27%) or the State (23%). Springfield also has a lower share of households with income above $75,000 (17%) than Eugene (23%), the County (23%), or the State (27%).

Figure A-2. Distribution of household income of Oregon, Lane County, Eugene, and Springfield, 2008

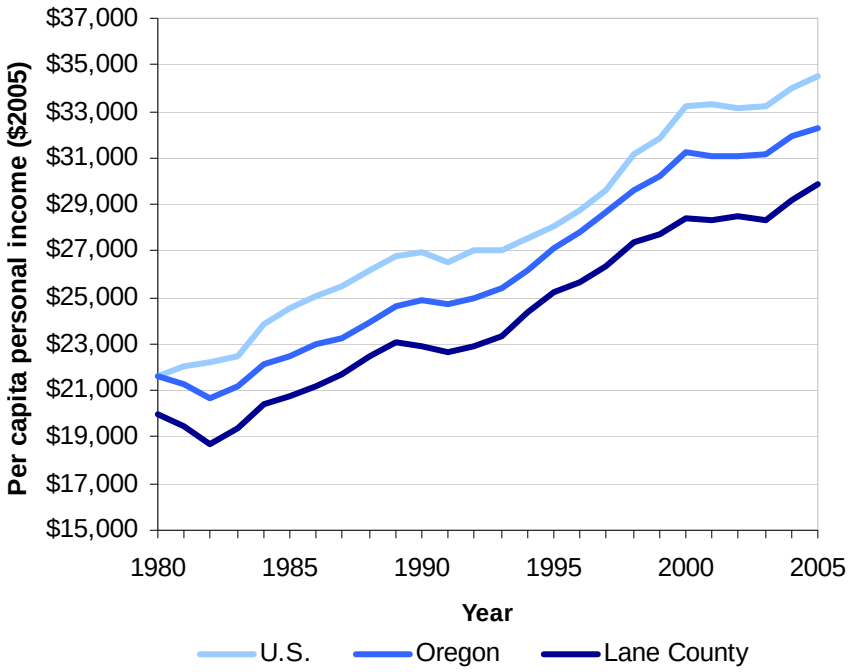


Source: Claritas 2008

Figure A-3 shows the change in per capita personal income for the U.S., Oregon, and Lane County between 1980 and 2005 (in constant 2005 dollars). Oregon's per capita personal income was consistently lower than the U.S. average over the 25-year period. While the gap between the Oregon and U.S. average narrowed in the mid-1990s, it widened again starting in the late 1990's.

Lane County's personal income over the 25-year period was consistently lower than Oregon's personal income. In 2005, per capita personal income in Lane County was approximately 92% of Oregon's per capital income and 87% of the U.S. per capital income. During the 25-year period, per capita personal income in both Lane County and Oregon grew by 49%, while personal income grew by 59% nationally during the same period.

Figure A-3. Per capita personal income in the U.S., Oregon, and Lane County, 1980-2005, ($2005)

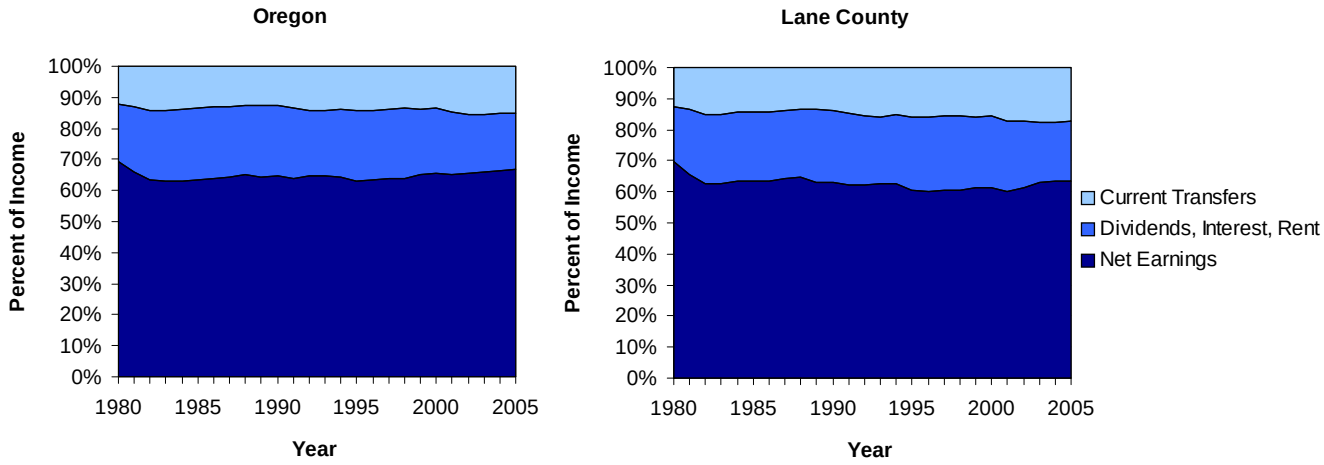


Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Figure A-4 shows the major sources of per capita personal income for Oregon and Lane County between 1980 and 2005. Lane County's share of personal income from net earnings was lower than for Oregon and the County's share of personal income from transfer payments and dividends, interest, and rent was higher than the State average.

Retirees are most likely to have personal income from current transfers and dividends, interest, and rent. The larger share of personal income from these sources makes sense because Lane County has a larger share of people over 60-years than the State average. Figure A-1 shows that Lane County has a higher percentage of residents over 60 years old than the State average. In addition, the share of population aged 65 and older increased by 16% between 1990 and 2000 in Lane County, compared with a 12% statewide increase in population 65 and older.

Figure A-4. Per capita personal income by major sources, Oregon and Lane County, 1980-2005



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

Table A-3 shows average annual pay per employee in the U.S., Oregon, and Lane County for 2000 to 2006. The national average wage grew faster than State or County averages. The average U.S. wage increased by 20% (more than $7,000), compared to the State increase of 16% (more than $5,000) or the County increase of 19% (more than $5,000). Wages in Lane County relative to the U.S. decreased by 1% over the six-year period.

Lane County's average annual wage has increased by 19% (more than $5,000) from $27,878 to $33,240 over the 2000 to 2006 period. Lane County's average pay has grown faster than the State average, increasing from 85% of the State average in 2000 to 87% in 2006.

Table A-3. Average annual pay, Oregon and Lane County (nominal dollars), 2000-2006

				Lane County	
	U.S	Oregon	Lane County	% of U.S.	% of State
2000	$35,323	$32,776	$27,878	79%	85%
2001	$36,219	$33,202	$28,982	80%	87%
2002	$36,764	$33,685	$29,427	80%	87%
2003	$37,765	$34,455	$30,325	80%	88%
2004	$39,354	$35,627	$31,339	80%	88%
2005	$40,677	$36,593	$32,302	79%	88%
2006	$42,535	$38,070	$33,240	78%	87%
Change 2000 to 2006					
Nominal Change	$7,212	$5,294	$5,362		
Percent Change	20%	16%	19%		

Source: Oregon Employment Department and U.S. Bureau of Labor Statistics

Springfield's average wages are similar to the County average. The average wage for workers in Springfield in 2006 was nearly $33,000.

LANE COUNTY EMPLOYMENT TRENDS

Tables A-4 and A-5 present data from the Oregon Employment Department that show changes in covered employment[47] for Lane County between 1980 and 2005. The changes in sectors and industries are shown in two tables: (1) between 1980 and 2000 and (2) between 2001 and 2005. The analysis is divided in this way because of changes in industry and sector classification that made it difficult to compare information about employment collected after 2001 with information collected prior to 2000.

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 A-4 shows the changes in covered employment by sector in Lane County between 1980 and 2000. Covered employment in the County grew from 97,600 to 139,696, an increase of 43% or 42,096 jobs. Every sector added jobs during this period, except for Mining. The sectors with the greatest change in employment were Services and Retail Trade, adding a total of 29,423 jobs or about 70% of all new jobs.

Manufacturing grew by 4,020 jobs during the twenty-year period. The industries with the largest manufacturing growth were Transportation equipment manufacturing (R.V. manufacturing), computer and electronics manufacturing, and machinery manufacturing.

Average pay per employee increased from about $13,700 in 1980 to $27,900 in 2000. The sectors that grew the fastest generally paid less than average, with Services paying between 80% to 90% of average and Retail Trade paying about 60% of average. Manufacturing jobs generally paid more than the average, varying between 140% of average in 1980 to 124% of average by 2000.

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

Table A-4. Covered employment in Lane County, 1980-2000

Sector	1980	1990	2000	Change 1980 to 2000 Difference	Percent	AAGR
Agriculture, Forestry & Fishing	1,137	1,863	2,101	964	85%	2.5%
Mining	231	179	154	-77	-33%	-1.6%
Construction	4,600	3,992	6,834	2,234	49%	1.6%
Manufacturing	**19,638**	**20,654**	**23,658**	**4,020**	**20%**	**0.7%**
Trans., Comm., & Utilities	3,836	3,750	3,845	9	0%	0.0%
Wholesale Trade	5,578	5,900	6,422	844	15%	0.6%
Retail Trade	**20,299**	**24,429**	**28,758**	**8,459**	**42%**	**1.4%**
Finance, Insurance & Real Estate	4,217	4,523	6,198	1,981	47%	1.6%
Services	**18,272**	**27,817**	**39,236**	**20,964**	**115%**	**3.1%**
Nonclassifiable/all others	13	50	37	24	185%	4.3%
Government	19,779	20,219	22,453	2,674	14%	0.5%
Total	97,600	113,376	139,696	42,096	43%	1.4%

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages. Summary by industry and percentages calculated by ECONorthwest

Table A-5 shows the change in covered employment by sector for Lane County between 2001 and 2007. Employment increased by 15,556 jobs or 11% during this period. The private sectors with the largest increases in numbers of employees were Administration Support and Cleaning, Retail Trade, Construction, and Health and Social Assistance. The sector that lost the greatest number of employees during this period was Agriculture, Forestry, Fishing and Mining..

Table A-5. Covered employment in Lane County, 2001-2007

Sector	2001	2007	Change 2001 to 2007 Difference	Percent	AAGR
Natural Resources and Mining	2,338	2,062	-276	-12%	-2.1%
Construction	**6,366**	**8,034**	**1,668**	**26%**	4.0%
Manufacturing	19,697	19,864	167	1%	0.1%
Wholesale	5,300	6,071	771	15%	2.3%
Retail	**17,912**	**19,755**	**1,843**	**10%**	1.6%
Transportation & Warehousing	2,606	3,047	441	17%	2.6%
Information	3,729	3,901	172	5%	0.8%
Finance & Insurance	3,963	4,313	350	9%	1.4%
Real Estate Rental & Leasing	2,508	2,530	22	1%	0.1%
Professional, Scientific & Tech. Srv.	5,571	5,658	87	2%	0.3%
Management of Companies	1,818	1,901	83	5%	0.7%
Admin. Support & Cleaning Srv.	**6,399**	**8,738**	**2,339**	**37%**	5.3%
Education	1,067	1,389	322	30%	4.5%
Health & Social Assistance	**16,871**	**18,966**	**2,095**	**12%**	2.0%
Arts, Entertainment & Recreation	1,542	2,163	621	40%	5.8%
Accomodations & Food Services	11,746	12,737	991	8%	1.4%
Other Services (except Public Admin.	5,552	5,674	122	2%	0.4%
Private Non-Classified	49	45	-4	-8%	-1.4%
Government	22,398	24,133	1,735	8%	1.3%
Total	**137,432**	**152,988**	**15,556**	**11%**	**2.7%**

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages. Summary by industry and percentages calculated by ECONorthwest

Table A-6 shows a summary of employment in Lane County in 2007. Table A-6 shows the ten largest sectors in **bold** are the top ten employers, sectors with below average pay per employee in red, and sectors with above average pay per employee in blue. Table A-6 shows:

- Construction, Manufacturing, Government, and Health and Social Assistance were among the sectors with the greatest employment in Lane County and have above average pay per employee. These sectors accounted for 47% of employment or nearly 71,000 employees in Lane County.
- Retail, Accommodations and Food Services, and Administration and Support and Waste Management were among the sectors with the greatest employment in Lane County and have below average pay per employee. These sectors accounted for 27% of employment or more than 41,000 employees in Lane County.

Table A-6. Covered employment in Lane County, 2007

Sector / Industry	Establish-ments	Employment	Percent of Employment	Average Pay per Employee
Natural Resources & Mining	228	2,062	1%	$34,662
Construction	**1,249**	**8,034**	**5%**	**$41,346**
Manufacturing	**599**	**19,864**	**13%**	**$41,055**
Wood product manufacturing	76	4,548	3%	$42,423
Machinery manufacturing	51	1,816	1%	$48,027
Computer & electronic product mfg.	20	1,934	1%	$56,594
Transportation equipment mfg.	31	4,093	3%	$31,942
Wholesale	588	6,071	4%	$44,609
Retail	**1,276**	**19,755**	**13%**	**$24,258**
Motor vehicle & parts dealers	159	2,997	2%	$39,809
Building material & garden supply stores	85	1,603	1%	$27,883
Food & beverage stores	205	4,044	3%	$20,451
General merch&ise stores	58	4,073	3%	$21,784
Miscellaneous store retailers	174	1,455	1%	$20,513
Transportation, Warehousing & Utilties	267	3,047	2%	$37,448
Information	180	3,901	3%	$50,769
Finance & Insurance	611	4,313	3%	$49,753
Real Estate Rental & Leasing	566	2,530	2%	$25,994
Professional, Scientific & Technical Svcs	1,004	5,658	4%	$41,314
Management of Companies	87	1,901	1%	$66,758
Admin. & Support & Waste Mgmt	**484**	**8,738**	**6%**	**$21,771**
Private Education	135	1,389	1%	$23,709
Health & Social Assistance	**971**	**18,966**	**13%**	**$39,836**
Ambulatory health care services	598	6,453	4%	$52,408
Nursing & residential care facilities	181	3,915	3%	$22,013
Arts, Entertainment & Recreation	151	2,163	1%	$13,533
Accomodations & Food Services	**861**	**12,737**	**8%**	**$13,749**
Other Services	1,322	5,674	4%	$22,345
Private Non-Classified	66	45	0%	$41,167
Government	**376**	**24,133**	**16%**	**$39,312**
Federal	70	1,764	1%	$57,977
State	**61**	**6,878**	**5%**	**$39,498**
Local	**245**	**15,491**	**10%**	**$37,105**
Education & Health Services	**147**	**8,547**	**6%**	**$31,343**
Public Administration	49	4,268	3%	$47,464
Total	**11,019**	**150,982**	**100%**	**$34,328**

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages. Summary by industry and percentages calculated by ECONorthwest
Notes: Sectors in **bold** are the top ten employers, sectors in red have below average pay per employee, and sectors in blue have above average pay per employee.

EMPLOYMENT IN SPRINGFIELD

Table A-7 shows a summary of confidential employment data for Springfield in 2006. Springfield had 27,310 jobs at 1,819 establishments in 2006, with an average firm size of 15 employees. The sectors with the greatest employees were: Retail (13%), Government (13%), Health Care and Social Assistance (11%), and Manufacturing (10%). These sectors accounted for 17,863 or 65% of Springfield's jobs.

Table A-7. Covered employment in Springfield, 2006

Sector / Industry	Establish-ments	Employees	
		Number	% of Total
Agriculture, Forestry, Fishing, and Mining	**22**	**282**	**1%**
Forestry and Logging	11	136	0%
Other Agriculture, Forestry, Fishing, and Mining	11	146	1%
Construction	**205**	**1,922**	**7%**
Manufacturing	**104**	**2,714**	**10%**
Wood Product Manufacturing	18	1,013	4%
Chemical Manufacturing	3	251	1%
Fabricated Metal Product Manufacturing	18	233	1%
Transportation Equipment Manufacturing	7	188	1%
Food Manufacturing	6	111	0%
Plastics and Rubber Products Manufacturing	6	111	0%
Furniture and Related Product Manufacturing	9	80	0%
Machinery Manufacturing	7	68	0%
Other Manufacturing	30	659	2%
Wholesale Trade	**71**	**1,230**	**5%**
Retail	**265**	**3,632**	**13%**
General Merchandise Stores	24	1,008	4%
Food and Beverage Stores	42	744	3%
Motor Vehicle and Parts Dealers	35	339	1%
Building Material, Garden Equipment, & Supplies Dealers	15	278	1%
Electronics and Appliance Stores	16	210	1%
Other Retail	133	1,053	4%
Transportation and Warehousing and Utilities	**55**	**941**	**3%**
Information	**24**	**1,356**	**5%**
Finance and Insurance	**99**	**1,110**	**4%**
Real Estate and Rental and Leasing	**98**	**441**	**2%**
Professional, Scientific, and Technical Services	**97**	**576**	**2%**
Management of Companies and Enterprises	**24**	**343**	**1%**
Admin. & Support and Waste Mgt Services	**82**	**2,460**	**9%**
Private Educational Services	**12**	**109**	**0%**
Health Care and Social Assistance	**167**	**3,069**	**11%**
Arts, Entertainment, and Recreation	**30**	**321**	**1%**
Accommodation and Food Services	**179**	**2,453**	**9%**
Accommodation	12	227	1%
Food Services and Drinking Places	167	2,226	8%
Other Services	**217**	**816**	**3%**
Government	**68**	**3,535**	**13%**
Federal and State	13	368	1%
Local	55	3,167	12%
Total	**1,819**	**27,310**	**100%**

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

Map A-1 shows employment in Springfield by plan designations and number of employees in 2006. Map A-1 shows that employees are distributed throughout Springfield, with concentrations along Main Street and in Gateway.

Map A-2 shows the size of employers in Springfield by Plan Designation. Larger employers are clustered along Main Street, in Gateway, and in other areas zoned for commercial and industrial use. Small employers are scattered in most parts of the City.

Employers by Number of Employees Springfield 2006

City of Springfield

Oregon

Legend

- City Limits
- Urban Growth Boundary

2006 Employment

- 0 - 25
- 26 - 100
- 101 - 300
- 301 - 1000
- 1001 - 5000

0 900 1,800 3,600
Feet

ECONorthwest, April 2008

Employers by Size, and Type Springfield 2006

City of Springfield

Oregon

Legend

City Limits

Urban Growth Boundary

Industrial

0 - 25

26 - 100

101 - 300

301 - 1000

1001 - 5000

Other

0 - 25

26 - 100

101 - 300

301 - 1000

1001 - 5000

N

0 900 1,800 3,600
Feet

ECONorthwest, April 2008

Firms wanting to expand or locate in Springfield will be looking for a variety of site and building characteristics, depending on the industry and specific circumstances. One way to describe site needs is to group industries based on building and site characteristics. Each sector has been uniquely assigned to a "typical" building type, grouped by industrial and commercial uses.

Table A-8. Converting employment to building types

Building Type		Types of industries	NAICS Sectors
Industrial			
WD	Warehousing & Distribution	Transportation & Wholesale Trade	48-49, 42
GI	General Industrial	Ag, Mining, Utlilities, Construction, Manufacturing	11, 21,22, 23, 31-33
Commercial			
Office	Office	Information, FIRE, Professional Srv, Mgt of Companies, Admin & Support & Waste Mgt, Utilities, Arts/Entertainment, Other Services	51-56, 71, 81
Retail	Retail	Retail (incl. Accom & Food Srv)	44-45, 72
Med/Gov.	Medical & Government Institutions	Health & Social Services, Public Administration	61, 62, 92

Source: ECONorthwest based on methodology used by Metro in the report "Urban Growth Report: An Employment Need Analysis," 2002

Table A-9 shows employment by Comprehensive Plan Designation in 2006. About 39% of Springfield's employment is located in commercial plan designations, with more than 8,000 employees in the Commercial designation. An additional 34% of the City's employment is located in industrial designations. About 16% of Springfield's employment is located in residential designations with 10% in the Low Density Residential designation.

Table A-9. Covered employment by Plan Designation, Springfield, 2006

Plan Designation	Industrial		Commercial		Total	
	Emp.	Percent	Emp.	Percent	Emp.	Percent
Commercial						
Commercial	450	6%	7,649	40%	8,099	30%
Major Retail Center	20	0%	2,316	12%	2,336	9%
Subtotal	470	6%	9,965	52%	10,435	39%
Government						
Government & Education	67	1%	660	3%	727	3%
Industrial						
Campus Industrial	274	3%	2,142	11%	2,416	9%
Heavy Industrial, Special Heavy Industrial, and Sand and Gravel	2,908	37%	304	2%	3,212	12%
Light Medium Industrial	3,032	39%	645	3%	3,677	14%
Subtotal	6,214	79%	3,091	16%	9,305	34%
Mixed-Use						
Commercial Mixed Use	318	4%	1,450	8%	1,768	7%
Light Med Ind Mixed Use and Medium Density Res Mixed	113	1%	169	1%	282	1%
Subtotal	431	5%	1,619	8%	2,050	8%
Residential						
High Density Residential	0	0%	456	2%	456	2%
Low Density Residential	592	8%	2,093	11%	2,685	10%
Medium Density Residential	100	1%	1,082	6%	1,182	4%
Subtotal	692	9%	3,631	19%	4,323	16%
Other						
Parks and Open Space	0	0%	250	1%	250	1%
TOTAL	**7,874**	**100%**	**19,216**	**100%**	**27,090**	**100%**

Source: Oregon Employment Department Quarterly Census of Employment and Wages (QCEW) and Springfield GIS data; calculations and analysis by ECONorthwest
Note: The number of employees shown in Table A-9 (27,090) is fewer than shown in Table A-7 (27,310) because of data issues between the QCEW and GIS data.

Table A-10 shows the estimated covered employment located in non-residential plan designations by type of building in Springfield in 2006. More than half of Springfield's employment in 2006 was located in Office and Retail buildings. More than two-thirds of Springfield's firms were located in Office and Retail buildings.

Table A-10. Estimated covered employment in non-residential plan designations by type of building, Springfield, 2006

Building Type	Employees		Firms	
	Number	Percent	Number	Percent
WD	2,457	11%	50	8%
GI	4,336	20%	101	17%
Office	6,212	28%	192	31%
Retail	5,500	25%	220	36%
Med/Gov	3,604	16%	49	8%
Total	**22,109**	**100%**	**612**	**100%**

Source: ECONorthwest based on QCEW data

Table A-11 shows the distribution of employees by building type and site size in non-residential plan designations in Springfield in 2006. About 22% of Springfield's employment is on sites 5 to 20 acres, 21% is on of less than 1-acre, and 19% is on sites greater than 50 acres.

Table A-11. Percent of employees by building type and site sizes, Springfield, 2006

Building Type	Site Size (acres)						Total Employees
	Less than 1	1 to 2	2 to 5	5 to 20	20 to 50	Greater than 50	
WD	13%	6%	3%	63%	12%	3%	100%
GI	15%	17%	17%	18%	2%	31%	100%
Office	28%	14%	15%	23%	13%	8%	100%
Retail	29%	13%	11%	18%	10%	18%	100%
Med/Gov	9%	4%	8%	5%	35%	38%	100%
Total	**21%**	**12%**	**12%**	**22%**	**13%**	**19%**	**100%**

Source: ECONorthwest based on QCEW data

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 in industries, also called industrial clusters. Sectors that are highly concentrated (meaning there are more than the "average" number of businesses in a sector in a given area) and have had high employment growth are likely to be 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 Oregon Economic and Community Development Department (OECDD) prepared a report titled "Oregon's Traded Clusters: Major Industries and Trends." This report identified 25 clusters in Lane County.

- **Business Services.** This cluster is dominated by Professional, Scientific, and Technical Services and Employment Services. The average annual wage varies by sector, with the highest pay in Professional, Scientific, and Technical Services (about $51,800). Employment growth in these industries was moderate to fast between 2003 and 2005. Business Services firms may be attracted to Springfield as a result of firms located in Springfield, the availability of educated workers within the region, and the high quality of life and access to recreation in Springfield.

- **Communication Equipment** This cluster includes manufacturing and wholesaling of computer, communications, and audio and video equipment. Lane County has clusters of both manufacturing and wholesaling communication equipment but the manufacturing cluster is bigger in the County. Employment growth in the cluster was fastest in computer and peripheral manufacturing between 2003 and 2005. The average annual wage in this sector is higher than the State average, at $68,076. Firms in this cluster may be attracted to Springfield as the City's location and access to transportation, the availability of educated workers within the region, and the high quality of life and access to recreation in Springfield.

- **Information Technology.** This cluster includes Telecommunications, Software Publishers, and Internet Service Providers. The average annual wage was above State averages. Growth in the cluster varied between 2003 and 2005, with a decrease in Telecommunications employment and increases in employment with Internet Service Providers. Information Technology firms may be attracted to Springfield because of the availability of educated workers within the region and the high quality of life and access to recreation in Springfield. Springfield may be attractive as a location to outsource back-office functions for larger Information Technology firms.

- **Logistics and Distribution.** This cluster includes truck transportation and warehousing. This cluster grew during the 2003-2005 period, with the greatest growth in Truck Transportation. Wages in this cluster were similar to State averages. Firms in this cluster may be attracted to Springfield as the City's location relative

to other cities in the Willamette Valley and Oregon and the access to transportation via I-5 and Highway 126.

- **Medical products.** This cluster includes medical and equipment supplies manufacturing. This sector has higher than average wages and had moderate employment growth during the 2003 to 2005 period. Firms may be attracted to Springfield as a result of firms located in Springfield, the availability of educated workers within the region, and the high quality of life and access to recreation in Springfield.

- **Metals and Related Products.** This cluster includes metals manufacturing, including Fabricated Metals Manufacturing and Primary Metals Manufacturing. Although employment decreased in this cluster over the 2003-2005 period, Lane County has the largest cluster of Metal Wholesalers outside of the Portland metropolitan area. Wages in this cluster were general at or above State averages. Firms may be attracted to Springfield as a result of existing businesses and the availability of labor.

- **Processed Foods and Beverages.** This cluster includes manufacturing of food and beverages. Employment in this cluster decreased over the 2003-2005 period and average wages in this cluster are at or below State averages. Firms may be attracted to Springfield as a result of the City's proximity to food growers and the availability of labor.

- **Wood and Other Forest Products.** This cluster includes wood product manufacturing, logging, paper making, and support activities. The average annual wage was below State averages and employment grew slowly within the cluster over the 2003-2005 period. Firms may be attracted to Springfield as a result of the City's proximity to natural resources and the availability of labor.

Table A-12 shows potential growth sectors in Springfield, based on existing concentrations of employment and the Oregon Employment Department's (OED) forecast for employment growth over the 2006-2016 period. Sectors with high employment concentration and high growth forecasts are the industries most likely to grow. These sectors are: Health and Social Assistance; Administrative and Support and Waste Management Services; Construction; and Accommodations and Food Services.

Springfield may have opportunities for growth in sectors that the OED forecasts will have high growth but Springfield does not currently have

high concentrations in: Arts, Entertainment, and Recreation; Management of Companies and Enterprises; Professional, Scientific, and Technical Services; and Private Educational Services.

Table A-12. Potential growth of industries in Springfield

Low Employment Growth Projection for Lane County	High Employment Growth Projection for Lane County
High Employment Concentration in Springfield (relative to Oregon)	
Information	Health Care & Social Assistance
Finance & Insurance	Admin. & Support & Waste Mgt Srv.
Transportation, Warehousing & Utilities	Construction
Real Estate & Rental & Leasing	Accommodation & Food Srv.
Wholesale Trade	
Low Employment Concentration in Springfield (relative to Oregon)	
Government	Arts, Entertainment, & Recreation
Other Srv.	Management of Companies & Enterprises
Manufacturing	Professional, Scientific, & Technical Srv.
Retail	Private Educational Srv.
Agriculture, Forestry, Fishing, & Mining	

Source: Oregon Employment Department; calculations by ECONorthwest

REGIONAL BUSINESS ACTIVITY

Springfield exists within with Eugene-Springfield regional economy. Springfield is able to attract labor from across the region, Springfield employers and residents benefit from training opportunities present in Eugene (e.g., the University of Oregon and Lane Community College), and Springfield businesses and residents are effected by economic activity within the region. This section presents the large-scale regional business activities.

- **Peace Health at RiverBend.** Peace Health has built a new hospital complex at RiverBend and will complete the transition of staff from the University District facility to RiverBend by the end of Sept. 2008. The RiverBend campus will have 2,500 PeaceHealth employees, in occupations including: physicians, nurses, medical technicians, other medical staff, environmental services staff, and food services staff. PeaceHealth started relocating administrative and other staff to the RiverBend Annex in 2006, which has 700 employees.

  The RiverBend campus will attract additional firms. For example, Oregon Medical Labs, Oregon Imaging Center, and the Northwest Specialty Clinics will have approximately 350 staff and physicians at the RiverBend campus. The RiverBend

Pavillion will have about 300 employees, at the Oregon Medical Group, Oregon Imaging, and other medical businesses.

PeaceHealth plans to further develop the RiverBend campout to include a wide range of uses: a mixture of housing types, office and commercial support services, retail, and educational and research functions to support collaborations with Oregon Health Services University and the University of Oregon. Studies for the RiverBend master plan indicated that there may be demand for additional office development (400,000-500,000 square feet) and commercial retail services (50,000 to 70,000 square feet).

- **Manufacturing.** Manufacturing is important to the economy in Springfield and in Lane County. Manufacturing accounted for 14% of employment (more than 20,000 jobs) in Lane County and 10% of employment (more than 2,700 jobs) in Springfield in 2006. [48]

  Manufacturing is a traded sector industry, which brings revenue into Oregon and Lane County from outside the State. The following manufacturing industries accounted for two-thirds ($11 billion) of revenue from exports in Oregon in 2007: Computer & Electronic Production, Transportation Equipment, Machinery Manufacturers, Chemical Manufacture, and Primary Metal Manufacturers.[49] These industries are all present in Lane County, accounting for 44% of manufacturing employment in the County. Other export industries with substantial employment in Lane County are: Woods Products Manufacturing, Food Manufacturing, and Fabricated Metal Product Manufacturing.[50]

  - **Recreational Vehicles.** Lane County has a cluster of recreational vehicles (RVs) manufacturers and retailers. Two of Lane County's largest manufacturers are Monaco Coach and County Coach. Employment in RV manufacturing has declined since 2006 as a result of declining demand for RVs due, in part, to increases in gasoline costs. High energy costs

[48] Oregon Employment Department

[49] "Economic Data Packet, Mary 2008," Oregon Economic And Community Development Department

[50] Oregon Employment Department

may continue to depress demand for RVs, at least in the next two to five years.

- **Wood Products and Paper Manufacturing.** Manufacturing timber-related products has historically been a source of employment and exports in Lane County. Employment in these industries has declined since the 1980's but continues to account for more than one-quarter of manufacturing employment in Lane County in 2006. Continued changes create uncertainty for future employment in these industries. For example, Weyerhaeuser, one of Lane County's largest employers, announced in March 2008 that it was selling several facilities in Oregon and Lane County to International Paper Corporation. It is unclear whether and how this sale will impact employment in paper manufacturing.

- **Call centers.** The trend towards domestic outsourcing of back-office functions has lead several companies to locate call centers in the Eugene-Springfield area. The largest among these call centers is Symantec, located in Springfield. Other recent call centers to locate in the Eugene-Springfield area include Royal Caribbean and Enterprise. The Eugene-Springfield's trained labor pool of relatively low-cost workers for call centers gives the region an advantage for attracting additional call centers.

- **Tourism.** Tourism brings economic activity into an area from outside sources. Tourism expenditures in Lane County in 2006 grew 7.5%, to $553 million, exceeding the statewide tourism growth rate for the year. Tourism accounts for about 7,500 jobs in Lane County.[51]

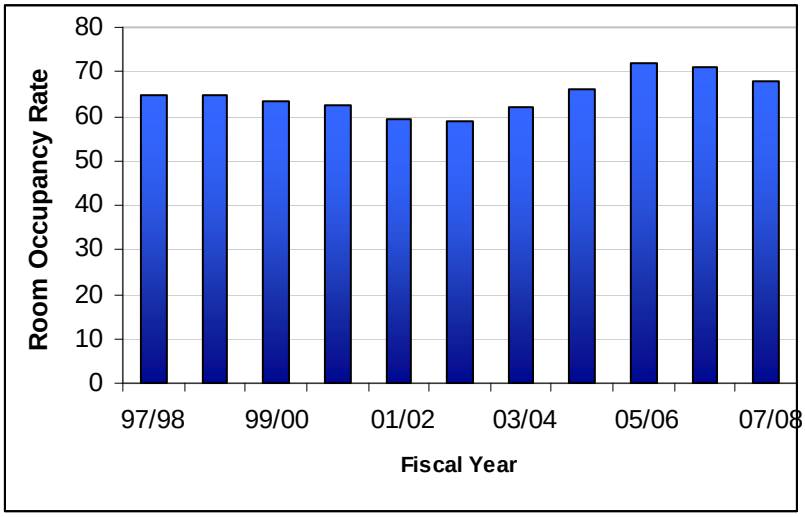
A major source of tourism spending is overnight accommodations. In 2008, the Eugene-Springfield Region has 3,118 total rooms. Since 1997, 629 limited service hotel rooms were added. During the same period, 377 full service rooms, 92 limited service rooms, and 15,464 square feet of meeting space have closed.[52]

Figure A-5 shows the hotel occupancy rate in the Eugene-Springfield Region from fiscal year 1998 to fiscal year 2008. The Region's occupancy rate varied from 59% in fiscal year 2002 and 2003 to 72% in fiscal year 2006.

[51] Convention & Visitors Association of Lane County Oregon, CVALCO

[52] Convention & Visitors Association of Lane County Oregon, CVALCO

Figure A-5. Hotel room occupancy rate, Eugene-Springfield Region, Fiscal Years 1998 to 2008



Source: Convention & Visitors Association of Lane County Oregon, CVALCO
Note: 2008 data current through March 2008

Springfield levies a 9.5% transient lodging tax on overnight accommodations. Springfield's lodging tax rate is 9.5%. Table A-13 shows transient lodging tax revenue for Lane County and Springfield for fiscal year 2000 through 2008. Springfield's lodging tax revenue varied from $1.2 million in fiscal year 2004 to $1.6 million in fiscal year 2007. Springfield's transient lodging tax revenues accounted for about one-quarter of total County revenues.

Table A-13. Transient lodging tax revenues, Lane County and Springfield, Fiscal Years 2000 to 2008

Fiscal Year	Lane County	Springfield	Springfield's % of County
2000	$4,753,583	$1,366,788	29%
2001	$4,834,210	$1,314,714	27%
2002	$4,865,320	$1,265,825	26%
2003	$4,820,662	$1,275,426	26%
2004	$5,095,869	$1,187,367	23%
2005	$5,378,361	$1,242,653	23%
2006	$6,016,364	$1,504,813	25%
2007	$6,611,718	$1,597,994	24%
2008	$5,103,490	$1,235,685	24%

Source: Convention & Visitors Association of Lane County Oregon, CVALCO
Note: 2008 data current through March 2008

- **Agriculture.** Agricultural production is an important component of Lane County's economy. In 2002, Lane County had approximately $88 million in total gross sales from agriculture.

Table A-14 shows the top five agricultural products in Lane County in 1997 and 2002. Lane County's agriculture products with the greatest value of sales in 2002 were Nursery ($21 million) and Milk & dairy ($10.3 million). Milk & diary had the largest average sales value per farm ($1.1 million), nearly double the 1997 average sales value for dairies in 1997 ($0.6 million). This change may indicate that dairies have grown larger over the five-year period.

Other important changes are the decrease in value of sales for poultry and eggs (down $4.2 million) cattle and calves (down $2.2 million). The decrease in sales for cattle and calves may be explained by the decrease of 248 farms with cattle and calves.

Table A-14. Six agricultural products with the highest sales value, Lane County 1997 and 2002

Item	Value of Sales	Farms	Average Value of Sales per Farm
2002 Total Sales			
Nursery, greenhouse, floriculture, & sod	$21,001,000	208	$ 100,966
Milk & other dairy products from cows	$10,290,000	9	$ 1,143,333
Cattle & calves	$ 7,622,000	779	$ 9,784
Fruits, tree nuts, & berries	$ 6,683,000	382	$ 17,495
Vegetables, melons, potatoes, & sweet potatoes	$ 5,955,000	155	$ 38,419
Poultry & eggs	$ 5,919,000	218	$ 27,151
1997 Total Sales			
Poultry & eggs	$10,074,000	144	$ 69,958
Cattle & calves	$ 9,780,000	1,027	$ 9,523
Milk & other dairy products from cows	$ 7,306,000	13	$ 562,000
Fruits, tree nuts, & berries	$ 6,842,000	303	$ 22,581
Vegetables, melons, potatoes, & sweet potatoes	NA	NA	NA
Nursery, greenhouse, floriculture, & sod	NA	NA	NA

Source: USDA Census of Agriculture, 2002; Calculations by ECONorthwest
Note: The definition of the following categories of farm products changed between 1997 and 2002: Nursery, greenhouse, floriculture, and sod; Other crops and hay; and vegetables, melons, potatoes, and sweet potatoes. These changes prevent direct comparison between the Total Sales of these agricultural products in 1989 and 2002.

OUTLOOK FOR GROWTH IN SPRINGFIELD

Table A-15 shows the population forecast developed by the Office of Economic Analysis for Oregon and Lane County for 2000 through 2040. Lane County is forecast to grow at a slower rate than Oregon over the 2005 to 2030 period. The forecast shows Lane County's population will grow by about 96,600 people over the 25-year period, a 29% increase. Over the same period, Oregon is forecast to grow by more than 1.2 million people, a 35% increase.

Table A-15. State population forecast, Oregon and Lane County, 2000 to 2040

Year	Oregon	Lane County
2000	3,436,750	323,950
2005	3,618,200	333,855
2010	3,843,900	347,494
2015	4,095,708	365,639
2020	4,359,258	387,574
2025	4,626,015	409,159
2030	4,891,225	430,454
2035	5,154,793	451,038
2040	5,425,408	471,511
Change 2005 to 2030		
Amount	1,273,025	96,599
% Change	35%	29%
AAGR	1.2%	1.0%

Source: Office of Economic Analysis

Table A-16 shows the Oregon Employment Department's forecast for employment growth by industry for Lane County over the 2006 to 2016 period. The sectors that will lead employment growth in Lane County for the ten-year period are Health Care & Social Assistance (adding 5,600 jobs), Government (adding 3,600 jobs), Professional and Business Services (adding 3,000 jobs), Leisure & Hospitality (adding 2,800 jobs), and Retail Trade (adding 2,400 jobs). Together, these sectors are expected to add 17,400 new jobs or 76% of employment growth in Lane County.

Table A-16. Nonfarm employment forecast by industry in Lane County, 2006-2016

Sector / Industry	2006	2016	Change 2006-2016 Amount	% Change
Natural resources & Mining	900	900	0	0%
Construction	8,000	9,200	1,200	15%
Manufacturing	20,300	21,000	700	3%
Durable Goods	16,300	16,900	600	4%
Wood prodcut mfg.	4,700	4,500	-200	-4%
Transportation equip. mfg.	4,400	4,700	300	7%
Nondurable goods	4,000	4,100	100	3%
Transportation, & utilities	3,300	3,700	400	12%
Wholesale trade	5,900	6,500	600	10%
Retail trade	**19,700**	**22,100**	**2,400**	**12%**
Information	3,700	4,100	400	11%
Financial activities	8,300	9,300	1,000	12%
Professional & business srv.	**16,100**	**19,100**	**3,000**	**19%**
Administrative & support srv.	8,200	9,700	1,500	18%
Education	1,500	1,900	400	27%
Health care & social assist.	**18,100**	**23,700**	**5,600**	**31%**
Health care	15,400	20,500	5,100	33%
Leisure & hospitality	**14,200**	**17,000**	**2,800**	**20%**
Accommodation & food srv.	12,100	14,300	2,200	18%
Food srv. & drinking places	10,700	12,700	2,000	19%
Other srv.	5,100	5,700	600	12%
Government	**28,400**	**32,000**	**3,600**	**13%**
Federal government	1,800	1,700	-100	-6%
State government	11,300	13,200	1,900	17%
State education	8,700	10,200	1,500	17%
Local government	15,400	17,100	1,700	11%
Local education	8,600	9,300	700	8%
Total nonfarm employment	**153,400**	**176,100**	**22,700**	**15%**

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

Appendix B Factors Affecting Future Economic Growth in Springfield

This appendix presents a detailed analysis consistent with the requirements of OAR 660-009-0015(4) of Springfield's comparative advantage relative to the Eugene/Springfield area, Lane County, Willamette Valley, and Oregon. The information presented in this appendix is summarized in Chapter 3.

WHAT IS COMPARATIVE ADVANTAGE

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

By affecting the cost of production and marketing, comparative advantages affect the pattern of economic development in a region relative to other regions. Goal 9 and OAR 660-009-0015(4) recognizes this by requiring plans to include an analysis of the relative supply and cost of factors of production.[53] An analysis of comparative advantage depends on the geographic areas being compared. In general, economic conditions in Springfield will be largely shaped by national and regional economic conditions affecting the Willamette Valley. Chapter 2 and Appendix A present trends and forecasts of conditions in Oregon and Springfield to help establish the context for economic development in Springfield. Local economic factors will help determine the amount and type of development in Springfield relative to other communities in Oregon.

This appendix focuses on the comparative advantages of Springfield as a recreation destination relative to the rest of Oregon. The implications of the factors that contribute to Springfield's comparative advantage are discussed at the end of this chapter.

[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."

LOCATION

Springfield is a city with a population of approximately 57,320 people in 2007, located in the Southern Willamette Valley. Interstate 5 runs to the west of Springfield and Highway 126 runs east-west through Springfield. Springfield is located between the Willamette River (to the south) and McKenzie River (to the north). Springfield's location will continue to impact Springfield's future economic development.

- Springfield shares a border with Eugene, the 2nd largest city in the State of Oregon, with a population of approximately 153,690 people in 2007. The Eugene-Springfield Metropolitan Statistical Area (MSA), which includes all of Lane County, had more than 343,000 people in 2007, accounting for 9% of Oregon's population.

- Springfield has easy access to the State's highway system and other transportation opportunities. Interstate 5 runs to the west of Springfield and Highway 126 is the main east-west route through Springfield. Residents and businesses in Springfield can access other modes of transportation in Eugene, including the Eugene Airport, Greyhound bus service, and passenger rail service.

- Residents of Springfield have easy access to shopping, cultural activities, indoor and outdoor recreational activities, and other amenities in Springfield, Eugene, and rural Lane County.

- Springfield residents have several opportunities for post-secondary education: the University of Oregon, Lane Community College, Northwest Christian College, and Gutenberg College.

Springfield's location, access to I-5 and Highway 126, and proximity to Eugene are primary comparative advantages for economic development in Springfield.

BUYING POWER OF MARKETS

The buying power of Springfield and the Eugene-Springfield area forms part of Springfield's comparative advantage by providing a market for goods and services. Table B-1 shows the combined total expenditures for households in Springfield and the Eugene-Springfield Metropolitan Statistical Area (MSA) in 2008. Households in Springfield are expected to spend about $937 million in 2008, about 14% of total household expenditures in the Eugene-Springfield MSA.

Table B-1. Aggregate annual household expenditures for common purchases, Springfield and the Eugene-Springfield Metropolitan Statistical Area (MSA), 2008

	Springfield	Eugene/ Springfield MSA	Springfield % of MSA Spending
Apparel	$ 78,765,734	$ 548,162,423	14%
Entertainment	$ 106,917,462	$ 777,731,151	14%
Food at Home	$ 135,808,782	$ 875,120,493	16%
Health Care	$ 72,511,784	$ 534,882,328	14%
Household Equipment	$ 48,498,974	$ 367,679,233	13%
Shelter-Related Expenses	$ 49,925,453	$ 369,146,828	14%
Transportation	$ 185,522,716	$ 1,304,243,991	14%
Miscellaneous Items	$ 259,702,794	$ 1,890,881,821	14%
Total	**$ 937,653,699**	**$ 6,667,848,268**	**14%**

Source: Claritas, 2008
Note: Table B-1 does not include spending on shelter or housing

Table B-2 shows average household expenditures for common purchases in Springfield and the Eugene-Springfield MSA in 2008. Springfield households spend an average of $42,700 on commonly purchased items, not including housing, which typically accounts for 20% or more of household expenditures. Springfield's households spent less than the regional and nation averages, with about 91% of the $47,000 average expenditures for all households in the Eugene-Springfield MSA and 84% of national average household expenditures.

Springfield households spent the most on miscellaneous items ($11,800), such as personal care items, education, child care, pet care, and eating out. Transportation accounted for 20% of Springfield household expenditures, food at home accounted for 14%, and entertainment accounted for 11% of expenditures. Compared to household spending for the entire MSA or the nation, Springfield households spent a more on food at home and less on household equipment (e.g., home furnishings and major appliances) and shelter-related expenses (e.g., household repairs, fuel, and telephone service)

Table B-2. Average annual household expenditures for common purchases, Springfield and the Eugene-Springfield Metropolitan Statistical Area (MSA), 2008

	Springfield Households		Eugene/ Springfield MSA	Springfield's Expenditures Compared to:	
	Expenditures	% of Total		E/S MSA	U.S
Apparel	$ 3,589	8%	$ 3,869	93%	77%
Entertainment	$ 4,871	11%	$ 5,490	89%	84%
Food at Home	$ 6,187	14%	$ 6,177	100%	98%
Health Care	$ 3,304	8%	$ 3,775	88%	77%
Household Equipment	$ 2,210	5%	$ 2,595	85%	76%
Shelter-Related Expenses	$ 2,275	5%	$ 2,606	87%	75%
Transportation	$ 8,452	20%	$ 9,206	92%	90%
Miscellaneous Items	$ 11,832	28%	$ 13,347	89%	80%
Total	**$ 42,720**	**100%**	**$ 47,065**	**91%**	**84%**

Source: Claritas, 2008
Note: Table B-2 does not include spending on shelter or housing, which typically accounts for 20% or more of household expenditures.

AVAILABILITY OF TRANSPORTATION FACILITIES

Businesses and residents in Springfield have access to a variety of modes of transportation: automotive (Interstate 5, multiple State highways, and local roads); rail (Union Pacific and Amtrak); transit (LTD); and air (Eugene Airport).

Springfield has excellent automotive access for commuting and freight movement. Springfield is located along Interstate 5, the primary north-south transportation corridor on the West Coast, linking Springfield to domestic markets in the United States and international markets visa West Coast ports. Springfield has developed along Highway 126, connecting Springfield to rural areas to the East of Springfield. Highway 126 is the primary east-west highway in Lane County, running from Florence to Redmond. Businesses and residents of Springfield also have access to Highway 99 in Eugene and Highway 58 in Pleasant Hill.

Other transportation options in Springfield are:

- **Rail.** Multiple Union Pacific rail lines serve Springfield, providing freight service. There are two primary junctions in Springfield: (1) the Springfield Junction is located in the Glenwood area in Southwest Springfield and (2) the Mohawk Junction is near the city's southern boundary, near 25th St.

- **Transit.** The Lane Transit District (LTD) provides transit service to the Eugene-Springfield region. LTD serves Springfield with multiple bus lines, providing bus service within Springfield and

connecting Springfield with Eugene. LTD recently began operating a bus rapid transit (BRT) system, called EmX, which provides service between Springfield Station and Eugene Station. Construction is underway for the new Pioneer Parkway BRT route, which will connect to the Sacred Heart Medical Center, and the Gateway Mall.

- **Air.** The Eugene Airport provides both passenger and freight service for Eugene and Springfield residents. The airport is the second busiest in the state, and the fifth largest in the Pacific Northwest. The airport is served by five commercial airlines, and is the primary airport for a six county region.

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

PUBLIC FACILITIES AND SERVICES

Provision of public facilities and services can impact a firm's decision on location within a region but ECO's past research has shown that businesses make locational decisions primarily based on factors that are similar with 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.

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, redevelopment, and infill development. Success at attracting or retaining firms may depend on availability of attractive sites for development, especially large sites. For example, Springfield was attractive as a location of PeaceHealth's new hospital because the City had a large, relatively flat site located relatively near to Interstate 5 and Beltline Highway.

Springfield's decisionmakers articulated their support for provision of employment land through the economic development strategy and in other policy choices. Objectives in the economic development strategy supporting the provision of employment land include objectives to: (1) provide employment land in a variety of locations, configurations, and site sizes for industrial and other employment uses, (2) provide an adequate competitive short-term supply of suitable land to respond to economic development opportunities as they arise, (3) reserve sites over 20-acres for special developments and industries that require large sites, and (4) provide adequate infrastructure to sites.

The economic development strategy also includes objectives that support redevelopment of existing land within the UGB, especially in Downtown and in Glenwood, and infill development. In addition, the City is promoting redevelopment in Downtown through the creation of the Urban Renewal District in Downtown Springfield.

TAX POLICY

The tax policy of a jurisdiction is a consideration in economic development policy. Table B-3 shows that Springfield's property tax rate is between $16.32 and $18.65 per $1,000 of assessed value, compared with a state average of $15.20. The property tax rate in Eugene is more variable than Springfield's, ranging from $10.31 to $24.68 per $1,000 of assessed value. [54]

Table B-3. Property tax rate per $1,000 assessed value for Springfield, Eugene, and Oregon, 2007.

Area	Tax Rate (per $1,000 assessed value)
Oregon	$15.20
Lane County	$15.47
Springfield	**$16.32 - $18.65**
Eugene	$10.31 - $24.68

Source: Oregon Department of Revenue

[54] Property tax rates for Springfield and Eugene are a composite of the rates for all properties with an address in Eugene or Springfield. It is almost certain that some of these properties is located outside of both the Eugene and Springfield urban growth boundaries and are subject to unincorporated Lane County tax rates.

WATER

Springfield's water provider is the Springfield Utility Board (SUB). Springfield's primary source of water is wells, supplemented by surface water from the Middle Fork of the Willamette River. Springfield has 33 wells in 7 well fields, which provide the majority of Springfield's water. SUB has purchased rights to water from the McKenzie River, to supply future need for water.

Springfield's water treatment plant is located on the Middle Fork of the Willamette River, which provides water treatment for the city. The water treatment plant is at or near capacity, with peak summer residential and commercial irrigation demands exceeding the plant's capacity at times. SUB is addressing peak demands by educating customers peak shifting, the practice of irrigating landscaping in the evening or at night.

SUB is planning upgrades to the water treatment plant in 2008 and 2009 to address issues meeting demand at peak times. SUB is also planning upgrades double the plant's capacity in 2010. Springfield plans to build two additional water treatment plants on the McKenzie River, as demand for water increases. SUB expects to need the new treatment plants by 2013 to 2018.

SUB has sufficient water to meet expected growth and be able to meet residential and employment needs. SUB is not concerned about its ability to supply water to any type of industry, including water-intensive industries like food processing. SUB has lower water rates than the national average. The combination of available and lower cost water may be an advantage to attracting some types of businesses to Springfield.

WASTEWATER

Springfield's wastewater services are provided by Metropolitan Wastewater Management Commission (MWMC), which operates a wastewater facility that serves Springfield, Eugene, and Lane County. Springfield's wastewater system, which includes the sanitary sewer and other equipment, is managed by Springfield Public Works.

Springfield is about to meet current wastewater demands, except in instances of heavy rainfall. On dry days, Springfield generates about 6 million gallons of wastewater per day. During heavy rainfall, Springfield can generate 100 million gallons of wastewater per day, as a result of infiltration and inflow into wastewater pipes.

Springfield recently completed an update of the Wastewater Master Plan, which identified $65 million of upgrades to the system, which will

provide service to unserviced areas in Springfield and address problems with infiltration and inflow into wastewater pipes.

Springfield expects to be able to meet expected growth. The City expects to provide service to 6,100 new equivalent dwelling units, which includes residences and businesses, over the next 20-years. If Springfield needs to expand its urban growth boundary, the City will need to plan how to provide service to the new areas.

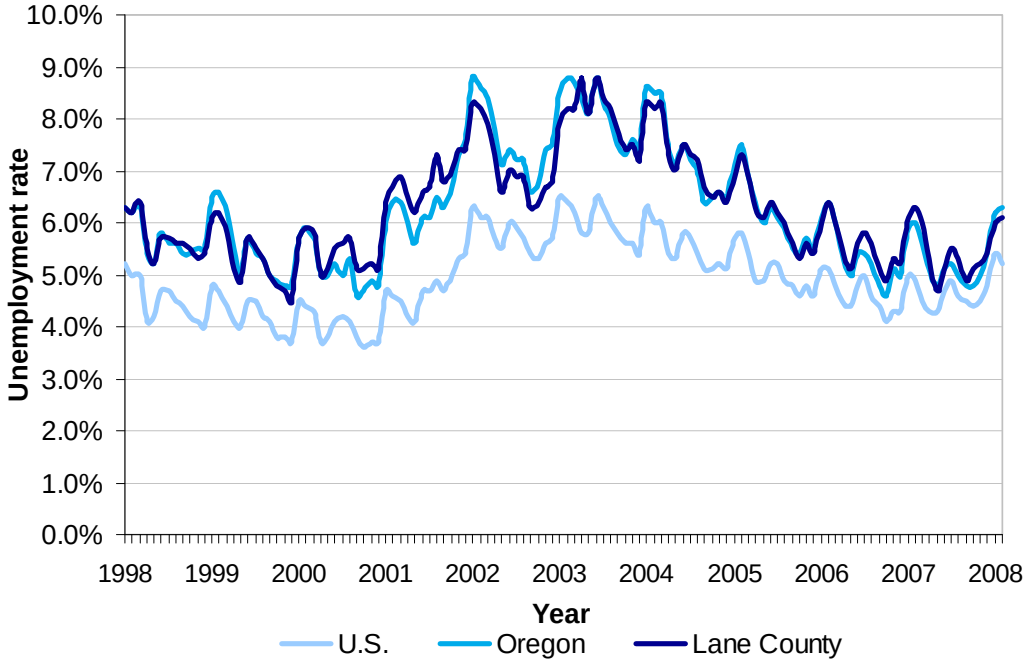
LABOR MARKET FACTORS

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

The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2000 Census, Lane County has more than 166,000 people in its labor force, with 16% of the County's labor force located in Springfield (27,000 participants in the labor force).

The unemployment rate is one indicator of the relative number of workers who are actively seeking employment. Labor force data from the Oregon Employment Department shows that unemployment in Lane County 6.1% in February 2008, lower than the State average of 6.3%. Figure B-1 shows the unemployment rate for Lane County, Oregon, and the United States for the past decade. During this period, Lane County's unemployment has been very similar to the statewide unemployment rate. The County and State unemployment rates have been consistently higher than the national average, but the difference has decreased in recent years.

Figure B-1. Unemployment rates for Lane County, Oregon, and the U.S., January 1998 to February 2008



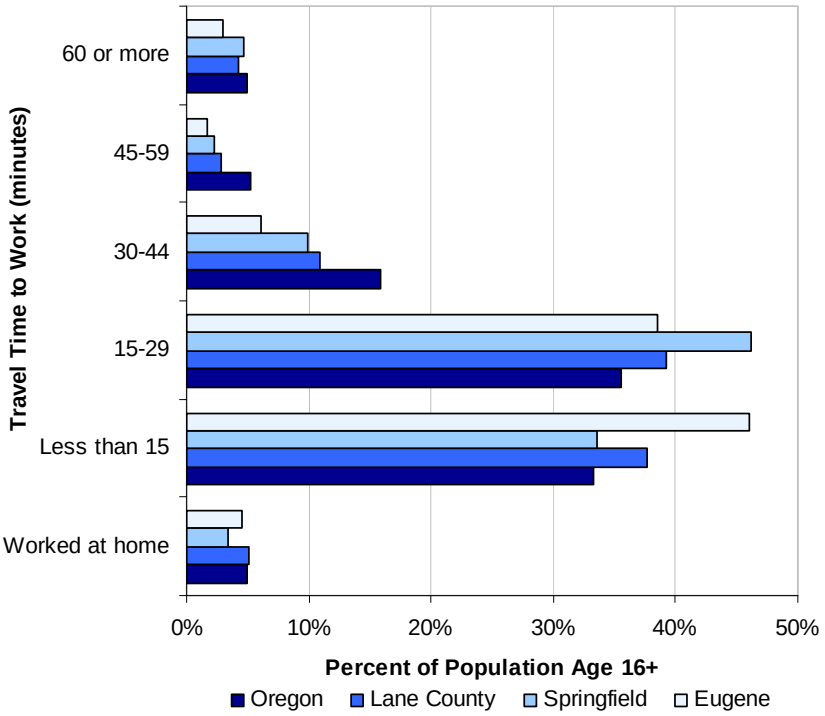
Source: Bureau of Labor Statistics

Note: unemployment data is not seasonally adjusted

Another important factor in the labor force is the distance that workers are willing to commute. Figure B-2 shows a comparison of the commute time to work for residents 16 years and older for Oregon, Lane County, Eugene, and Springfield in 2008.

Springfield residents were more likely to have a commute of between 15 and 29 minutes than residents of the State, County, or Eugene. About 46% of Springfield residents commute 15 to 29 minutes, compared with the 36% of State residents, 39% of County residents, and 38% of Eugene's residents.

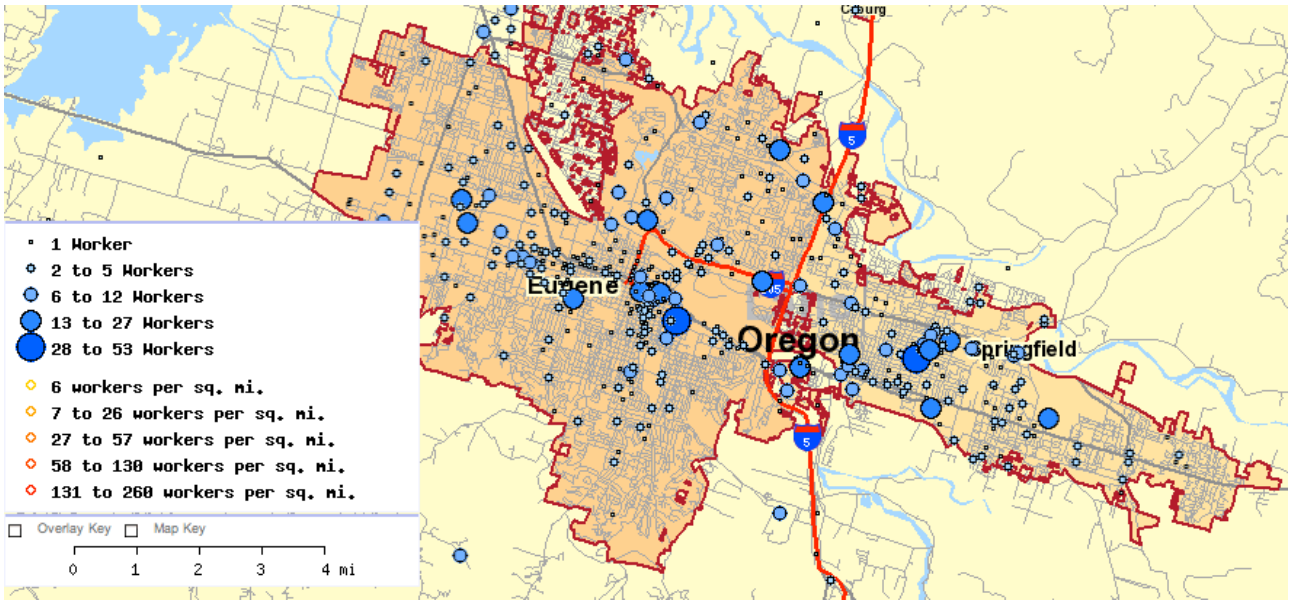
Figure B-2. Commuting time to work in minutes for residents 16 years and older, Oregon, Lane County, Eugene, and Springfield, 2008



Source: Claritas 2008

Figure B-3 and Table B-4 show where residents of Springfield work in 2004. Figure B-3 and Table B-4 show that 81% of Springfield's residents were employed in Lane County, with 40% of Springfield's residents working in Eugene and 25% working in Springfield. Close to 1,000 Springfield workers (4%) commute to Multnomah County, the majority of who work in Portland.

Figure B-3. Places that residents of Springfield were employed, 2004



Source: U.S. Census Bureau: LED on the Map

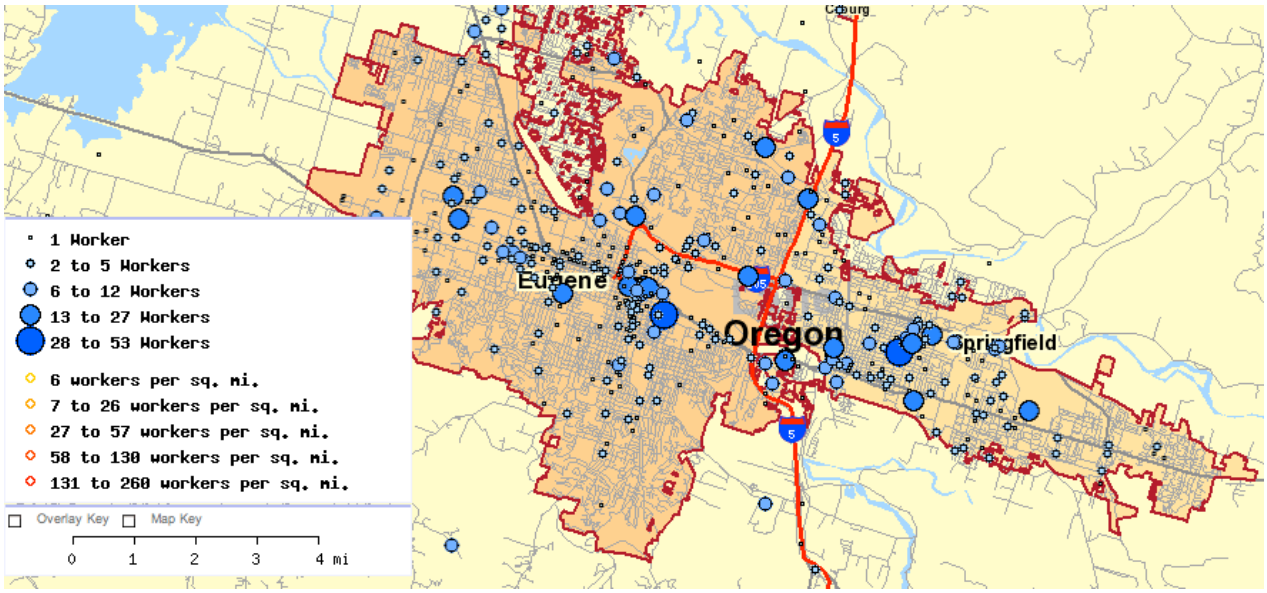
Table B-4. Places that residents of Springfield were employed, 2004

Location	Number	Percent
Lane County	18,649	81%
Eugene	**9,261**	**40%**
Springfield	**5,675**	**25%**
Coburg	638	3%
Junction City	475	2%
Multnomah Co.	975	4%
Portland	839	4%
All Other Locations	3,385	15%
Total	23,009	100%

Source: U.S. Census Bureau: LED on the Map

Figure B-4 and Table B-5 show where employees of firms located in Springfield lived in 2004. Seventy-nine percent of Springfield's workers lived in Lane County. Twenty-nine percent lived in Springfield, and 23% lived in Eugene. About 27% of Springfield's workers lived in unincorporated areas of Lane County and 21% lived outside of Lane County.

Figure B-4. Places where workers in Springfield lived, 2004



Source: U.S. Census Bureau: LED on the Map

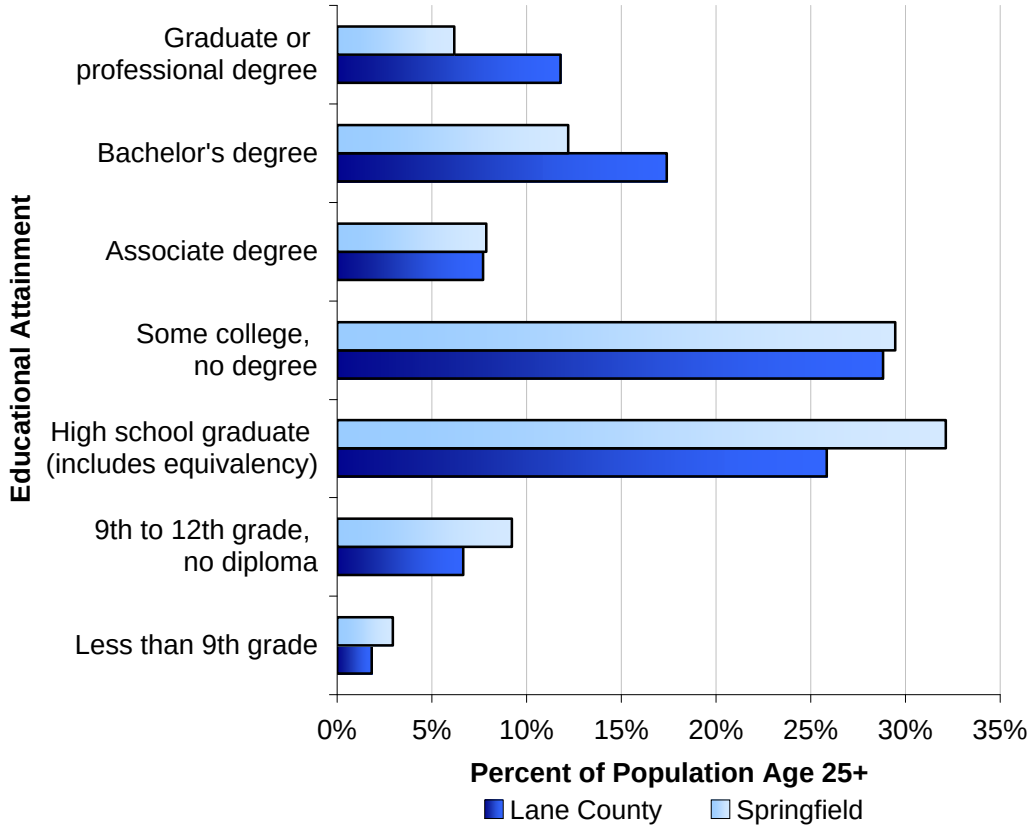
Table B-5. Places where workers in Springfield lived, 2004

Location	Number	Percent
Lane County	15,341	79%
Springfield	**5,675**	**29%**
Eugene	**4565**	**23%**
All Other Locations	4,112	21%
Linn County	537	3%
Marion County	428	2%
Jackson County	409	2%
Other locations	2,738	14%
Total	19,453	100%

Source: U.S. Census Bureau: LED on the Map

Educational attainment is an important labor force factor because firms need to be able to find educated workers. Figure B-5 shows the share of population by education level completed in Springfield and Lane County in 2007. In 2007, Springfield had a smaller share of residents with an associate's degree or higher (26%) than residents of Lane County (37%). In comparison, 47% of Eugene's residents have an associate's degree or higher.

Figure B-5. Educational attainment for the population 25 years and over, Oregon, Lane County, and Springfield, 2007



Source: OregonProspector.com

Opportunities for workforce training and post-secondary education for residents of the Eugene-Springfield area include: the University of Oregon, Lane Community College, Northwest Christian College, and Gutenberg College.

Table B-6 shows changes in ethnicity Oregon, Lane County, and Springfield between 1990, 2000, and 2008. This table shows that the Springfield has a larger share of Hispanic or Latino residents than Lane County 2000, with 6.6% of residents in Springfield were Hispanic compared to the County average of 4.6%. Between 1990 and 2000, Springfield's Hispanic and Latino population grew by 168% (2,176 people), compared with growth in the Hispanic and Latino population of 117% in Lane County and 144% in Oregon.

In 2008, Hispanic residents accounted for about 11% of Oregon's population and 6% of Lane County's population. Springfield's Hispanic population grew by 95% between 2000 and 2008, more than twice the rate of growth for the County or State during the same period.

Table B-6. Changes in ethnicity, Oregon, Lane County, and Springfield, 1990, 2000, and 2008

	Oregon	Lane County	Springfield
1990			
Total Population	2,842,321	282,912	44,683
Hispanic or Latino	112,707	6,852	1,299
Percent Hispanic or Latin	4.0%	2.4%	2.9%
2000			
Total Population	3,421,399	322,959	52,729
Hispanic or Latino	275,314	14,874	3,475
Percent Hispanic or Latin	8.0%	4.6%	6.6%
2008			
Total Population	3,772,854	343,961	56,016
Hispanic or Latino	400,435	20,941	5,293
Percent Hispanic or Latin	10.6%	6.1%	9.4%
Change 1900-2000			
Hispanic or Latino	162,607	8,022	2,176
Percent Hispanic or Latin	144%	117%	168%
Change 2000-2008			
Hispanic or Latino	125,121	6,067	3,287
Percent Hispanic or Latin	45%	41%	95%

Source: U.S. Census 1990 and 2000, Claritas 2008

Commuting is common in Springfield. About 40%of the people who live in Springfield commute to Eugene for work. Less than one-third of Springfield's workers live in Springfield. The implication of this workforce analysis is that, while only one-third of Springfield's workforce lives within the City, Springfield are able to attract educated workers from most of Eugene and surrounding areas in Lane county.

It does not appear that workforce will be a constraint on employment growth in Springfield. Springfield should be able to continue to draw on residents of Eugene for workers, even if energy prices continue to rise but Springfield's ability to attract workers from outside of the Eugene-Springfield area may be negatively impacted by continued increases in energy prices.

Appendix C Employment Forecast and Site Needs for Industrial and other Employment Uses

This appendix presents a detailed analysis of Springfield's site needs consistent with the requirements of OAR 660-009-0015(2) and of OAR 660-009-0025(1). This appendix includes an employment forecast and an analysis of site needs to accommodate industrial and other employment uses in Springfield for the 2010 to 2030 period. The information presented in this appendix is summarized in Chapter 4.

EMPLOYMENT FORECAST

To provide for an adequate supply of commercial and industrial sites consistent with plan policies, Springfield needs an estimate of the amount of commercial and industrial land that will be needed over the planning period. Goal 9 requires cities identify "the number of sites by type reasonably expected to be needed to accommodate the expected employment growth based on the site characteristics typical of expected uses." The number of needed sites is dependent on the site requirements of employers. The estimate of land need is presented in the site needs analysis in the next section.

Demand for commercial and industrial land will be driven by the expansion and relocation of existing businesses and new businesses locating in Springfield. The level of this business expansion activity can be measured by employment growth in Springfield. This section presents a projection of future employment levels in Springfield 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 Springfield's UGB presented in Chapter 3. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in Springfield.

2. **Project total employment.** The projection of total employment will be calculated using the safe harbor method suggested in OAR 660-024.

3. **Allocate employment.** This step involves allocating employment to different building types, based on similar requirements for built space.

EMPLOYMENT BASE FOR PROJECTION

To forecast employment growth in Springfield, we must start with a base of employment growth on which to forecast. Table C-1 shows ECO's estimate of total employment in the Springfield UGB in 2006. To develop the figures, ECO started with estimated covered employment in the Springfield UGB from confidential QCEW (Quarterly Census of Employment and Wages) data provided by the Oregon Employment Department.

Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Analysis of data shows that covered employment reported by the Oregon Employment Department for Lane County is only about 74% of total employment reported by the U.S. Department of Commerce. We made this comparison by sector for Lane County and used the resulting ratios to convert covered employment to total employment in Springfield.

Table C-1 shows Springfield had an estimated 36,706 employees within its UGB in 2006. This figure results in a population-to-employment ratio of 1.7 persons per employee. The statewide average is about 1.9 persons per employee.

Table C-1. Estimated total employment in the Springfield UGB by sector, 2006

Sector	Covered Employment Number	Covered Employment % of Total Emp.	Estimated Total Employment
Agriculture, Forestry, Fishing, & Mining	282	73%	387
Construction	1,922	65%	2,973
Manufacturing	2,714	99%	2,750
Wholesale Trade	1,230	85%	1,446
Retail	3,632	79%	4,609
Transportation & Warehousing & Utilities	941	70%	1,349
Information	1,356	79%	1,710
Finance & Insurance	1,110	66%	1,673
Real Estate & Rental & Leasing	441	33%	1,341
Professional, Scientific, & Technical Services	576	52%	1,107
Management of Companies & Enterprises	343	97%	354
Admin. & Support & Waste Mgt Services	2,460	76%	3,239
Private Educational Services	109	38%	290
Health Care & Social Assistance	3,069	77%	4,008
Arts, Entertainment, & Recreation	321	41%	777
Accommodation & Food Services	2,453	91%	2,686
Other Services	816	48%	1,685
Government	3,535	82%	4,322
Total	**27,310**	**74%**	**36,706**

Source: 2005 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department. Covered employment as a percent of total employment calculated by ECONorthwest using data for Lane County employment from the U.S. Department of Commerce, Bureau of Economic Analysis (total) and the Oregon Employment Department (covered).

The employment forecast covers the 2010 to 2030 period, requiring an estimate of total employment for Springfield in 2008. Since 2006, Springfield has had one major change in employment, beyond expected employment growth: PeaceHealth has built a new hospital at RiverBend. PeaceHealth estimates that there will be approximately 3,400 new employees in Springfield in 2008 as a result of the hospital at RiverBend.

ECO estimates that Springfield has 37,733 employees in 2008, plus the 3,400 employees at RiverBend. The result is an employment base of 41,133 total employees in Springfield in 2008.

EMPLOYMENT PROJECTION

OAR 660-024-0040 (8) (a) (A) allows the City to determine employment land needs based on "The county or regional job growth rate provided in the most recent forecast published by the Oregon Employment Department." Springfield is part of Region 5, which includes all of Lane County. Based on this safe harbor, employment in Springfield can be assumed to grow at 1.4% annually. Table C-2 shows the result of applying

this growth rate to the total employment base of 41,133 in Springfield. Table C-2 shows that employment is forecast to grow by 13,440 employees (a 32% increase) between 2010 and 2030.

Table C-2. Employment growth in Springfield's UGB, 2010–2040

Year	Total Employment
2008	41,133
2010	42,284
2030	55,724
2030	55,724
2031	56,498
2032	57,283
2033	58,079
2034	58,886
2035	59,704
2036	60,534
2037	61,375
2038	62,228
2039	63,093
2040	63,970
Change 2010 to 2030	
Employees	13,440
Percent	32%
AAGR	1.4%

Source: ECONorthwest

Springfield is part of the regional economic center in the Eugene-Springfield region. The ratio of population to employment will decrease from 1.6 to 1.5 people per job between 2010 and 2030. This change shows that employment will grow faster than population in Springfield, suggesting that some Springfield will continue to have employees who commute from Eugene or other cities in the region.

ALLOCATE EMPLOYMENT TO DIFFERENT BUILDING TYPES

The next step in the employment forecast is to allocate future employment to building type, as described in Table A-8 in Appendix A. The allocation was done by grouping employment into building types with similar building and site requirements. For example, the following service sectors were grouped together into the "office" building type because they need similar types of built space with similar site requirements: information, finance, real estate, professional services, management of companies, administrative support, utilities, arts and entertainment, and other services.

Table C-3 shows the forecast of employment growth by building type in Springfield's UGB in 2030. Table C-3 shows the amount of employment by building type in 2010. In 2010, a total of about 60% of Springfield's employment is in office and other services' building types. About 18% is in retail, 15% is in general industrial and 7% is in warehousing and distribution.

Table C-3. Forecast of employment growth in by building type, Springfield UGB, 2010–2030

	2010		2030		Change
Building Type	Employment	% of Total	Employment	% of Total	2010 to 2030
Industrial					
Warehousing & Distribution	2,954	7.0%	3,343	6.0%	389
General Industrial	6,457	15.3%	7,523	13.5%	1,066
Commercial					
Office	12,561	29.7%	17,274	31.0%	4,713
Retail	7,709	18.2%	9,752	17.5%	2,043
Other Services	12,603	29.8%	17,832	32.0%	5,229
Total	**42,284**	**100.0%**	**55,724**	**100.0%**	**13,440**

Source: ECONorthwest
Note: Green shading denotes an assumption by ECONorthwest

The forecast in Table C-3 assumes that Springfield will have growth in all categories of employment. It also assumes that the share of employment will increase in other services (2.2% increase in share) and office (1.3% increase in share). At the same time, the share of employment will decrease in general industrial (1.8% decrease in share), warehousing and distribution (1.0% decrease in share), and retail (0.7% decrease in share). In terms of jobs, employment will increase in all of these sectors.

The assumptions about the changes in share of all employment are based on the following considerations:

- **Increase in the share of employment in office and other services.** Springfield's target industries are predominantly office and other services, such as medical services, services for seniors, call centers, back office functions, high tech, professional services, corporate headquarters, and other services. The forecast assumes that these industries will grow faster than other employment in Springfield.

- **Decrease in employment in other categories.** The decreases in employment in other categories is based on the following factors:

    - While Springfield expects that general industrial will grow, the City expects industrial employment will grow slower than all employment in the City. This expectation is based

on the target industries that Springfield has identified and the Oregon Employment Department's forecast for employment growth in Lane County for 2006 to 2016.

- Springfield expects that employment in warehousing and distribution will grow but slower than all employment because Springfield is at a disadvantage for siting warehouse and distribution firms. These firms need sites that have easy access to I-5 and flat sites of 20 or more acres. There are relatively few sites in or around Springfield that meet these criteria.

- Employment in retail will grow with population. Springfield expects that retail will grow slightly slower than all employment. This assumption is based on the expectation that Springfield's target industries will grow faster than overall employment growth, including retail employment.

It is worth noting that the employment projections in this appendix do not take into account a major jump in employment that could result from the location of one or more large employers in the community during the planning period. This could take place if the City were successful in its recruitment efforts, either on its own and/or in conjunction with the Governors Initiative to bring new industry to the State. PeaceHealth and Symantec are examples of such events. 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.

SITE NEEDS

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

Firms wanting to expand or locate in Springfield will be looking for a variety of site and building characteristics, depending on the industry and specific circumstances. Previous research conducted by ECO has found that while there are always specific criteria that are industry-dependent and specific firm, many firms share at least a few common site criteria. In general, all firms need sites that are relatively flat, free of natural or regulatory constraints on development, with good transportation access and adequate public services. The exact amount, quality, and relative importance of these factors vary among different types of firms. This section discusses the site requirements for firms in industries with growth potential in the Eugene-Springfield Region, as indicated by the Oregon Employment Department forecast shown in Table A-12.

FACTORS THAT AFFECT LOCATIONAL DECISIONS

Why do firms locate where they do? There is no single answer—different firms choose their locations for different reasons. Key determinates of a location decision are a firm's *factors of production*. For example, a firm that spends a large portion of total costs on unskilled labor will be drawn to locations where labor is relatively inexpensive. A firm with large energy demands will give more weight to locations where energy is relatively inexpensive. In general, firms choose locations they believe will allow them to maximize net revenues: if demand for goods and services is held roughly constant, then revenue maximization is approximated by cost minimization.

The typical categories that economists use to describe a firm's production function are:

- **Labor.** Labor is often and increasingly the most important factor of production. Other things equal, firms look at productivity—labor output per dollar. Productivity can decrease if certain types of labor are in short supply, which increases the costs by requiring either more pay to acquire the labor that is available, the recruiting of labor from other areas, or the use of the less productive labor that is available locally. Based on existing commuting patterns, Springfield has access to labor from the Eugene-Springfield Region.

- **Land.** Demand for land depends on the type of firm. Manufacturing firms need more space and tend to prefer suburban locations where land is relatively less expensive and less difficult to develop. Warehousing and distribution firms need to locate close to interstate highways.

- **Local infrastructure.** An important role of government is to increase economic capacity by improving quality and efficiency of infrastructure and facilities, such as roads, bridges, water and sewer systems, airport and cargo facilities, energy systems, and telecommunications.

- **Access to markets.** Though part of infrastructure, transportation merits special attention. Firms need to move their product, either goods or services, to the market, and they rely on access to different modes of transportation to do this. Springfield's access to I-5 and Highway 126 provide the City with advantages in attracting businesses that need easy access to highways but do not need to ship large volumes of freight by truck.

- **Materials.** Firms producing goods, and even firms producing services, need various materials to develop products that they can sell. Some firms need natural resources: lumber manufacturing requires trees. Or, farther down the line, firms may need intermediate materials: for example, dimensioned lumber to build manufactured housing.

- **Entrepreneurship**. This input to production may be thought of as good management, or even more broadly as a spirit of innovation, optimism, and ambition that distinguishes one firm from another even though most of their other factor inputs may be quite similar.

The supply, cost, and quality of any of these factors obviously depend on market factors: on conditions of supply and demand locally, nationally, and even globally. But they also depend on public policy. In general, public policy can affect these factors of production through:

- **Regulation.** Regulations protect the health and safety of a community and help maintain the quality of life. Overly burdensome regulations, however, can be a disincentive for businesses to locate in a community. Simplified bureaucracies and straightforward regulations can reduce the burden on businesses and help them react quickly in a competitive marketplace.

- **Taxes**. Firms tend to seek locations where they can optimize their after-tax profits. Studies show that tax rates are not a primary location factor within a region—they matter only after businesses have made decisions based on labor, transportation, raw materials, and capital costs. The cost of these production factors is usually similar within a region. Therefore, differences in tax levels across

communities within a region are more important in the location decision than are differences in tax levels between regions.

- **Financial incentives**. Governments can offer firms incentives to encourage growth. Studies have shown that most types of financial incentives have had little significant effect on firm location between regions. For manufacturing industries with significant equipment costs, however, property or investment tax credit or abatement incentives can play a significant role in location decisions. Incentives are more effective at redirecting growth within a region than they are at providing a competitive advantage between regions.

This discussion may suggest that a location decision is based entirely on a straight-forward accounting of costs, with the best location being the one with the lowest level of overall costs. Studies of economic development, however, have shown that location decisions depend on a variety of other factors that indirectly affect costs of production. These indirect factors include agglomerative economies (also known industry clusters), quality of life, and innovative capacity.

- **Industry clusters**. Firms with similar business activities can realize operational savings when they congregate in a single location or region. Clustering can reduce costs by creating economies of scale for suppliers. For this reason, firms tend to locate in areas where there is already a presence of other firms engaged in similar or related activities.

- **Quality of life.** A community that features many quality amenities, such as access to recreational opportunities, culture, low crime, good schools, affordable housing, and a clean environment can attract people simply because it is a nice place to be. A region's quality of life can attract skilled workers, and if the amenities lure enough potential workers to the region, the excess labor supply pushes their wages down so that firms in the region can find skilled labor for a relatively low cost. The characteristics of local communities can affect the distribution of economic development within a region, with different communities appealing to different types of workers and business owners. Sometimes location decisions by business owners are based on an emotional or historical attachment to a place or set of amenities, without much regard for the cost of other factors of production.

- **Innovative capacity.** Increasing evidence suggests that a culture promoting innovation, creativity, flexibility, and adaptability is

essential to keeping U.S. cities economically vital and internationally competitive. Innovation is particularly important in industries that require an educated workforce. High-tech companies need to have access to new ideas typically associated with a university or research institute. Innovation affects both the overall level and type of economic development in a region. Government can be a key part of a community's innovative culture, through the provision of services and regulation of development and business activities that are responsive to the changing needs of business.

Table C-4 provides a summary of production factors in Springfield as well as comments on local opportunities and constraints. It also discusses implications of each factor for future economic development in Springfield.

Table C-4. Summary of production factors and their implications for Springfield

Category	Opportunities	Challenges	Implications
Labor	• Access to labor from the across the Eugene-Springfield Region	• Existing workforce has lower educational attainment than regional averages • Potential difficulty in finding dependable labor for manufacturing jobs	The City has access to labor from the region. As the City adds more high-end, expensive houses, the City is likely to attract a more educated workforce. Commuting patterns may be negatively impacted by increases in energy prices. The impact is likely to be less in the immediate Eugene-Springfield area but is likely to be greater for commuters that live further from Eugene and Springfield.
Land	• Opportunities for redevelopment and infill development, especially in Downtown and Glenwood	• Lack of large parcels of land near highways • Cost of land • Short-term availability	Firms that prefer large, undeveloped parcels near highways are unlikely to locate in Springfield under current conditions, such as warehousing and distribution or manufacturers that require freight access.
Local infrastructure	• Proximity to I-5 and Highway 126 and availability of freight shipping by rail • Opportunities transportation via transit, bicycle, and pedestrian • Capacity of water and wastewater systems	• Cost of providing infrastructure	Springfield has sufficient local infrastructure to attract and retain businesses.
Access to markets	• Proximity to I-5 and Highway 126 and availability of freight shipping by rail • Proximity to Eugene Airport for transportation of people and small quantities of goods	• Lack of sites with good transportation access, especially to I-5	Springfield's highway and rail access is sufficient to attract firms that need access to markets via highways. Springfield is relatively unlikely to attract firms that need to move large quantities of freight via trucks on I-5.
Materials	• Proximity to natural resources (e.g., timber or agricultural products) • Access to multiple rail lines	• Cost of shipping raw and finished products	Springfield may be attractive to manufacturers that need access to natural resources. However, firms dependant on highway access to transport large quantities of materials may not locate in Springfield until infrastructure needs are addressed.

Category	Opportunities	Challenges	Implications
Entrepreneurship	• Proximity of the University of Oregon • Quality of life	• Springfield's image as having a "blue collar" business environment.	Springfield may be attractive to entrepreneurs who value the City's quality of life attributes, access to outdoor recreation, and other locational attributes. Springfield has opportunities to encourage entrepreneurship through continued improvement of the City's image and through attracting more professional jobs, such as the developing medical cluster
Regulation	• Pro-business attitudes among City officials and leaders • Ability to craft regulations that are conducive to business	• High Systems Development Charges (SDCs)	The City has the opportunity to develop a regulatory framework that can promote economic activity through economic development policies, plans for providing infrastructure, and provision of a variety of housing types.
Taxes	• Property taxes are comparable to Eugene	• Comparatively high System Development Charges (SDCs)	Springfield needs revenue sources for providing public services and infrastructure, just as other cities do. The City has options about how to raise these funds: through property taxes, development fees, and other fees to taxes.
Industry clusters	• Presence of a developing medical cluster and existing call center cluster • Opportunities for development of other clusters	• Availability of sites • Transportation access • Labor availability	Springfield may be able to build employment in existing clusters, especially the developing medical cluster. Springfield has opportunities to develop other clusters, such as high-tech or small scale manufacturing.
Quality of life	• High quality of life, including access to recreation, proximity to cultural amenities in Eugene, regional shopping opportunities and environmental quality	• Growth management challenges, such as balancing development with protection of environmental quality	Springfield's policy choices will affect the City's quality of life, such as decisions regarding development of natural areas, housing policies, or policies that lead to redevelopment of downtown.

Category	Opportunities	Challenges	Implications
Innovative capacity	• Educated regional workforce • Existing professional and business service firms • Proximity to the University of Oregon • Existing businesses, clusters, and innovators in the Region	• Attracting and retaining good workers in the region • Availability of higher-end housing and cultural amenities to attract creative class workers	Government can be a key part of a community's innovative culture, through the provision of services and regulation of development and business activities that are responsive to the changing needs of business.

CHARACTERISTICS OF SITES NEEDED TO ACCOMMODATE EMPLOYMENT GROWTH

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

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

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

Source: ECONorthwest.

More specific site needs and locational issues for firms in potential growth industries include a range of issues. Table C-6 summarizes site needs and key issues related to sites in Springfield.

Table C-6. Summary of site requirements

Site Attribute	Comments
Flat sites. Flat topography (slopes with grades below 10%) is needed by almost all firms in every industry except for small Office and Commercial firms that could be accommodated in small structures built on sloped sites. Flat sites are particularly important for Industrial firms in manufacturing, trucking, and warehousing, since these firms strongly prefer to locate all of their production activity on one level with loading dock access for heavy trucks.	The BLI excluded lands with slopes over 15%. Some available sites in the Glenwood area have slopes that exceed 5% which may be inappropriate for some employment uses.
Parcel configuration and parking. Large Industrial and Commercial firms that require on-site parking or truck access are attracted to sites that offer adequate flexibility in site circulation and building layout. Parking ratios of 0.5 to 2 spaces per 1,000 square feet for Industrial and 2 to 3 spaces per 1,000 square feet for Commercial are typical ratios for these firms. In general rectangular sites are preferred, with a parcel width of at least 200-feet and length that is at least two times the width for build-to-suit sites. Parcel width of at least 400 feet is desired for flexible industrial/business park developments and the largest Commercial users.	Parcel configuration and parking do not appear to be a constraining factor with the city's existing land base.
Soil type. Soil stability and ground vibration characteristics are fairly important considerations for some highly specialized manufacturing processes, such as microchip fabrications. Otherwise soil types are not very important for Commercial, Office, or Industrial firms—provided that drainage is not a major issue.	Soils do not appear to be a constraining factor on most sites in Springfield. The City may want to consider limiting development on areas such as wetlands, flood plains, riparian corridors, wildlife areas, steep slopes and other sensitive areas.
Road transportation. All firms are heavily dependent upon surface transportation for efficient movement of goods, customers, and workers. Access to an adequate highway and arterial roadway network is needed for all industries. Close proximity to a highway or arterial roadway is critical for firms that generate a large volume of truck or auto trips or firms that rely on visibility from passing traffic to help generate business. This need for proximity explains much of the highway strip development prevalent in urban areas today.	Businesses in Springfield have access to I-5, Highway 126, Highway 99 (in Eugene), and Highway 58. Springfield also has a well-developed street network within the City. The City may need to work with large businesses to increase automotive capacity in newly developed areas or in areas where the intensity of employment uses increase substantially.
Rail transportation. Rail access can be very important to certain types of heavy industries. The region has good rail access to many industrial sites.	Springfield is served by multiple Union Pacific rail lines. There are two primary junctions in Springfield: (1) the Springfield Junction is located in the Glenwood area in Southwest Springfield and (2) the Mohawk Junction is near the city's southern boundary, near 25th St.
Air transportation. Proximity to air transportation is important for some firms engaged in manufacturing, finance, or business services.	Springfield is located 15 miles from the Eugene Airport.

Site Attribute	Comments
Transit. Transit access is most important for businesses in Health Services, which has a high density of jobs and consumer activity, and serves segments of the population without access to an automobile.	Springfield has access to transit through the Lane Transit District (LTD). There are multiple bus lines that run throughout Springfield and multiple buses that connect Springfield and Eugene.
Pedestrian and bicycle facilities. The ability for workers to access amenities and support services such as retail, banking, and recreation areas by foot or bike is increasingly important to employers, particularly those with high-wage professional jobs. The need for safe and efficient bicycle and pedestrian networks will prove their importance over time as support services and neighborhoods are developed adjacent to employment centers.	Springfield has pedestrian and bicycle facilities. Springfield last updated the City Bicycle Plan in 1998. The plan proposes expansion of bicycle facilities to improve bicycle connectivity throughout the City and to neighboring communities. People in Springfield are able to use bicycle facilities for commuting if they live and work in areas of the City that have bicycle infrastructure. Commuting via pedestrian facilities may be more limited to people who live near their work. Springfield's pedestrian and bicycle facilities can be used on conjunction with LTD buses to provide opportunities for alternative methods of commuting for people that live further from work.
Labor force. Firms are looking at reducing their workforce risk, that is, employers want to be assured of an adequate labor pool with the skills and qualities most attractive to that industry. Communities can address this concern with adequate education and training of its populace. Firms also review turnover rates, productivity levels, types and amount of skilled workers for their industry in the area, management recruitment, and other labor force issues in a potential site area.	Commuting patterns within Springfield suggest that businesses in Springfield have access to the workforce of the Eugene-Springfield Region. Firms in Springfield will need employees with a range of skills, from people with customer service skills to highly educated professionals. Some types of skills that employers may need include: management skills, technology, manufacturing (e.g., machinist or wood-working), a range of medical training, creative skills, and other skills or education. The educational and skill requirements of businesses in Springfield are likely to be similar to the needs of businesses throughout the Eugene-Springfield Region.
Amenities. According to the International Economic Development Council[55], attracting and retaining skilled workers requires that firms seek out places offering a high quality of life that is vibrant and exciting for a wide range of people and lifestyles.	Springfield offers access to outdoor amenities. Many urban amenities are available in Springfield and Eugene.
Fiber optics and telephone. Most if not all industries expect access to multiple phone lines, a full range of telecommunication services, and high-speed internet communications.	Springfield has access to high-speed telecommunications facilities.

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

Site Attribute	Comments
Potable water. Potable water needs range from domestic levels to 1,000,000 gallons or more per day for some manufacturing firms. However, emerging technologies are allowing manufacturers to rely on recycled water with limited on-site water storage and filter treatment. The demand for water for fire suppression also varies widely.	Springfield has sufficient potable water to meet current and expected needs.
Power requirements. Electricity power requirements range from redundant (uninterrupted, multi-sourced supply) 115 kva to 230 kva. Average daily power demand (as measured in kilowatt hours) generally ranges from approximately 5,000 kwh for small business service operations to 30,000 kwh for very large manufacturing operations. The highest power requirements are associated with manufacturing firms, particularly fabricated metal and electronics. For comparison, the typical household requires 2,500 kwh per day.	Springfield has access to sufficient power supply to accommodate most commercial and industrial users.
Land use buffers. According to the public officials and developers/brokers ECO has interviewed, Industrial areas have operational characteristics that do not blend as well with residential land uses as they do with Office and Commercial areas. Generally, as the function of industrial use intensifies (e.g., heavy manufacturing) so to does the importance of buffering to mitigate impacts of noise, odors, traffic, and 24-hour 7-day week operations. Adequate buffers may consist of vegetation, landscaped swales, roadways, and public use parks/recreation areas. Depending upon the industrial use and site topography, site buffers range from approximately 50 to 100 feet. Selected commercial office, retail, lodging and mixed-use (e.g., apartments or office over retail) activities are becoming acceptable adjacent uses to light industrial areas.	

LONG-TERM LAND AND SITE NEEDS

Table C-3, presented earlier in this appendix, discusses Springfield's forecast for employment by building type. The analysis of long-term site needs in Springfield builds off of the employment forecast for Springfield. Consistent with the requirements of OAR 660-009-0015(2), the site needs analysis presented in this section identifies the number of sites by broad category of site type and size reasonably expected to be needed for the 20-year planning period.

The steps in to get from the employment forecast in Table C-3 to an estimate of needed sites are:

- Determine the amount of employment that can be accommodated in non-employment plan designations.

- Allocate new employment requiring land in employment designations[56] to sites ranging in size from less than 1-acre to greater than 50-acres. This allocation is based on historic employment patterns, discussed in Appendix A.
- Estimate the reasonable range of sites needed based on the employment forecast, historic development patterns, and infill and redevelopment potential.
- Estimate the needed sites by site size and building type, using the range of sites identified in the previous step.

The remainder of this section is organized based on these steps.

In 2006, approximately 16% of Springfield's employment was located in non-employment (predominantly residential) plan designations. Table A-9 and Map A-1 show the location of existing employment in Springfield. We assumed that a similar percentage of employment would continue locating in non-employment designations.

Table C-7 shows employment growth by the employment location. Table C-7 assumes makes two assumptions that decrease land needed for new employment:

- **Some employment growth will occur on land not designated for employment use.** Some new employment will occur outside commercial and industrial built space or land. For example, some construction contractors may work out of their homes, with no need for a shop or office space on non-residential land. Currently 16% of employment is located in residential zones. ECO assumed that this trend will continue.
- **Some employment growth will not require new commercial or industrial built space or land.** Some employment growth will be accommodated on existing developed or redeveloped land, as when an existing firm adds employees without expanding space. Typically about 10 to 15% of new employment is accommodated in existing commercial or industrial built space. ECO assumed that 10% of new employment will be accommodated in existing commercial or industrial built space.

Using these assumptions, Springfield will need to provide land for approximately 10,177 new employees between 2010 and 2030.

[56] Not all new employment will require additional land in employment zoning designations. Some employment growth will occur on land not designated for employment use (e.g., employment in residential zones) and some employment growth will not require new commercial or industrial built space or land (e.g., new employment accommodated in existing built space).

Table C-7. New employment locating in non-employment plan designations, Springfield, 2030

Type	New Employment	Employment Location: Non-employment designtions	Employment Location: Existing Com. & Ind. Built Space	Employment Location: Employment on New Land
Industrial				
Warehousing & Distribution	389	0	39	350
General Industrial	1,066	0	107	959
Commercial				
Office	4,713	754	471	3,488
Retail	2,043	327	204	1,512
Other Services	5,229	837	523	3,869
Total	**13,440**	**1,918**	**1,344**	**10,178**

Source: ECONorthwest

Determining Springfield's site needs requires distributing employment to a range of site sizes, ranging from small sites (less than 1 acre and 1 to 2 acre sites) to large sites (20 to 50 acre and sites greater than 50 acres). Table C-8 shows the distribution of employees by building type and site size in non-residential plan designations in Springfield in 2006. About 22% of Springfield's employment is on sites 5 to 20 acres, 21% is on of less than 1-acre, and 19% is on sites greater than 50 acres.

Table C-8. Percent of employees by building type and site sizes, Springfield, 2006

Building Type	Site Size (acres): Less than 1	1 to 2	2 to 5	5 to 20	20 to 50	Greater than 50	Em
Warehousing & Distribution	13%	6%	3%	63%	12%	3%	
General Industrial	15%	17%	17%	18%	2%	31%	
Office	28%	14%	15%	23%	13%	8%	
Retail	29%	13%	11%	18%	10%	18%	
Other Services	9%	4%	8%	5%	35%	38%	
Total	**21%**	**12%**	**12%**	**22%**	**13%**	**19%**	

Source: ECONorthwest based on QCEW data

Table C-9 distributes employees (shown in Table C-7) based on the historic distribution of employment by site size and building type shown in Table C-8. In other words, the analysis assumes that future employment will require similar site sizes as current firms. For example, 21% of employment will locate on sites less than 1 acre.

Table C-9. Forecast of growth employment by building type and site size, Springfield, 2010 to 2030

Building Type	Site Size (acres)						Total Employees
	Less than 1	1 to 2	2 to 5	5 to 20	20 to 50	Greater than 50	
Warehousing & Distribution	46	21	9	221	41	12	350
General Industrial	141	161	167	168	20	302	959
Office	1,024	448	400	645	338	632	3,488
Retail	143	65	116	76	535	576	1,512
Other Services	817	451	460	869	520	752	3,869
Total	**2,171**	**1,148**	**1,153**	**1,979**	**1,454**	**2,274**	**10,178**

Source: ECONorthwest

Table C-10 shows the range of sites needed by site size and building type in Springfield in 2030. The table uses information the following information to determine the range of site needs:

- **Total employment** is employment by site size from Table C-9.
- **Average employees per firm** is based on analysis of the average number of employees per firm by site size in Springfield in 2006.
- **Needed sites based on historic employment patterns** estimates the number of sites needed by dividing the total employment by average number of employees per firm. Although this calculation provides a reasonable estimate of the number of sites needed based on historical data, it does not take into account redevelopment potential of existing sites or the need for a variety of sites.
- **Range of needed sites** presents a range of needed sites based on the employment forecast, historical development patterns, and potential for redevelopment.

Table C-10. Range of needed sites by site size and building type, Springfield, 2010 to 2030

	Site Size (acres)						
	Less than 1	1 to 2	2 to 5	5 to 20	20 to 50	Greater than 50	Total
Total Employment	2,141	1,132	1,137	1,953	1,434	2,243	10,040
Average Employees per Firm	12	30	39	101	594	1,432	
Needed Sites based on historic employment patterns	178	38	29	19	2	2	268
Range of needed sites	**180 to 250**	**40 to 70**	**30 to 60**	**20 to 45**	**3 to 6**	**2 to 4**	**295 to 435**

Source: ECONorthwest

Table C-11 presents and estimate of needed sites by site size and type of building. The results show that Springfield needs approximately 371 sites. Most sites are small, 2-acres or less. Springfield needs approximately 8 sites larger than 20-acres.

Table C-11. Estimated needed sites by site size and building type, Springfield, 2010 to 2030

	Site Size (acres)						
Building Type	Less than 1	1 to 2	2 to 5	5 to 20	20 to 50	Greater than 50	Total Sites
Warehousing & Distribution			3	5	1		9
General Industrial	5	7	10	11	3	3	39
Office	100	20	20	5	1		146
Retail	70	15	10	4			99
Other Services	50	18	5	5			78
Total	**225**	**60**	**48**	**30**	**5**	**3**	**371**

Source: ECONorthwest

The identified site needs shown in Table C-11 do not distinguish sites by comprehensive plan designation. It is reasonable to assume that industrial uses will primarily locate in industrial zones. Retail and service uses could locate in commercial zones, mixed use zones, and residential zones.