

Envision Eugene • Comprehensive Plan
Appendix B

EMPLOYMENT LAND SUPPLY STUDY

FINAL



Envision Eugene

Employment Land Supply Study (2012-2032)

July 2017

Table of Contents

Introduction and Acknowledgements

Part I. 2012 Employment Land Supply

Part II. Eugene Economic Opportunities Analysis

Part III. Public and Semi-Public Uses on Employment Land (2012-2032)

Part IV. Measures to Increase Employment Development (2012-2032)

Part V. UGB Expansion Areas to Address Industrial Land Deficit

Part VI. Employment Buildable Lands Inventory (2012-2032)

Introduction to Eugene’s Employment Land Supply Study

Eugene’s Employment Land Supply Study includes six Parts. Parts I-V are the steps that lead to Part VI, which establishes Eugene’s 20-year supply of land for residential use. In Part I, “2012 Employment Land Supply,” the City identifies the employment land supply that exists inside Eugene’s urban growth boundary (“UGB”) in 2012.¹ Part II, “Eugene Economic Opportunities Analysis,” determines whether the land identified in Part I is enough to accommodate Eugene’s economic growth over a 20-year planning period based on application of recent trends. Part III, “Public and Semi-Public Uses on Employment Land (2012-2032),” determines the amount of additional residential land that will be needed during the 20-year period due to public and semi-public uses that are likely be located on employment land inside the UGB. It then determines whether the 2012 employment land supply can accommodate the projected demands on employment land for the next 20 years if Eugene continues to develop according to recent trends and existing codes and programs.

In Part IV, “Measures to Increase Employment Development,” the City explains the efficiency measures it has taken to increase its supply of employment land inside its UGB. In Part V, “UGB Expansion Areas to Address Industrial Land Deficit,” the City identifies the urban growth boundary expansion needed to accommodate the remaining employment land needs. Part VI, “Employment Buildable Land Inventory (2032),” provides the City’s 2012-2032 Buildable Land Inventory intended to serve Eugene’s need for employment land through 2032 including the final land supply maps and density/capacity assumptions for the different categories of land on the supply maps.

Acknowledgements and Appreciation

The City of Eugene wishes to thank the many members of the community, staff and consultants that contributed to this work over the 2010-2016 period. This work is better because of your participation.

Community Members

Technical Resource Group members 2016: Shawn Boles, Rick Duncan, Ed McMahon, Mia Nelson, Brittany Quick-Warner, Sue Prichard, Joshua Skov, John Barofsky

Technical Resource Group members 2013-2015: Shawn Boles, Rick Duncan, Ed McMahon, Mia Nelson, Brittany Quick-Warner, Sue Prichard, and Joshua Skov

Technical Resource Group members 2010-2012: Shawn Boles, Rick Duncan, Erin Ellis, Roger Gray, Kevin Matthews, Ed McMahon, Mia Nelson, Gretchen Pierce, Laura Potter, Sue Prichard. Other participants included Joshua Skov, Barbara Mitchell, Randy Hledik, Bill Aspegren, George Grier, Dave Hauser, Jack Roberts, Rusty Rexius, Gary Wildish

¹ For purposes of this Study, the “Eugene UGB” is the portion of the former Eugene –Springfield regional UGB that lies west of Interstate 5. Springfield took action in 2011 to lawfully withdraw the land east of Interstate 5 from the, previously, regional UGB, as directed by ORS 197.304.

Agency Members

City Staff: Carolyn Burke, Jason Dedrick, Zach Galloway, Lisa Gardner, Alissa Hansen, Terri Harding, Robin Hostick, Emily Jerome, Heather O'Donnell, Doug Terra

Consultants

EcoNorthwest: Bob Parker and Beth Goodman

Lane Council of Governments: Nick Siegel and David Richey

Part I. 2012 Employment Land Supply

Part I includes the following sections, figures and tables:

1. Introduction
2. Purpose
3. Data & Methods
4. The Process
5. Short Term Supply of Employment Land
6. Conclusion

Table 1 Committed & Protected Employment Land, Eugene 2012

Table 2. Vacant Employment Land, Eugene 2012

Table 3. Vacant Industrial Land, Eugene 2012

Table 4. Developed Employment Land, Eugene 2012

Table 5. Commercial Land, Partially Vacant, Eugene 2012

Table 6. Employment Land, Partially Vacant & Redevelopment, Eugene 2012

Table 7. Summary of Existing Land Supply for Employment Lands, Eugene 2012

Table 8. Short Term Employment Land Supply, Eugene 2012

Figure 1 Plan Designations (2012)

Figure 2 Plan Designations for Employment Land (2012)

Figure 3 Committed and Protected Land (2012)

Figure 4 Employment Land Supply (2012)

Figure 5 Employment Land Supply (2012) (tiles 1 through 10)

Figure 6 Developed Employment Land (2012)

1. Introduction

The first step in establishing a complete and final 20 year employment Buildable Lands Inventory (2012-2032) is the identification of the employment land supply that exists inside Eugene’s urban growth boundary (“UGB”) in 2012, the outset of the 20 year planning period. For Eugene, the 2012 land supply is documented in this Part I of the Envision Eugene / Employment Land Supply Study. The 2012 employment land supply forms the basis for Parts II, III and IV of this Study that determine the capacity of the 2012 employment land supply to meet the City’s needs for additional employment development over the 2012-2032 planning period. In Part V, the City identifies the urban growth boundary expansion needed to accommodate the remaining employment land needs. The final Buildable Lands Inventory (“BLI”) for the 2012-2032 planning period is located in Part VI of this Study.

2. Purpose

One of the primary goals of the Envision Eugene project is to determine how Eugene will accommodate the community's growth through 2032, as required by state law. Eugene is expected to grow and will need to accommodate more people and jobs. Determining how to accommodate this future demand requires Eugene to first identify its 2012 supply of the land available for jobs.¹

The 2012 employment land supply analysis informs several questions:

- Most significantly, how much employment land is available in 2012 for development within the area of Eugene's current UGB?
- Where is that developable employment land located?
- What is the distribution of the developable employment land by the comprehensive plan land use designation categories (*e.g.*, commercial, industrial)?

The methods used for, and results of, the 2012 employment land supply were reviewed by multiple stakeholder groups, including a citizen advisory committee during the 2008 Eugene Comprehensive Lands Assessment process and the Envision Eugene Technical Resource Group (TRG) during the subsequent Envision Eugene process.² The TRG's work was integral to the Envision Eugene analysis. The TRG included members with local and regional expertise on issues like economic and residential market conditions and development trends, land use conservation, and sustainability, as well as members from other local boards and commissions. The TRG met regularly over the course of five years, volunteering hundreds of hours, to examine the assumptions and methodologies related to all Envision Eugene analysis, including the 2012 land supply, demand projections, capacity analysis and measures to increase development and UGB expansion. Where the TRG's work was particularly significant in the preparation of the 2012 employment land supply, its work is highlighted below. The following describes the data, analysis and results of the 2012 employment land supply.

3. Data & Methods

Most of the data files needed to determine the 2012 employment land supply are from local government systems, while other data was created or calculated or the result of location (geospatial) based processing. All data files were current as of 2012 where possible. These data layers and mapped features include:

¹ Eugene's process for establishing the 2012 employment land supply included the simultaneous establishment of its 2012 residential land supply, taking into account all plan designations to create consistency in methodology and terminology between the inventories of residential and employment land. See Envision Eugene/Residential Land Supply Study.

² An initial 2008 land supply was prepared by the Lane Council of Governments. City staff and LCOG updated the 2008 work in 2012. Following the full run of the land model in 2012, in May 2013 any vacant land that had an address assigned to it was classified as "developed." Address points are typically assigned to lots when a building permit is applied for and is, therefore, a reasonable proxy for development.

Land and administrative boundary data	Land constraints data
<ul style="list-style-type: none"> • Eugene-Springfield Metropolitan Plan (Metro Plan) boundary, for the portion west of Interstate 5 • Plan Designation areas (intended future use of property per the Metro Plan) • Urban growth boundary (UGB) • Land use, existing • Zone districts • Tax lot boundary • Improvement value 	<ul style="list-style-type: none"> • Street and other rights-of-way • Floodway • Protected natural resources (per Statewide Planning Goal 5 and federally threatened or endangered species) • Wetland areas • Water quality management areas (per Statewide Planning Goal 6) • Natural Resource zoned areas • Public parks • Other publically owned lands • Slopes and elevation • Historic Sites

4. The Process

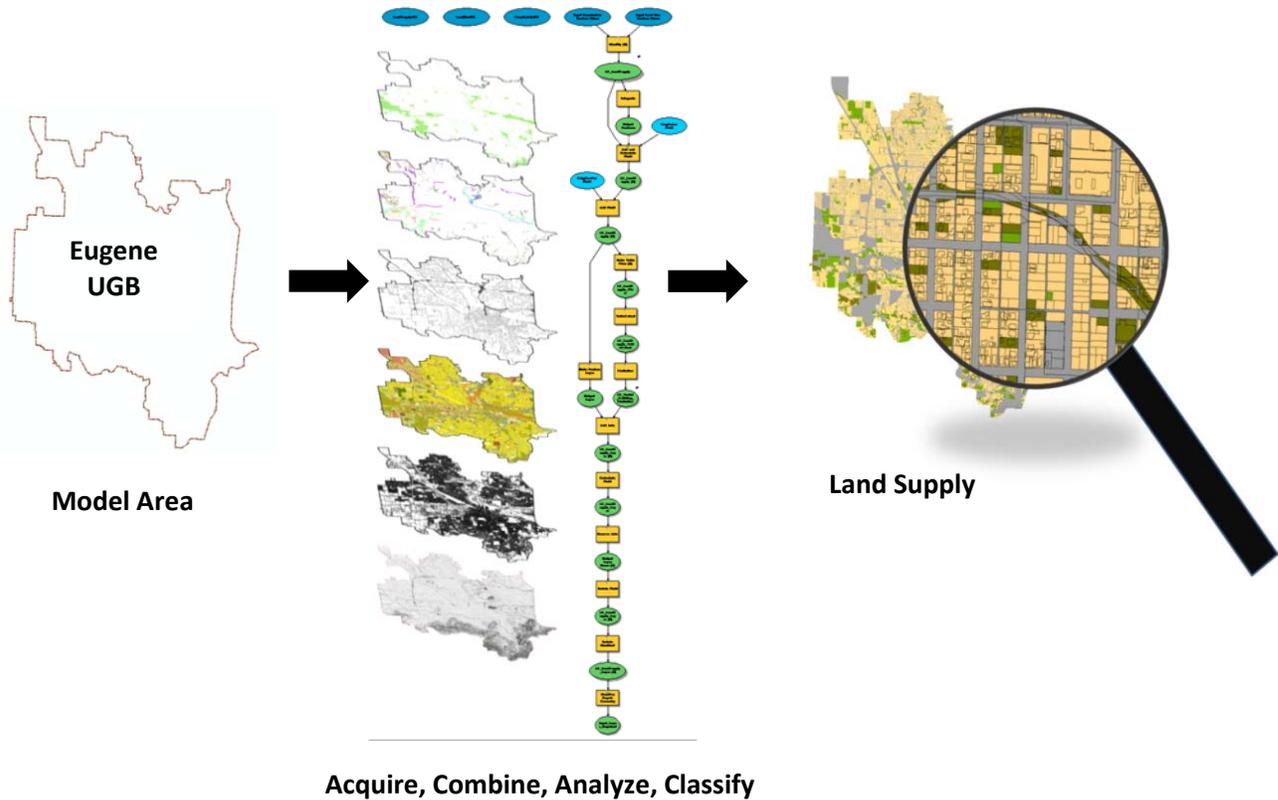
The foundation for identifying Eugene’s 2012 employment land supply is a location-based (geospatial³) model that was used to create the land supply layer. The land supply process is divided into five (5) main steps or phases. The first three steps were completed within the model and steps 4 and 5 used the results of the model:

- 1) **Acquire and evaluate the data;** obtain and review the data layers as to their suitability for use in the analysis, including resolving any quality issues, and develop a methodology for applying that data.
- 2) **Create a land supply layer;** combine all the geographic features together to create a single integrated land supply layer.
- 3) **Classify land into types;** do a sub-tax lot level analysis that classifies the thousands of pieces of the land supply layer into one of four types of land (committed, protected, developed, vacant—specific definitions are presented in Step 3, below) by comprehensive plan designation.
- 4) **Identify additional capacity;** identify underdeveloped sites that the model initially classified as developed.

³ “Geospatial analysis is an approach to applying statistical analysis and other informational techniques to data which has a geographical or geospatial aspect. Such analysis would typically employ software capable of geospatial representation and processing, and apply analytical methods to terrestrial or geographic datasets, including the use of geographic information systems and geomatics.” (Wikipedia contributors. "[Geospatial analysis](#)." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 7 Apr. 2015. Web. 19 May. 2015)

- 5) **Summarize the results;** summarize the 2012 land supply using tables, charts and maps and provide information to help answer the larger question – how do we meet the demand for land of different types over the next 20 years?

The illustration below provides a simplified view of the model analysis used to create the land supply, showing how numerous sources of data and assumptions were processed using a series of geographic models.



Step 1: Acquire and evaluate the data

The data layers described earlier were acquired from several sources, including local, state and federal agencies. The data layers used are the result of considering the type of data needed to develop an employment land inventory and locating the best available data. For example, Figures 1 and 2 at the end of this Part I show the 2012 comprehensive plan designations used for Eugene. A processing methodology was developed, as described further in steps 2 through 5, for how the selected data layers are integrated into the geospatial model, processed, and result in a land supply. Evaluation of the data and developing the analysis processes (the methodology) was completed by government staff, with support from consultants and the TRG that spent many hours vetting the data and analysis.

Step 2: Create a land supply layer

The overlay of all the data layers together in the geospatial model creates one integrated layer – the land supply – which divides the UGB into tens of thousands of individual pieces or polygons based on their different characteristics. Some people have described the final map layer as looking like “fabric” or “shattered glass” or a quilt. Each piece of land in the land supply fabric carries with it all of the characteristics from the different layers that were overlaid together; land uses and boundaries (*e.g.*, tax lots, plan designation, acreage) and land constraints (*e.g.*, rights-of-way, wetlands).⁴ The result is 34,503 acres of a sub-tax lot level analysis of the characteristics for all land within the 2012 Eugene UGB. Of this, 11,963 acres are employment land. This sub-tax lot analysis is then used to identify what pieces of land are suitable for development (Step 3).

Step 3: Classify land into types

Each of the thousands of individual pieces of land in the land supply inventory are then classified as one of four types of land based on the data characteristics (*e.g.*, comprehensive plan designation, wetlands) of that piece of land. The four types of land are protected, committed, vacant⁵ and developed.

Then, the acres of the four land types are categorized by comprehensive plan designation to provide a total number of acres by land type and by plan designation for all of Eugene’s 34,503 acre UGB. Out of the 34,503 acres in the UGB, 11,963 are in designations that will accommodate future employment (*e.g.* industrial, commercial office, retail and government). The data layers that make up the four types of land and the total acreage of the land types by plan designation are as follows:

- **Protected** land is reserved to protect natural resources or because of natural hazards and therefore has no development or redevelopment potential. These development constraints temporarily or permanently limit or prevent the use of land for economic development. Lands defined as protected include the following:⁶

⁴ This means that in the geospatial model, a lot or subarea is not identical with a tax lot. Instead, it is a subarea of a tax lot that shares certain characteristics. For instance, if a lot has more than one plan designation, barring any other differing characteristics the tax lot would be split into subareas by, at minimum, the number of plan designations on the site.

⁵ Rather than the term “vacant,” the Envision Eugene geoprocessing model uses the term “undeveloped” to include all employment land that has no permanent buildings or improvements. In this Study, however, “vacant” is used instead of “undeveloped” for consistency with State law terminology. OAR 660-009-0005(14) defines “vacant land” as “a lot or parcel: (a) equal to or larger than one half-acre not currently containing permanent buildings or improvements; or (b) equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements.” Part (b) of the definition is addressed in the Envision Eugene model and in this Study by the land category “partially vacant.”

⁶ This definition is consistent with OAR 660-009-0005(2) definition: ““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.”

- Federal Emergency Management Agency (FEMA) Floodway (Flood Insurance Rate Map - FIRM, 1999 publication year)
- Eugene’s Adopted Goal 5 Riparian Corridors and Surrounding Protection Areas
- Eugene’s Adopted Goal 5 Wetlands and Surrounding Protection Areas
- Eugene’s Adopted West Eugene Wetlands and Surrounding Protection Areas
- Eugene’s Adopted Goal 5 Upland Wildlife Habitat and Surrounding Protection Areas
- Eugene’s Adopted Goal 6 Water Quality Protection Areas
- Historic and Cultural Resources (City Landmark, National Register, or Primary Ranked Cultural Resource)
- Natural Resource (NR) Zoned Areas
- Wildlife Habitat (federally listed threatened and endangered species)
- Steep Slopes⁷
 - Industrial: > 15%
 - Commercial: > 30%
- **Committed** land is devoted to special uses like parks, schools, government offices, cemeteries, and rights-of-way and therefore has no development or redevelopment potential for (non-public sector) jobs. Based on tax assessor data and the Lane County land use code system, lands defined as committed include the following:
 - Government Property (e.g. city, county, state, federal)
 - City, County and State Parks
 - School District Property (e.g. 4J and Bethel)
 - Transportation Rights-of-Way (e.g. streets, rail)
 - Cemeteries
 - Bonneville Power Administration (BPA) easements
- **Vacant** land is land suitable for development that is identified with a “vacant” land use code in the regional land use code system or has insignificant improvements of less than \$1,000 in 2012 assessed value.⁸
- **Developed** land is identified with a “developed” type of land use code in the regional land use classification system or with significant improvements of at least \$1,000 in 2012 assessed value. Developed land may also have redevelopment potential and, as discussed below, additional capacity if the land is larger.

⁷ As found during the Eugene Comprehensive Lands Assessment analysis, in Eugene, above these slope levels are where each of these basic development types have not occurred historically. Instead, most Industrial land development was found to occur below 5% slope and most Commercial land development was found to occur below 10% slope.

⁸ The land model was run in August of 2012. In an effort to make the 2012 land supply as current as possible, in May 20, 2013 any vacant sites with an address point in GIS as of that date were removed from the vacant land inventory. An address point is typically applied to a property in the regional GIS system when a building permit is submitted. Therefore for this analysis, it was assumed that the address point meant the property was under development in 2012 and no longer available as vacant land.

The land model results⁹ by land type are as follows:

Protected & Committed Land

- Lands can be classified as committed or protected, or both (*e.g.*, government owned land with protected wetlands) and as such these classes are not mutually exclusive and are reported on as one combined category.¹⁰
- Additionally, analysis was done after the land model was run to address government surplus land. Some government owned land has been officially designated as surplus land, meaning it is anticipated for disposal and will not be committed to public use in the future. Since these sites¹¹ are still in public ownership, the model initially classifies them as committed. To correct this, for confirmed surplus sites the public ownership characteristic in the model is overridden so that the land type is assigned as if it were in private ownership. This did not result in additional capacity for non-government employment as many of these sites are fully developed and what they would re-develop with in the future is unknown.
- The combined committed and protected acres is 13,880 acres for all of the plan designations in the UGB which equates to approximately 40% of Eugene’s 34,503 acres. The combined committed and protected acres on employment is 6,750 acres which equates to about 56% of all employment land in the UGB as follows in Table 1 and shown on Figure 3:

Table 1. Committed & Protected Employment Land, Eugene 2012

Plan Designation	Acres
Commercial	629.3
Commercial Mixed Use	55.5
Campus Industrial	508.5
Government & Education	756.5
Heavy Industrial	693.0
Light Medium Industrial	1,004.7
Major Retail Center	113.7
Mixed Use	44.8
Parks and Open Space	2,621.0
Parks/OpenSpace Mixed Use	4.6
Special Heavy Industrial	221.1
University Research	97.6

⁹ For the purposes of this Study, acreage totals from the model are usually rounded to the closest whole number unless otherwise necessary to include one decimal.

¹⁰ When land is both committed and protected, the default is to identify that portion of land as committed.

¹¹ See the Technical Support portion of the public record for sites.

Vacant Land

- The acres of all vacant employment land are as follows in Table 2 and are as shown on Figures 4 and 5:

Table 2. Vacant Employment Land, Eugene 2012¹²

Plan Designation¹³	Vacant Land Acres
Commercial	96.9
Commercial Mixed Use	3.8
Campus Industrial	175.7
Government & Education	0.2
Heavy Industrial	102.5
Light Medium Industrial	319.7
Major Retail Center	3.9
Mixed Use	3.1
Parks and Open Space	63.0
Parks and Open Space Mixed Use	0
Special Heavy Industrial	5.7
University Research	2.6

- The inventory of vacant land includes sites of all sizes.
 - The City’s Envision Eugene Economic Opportunities Analysis EOA included at Part II of this Employment Land Supply Study shows a demand for larger industrial parcels. Therefore, City staff and the TRG engaged in a parcel-by-parcel review of all Industrial parcels 10 acres or greater to ensure the City’s supply of large employment sites is accurately classed by size and land category type. Aerial photos, natural resource inventories and local knowledge were used to evaluate which sites are entirely vacant and which sites have constraints limiting the amount of buildable “vacant” area. Of all the industrial sites 10 acres or greater in size that were reviewed, eight sites were confirmed as vacant sites; five of the eight sites are classified as entirely vacant; and

¹² The acres by plan designation reflected in the 2012 land supply are the plan designations as of 2012 and do not reflect any changes to plan designations that occurred after the land model was run (e.g., as a result of a measure to increase employment or residential development discussed in Part V of this Employment Land Supply Study).

¹³ Due to geospatial processing imprecision where the plan designation layer intersects with the UGB boundary, the land supply acres indicate that there are some acres of land in plan designations that are actually not within Eugene’s UGB (Agriculture, Forest Land, Rural Residential, Sand and Gravel). These geospatial processing “slivers” of plan designations are not actually within Eugene’s UGB and are therefore excluded from capacity reporting.

three of the eight sites have protected streams and wetlands located in a manner that bisects properties and limits the usable acres of the site (in addition to other non-protected wetlands in some locations). As a result of this analysis, Table 3 shows the vacant Industrial sites 10 acres or larger based on their vacant, non-protected acres as represented in the land supply model (*e.g.*, acres in supply) and based on the likely usable acres remaining on the sites after the portions separated from the access by natural resources are discounted.

- Sites smaller than 10 acres were not further analyzed and were assumed to be buildable.

Developed Land

Table 3. Vacant Industrial Land, Eugene 2012

	2012 Supply Acres	Useable Acres¹⁴	Sites
Acres on sites smaller than 10 acres	+/- 404		
Acres on sites larger than 10 acres	+/- 207¹⁵		
10-20 acres	55.9	56	4
20-50 acres			
1 site	24	24	1
2 sites with wetland and configuration constraints	70	40	2
1 site with wetland and configuration constraints	56.9	20-50	1
50-75 acres	0		0
75 acres and larger	0		0
Total	+/- 611		8

¹⁴ All Industrial lots or parcels at least 10 acres in size were further reviewed to confirm their actual usable acres for the large employment site analysis. Usable acres reflects that some of the larger Industrial lots are bisected by natural resources in a manner that limits access to and usability of a portion of the property. The “usable acres” category acknowledges these limitations by reflecting a reduced acreage to use for analyzing the adequacy of Eugene’s large employment sites by size. For more information, see the Technical Support portion of the record.

¹⁵ The total amount of Industrial vacant acres is 604 as shown in Table 2 (Campus Industrial 175.7 + Heavy Industrial 102.5 + Light Medium Industrial 319.7 + Special Heavy Industrial 5.7 equals 603.6 acres). At the model’s sub-taxlot level, these 604 acres include 404 acres that are less than 10 acres in size and 200 acres that are 10 acres or greater in size. The large site Industrial analysis reviewed each site as a whole (rather than sub-taxlot) so the land supply acres were aggregated for the whole tax lot; the 207 acres shown in Table 3 is the land supply acres on each site 10 acres or greater in size. This results in a seven acre difference at the sub-taxlot level (200 acres are 10 acres or greater) compared to the tax lot level (207 acres of sites that are 10 acres or greater) because there is one Industrial lot (tax lot 1704040000902) that at a sub-taxlot has a 7 acre portion that falls into the less than 10 acre size category, but all of the site is included in the 10 acre or greater size category.

- The acres of all developed employment land are as follows in Table 4 and are as shown on Figure 6:

Table 4. Developed Employment Land, Eugene 2012

Plan Designation	Developed Land Acres
Commercial	1108.1
Commercial Mixed Use	64.1
Campus Industrial	303.9
Government & Education	21.4
Heavy Industrial	1097.5
Light Medium Industrial	1320.2
Major Retail Center	182.9
Mixed Use	58.6
Parks and Open Space	261.3
Parks and Open Space Mixed Use	0
Special Heavy Industrial	11.2
University Research	6.6

Step 4: Identify additional capacity

Although the model initially identifies thousands of acres as developed, some of these acres may have additional capacity to accommodate more jobs. Using the results of the geospatial model for developed land, a separate analysis was completed of larger sites that the model initially classified as developed. These sites are further reviewed to determine if they are fully developed (and remain classified as developed land). If a portion of the site is undeveloped with room for additional development capacity it was reclassified as partially vacant land. Analysis was also completed to identify if redevelopment potential exists on some developed land. The sites that make up this additional capacity of developed land are classified as follows:

Partially Vacant Land¹⁶

- City staff and the TRG engaged in a parcel-by-parcel review of all larger sub-tax lot pieces that were initially categorized as developed to determine if any of these sites have additional room

¹⁶ The second part of the “vacant land” definition in OAR 660-009-0005(14)(b), states that “vacant land” can also mean a lot or parcel “equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements.” The Envision Eugene partially vacant land category is consistent with this definition; although the Envision Eugene land model originally identifies these lots as “developed,” they are Commercial lots of at least an acre and Industrial lots of at least 10 acres with some development but room for more. The term “partially vacant” is used in this Study for consistency between the terminologies of other Eugene land inventories being completed at the same time.

for development (i.e., partially vacant land) or if they are fully developed (e.g., buildings, parking areas, infrastructure, developed multi-family open space areas). Several resources were used to complete this analysis including aerial photos, tax assessor information, regional land use codes, and local knowledge.

- Commercial partially vacant land. All developed Commercial parcels 1 acre or larger were reviewed. The vast majority of commercially designated lots were fully developed. This review identified about 17 acres¹⁷ of partially vacant commercial land as shown in Table 5 and on Figures 4 and 5.
- Industrial partially vacant land. No partially vacant Industrial land was identified.

Table 5. Commercial Land, Partially Vacant, Eugene 2012

Plan Designation	Partially Vacant Acres
Commercial	+/- 17
Commercial	16.2
Commercial Mixed Use	1

- Government & Education and University Research. Analysis for partially vacant land was not necessary for these plan designations because the demand and capacity analysis for public land needs is estimated in Part III of this Study.

Redevelopment Potential of Developed Employment Land¹⁸

- Redevelopment potential exists for some of the developed land shown on Figure 6. An estimate of redevelopment potential has been assumed for those developed lands that are Commercial and Industrial sites smaller than 10 acres that are likely to redevelop during the planning period, and redevelopment/infill sites have been identified for Industrial sites 10 acres or greater in size. These lands provide additional development capacity. Redevelopment means to expand or replace buildings on land that is already developed but not to its full capacity, and in a manner that creates room for more jobs than the site originally held. Redevelopment potential means property that due to present or expected market forces there exists the strong likelihood that this property will redevelop over the next 20 years compared to other developed land in the UGB. Baseline redevelopment is the natural amount of redevelopment expected to occur without additional actions taken by the City to encourage it, compared to redevelopment that is

¹⁷ Partially vacant acres refers to the site acreage excluding acreage with existing development.

¹⁸ Per OAR 660-009-0005(1), “developed land” means “non-vacant land that is likely to be redeveloped during the planning period.” The Envision Eugene employment “redevelopment” land category is consistent with this definition; these are lands that have been identified with the potential to redevelop during the planning period.

enabled due to City actions (*e.g.*, because of enacting measures that increase employment development). The redevelopment potential is shown in Table 6 as follows:

- Industrial land with redevelopment potential.
 - Sites smaller than 10 acres. This analysis assumes that the industrial land base for sites smaller than 10 acres can accommodate about 5% of new employment through redevelopment, or about 31 acres of redevelopment capacity¹⁹
 - Sites 10 acres or greater. All developed Industrial sites 10 acres or larger were reviewed. This review, coupled with local knowledge from an industrial land-focused subcommittee,²⁰ identified four sites with redevelopment potential that are assumed to provide redevelopment/infill capacity. Three of the sites are between 10-20 acres and they were found to have redevelopment potential because each site has only a small amount of development (*e.g.*, a single dwelling or a parking lot) with room for infill or redevelopment. Eugene also has one site with redevelopment potential (the former Hynix site) between 20-50 acres which was found to have redevelopment/infill potential because a large portion of the site is undeveloped with one large building at the front that may need to be altered given the specific nature of the previous use.
- Commercial land with redevelopment potential. The Commercial redevelopment estimates looked at two types of baseline redevelopment.²¹
 - “Partial redevelopment”-- a small amount of redevelopment potential was identified after review of the building permit database. Small building additions and conversions such as converting storage area to retail space or adding an office wing add employment capacity, but do not meet the definition of a full redevelopment. Assuming an average of 450 square feet per employee (excluding large retail), partial redevelopment projects have added space for about 270 jobs city-wide over the past 10 years. The City assumes that at least this same amount will occur over the next 20 years (270 jobs).
 - “Market-driven redevelopment”-- a larger amount of redevelopment potential was identified using a “redevelopment estimating tool.”²² This tool is based on a 2010 market study by Johnson/Reid Associates and was developed by staff and TRG members with input by local experts. The redevelopment estimating tool uses a market-based approach to estimate redevelopment potential by examining different “prototype” projects – including office, retail, rental housing, and mixed use buildings- for market viability on every tax lot, city-wide, located within commercial land use designations. The results of that analysis

¹⁹ See Part II of this Study, the EOA, at section 6.1.3.3.²⁰ This group included members of the TRG as well as other local economic development experts.

²⁰ This group included members of the TRG as well as other local economic development experts.

²¹ See the Envision Eugene Commercial Employment Supply Technical Report (July 2015) which is included in the Technical Support portion of the public record for more information on baseline redevelopment.

²² For the redevelopment estimating tool, see the Technical Support portion of the public record.

show that some baseline redevelopment potential exists for general commercial (55 jobs) and medical office development (1,004 jobs).

- The total number of commercial jobs to be accommodated through baseline redevelopment is 1,329 jobs. Assuming the same split of office vs. retail jobs that is projected in the overall employment demand and the same employees per acre used for employment land capacity analysis, this results in 29 acres of commercial demand that can be absorbed on existing developed land through baseline redevelopment.²³
- Government & Education and University Research. Analysis for redevelopment/infill land was not necessary for these plan designations because the demand and capacity analysis for public land needs is estimated in a separate analysis within the Economic Opportunities Analysis in Part II of this Study.

Table 6. Employment Land, Partially Vacant & Redevelopment, Eugene 2012

Plan Designation	Partially Vacant Acres	Redevelopment/ Infill Acres or Sites
Commercial	17	29 acres (not mapped)
Commercial	16.2	
Commercial Mixed Use	1	
Industrial	0	See below
Sites smaller than 10 acres	0	31 acres (not mapped)
Sites larger than 10 acres	0	4 sites (mapped)

Step 5: Summarize the results

The results of the 2012 employment land supply project are tables, charts and maps that depict the land supply by location, size, and plan designation. Table 7 is a summary of the 2012 land supply by

²³ The 29 acres of baseline redevelopment assumed to be accommodated on development land is based on the split of commercial jobs forecasted in the 2011 Oregon Employment Department forecast; the commercial demand is projected to be 59.09% office jobs and 40.72% retail jobs. The employees per acre is the same assumption used to calculate capacity on employment land; 68 EPA for (non-retail) commercial jobs and 23 EPA for retail jobs. For partial redevelopment (55 jobs) and market-drive general commercial redevelopment (270 jobs), 59.09% of these 325 jobs is about 192 jobs divided by 68 EPA is about 2.82 acres and 40.72% of the 325 jobs is about 132 retail jobs divided by 23 EPA is 5.75 acres. This 8.58 acres divided by 0.8 acre for the net-to-gross conversion is 10.72 acres of conventional market driven or partial redevelopment (additions) redevelopment. For market-driven medical office redevelopment, the entire amount is assumed to be office jobs. 1,004 office jobs divided by 68 EPA is 14.8 acres, divided by 0.8 acre for the net to gross conversion is 18.45 acres of medical office redevelopment. 10.72 acres plus 18.45 acres is about 29 acres of commercial jobs accommodated through baseline redevelopment. See the Technical Support portion of the public record for more information.

employment land category on vacant and partially vacant land and includes estimates for some redevelopment potential which is further discussed in Part II (EOA), section 6.1.2 and 6.1.3.3.

Table 7. Summary of Existing Land Supply for Employment Lands, Eugene 2012

Plan Designation	Vacant Acres	Partially Vacant Acres	Redevelopment/ Infill Acres or Sites²⁴
Commercial	108	17	29 acres (not mapped)
Commercial	96.9	16.2	
Commercial Mixed Use	3.8	1	
Major Retail Center	3.9		
Mixed Use	3.1		
Industrial			
(Sites smaller than 10 acres)	404	0	31 acres (not mapped)
Campus Industrial	123.2		
Heavy Industrial	78.8		
Light Medium Industrial	196.2		
Special Heavy Industrial	5.7		
(Sites 10 acres or larger)	207 (8 sites)	0	4 sites (mapped)
Campus Industrial	52.6		
Heavy Industrial	24		
Light Medium Industrial	130.6		
Special Heavy Industrial	0		
Government & Education²⁵	0	n/a	n/a
University Research	3	n/a	n/a

5. Short Term Supply of Employment Land

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-

²⁴ Redevelopment / Infill sites were only mapped at the site level for the purposes of studying land for its suitability to meet the Industrial land need of 10 acres or greater in size. Employment land redevelopment / Infill sites are not otherwise required to be mapped.

²⁵ Analysis of partially vacant capacity or redevelopment capacity for Commercial or Industrial use on Government & Education or University Research land was not completed.

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.”

- Eugene conducted a short term supply analysis of all lands within the 2012 Eugene UGB. Eugene Water and Electric Board staff and City wastewater and stormwater staff were provided with the City’s 2012 employment land supply and identified the vacant and partially vacant employment land that is not served or would take significant improvements to be served with utilities. For some service deficiencies that were identified, and the City’s Public Facilities and Services Plan is proposed to be amended to include those significant needed projects. About 51 acres of employment land was identified as needing significant water facilities and about 229 acres of land was identified as needing significant wastewater facilities. When overlapped, about 215 acres of employment land may not qualify as short term.
- The 2035 Envision Eugene Transportation System Plan includes two changes to existing standards that will reduce barriers to development and provide that all employment land will be serviceable for transportation. These include reducing the minimum level of service (LOS) that streets are required to perform at for all City streets citywide to LOS E and adopting alternative performance measures for Oregon Department of Transportation facilities citywide. Furthermore, local streets can be developed within one year because they are usually improved by the developer shortly following a development approval.
- Despite the issues staff identified related to water and wastewater, all areas within the Eugene UGB can be considered to technically meet the Goal 9 Rule criteria of “engineering feasibility.” Staff identified few 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.
- Table 8 shows that about 71% percent of the land in the 2012 employment land supply qualifies as short-term supply.²⁶ This exceeds the minimum 25 percent requirement.

²⁶ This does not include analysis of the redevelopment portion of the 2012 employment land supply. Developed land is assumed to already be served and therefore, if included in the short term supply analysis, would increase the City’s short term supply.

Table 8. Short Term Employment Land Supply, Eugene 2012²⁷

Plan Designation	Vacant Acres	Partially Vacant Acres	Total Supply Acres	Acres not served	Total Acres Served	Percentage of Acres Served
Commercial	+/- 108	17	125	25	100	
Commercial	96.9	16.2	113.1	25.0	88.1	
Commercial Mixed Use	3.8	1	4.8		4.8	
Major Retail Center	3.9		3.9		3.9	
Mixed Use	3.1		3.1		3.1	
Industrial (all sizes)	+/- 604	0	604	190	414	
Campus Industrial	175.7		175.7	33.5	142.2	
Heavy Industrial	102.5		102.5	26.5	76.0	
Light Medium Industrial	319.7		319.7	129.9	189.8	
Special Heavy Industrial	5.7		5.7		5.7	
Total	+/- 711	17	729	215	514	71%

6. Conclusion

The key findings from the 2012 employment land supply are that, in 2012 Eugene had:

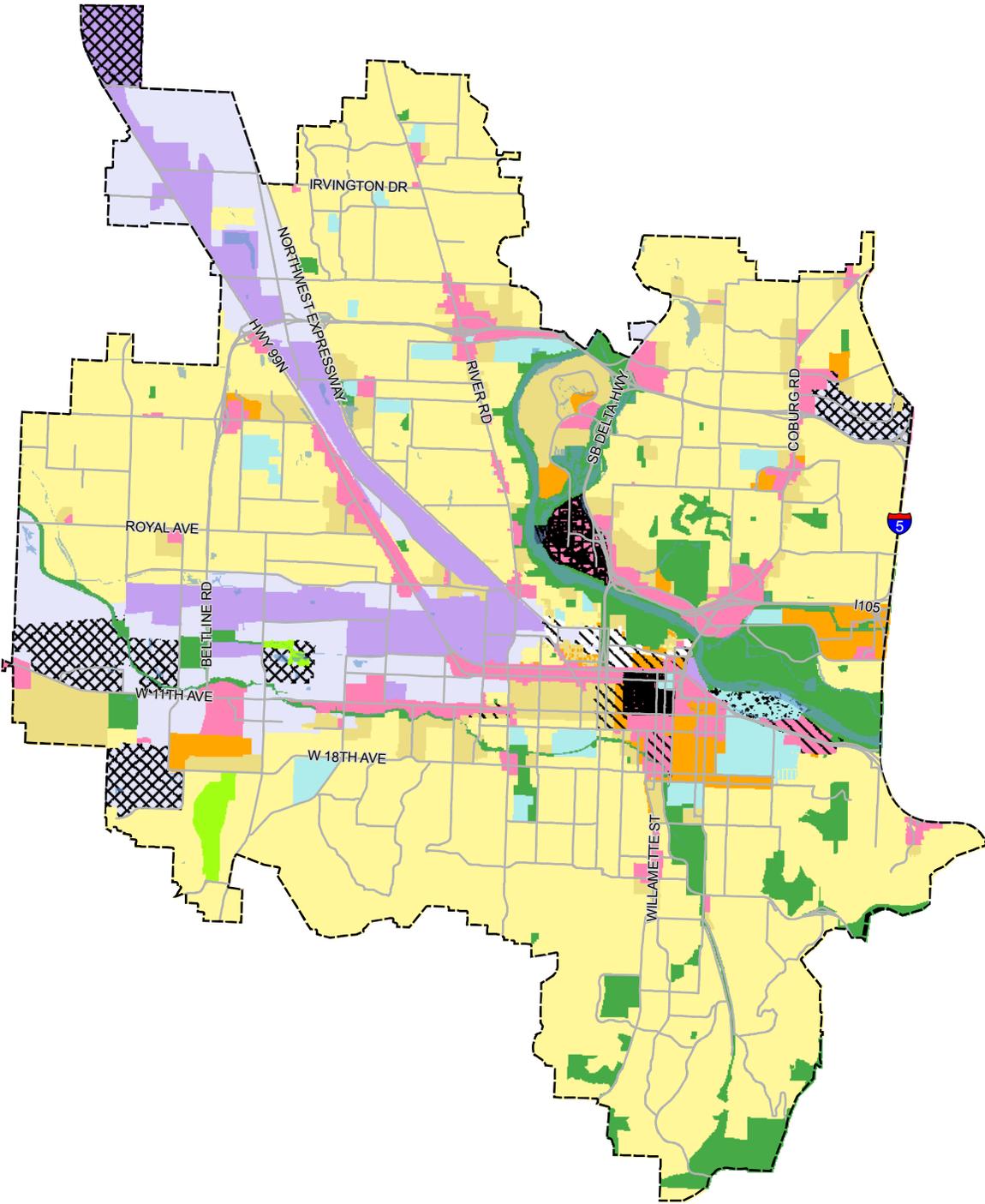
- For the Commercial land supply about: 108 vacant acres, 17 partially vacant acres and 29 redevelopment acres
- For the Industrial land supply less than 10 acres in size, about 404 Industrial vacant acres
- For the Industrial land supply 10 acres or greater in size, 8 Industrial sites, totaling about 207 acres
- About 71% of Eugene’s employment land supply qualifies as short term employment supply

In Part II and Part III of this Study, the City determines how much capacity for employment the 2012 employment land supply holds and analyzes the 20-year demands for employment land to accommodate new jobs and to accommodate public and semi-public uses.

After consideration of these impacts on the capacity of Eugene’s employment land, the City’s 20-year land needs are determined and indicated in the conclusion of Part III of the Envision Eugene Employment Land Supply Study: “Public and Semi-Public Uses on Employment Land (2012-2032).”

In Part IV of the Envision Eugene Employment Land Supply Study: “Measures to Increase Employment Development,” the City explains the efficiency measures it has taken to increase its supply of employment land inside its UGB. In Part V, the City identifies the urban growth boundary expansion needed to accommodate the remaining employment land needs. Part VI, “Employment Buildable Land Inventory (2032),” provides the City’s 2012-2032 Buildable Land Inventory intended to serve Eugene’s need for employment land through 2032. The Employment Buildable Land Inventory (“BLI”) located in Part VI of this Study is the official BLI for making future determinations as to whether a property is on the City’s employment land inventory. The supply study in this Part I of the Study is produced solely as a baseline for use in determining the (in)sufficiency of the 2012 supply of employment land.

Figure 1. Plan Designations (2012)

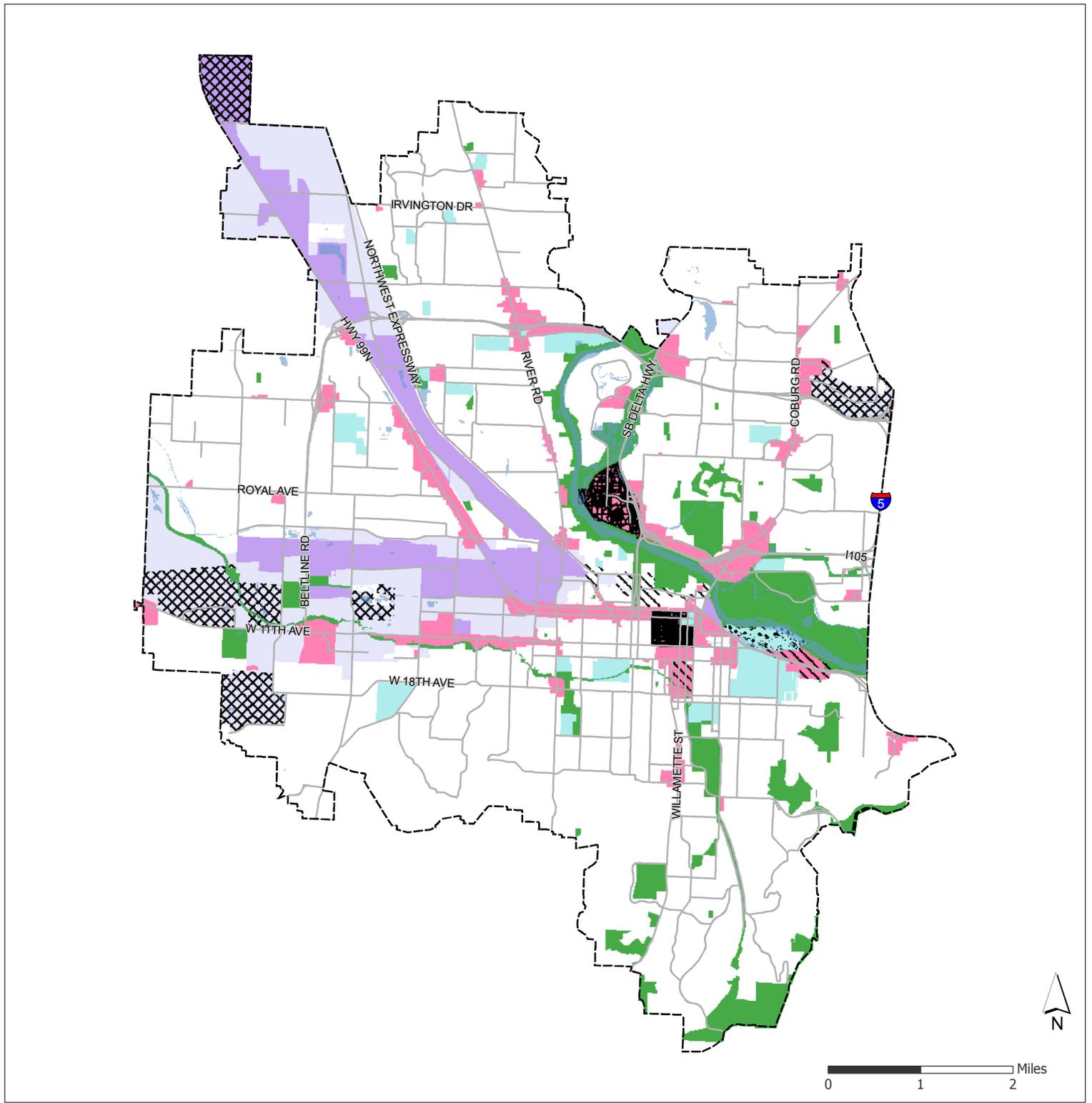


Urban Growth Boundary Water Bodies Roads

Plan Designation

- | | | | |
|-----------------------------|--------------------------|----------------------------|----------------------|
| Low Density Residential | Commercial | Light Medium Industrial | Natural Resource |
| Medium Density Residential | Major Retail Center | Campus Industrial | Parks and Open Space |
| Medium Density Res. Mixed | Commercial Mixed Use | University Research | Mixed Use |
| High Density Residential | Heavy Industrial | Government & Education | |
| High Density Res. Mixed Use | Special Heavy Industrial | Parks/Open Space Mixed Use | |

Figure 2. Plan Designations for Employment Land (2012)

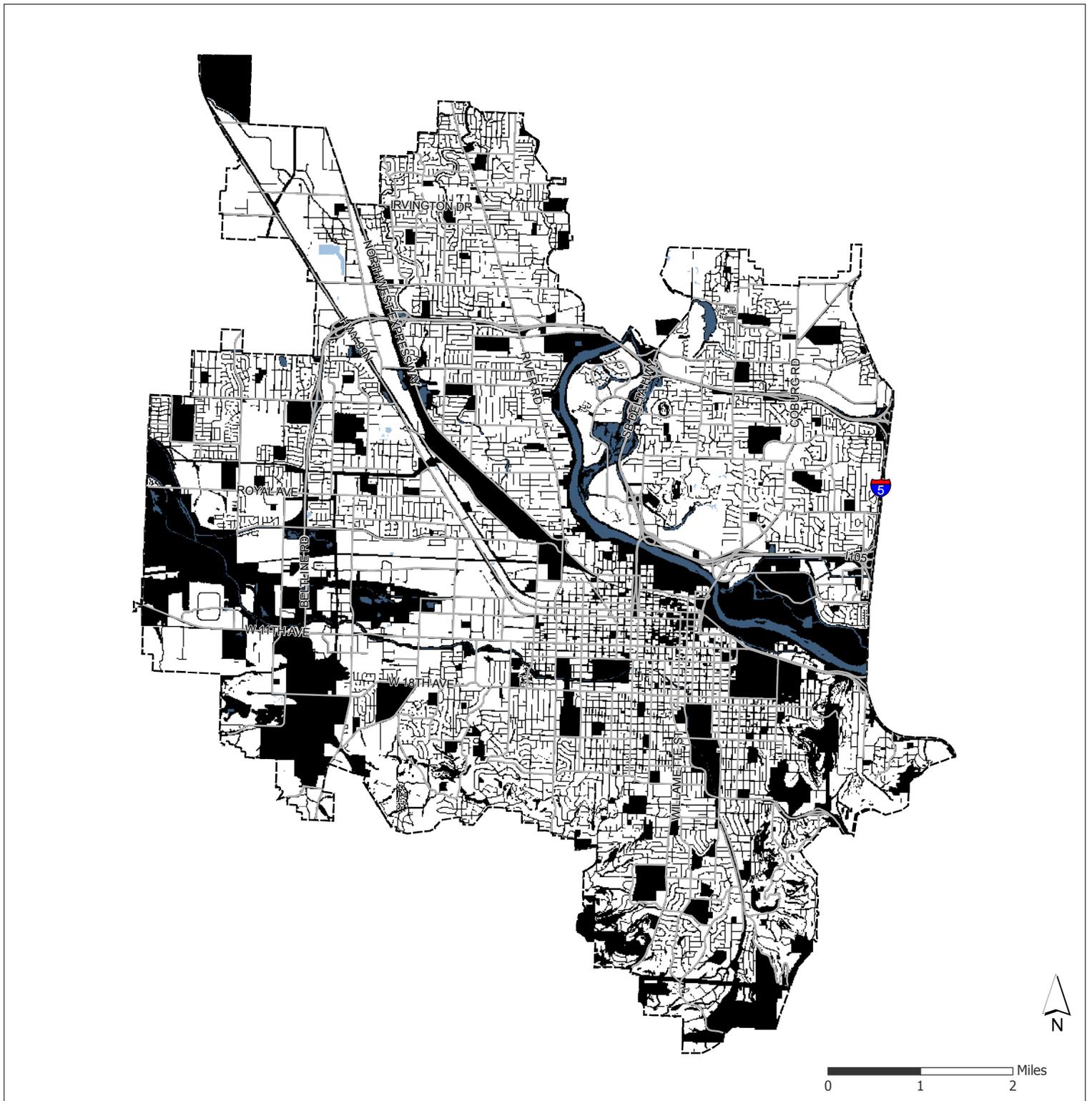


Urban Growth Boundary
 Water Bodies
 Roads

Plan Designation

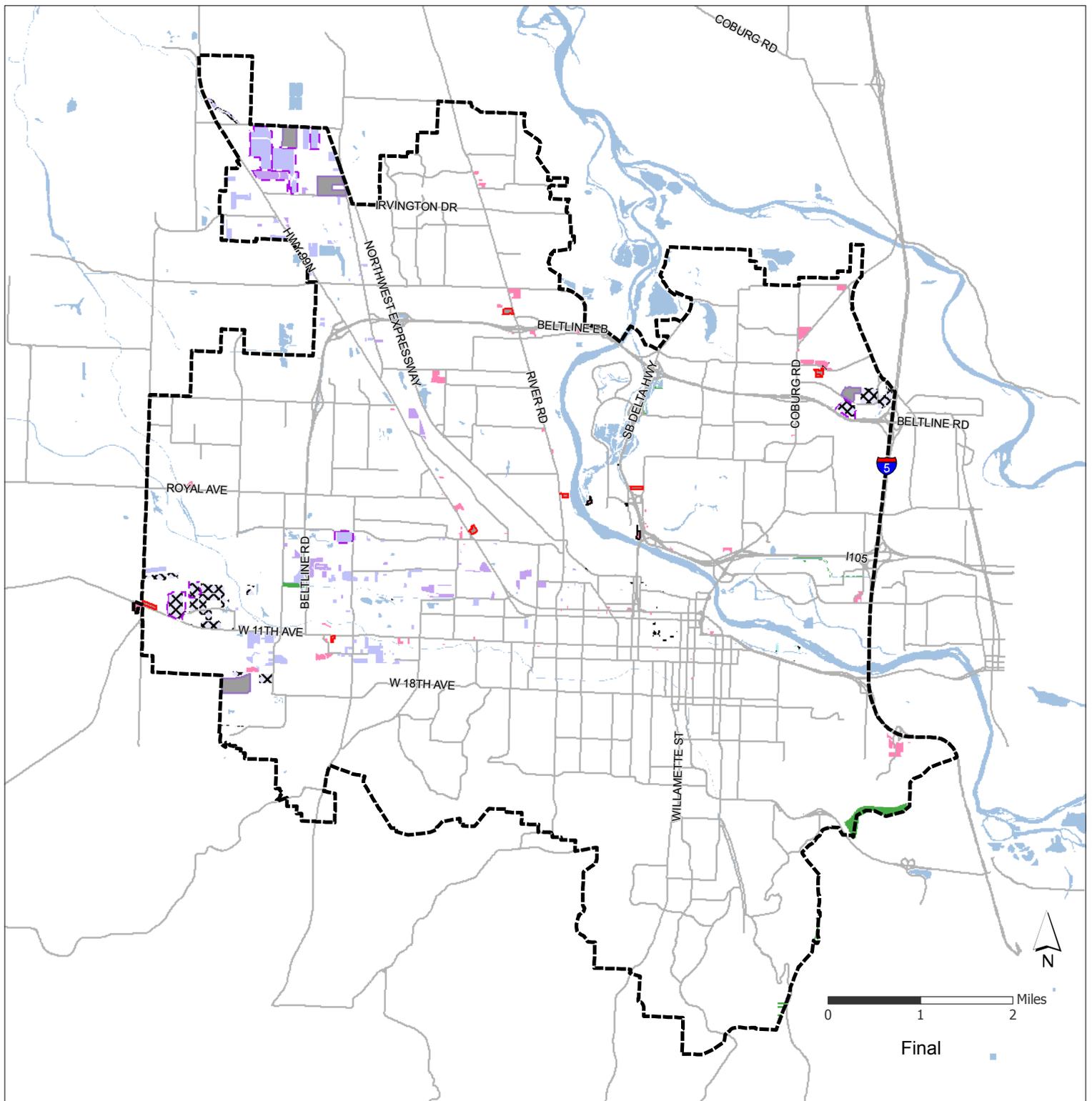
- | | | | |
|---|--|---|---|
| <ul style="list-style-type: none"> Commercial Major Retail Center Commercial Mixed Use | <ul style="list-style-type: none"> Heavy Industrial Special Heavy Industrial Light Medium Industrial | <ul style="list-style-type: none"> Campus Industrial University Research Government & Education Mixed Use | <ul style="list-style-type: none"> Parks and Open Space Parks/Open Space Mixed Use |
|---|--|---|---|

Figure 3. Committed and Protected Land (2012)



-  Urban Growth Boundary (2012)
-  Committed and Protected Lands
-  Water Bodies
-  Roads

Figure 4. Employment Land Supply (2012)



Urban Growth Boundary (2012) Water Bodies Roads

Plan Designation - Vacant Employment Lands

- | | | | |
|----------------------|--------------------------|------------------------|----------------------------|
| Commercial | Heavy Industrial | Campus Industrial | Parks and Open Space |
| Major Retail Center | Special Heavy Industrial | University Research | Parks/Open Space Mixed Use |
| Commercial Mixed Use | Light Medium Industrial | Government & Education | Mixed Use |

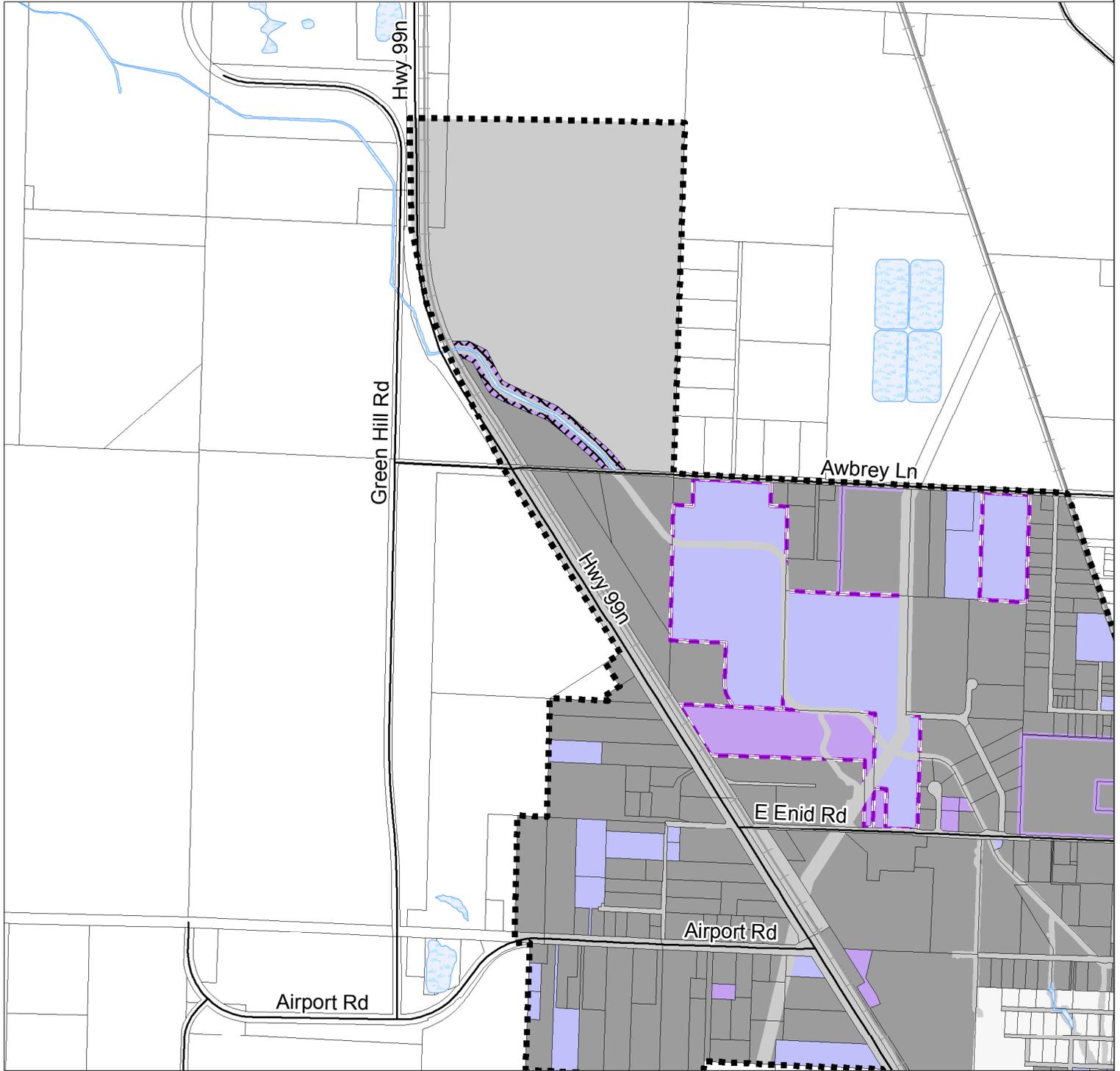
Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|--|-------------------------------------|
| Industrial (IND) Partially Vacant (PV) / redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant (PV) | |

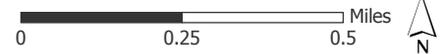
Caution: This map is not suitable for legal, engineering, or surveying purposes.

Figure 5. Employment Land Supply (2012)

Map tile 1 of 18



- Urban Growth Boundary (2012)
- Water Bodies
- Rail Road
- 2012 BLI Taxlots
- Major Streets



Final

Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

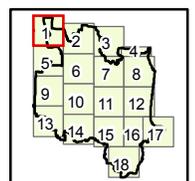
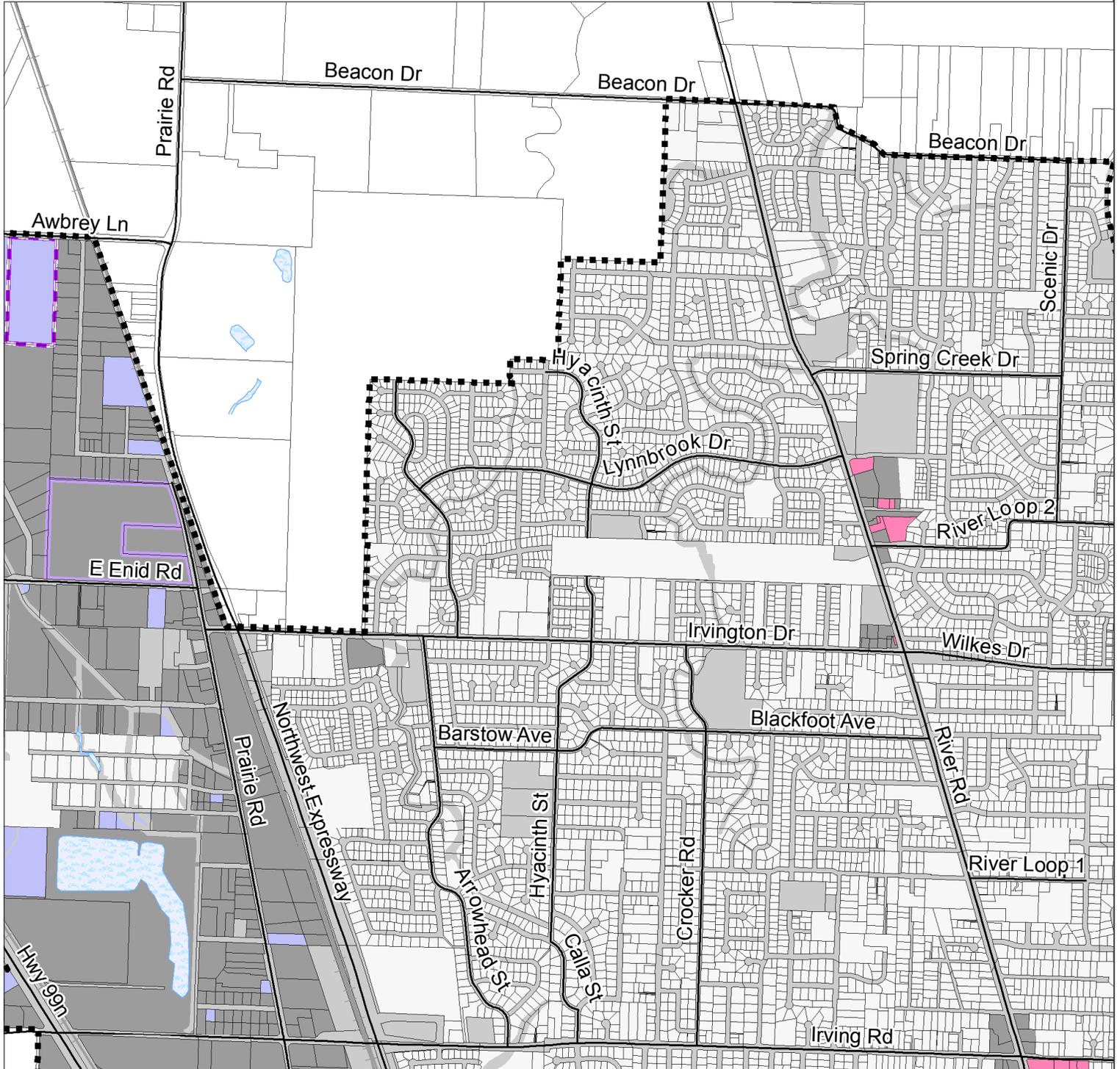


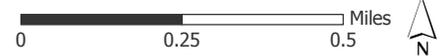
Figure 5. Employment Land Supply (2012)



Map tile 2 of 18



- Urban Growth Boundary (2012)
- Water Bodies
- Rail Road
- 2012 BLI Taxlots
- Major Streets



Final

Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

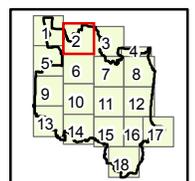
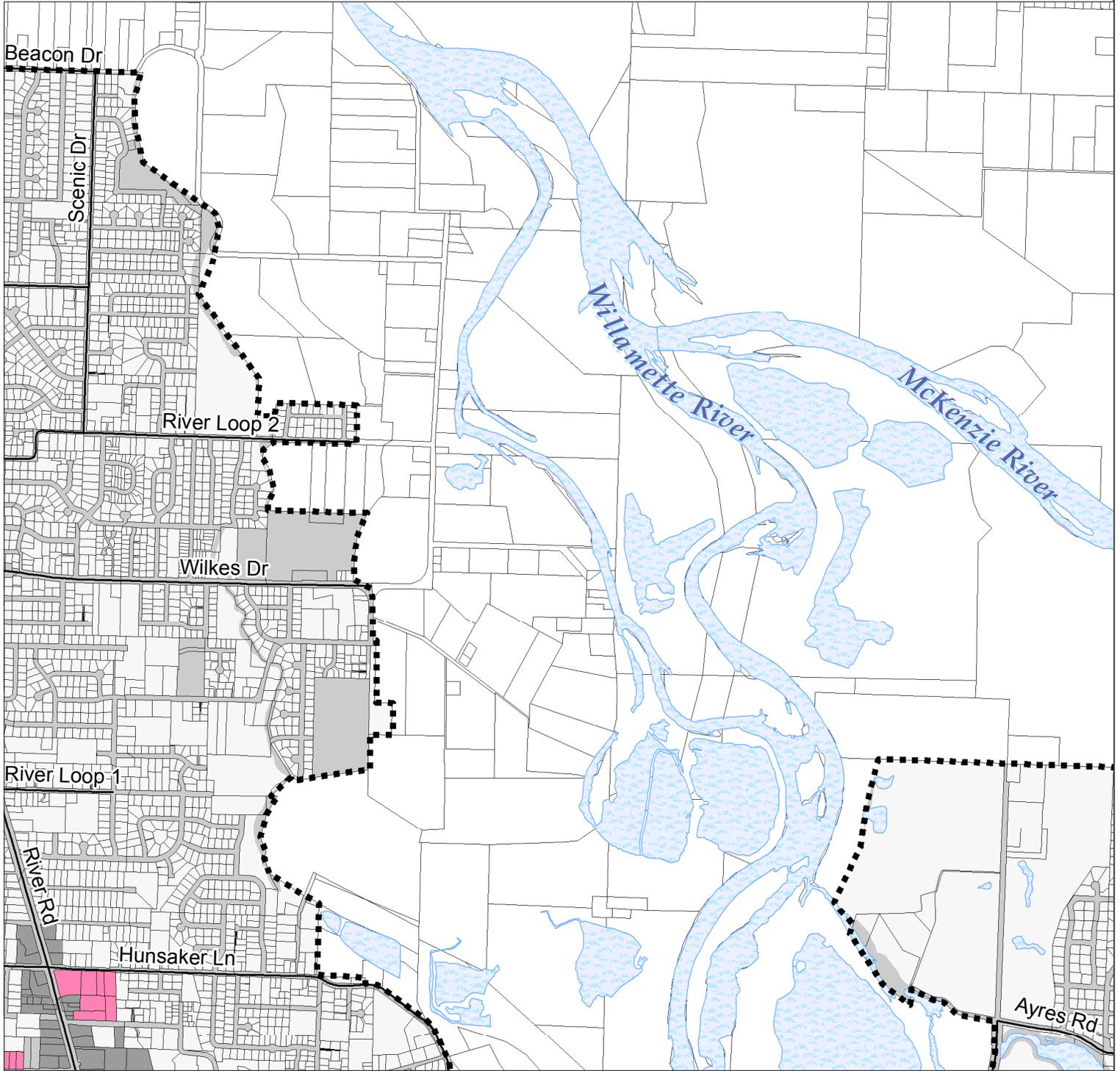


Figure 5. Employment Land Supply (2012)

Map tile 3 of 18



Urban Growth Boundary (2012)
 Water Bodies
 Rail Road
 2012 BLI Taxlots
 Major Streets

0 0.25 0.5 Miles
 Final

Plan Designations - Vacant Employment Lands

- | | | |
|--|--|---|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

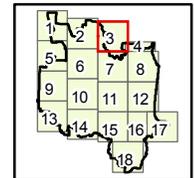
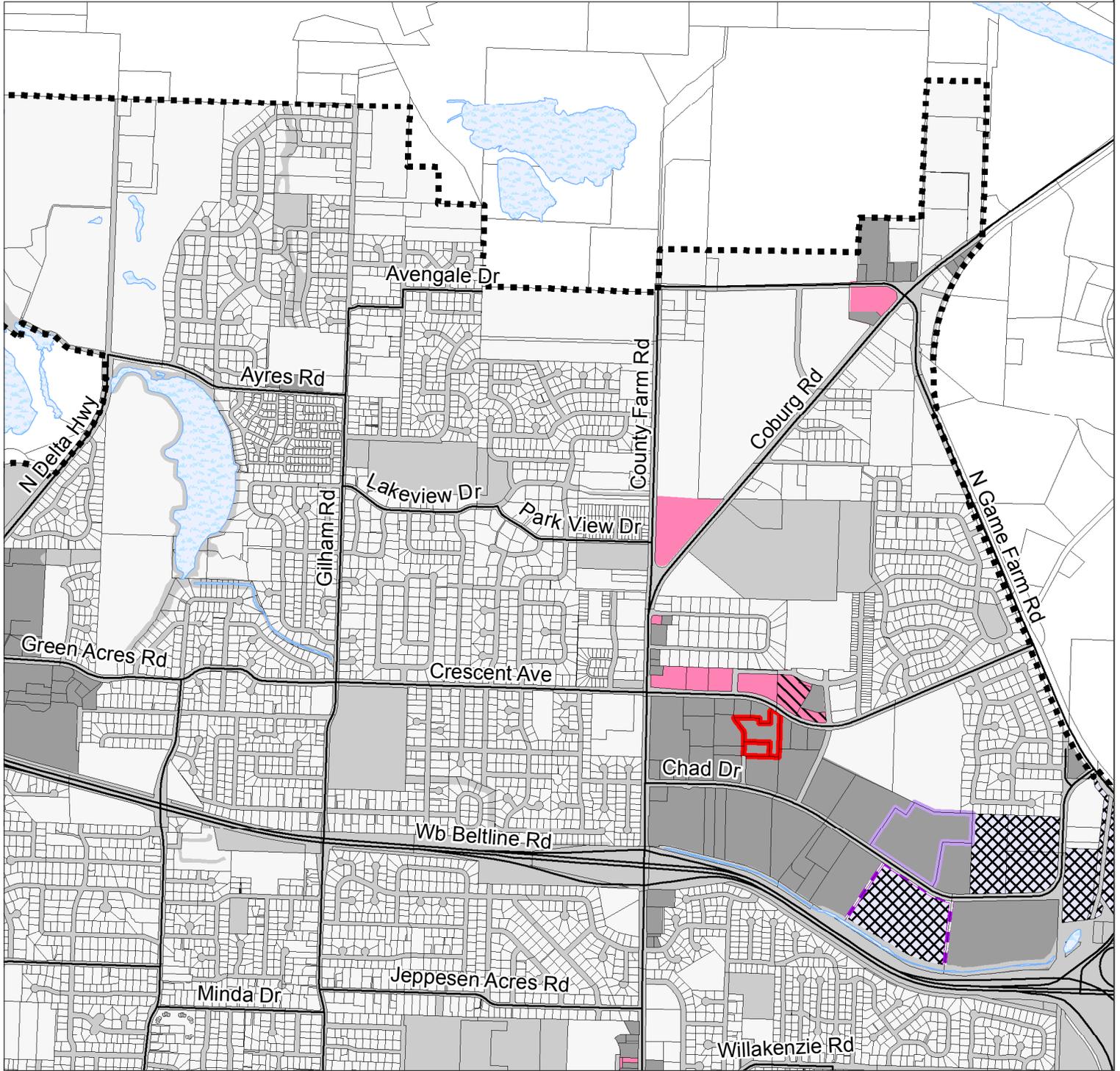


Figure 5. Employment Land Supply (2012)

Map tile 4 of 18



Urban Growth Boundary (2012)
 Water Bodies
 Rail Road
 2012 BLI Taxlots
 Major Streets

0 0.25 0.5 Miles
 Final

Plan Designations - Vacant Employments Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

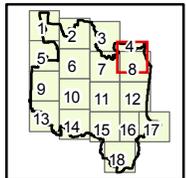
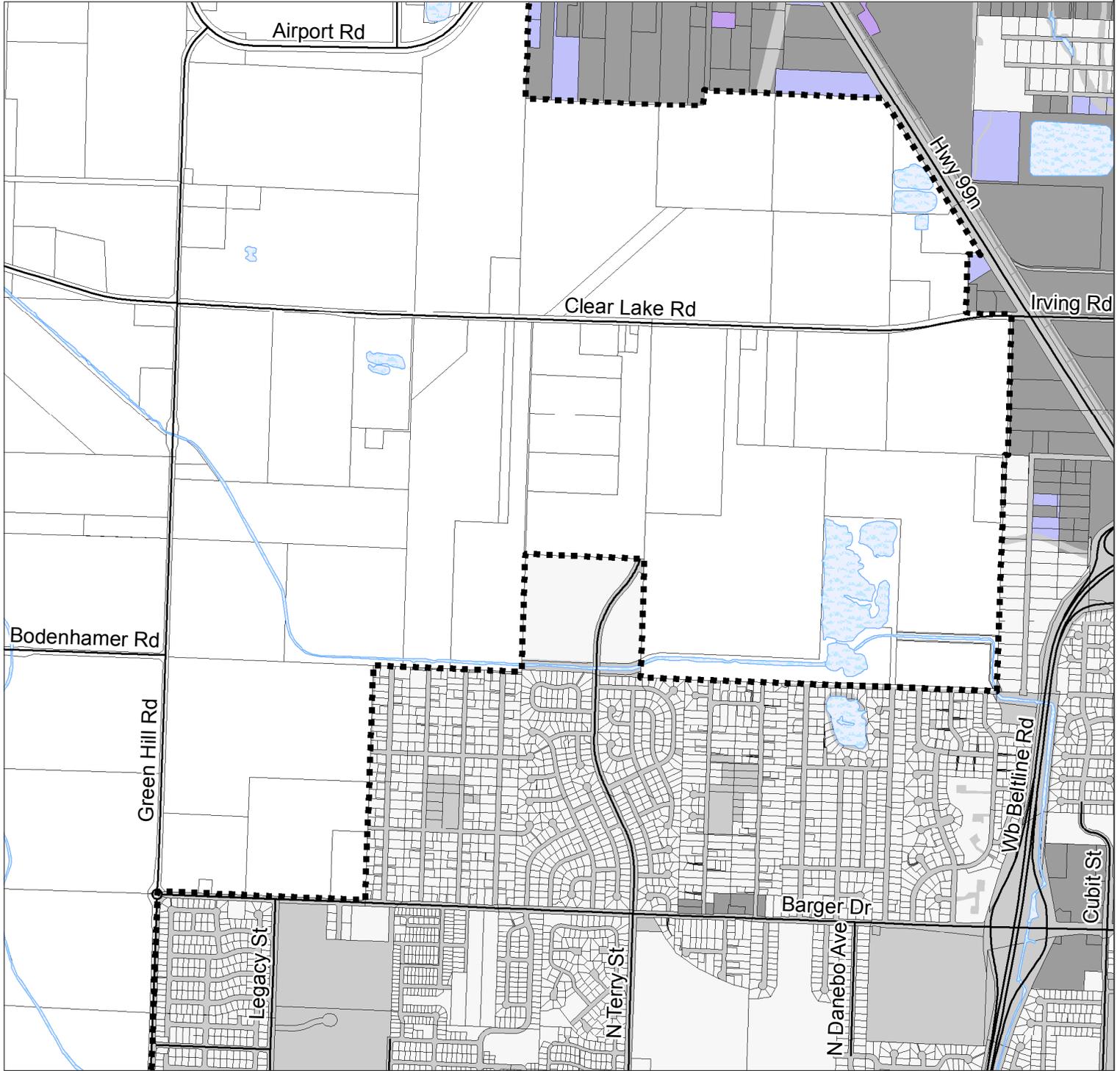
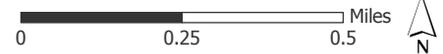


Figure 5. Employment Land Supply (2012)

Map tile 5 of 18



- Urban Growth Boundary (2012)
- Water Bodies
- Rail Road
- 2012 BLI Taxlots
- Major Streets



Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

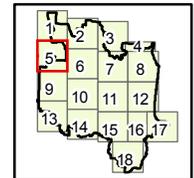
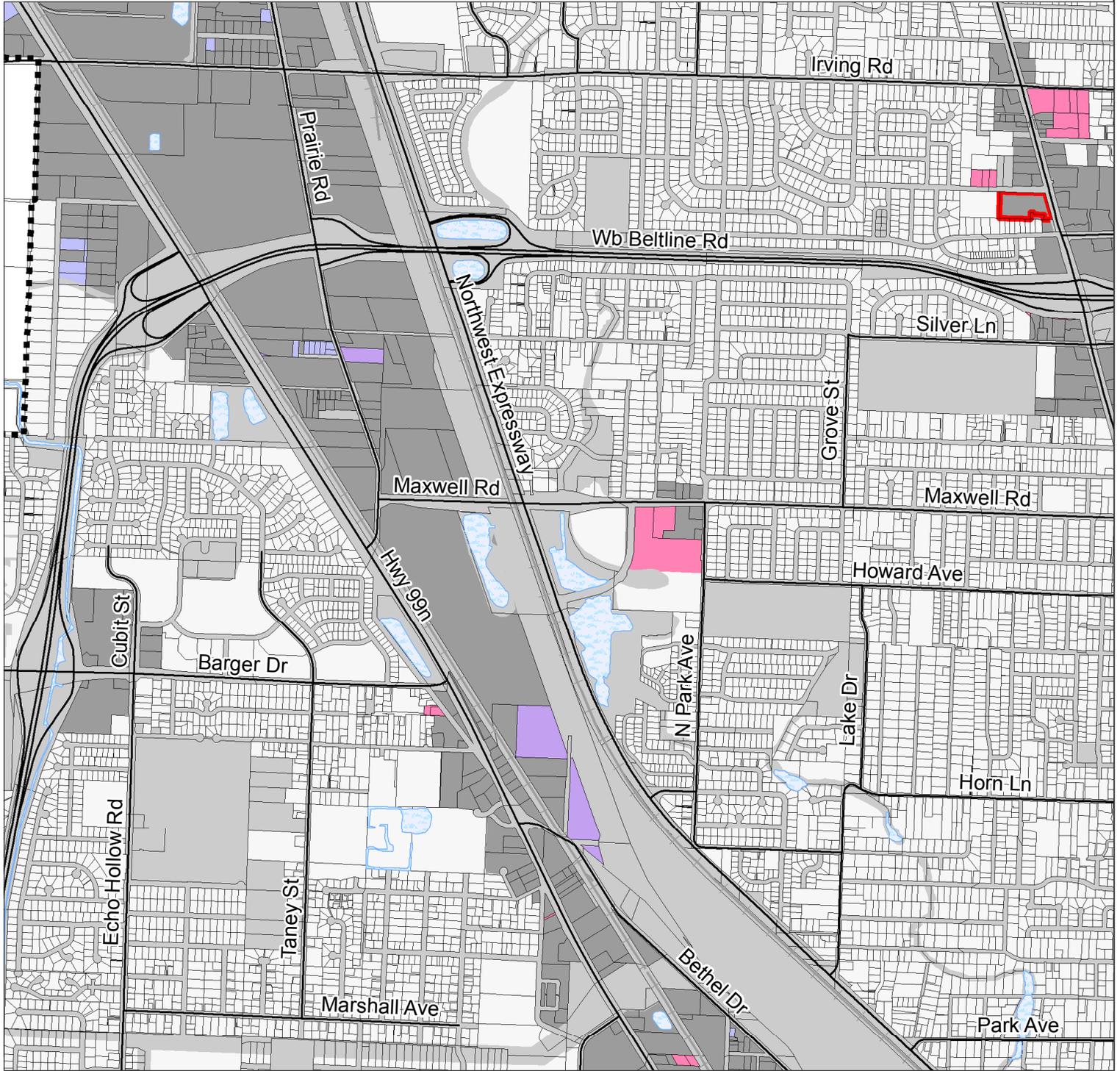


Figure 5. Employment Land Supply (2012)

Map tile 6 of 18



Urban Growth Boundary (2012)
 Water Bodies
 Rail Road
 2012 BLI Taxlots
 Major Streets

0 0.25 0.5 Miles
 N
 Final

Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

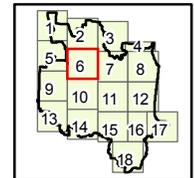
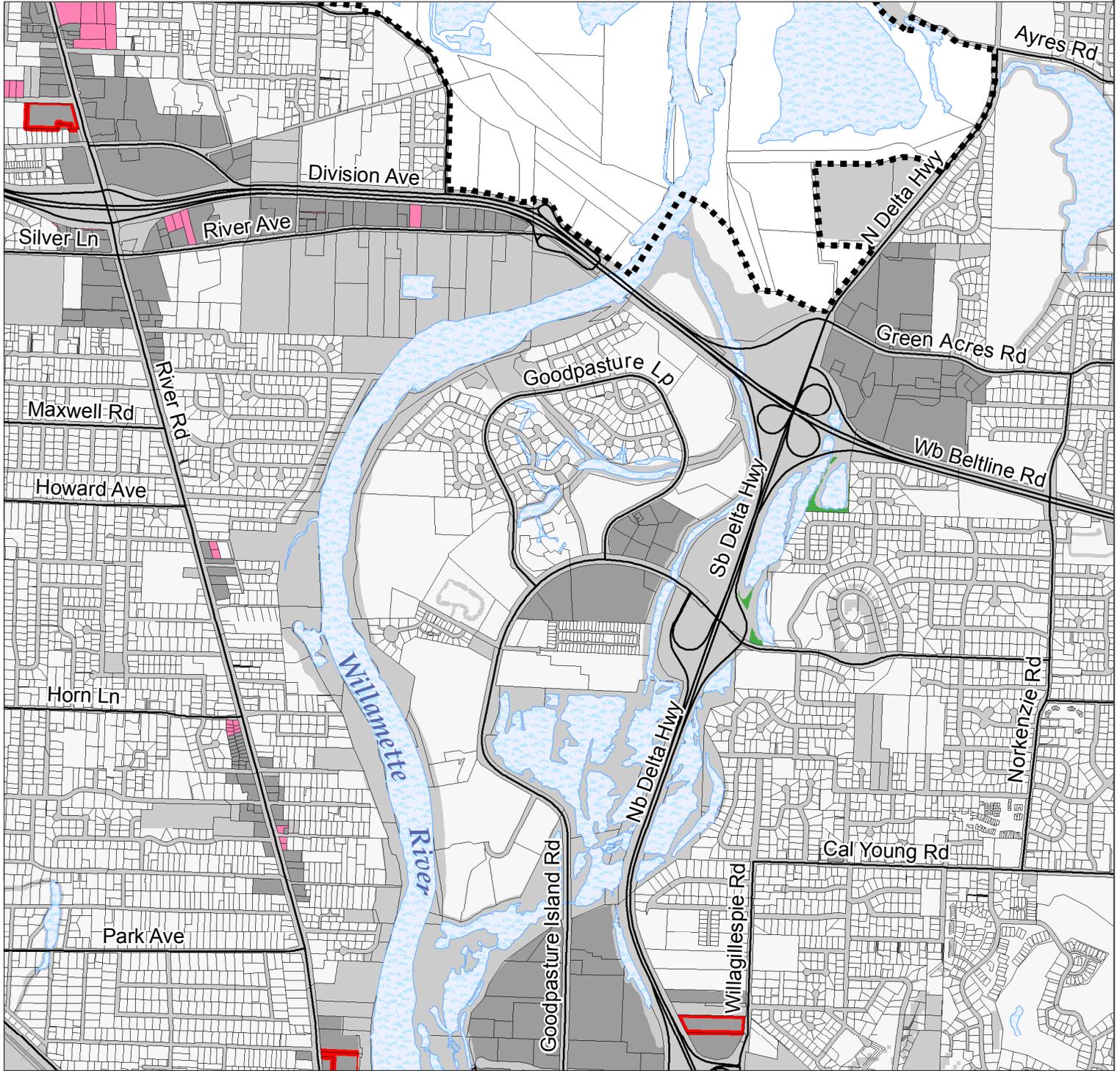


Figure 5. Employment Land Supply (2012)

Map tile 7 of 18



- Urban Growth Boundary (2012)
- Water Bodies
- Rail Road
- 2012 BLI Taxlots
- Major Streets



Final

Plan Designations - Vacant Employments Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

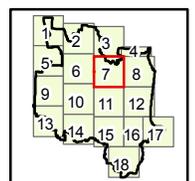
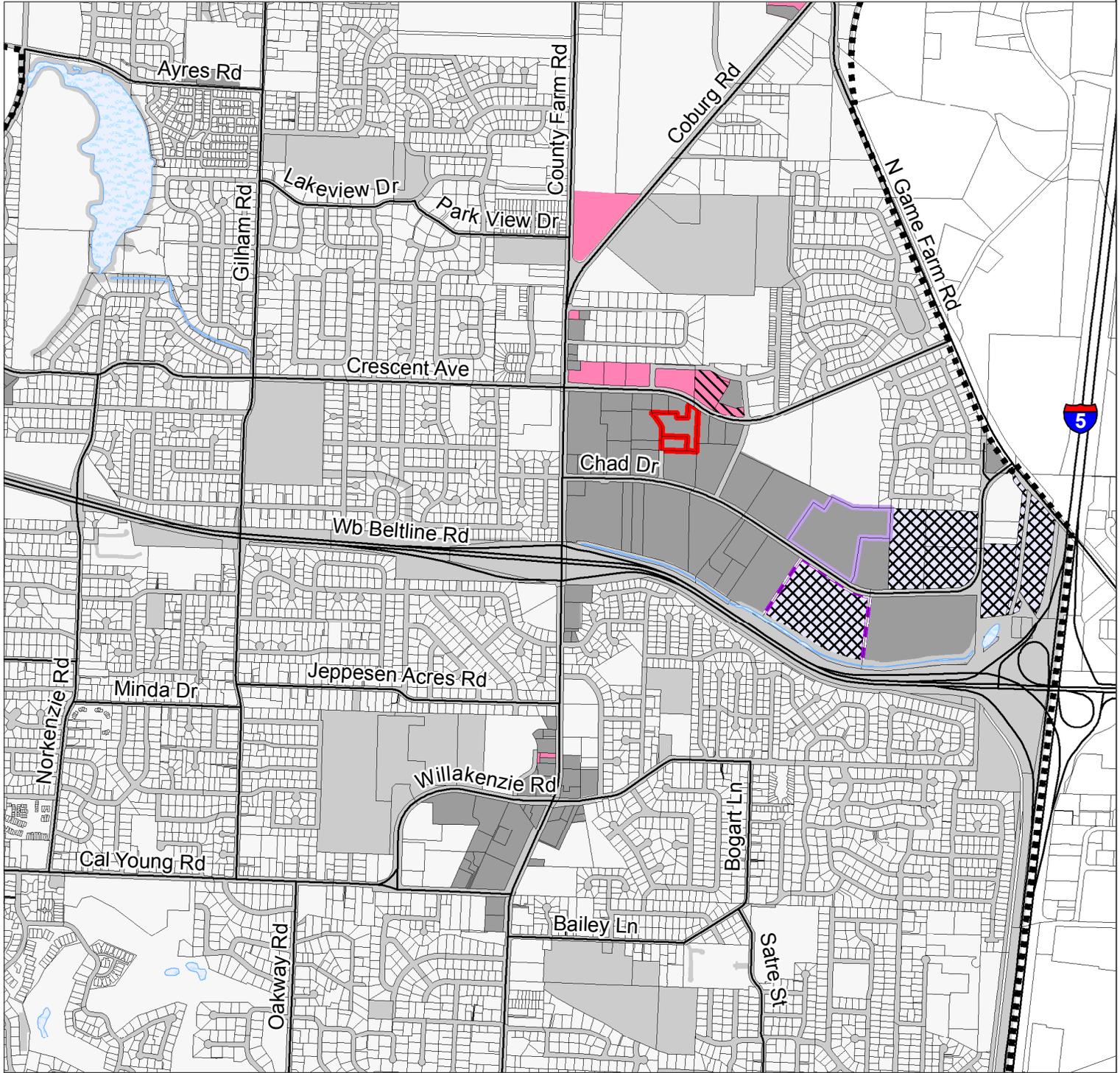


Figure 5. Employment Land Supply (2012)

Map tile 8 of 18



Urban Growth Boundary (2012)
 Water Bodies
 Rail Road
 2012 BLI Taxlots
 Major Streets

0 0.25 0.5 Miles
 N

Final

Plan Designations - Vacant Employments Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

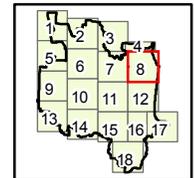
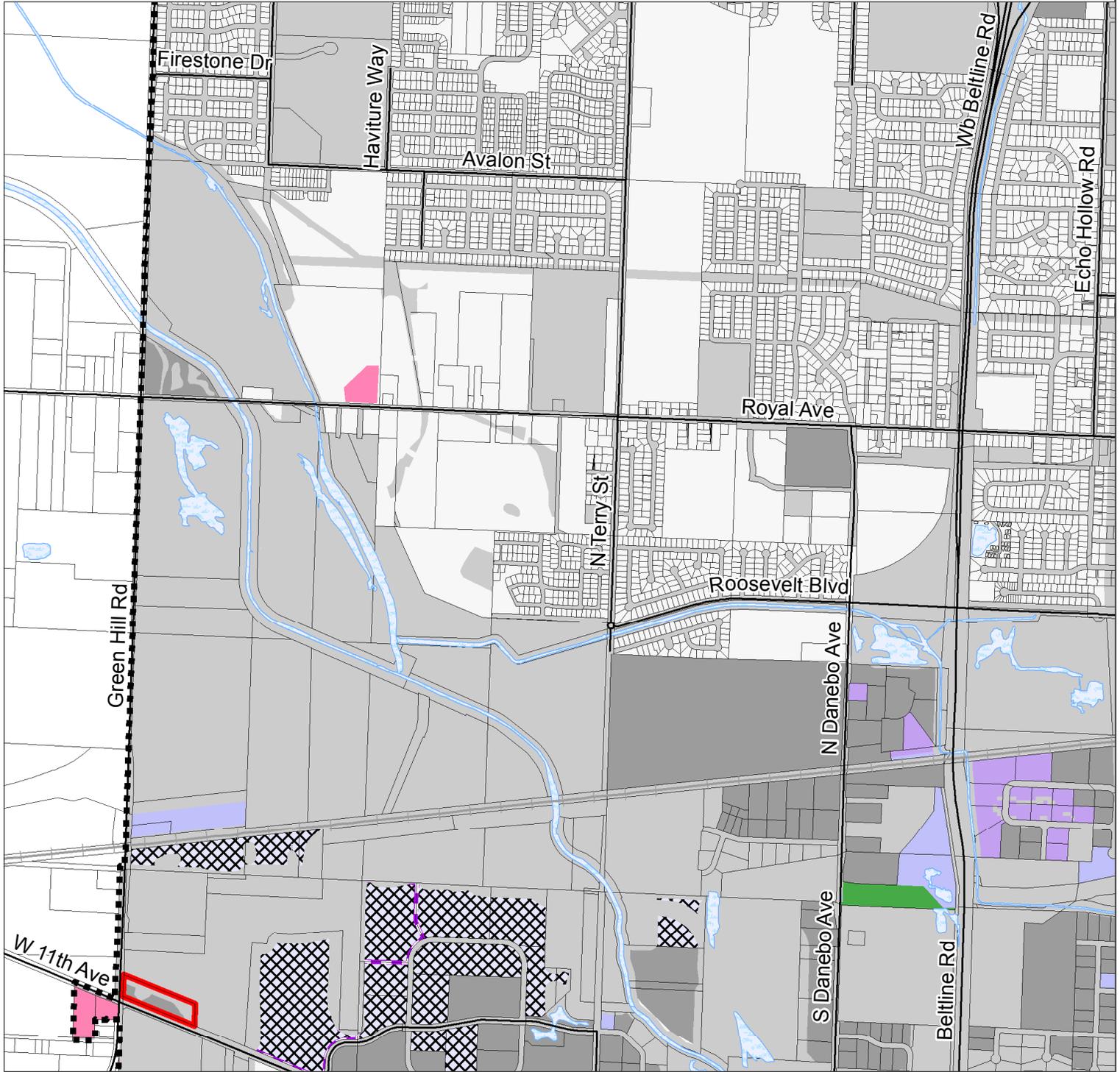
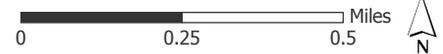


Figure 5. Employment Land Supply (2012)

Map tile 9 of 18



- Urban Growth Boundary (2012)
- Water Bodies
- Rail Road
- 2012 BLI Taxlots
- Major Streets



Final

Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

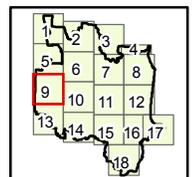
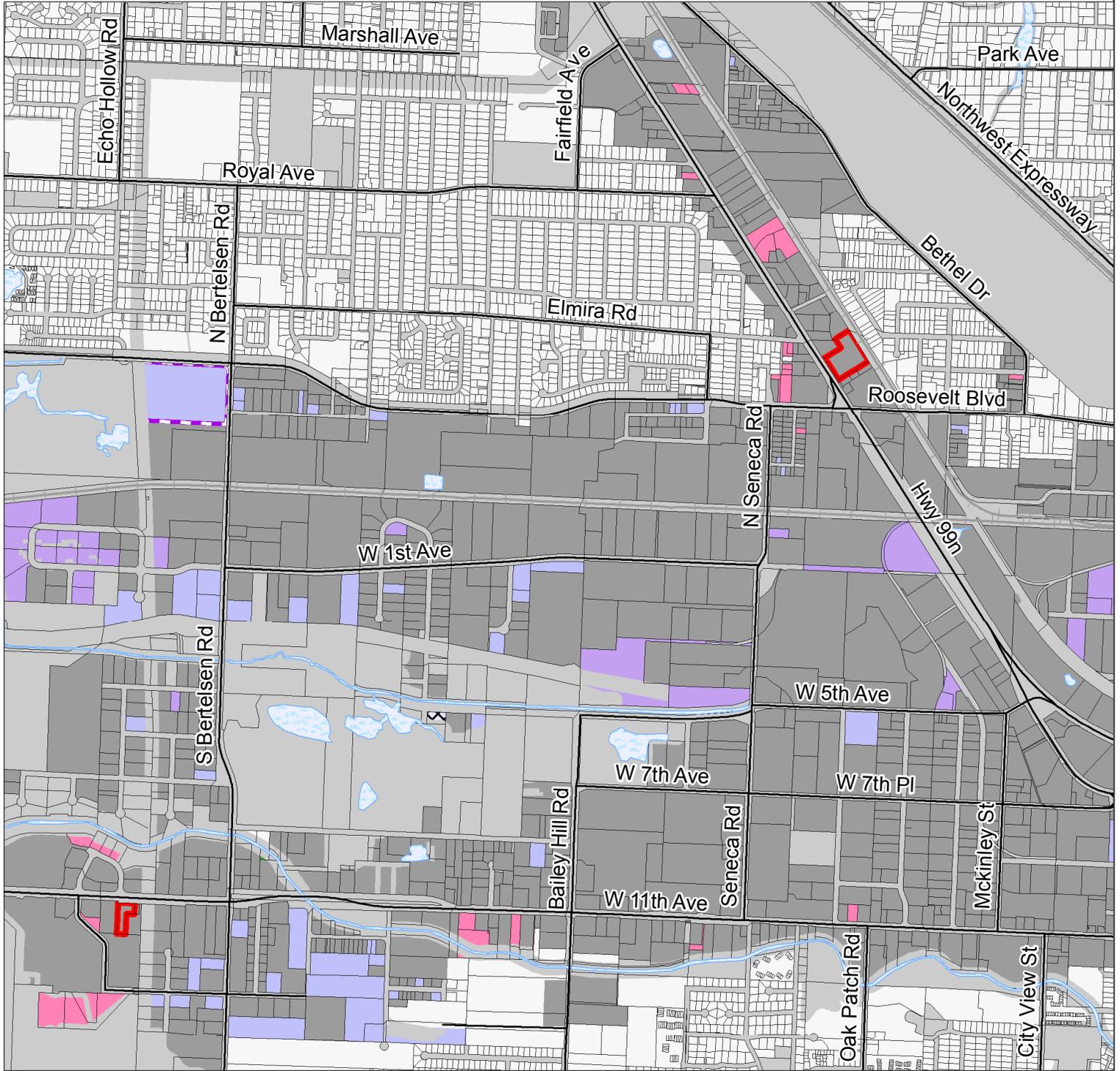


Figure 5. Employment Land Supply (2012)



Map tile 10 of 18



Urban Growth Boundary (2012)
 Water Bodies
 Rail Road
 2012 BLI Taxlots
 Major Streets

0 0.25 0.5 Miles
 Final

Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

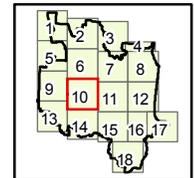
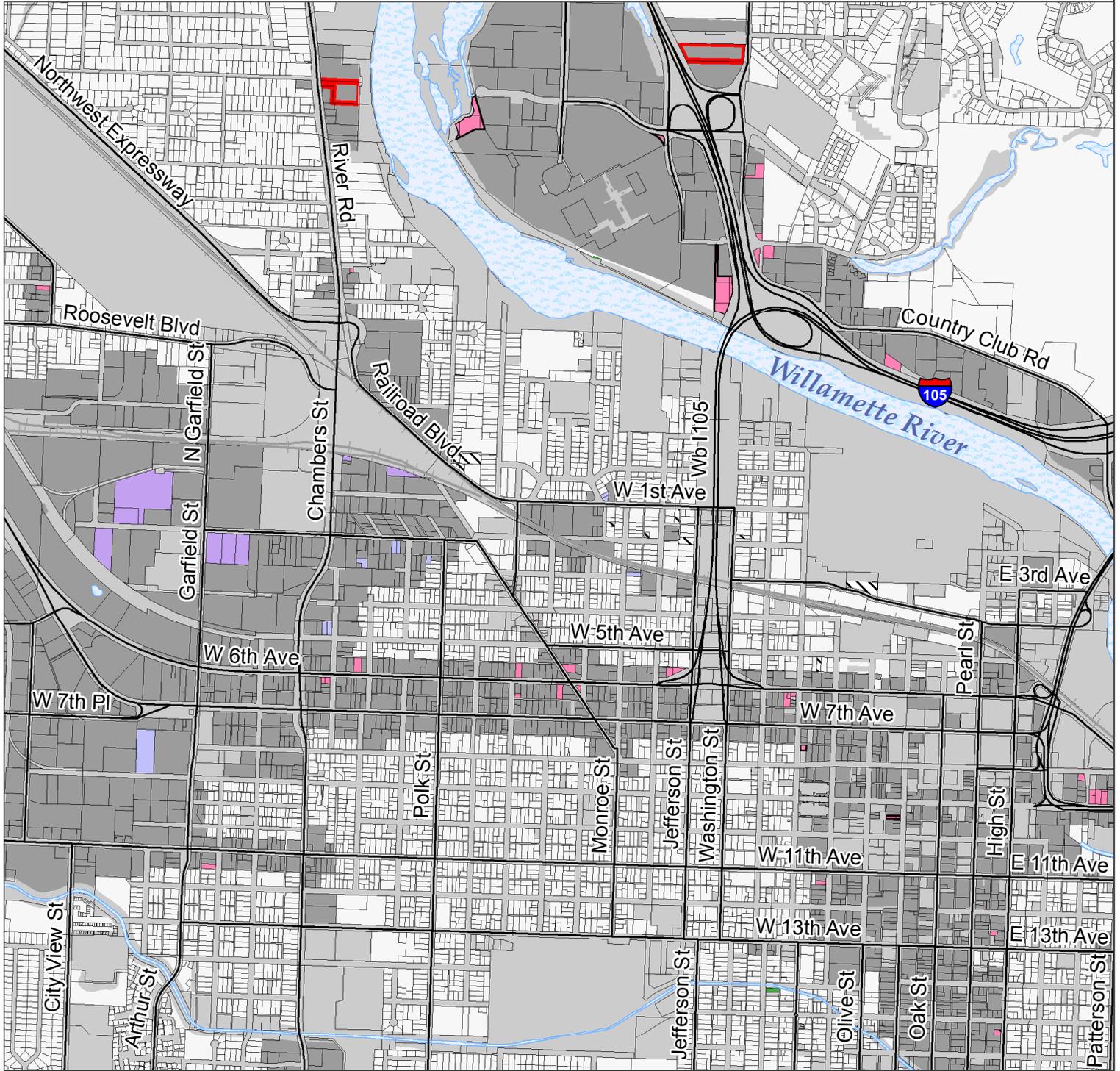
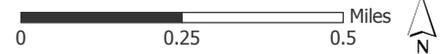


Figure 5. Employment Land Supply (2012)

Map tile 11 of 18



- Urban Growth Boundary (2012)
- Water Bodies
- Rail Road
- 2012 BLI Taxlots
- Major Streets



Final

Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

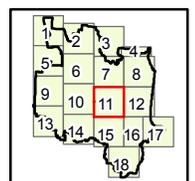
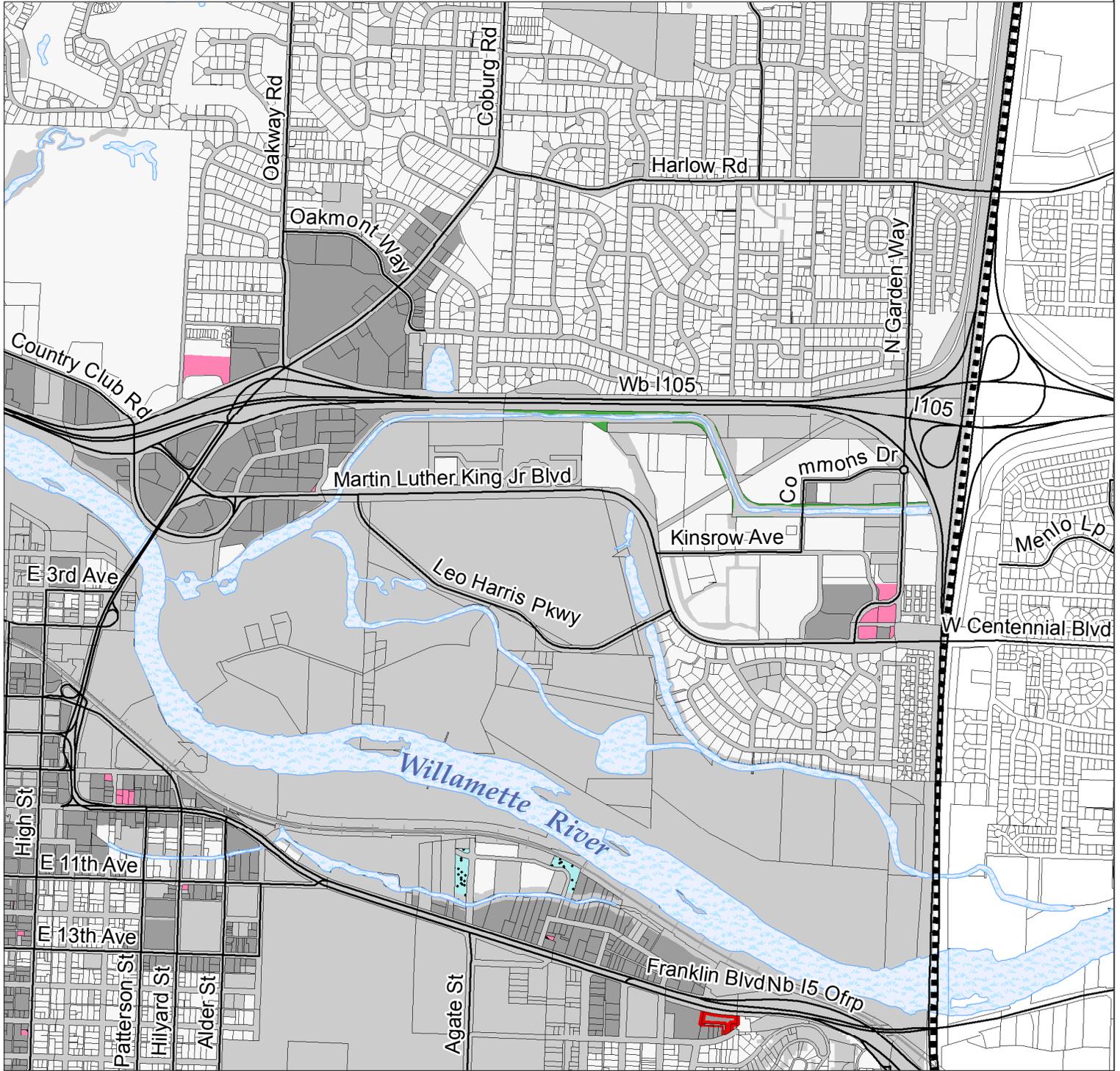


Figure 5. Employment Land Supply (2012)

Map tile 12 of 18



Urban Growth Boundary (2012)
 Water Bodies
 Rail Road
 2012 BLI Taxlots
 Major Streets

0 0.25 0.5 Miles
 N
 Final

Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

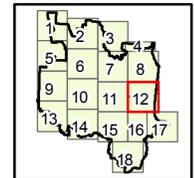
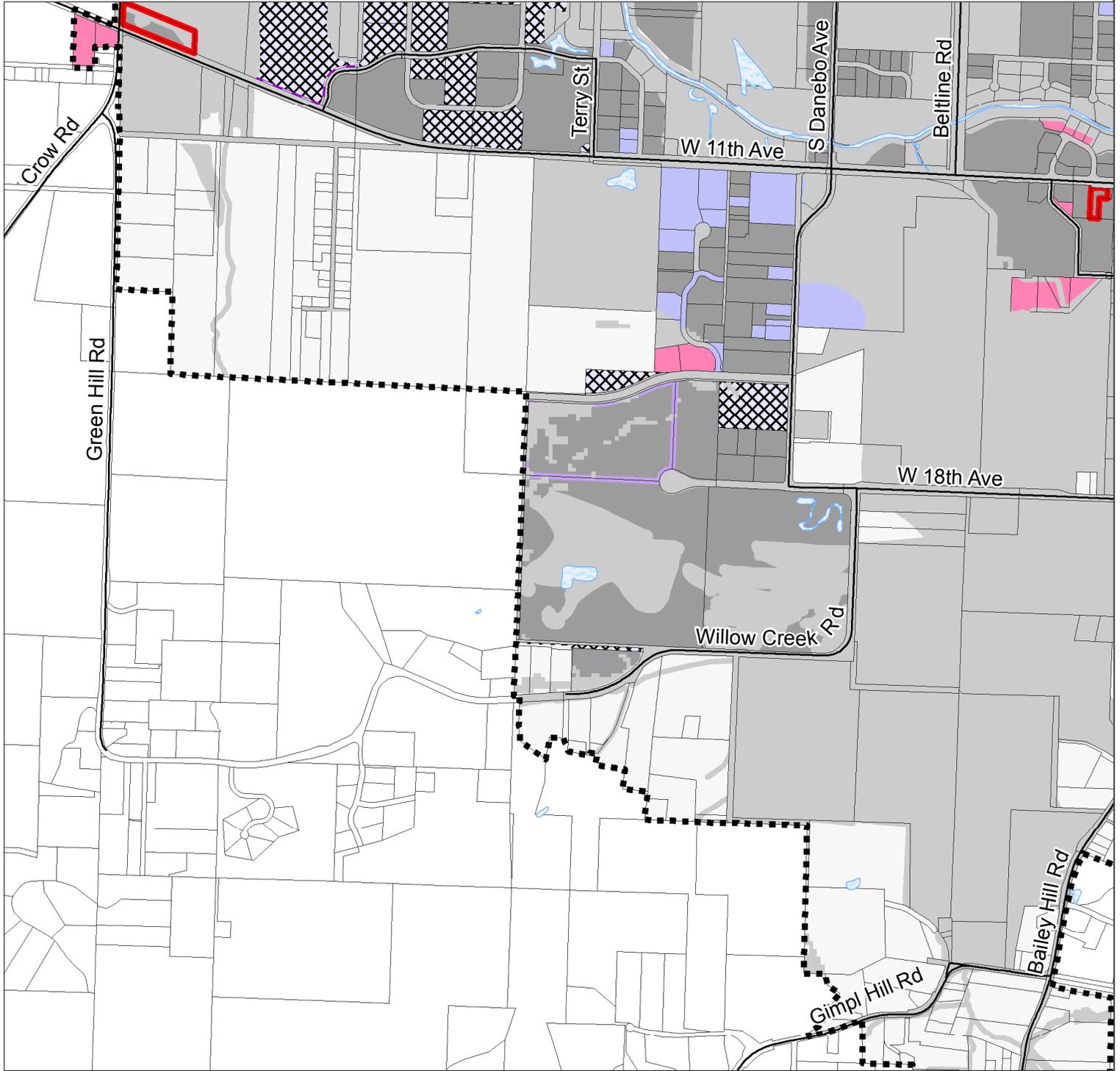


Figure 5. Employment Land Supply (2012)

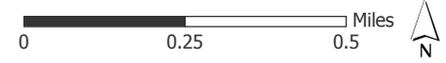


Map tile 13 of 18



Urban Growth Boundary (2012)
 Water Bodies
 Rail Road

2012 BLI Taxlots
 Major Streets



Plan Designations - Vacant Employment Lands

- | | | |
|---|--|---|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|--|--|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

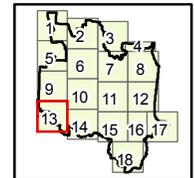
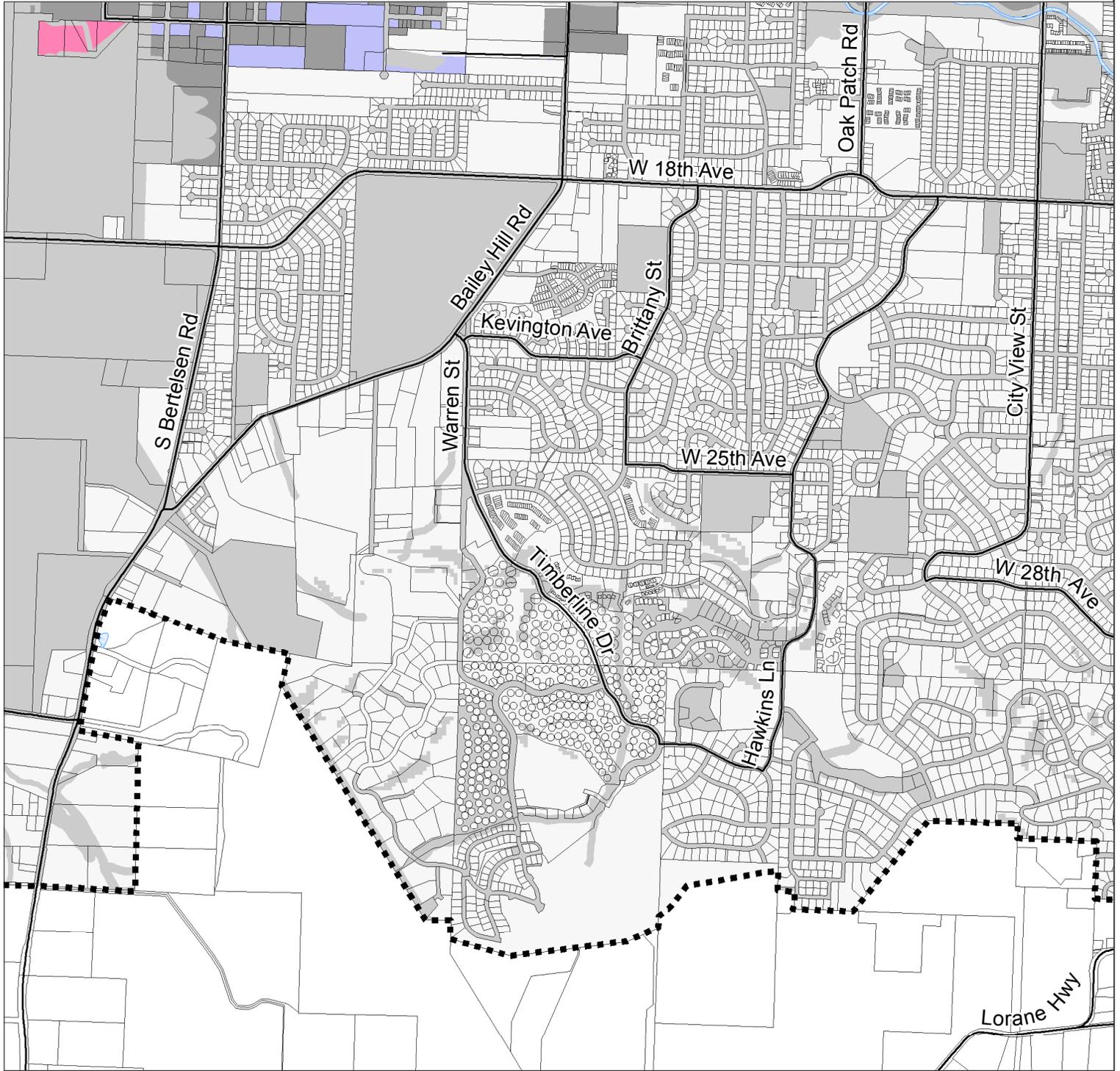


Figure 5. Employment Land Supply (2012)

Map tile 14 of 18



Urban Growth Boundary (2012)
 Water Bodies
 Rail Road
 2012 BLI Taxlots
 Major Streets

0 0.25 0.5 Miles
 Final

Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

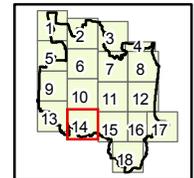
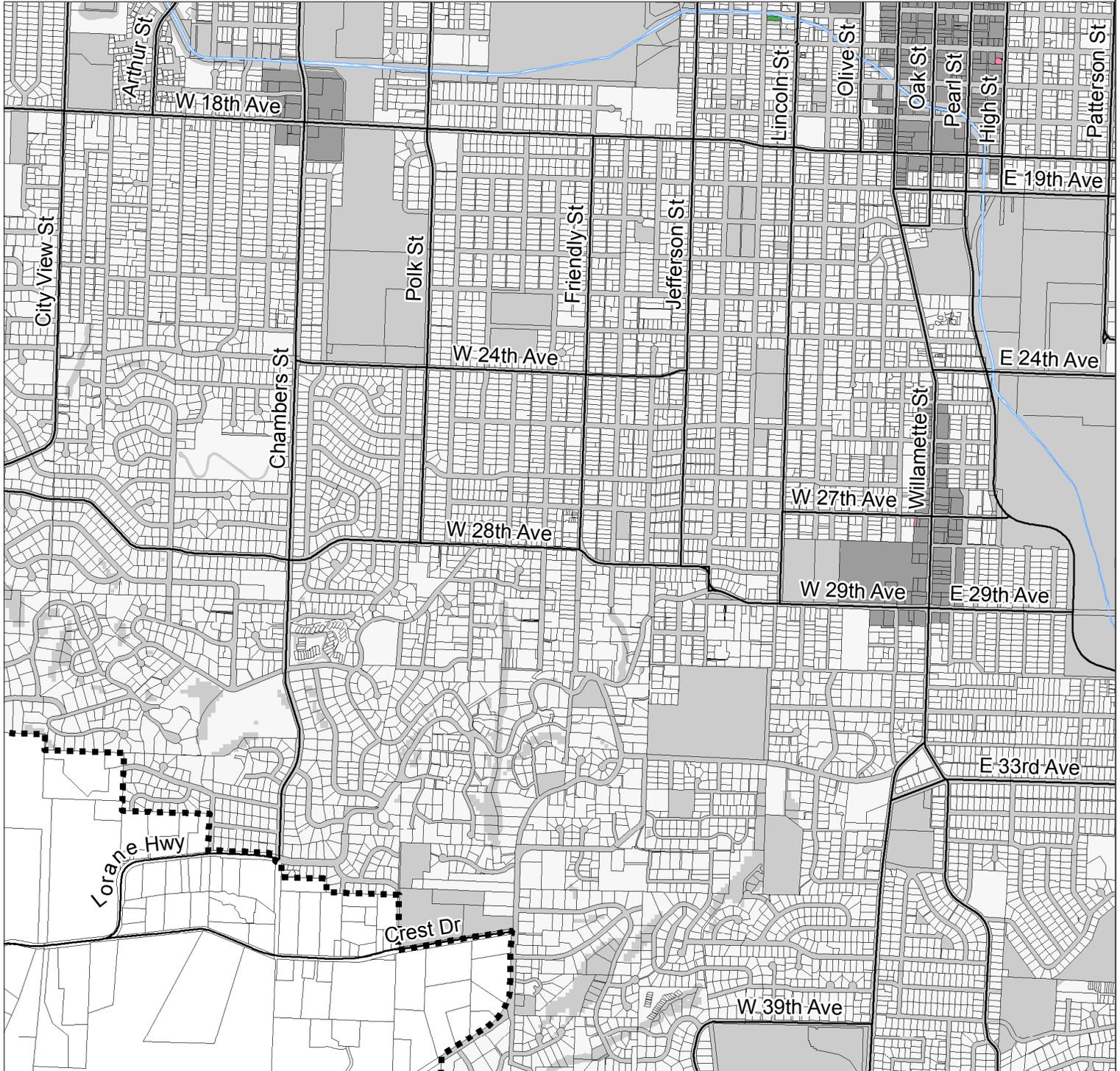
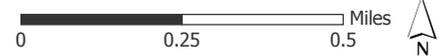


Figure 5. Employment Land Supply (2012)

Map tile 15 of 18



- Urban Growth Boundary (2012)
- Water Bodies
- Rail Road
- 2012 BLI Taxlots
- Major Streets



Final

Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Industrial (IND) vacant >= 10 acres
- Commercial (COM) Partially Vacant
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

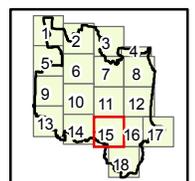
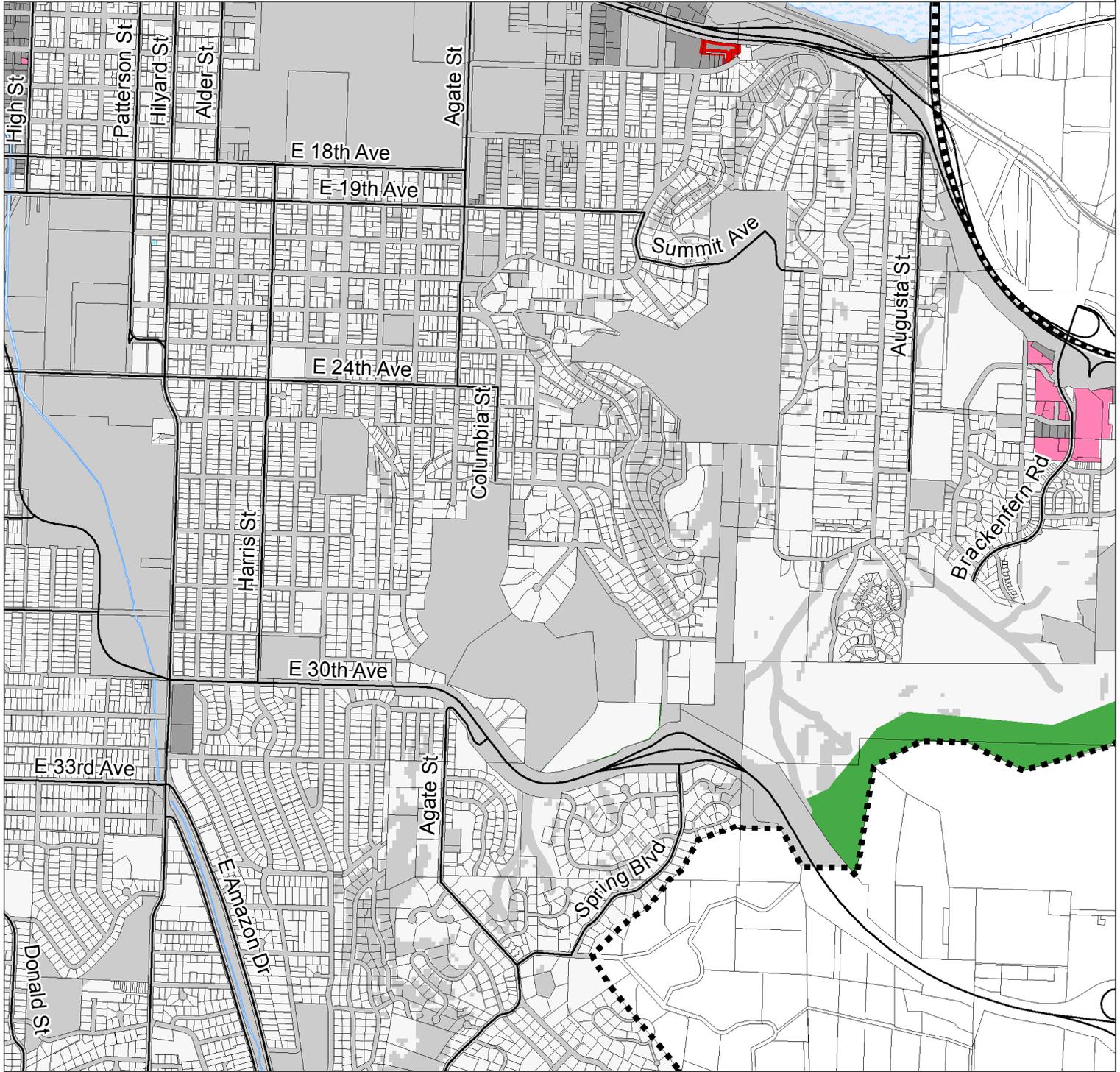


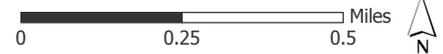
Figure 5. Employment Land Supply (2012)



Map tile 16 of 18



- Urban Growth Boundary (2012)
- Water Bodies
- Rail Road
- 2012 BLI Taxlots
- Major Streets



Final

Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

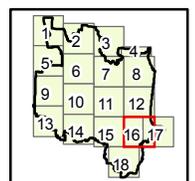
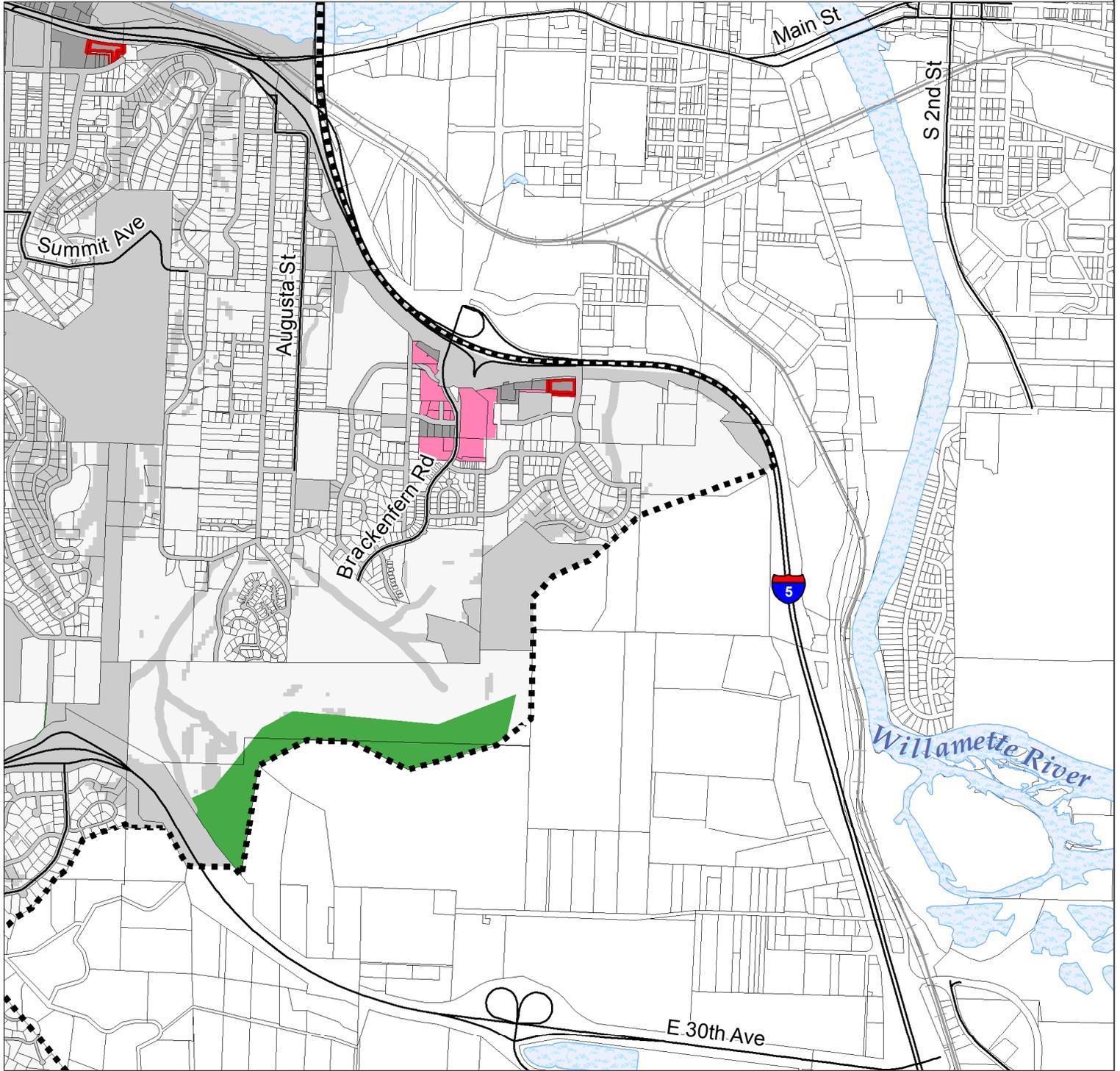
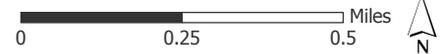


Figure 5. Employment Land Supply (2012)

Map tile 17 of 18



- Urban Growth Boundary (2012)
- Water Bodies
- Rail Road
- 2012 BLI Taxlots
- Major Streets



Final

Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

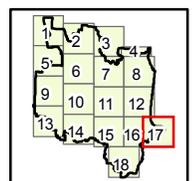
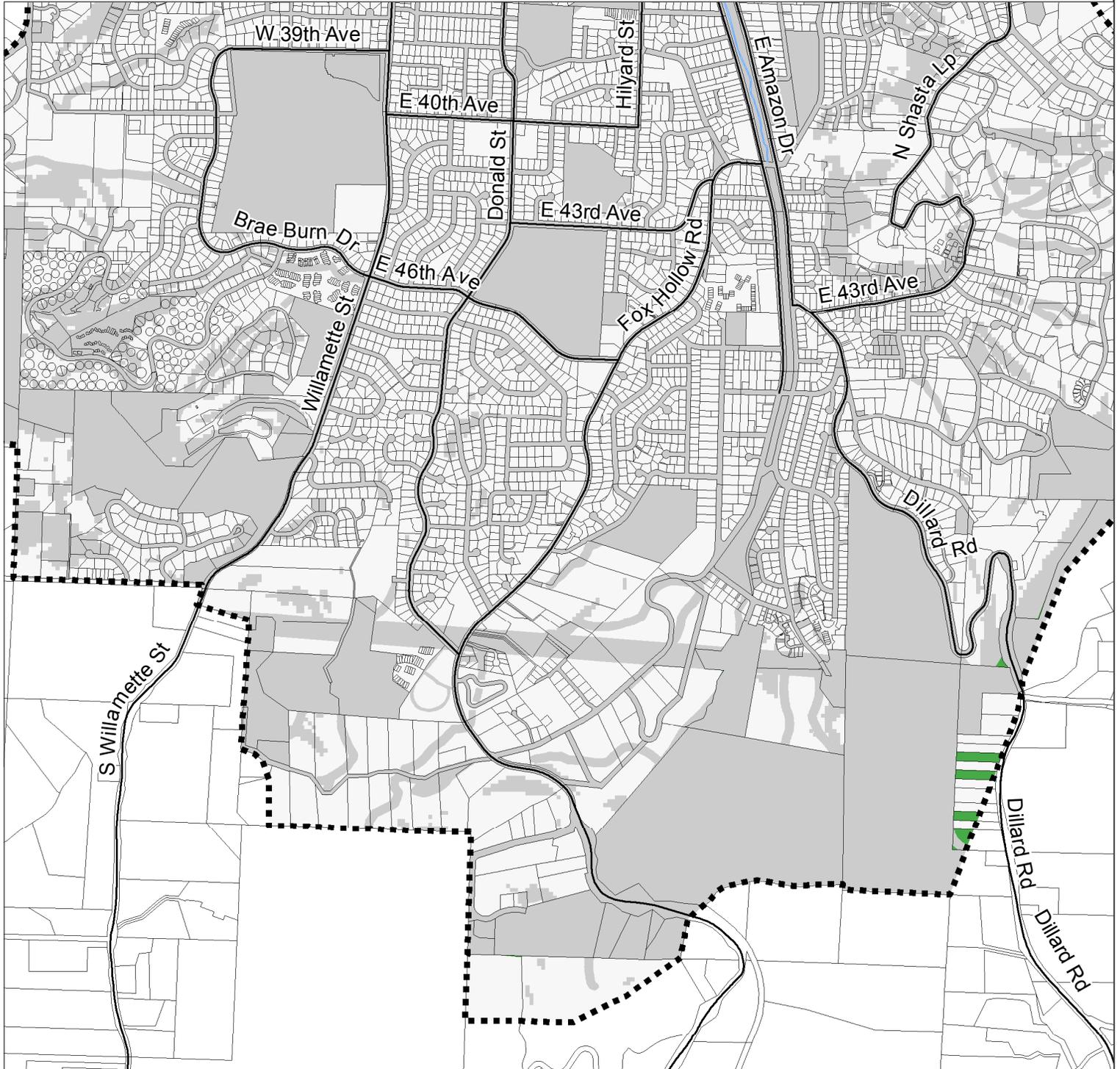


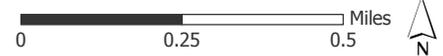
Figure 5. Employment Land Supply (2012)



Map tile 18 of 18



- Urban Growth Boundary (2012)
- Water Bodies
- Rail Road
- 2012 BLI Taxlots
- Major Streets



Final

Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The location of the UGB line on these maps is imprecise; for the precise location see Figure 2. Employment Land Supply (2012-2032).
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.

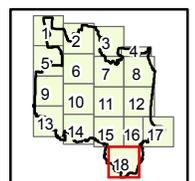
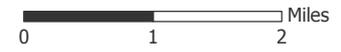
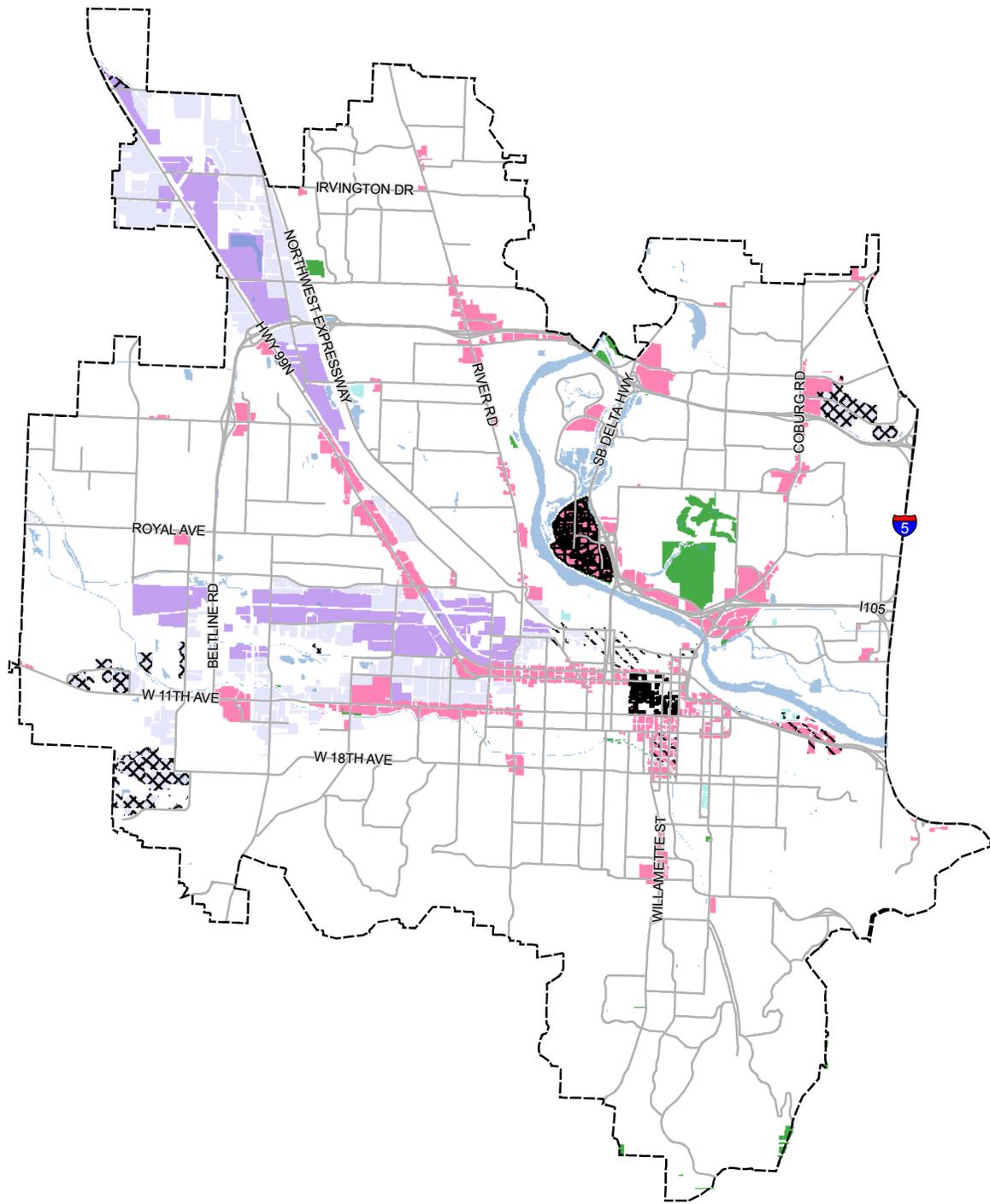


Figure 6. Developed Employment Land (2012)



Urban Growth Boundary Water Bodies Roads

Plan Designation

- | | | | |
|----------------------|--------------------------|------------------------|----------------------------|
| Commercial | Heavy Industrial | Campus Industrial | Parks and Open Space |
| Major Retail Center | Special Heavy Industrial | University Research | Parks/Open Space Mixed Use |
| Commercial Mixed Use | Light Medium Industrial | Government & Education | Mixed Use |

PART II. EUGENE ECONOMIC OPPORTUNITIES ANALYSIS

This economic opportunities analysis (EOA) for the City of Eugene is Part II of the Envision Eugene / Employment Land Supply Study, a larger project to determine whether Eugene has enough land to accommodate the City’s need for employment opportunities through 2032, based on the best information available or collectable at the time of this analysis.

This EOA includes the following chapters and sections:

1	Introduction	4
2	Framework for Economic Development	6
2.1	Factors that Affect Economic Development	6
2.2	Framework for Determining Whether Employment Land in Current UGB is Sufficient (State Requirements)	15
3	Economic Trends and Factors Affecting Future Economic Growth in Eugene	19
3.1	National, State, and Regional Trends	19
3.2	Implications of National, State and Regional Trends on Economic Development within Eugene	64
4	Assessment of Eugene’s Economic Potential	70
4.1	Location	70
4.2	Availability of Transportation Facilities	72
4.3	Public Facilities and Services	73
4.4	Land Supply	74
4.5	Eugene’s Competitive Advantages	81
4.6	Summary of Production Factors That May Affect Economic Development in Eugene	84
4.7	Summary of Issues Considered in Developing Eugene’s Economic Development Policies	89
4.8	Eugene’s Economic Development Policies	90
5	Employment Growth and Target Industries in Eugene	92
5.1	Employment Forecast	92
5.2	Target Industries	98
6	Land Demand and Site Needs	103
6.1	Employment Land Demand	105
6.2	Site Needs for Target Industries	126
7	Conclusions	134

This document contains the following tables:

Table 1. Population in the U.S., Oregon, the Willamette Valley, Lane County, and Eugene, 1990-2012.....	33
Table 2. Change in age distribution, Eugene, 2000-2011	34
Table 3. Average annual pay, U.S., Oregon, and Lane County (nominal dollars), 2000-2011.....	40
Table 4. Per Capita Income, Median Household Income, Median Family Income, Oregon, Lane County, and Eugene, 2011	40
Table 5. Places that residents of Eugene were employed, 2010.....	46
Table 6. Places where workers in Eugene lived, 2010.....	48
Table 7. Covered employment in Lane County, 1980-2000	52
Table 8. Covered employment in Lane County, 2001-2011	53
Table 9. Covered employment in Lane County, 2011.....	54
Table 10. Covered employment in Eugene, 2010	55
Table 11. Direct Travel Spending, East Lane County, Fiscal Years 2000 to 2011.....	57
Table 12. Local lodging tax revenues, Lane County and Eugene, Fiscal Years 2000 to 2012	58
Table 13. Six agricultural products with the highest sales value, Lane County 2002 and 2007	59
Table 14. State population forecast, Oregon and Lane County, 2000 to 2040.....	62
Table 15. Nonfarm employment forecast by industry in Lane County, 2012-2022	63
Table 16. Implications of national, state, and regional economic and demographic trends on economic growth in Eugene.....	64
Table 17. Examples of firms that considered locating in Oregon and Southern Washington between 1997 and 2010	78
Table 18. Site characteristics of common business types in Oregon.....	79
Table 19. Examples of business park sites, Portland Metro area	80
Table 20. Summary of production factors and their implications for Eugene	85
Table 21. Estimated total employment in the Eugene UGB by sector, 2010	94
Table 22. Employment growth in Eugene’s UGB, 2012–2032.....	96
Table 23. Forecast of employment growth by land use type, Eugene UGB, 2011–2031.....	97
Table 24. Estimate of infill of jobs in existing built space.....	107
Table 25. Estimate of employees per acre (EPA) by plan designation in selected sample areas, Eugene, 2006	108
Table 26. Estimate of employees per acre (EPA) for sample sites, Eugene, 2006.....	109
Table 27. Estimate of commercial employment that will require new employment land, Eugene 2032.....	113

Table 28. Estimate of commercial land need Eugene, 2032.....	114
Table 29. Commercial land sufficiency, Eugene 2012-2032	115
Table 30. Industrial employment forecast by site size, Eugene 2012-2032	119
Table 31. Industrial employment land need on sites smaller than 10 acres, Eugene, 2012-2032.....	121
Table 32. Range of land and suitable sites needed to accommodate industrial employment, sites larger than 10 acres, Eugene, 2012-2032	121
Table 33. Land and sites needed to accommodate industrial employment, sites larger than 10 acres, Eugene, 2012-2032.....	122
Table 34. Industrial land sufficiency, sites smaller than 10 acres, Eugene 2012-2032	124
Table 35. Industrial site sufficiency, sites larger than 10 acres, Eugene 2012-2032	125
Table 36. Industrial land sufficiency, sites larger than 10 acres, Eugene 2012-2032	125
Table 37. Summary of all land deficit or surplus, Economic Opportunities Analysis Conclusions, Eugene 2012-2032.....	134

This document contains the following figures:

Figure 1. Drivers of urban growth.....	12
Figure 2. The role of public policy	13
Figure 3. Process for assessing the sufficiency of employment land.....	16
Figure 4. Population by age, Oregon, Lane County, and Eugene, 2011.....	35
Figure 5. Population by age, Lane County, 2000 and 2040.....	36
Figure 6. Per capita personal income in the U.S., Oregon, and Lane County, 1980-2011, (2011 dollars)	38
Figure 7. Per capita personal income by major sources, Oregon and Lane County, 1990-2011	39
Figure 8. Distribution of household income of Oregon, Lane County, and Eugene, 2011	41
Figure 9. Household income by age of householder, Eugene, 2011.....	42
Figure 10. Educational attainment for the population 25 years and over, Oregon, Lane County and Eugene, 2011	43
Figure 11. Unemployment rates for the U.S., Oregon, Lane County, and Eugene, January 2002 to June 2012.....	44
Figure 12. Commuting time to work in minutes for residents 16 years and older, Oregon, Lane County, and Eugene, 2011	45
Figure 13. Places that residents of Eugene were employed, 2010	47
Figure 14. Places where workers in Eugene lived, 2010	48

1 INTRODUCTION

In 2008, the City of Eugene initiated the “Eugene Comprehensive Land Assessment” (ECLA) in response to House Bill 3337, which required that the City of Eugene establish an urban growth boundary (UGB) and demonstrate that there is enough land within the UGB to accommodate estimated housing needs for 20 years. The Eugene City Council chose also to address the community’s need for employment, parks and schools. The purpose of ECLA was to develop a factual basis for policy conversations about land need in Eugene. In 2010, a draft of the ECLA report was completed and presented to the Eugene City Council. The City Council accepted the Eugene Comprehensive Lands Assessment Executive Summary and directed City staff to use the estimates and data in the Envision Eugene Project.¹

The City of Eugene started the next phase of the discussion about Eugene’s land needs in May 2010. This project, called Envision Eugene, had two primary goals: (1) to determine how Eugene will accommodate the next 20 years of growth as required by State law and (2) to create a future that is livable, sustainable, beautiful, and prosperous. Envision Eugene incorporated input into the technical analysis from two key groups:

- **The Community Resource Group** was a series of in-depth conversations with a wide variety of thoughtful and knowledgeable community members.
- **The Technical Resource Group** was a committee of community members with technical expertise, who spent hundreds of hours vetting data and analysis.

In March 2011, City of Eugene staff presented a draft proposal, titled “Envision Eugene: A Legacy of Livability” to the community and City Council. The foundation of the proposal is a framework for the vision and desired outcomes of Eugene’s growth over the next 20 years, called the “Seven Pillars.”

In March 2012, City staff presented the document “Envision Eugene: A Community Vision for 2032.” This document refined the seven pillars in “Envision Eugene: A Legacy of Livability” and established the community vision for managing growth through specific strategies and proposed actions. City Council accepted this document in June 2012 and formally

¹ Resolution 5004 passed by the Eugene City Council on April 21, 2010.

initiated the legislative review of Eugene's UGB by notifying the Oregon Department of Land Conservation and Development.

This EOA is based, in large part, on the "Envision Eugene: A Community Vision for 2032." The EOA presents Eugene's employment land demand for the 2012 to 2032 period. It does not address the community's need for housing, parks or schools.

This document presents an EOA for the City of Eugene consistent with the requirements of statewide planning Goal 9, the Goal 9 and Goal 14 administrative rules (OAR 660 Divisions 9 and 24) and the court decisions that have interpreted them. Goal 9 describes the EOA as "an analysis of the community's economic patterns, potentialities, strengths, and deficiencies as they relate to state and national trends" and states that "a principal determinant in planning for major industrial and commercial developments should be the comparative advantage of the region within which the developments would be located."

Goal 9 requires the City to state its objectives for economic development (OAR 660-009-0020(1)(a)), to identify the types of industrial and other employment uses it can reasonably expect to locate in Eugene, and to identify the characteristics of sites needed to accommodate those reasonably expected industrial and other employment uses to implement the economic development objectives (OAR 660-009-0025(1)) over the 20-year planning period.

2 FRAMEWORK FOR ECONOMIC DEVELOPMENT

The purpose of the economic opportunities analysis (EOA) is to determine if there is enough land inside the City's UGB to support economic growth over a 20-year planning period based on application of recent trends. To make this determination, the City must assess how much and what types of economic growth may occur in Eugene.

2.1 Factors that Affect Economic Development

The fundamental purpose of Goal 9 is to make sure that a local government plans for economic development. The planning literature provides many definitions of economic development, both broad and narrow. Broadly,

“Economic development is the process of improving a community's well-being through job creation, business growth, and income growth (factors that are typical and reasonable focus of economic development policy), as well as through improvements to the wider social and natural environment that strengthen the economy.”²

That definition acknowledges that a community's well-being depends in part on narrower measures of economic well-being (e.g., jobs and income) and on other aspects of quality of life (e.g., the social and natural environment).

In practice, cities and regions trying to prepare an economic development strategy typically use a narrower definition of economic development: they take it to mean business development, job growth, and job opportunity. The assumptions are that:

- Business and job growth are contributors to and consistent with economic development, increased income, and increased economic welfare.
- The evaluation of tradeoffs and balancing of policies to decide whether such growth is likely to lead to overall gains in well-being (on average and across all citizens and businesses in a jurisdiction, and all aspects of well-being) is something that

² *An Economic Development Toolbox: Strategies and Methods*, Terry Moore, Stuart Meck, and James Ebenhoh, American Planning Association, Planning Advisory Service Report Number 541, October 2006.

decision makers do after an economic strategy has been presented to them for consideration.

That logic is consistent with the tenet of the Oregon land-use planning program: that all goals matter, no goal dominates, and the challenge is to find a balance of conservation and development that is acceptable to a local government and state. Goal 9 does not dominate, but it legitimizes and requires that a local government focus on the narrower view of economic development: the one that focuses on economic variables.

In that context, a major part of local economic development policy is about local support for business development and job growth; that growth comes from the creation of new firms, the expansion of existing firms, and the relocation or retention of existing firms. Thus, a key question for economic development policy is, *What are the factors that influence business and job growth, and what is the relative importance of each?* This document addresses that question in depth.³

2.1.1 What Factors Matter?

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 are 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,

³ The information in this section is based on previous Goal 9 studies conducted by ECONorthwest and the following publication: *An Economic Development Toolbox: Strategies and Methods*, Terry Moore, Stuart Meck, and James Ebenhoh, American Planning Association, Planning Advisory Service Report Number 541, October 2006.

the recruiting of labor from other areas, or the use of the less productive labor that is available locally.

- **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. While transportation has become relatively inexpensive compared to other inputs, and transportation costs have become a less important location factor, access to transportation is still critical. That long-run trend, however, could shift because of decreasing funds to highway construction, increasing congestion, and increasing energy prices.
- **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 disincentives 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. Tax rates are not a primary location factor – they matter only after businesses have made decisions based on labor, transportation, raw materials, and capital costs. The costs of these production factors are 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. 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 make it appear 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 as 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.

2.1.2 How Important Are These Factors?

To understand how changes in public policies affect local job growth, economists have attempted to identify the importance for firms of different locational factors. They have used statistical models, surveys, and case studies to examine detailed data on the key factors that enter the business location decision.

Economic theory says that firms locate where they can reduce the costs of their factors of production (assuming demand for products and any other factors are held constant). Firms locate in regions where they have access to inputs that meet their quality standards, at a relatively low cost. Because firms are different, the relative importance of different factors of production varies both across industries and, even more importantly, across firms.

No empirical analysis can completely quantify firm location factors because numerous methodological problems make any analysis difficult. For example, some would argue simplistically that firms will prefer locating in a region with a low tax rate to reduce tax expenses. However, the real issue is the value provided by the community for the taxes collected. Because taxes fund public infrastructure that firms need, such as roads, water, and sewer systems, regions with low tax rates may end up with poor infrastructure, making it less attractive to firms. When competing jurisdictions have roughly comparable public services (type,

cost, and quality) and quality of life, then tax rates (and tax breaks) can make a difference.

Further complicating any analysis is the fact that many researchers have used public expenditures as a proxy for infrastructure quality. But large expenditures on roads do not necessarily equal a quality road system. It is possible that the money has been spent ineffectively and the road system is in poor condition.

An important aspect of this discussion is that the business function at a location matters more than a firm's industry. A single company may have offices spread across cities, with headquarters located in a cosmopolitan metropolitan area, the research and development divisions located near a concentration of universities, the back office in a suburban location, and manufacturing and distribution located in areas with cheap land and good interstate access.

The location decisions of businesses are primarily based on 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. Most economic development strategies available to local governments, however, only indirectly affect the cost of these primary location factors. Local governments can most easily affect tax rates, 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.

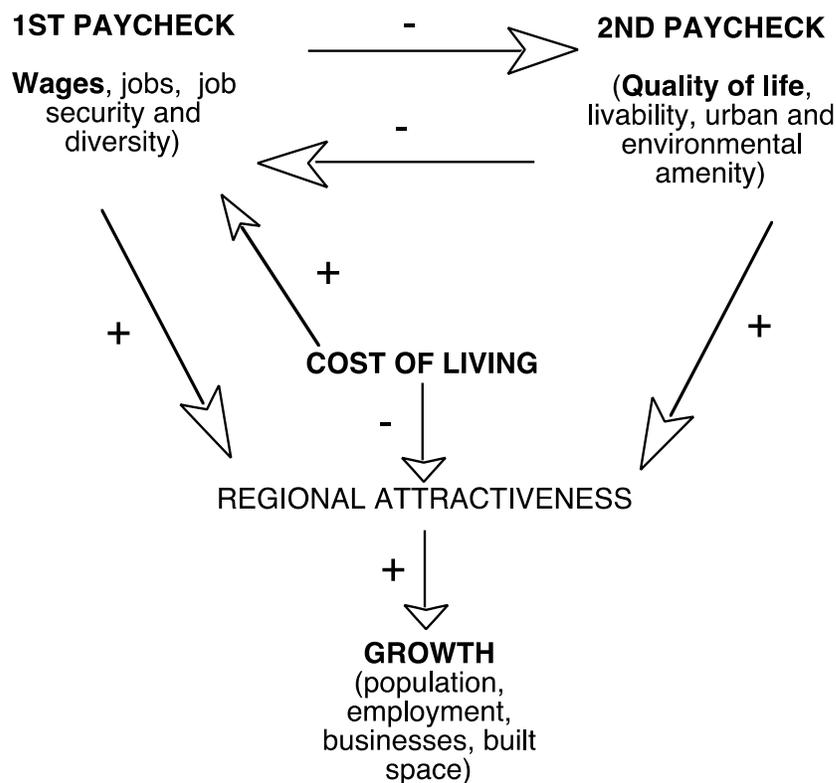
Local governments in Oregon also play a central role in the provision of buildable land through inclusion of lands in the Urban Growth Boundary, as well as through determination of plan designations and zoning, and through provision of public services. Obviously, businesses need buildable land to locate or expand in a community. Providing buildable land alone is not sufficient to guarantee economic development in a community – market conditions must create demand for this land, and local factors of production must be favorable for business activity. In the context of expected economic growth and the perception of a constrained land supply in Lane County, the provision of buildable land has the potential to strongly influence the level and type of economic development in Eugene. The provision of buildable land is one of the most direct ways that the City of Eugene can affect the level and type of economic development in the community.

2.1.3 What Drives Long-run Economic Development?

A regional economic system is complex and is difficult to model, much less to predict without the benefits of models, on the basis of intuition alone. Nonetheless, that is how the large majority of economic development policies get adopted. In light of that reality, the purpose of this section and the following figures is to provide a framework for thinking about causes and effects that will make the intuitions more informed.

Figure 1 shows the primary drivers of urban growth as generally accepted by urban and regional economists. It illustrates that households are attracted to different regions based on their estimation (explicit or implicit, accurate or not) of the tradeoffs among three categories of variables: availability of jobs, wages, cost of living, and everything else (which is a broad definition of quality of life). The phrase *2nd paycheck* refers to all those other things that households want. The arrows and signs illustrate the tradeoffs.

Figure 1. Drivers of urban growth



Source: ECONorthwest

For example, if wages increase, other things equal, a region becomes more attractive and growth is stimulated (migration occurs, and ultimately the

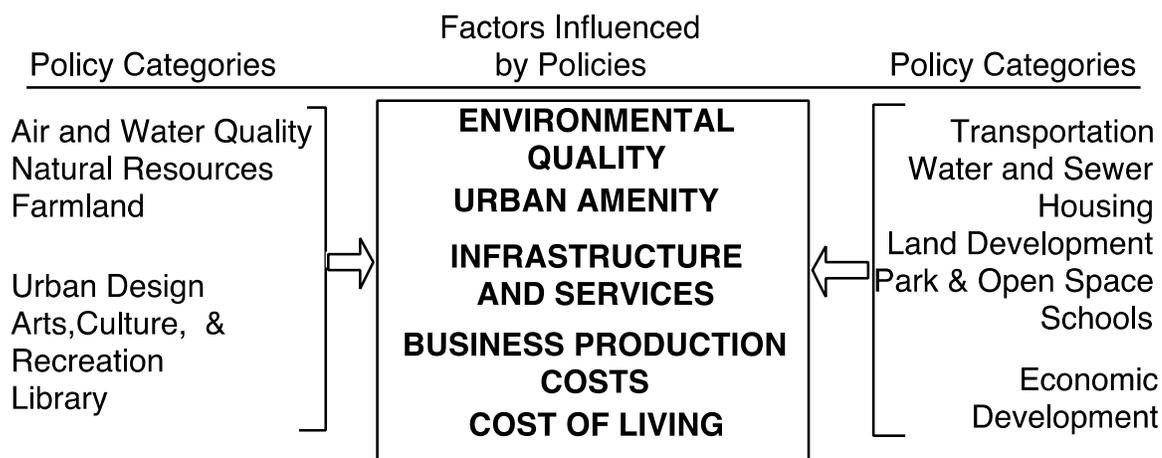
residential and commercial development to accommodate that growth). Other things, of course, are not equal. That growth can cause the cost of living to increase, which decreases regional attractiveness (but also creates pressure to increase wages). To the extent that households believe that a region offers natural and cultural amenities (quality of life) that are valuable, they will be willing to pay more (cost of living) or accept less (the first paycheck) to live in the region.

Figure 1 greatly oversimplifies the dynamics of growth. Each of its elements could be expanded into another diagram. For example, there is a feedback from growth to wages: more growth usually means more demand for labor, which means higher wages to ration an increasingly scarce supply.

As another example, if one were to expand the element labeled *2nd paycheck*, one would find that regional economic growth does not have unambiguous effects on the second-paycheck components of quality of life. Business growth affects components of quality of life either directly or indirectly through its impact on population growth. If a generalization is required, urban growth probably tends to increase urban amenities (shopping, entertainment, and organized recreational opportunities) and decrease the environmental quality and the capacity of infrastructure.

Figure 2. The role of public policy

Categories of public policy and key factors they influence



Source: ECONorthwest

Figure 2 shows that there are many policies a region can adopt to influence the factors that affect economic development. Taking just one example, if a region decided it wanted to affect urban form (for example, because of supposed beneficial effects on the cost of infrastructure and quality of life) there are many categories of policies (e.g., land use, transportation, other public facilities) and many subcategories (e.g., for

land use: traditional zoning, minimum-density zoning, design standards, etc.; for public facilities: design standards, concurrency requirements, financial incentives, system development charges and exactions, etc.).

To summarize the conclusions:

- At a regional level, three categories of variables interact to make a region grow: wages, quality of life, and cost of living.
- This simple categorization quickly gets complex: many sub-categories exist, which interact in complicated ways not only within categories, but also across them.
- Quality-of-life factors have been demonstrated empirically to influence residential and business location decisions.

Thus, public policymakers must consider a multitude of factors as they try to adopt optimal economic development policies. It is no longer as simple as just recruiting big industries.

2.2 Framework for Determining Whether Employment Land in Current UGB is Sufficient (State Requirements)

The assessment of Eugene’s employment land is designed to meet the requirements of Oregon Statewide Planning Goal 9, the administrative rules that implement it (Oregon Administrative Rule (OAR) 660-009), and the court decisions that interpret the Goal and rules. The intents of Goal 9 are: (1) to “provide an adequate land supply for economic development and economic growth in Oregon”; (2) to link planning for an adequate land supply to planning for development of infrastructure and community development; and (3) to assure that comprehensive plan policies and land-use regulations are updated and provide economic opportunities throughout the State and are based on analysis of economic trends.⁴

To satisfy the requirements of Goal 9, the State requires a city determine whether the employment land in its UGB (land supply) can accommodate the employment growth forecasted for a 20-year planning period (land demand, or need).⁵ If not, a city must take steps to increase land-use efficiency or it must expand the UGB to provide more employment land.

In the context of Goal 9, the measure of employment land is “sites” needed for employment uses. A site is a parcel or group of parcels of land designated for uses that accommodate employment. Cities will have need for a variety of site types, sizes, and locations based on the amount and type of employment growth expected. Sites have varying characteristics, such as size, location, or topography, and may be suited to meet the land need for one or more types of employment.

Eugene’s assessment of employment land and site needs is based on these requirements. The key results of the assessment are: (1) an inventory of Eugene’s employment land in 2012 (contained in Part I of the City’s Employment Land Supply Study), (2) an estimate of the number of sites needed for employment uses over the 20-year planning period and a factual basis supporting this estimate, and (3) a comparison of the supply of and the need for employment sites with a conclusion about whether

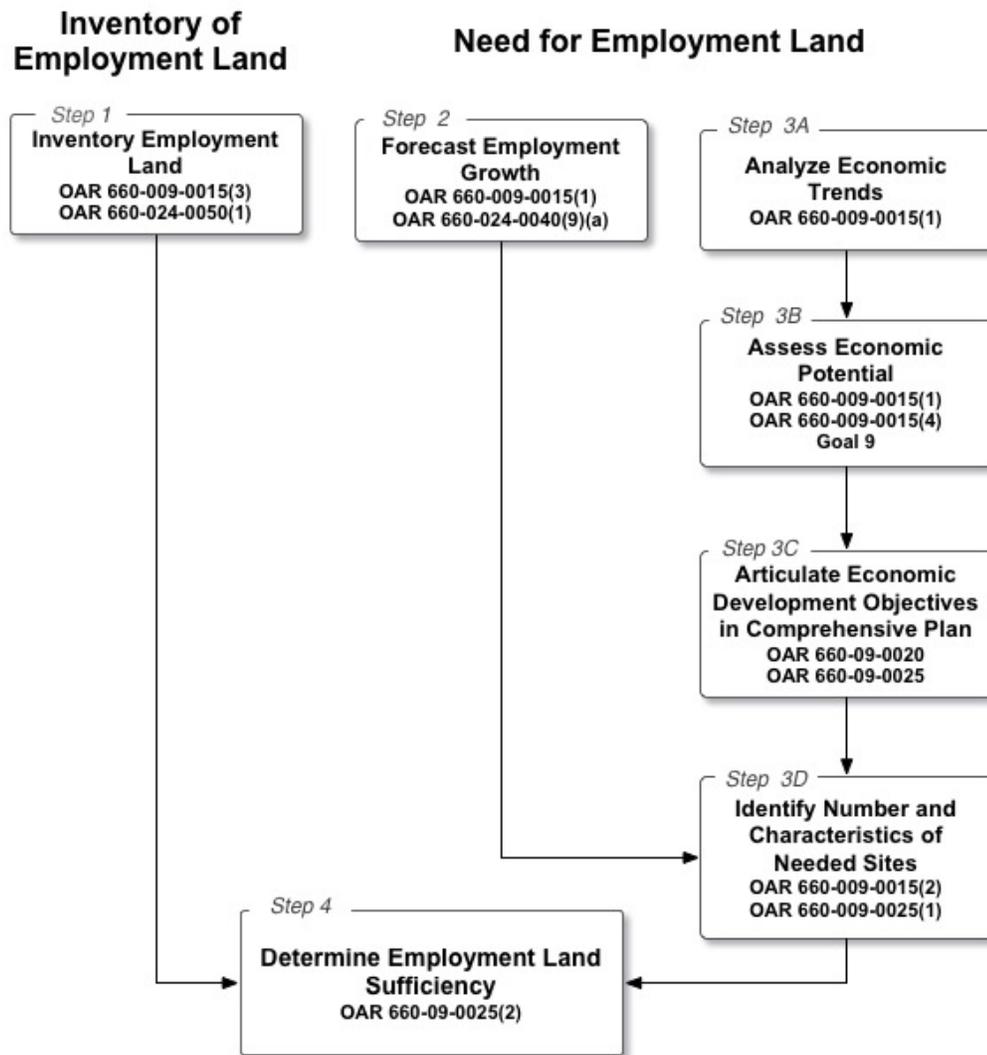
⁴ OAR 660-009-0000

⁵ The City of Eugene is included within a metropolitan UGB that also includes the City of Springfield. Due to the State Legislature’s adoption of HB 3337 in 2007 (ORS 197.304), the metropolitan UGB is being replaced by two separate UGBs, with Interstate 5 serving as the dividing line between the Eugene UGB and the Springfield UGB. Therefore, the Goal 9 determination for Eugene is whether the employment land in the UGB, on the west side of Interstate 5, can accommodate the employment growth forecasted for a 20-year planning period.

Eugene has enough land for employment uses. The estimate and comparison described in (2) and (3) are set out in this document, the Eugene Economic Opportunities Analysis (contained in Part II of the City’s Employment Land Study).

Figure 3 shows the basic process for determining whether there is enough employment land on Eugene’s side of the metropolitan UGB to accommodate Eugene’s growth over the 20-year planning period. The basic steps shown in Figure 3 correspond to the more detailed process for conducting the assessment that follows.

Figure 3. Process for assessing the sufficiency of employment land



Source: ECONorthwest

The steps in this assessment are:

1. **Inventory current (2012) stock of employment land.** (OAR 660-009-0015(3), OAR 660-024-0050(1)). Cities are required to develop an

inventory of vacant and developed lands within the planning area designated for industrial or other employment use. This inventory was produced for Eugene as part of the 2012 Employment Land Supply Study (2012 employment land supply). The 2012 employment land supply is contained in Part I of the Envision Eugene Employment Land Study.

2. **Forecast Employment Growth.** (OAR 660-09-0015(2), 660-024-0040(9)(a)). Cities are required to forecast the number of new employees they will need to accommodate (employment growth) over the 20-year planning period. The forecast is used to identify the number of employment sites the City will need (See 3D, below). The employment forecast for Eugene is included in this Economic Opportunities Analysis (EOA).
3. **Determine the Need for Employment Land.** Cities are required to identify the number and types of employment sites they will need to accommodate the forecasted employees with employers that can reasonably be expected to expand or locate in the area in the 20-year planning period. This analysis has the following steps:
 - A) *Analyze Economic Trends* (OAR 660-09-0015(1)). Cities are required to review national, state, regional, county and local trends to identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the Urban Growth Boundary (UGB). This trend analysis is included in this EOA document.
 - B) *Assess Economic Development Potential* (Statewide Planning Goal 9, OAR 660-09-0015(1) and (4)). Cities are required to consider their economic advantages and disadvantages to more precisely identify the employment uses that could reasonably be expected to expand or locate in the planning area. This assessment is included in this EOA document.
 - C) *Adopt Economic development policies.* (OAR 660-009-0020, 660-009-0025). The City's comprehensive plan must include policies that are based on the work above. These comprehensive plan policies must: state the overall objectives for economic development in the planning area; state that designating a competitive short term supply of land is a community objective; and 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, the plan must include strategies for preparing the total land

supply for development and for replacing the short-term supply of land as it is developed. These plan provisions will be adopted in the comprehensive plan.

D) *Identify the Number / Characteristics of Needed Sites (OAR 660-09-0015(2), 660-009-0025(1)).* To determine the City's need for employment land, the EOA must identify the number of sites by type reasonably expected to be needed to accommodate the forecast of employment growth (2, above). This identification must be based on the site characteristics typical of, and with some meaningful connection to, the expected employment uses. According to OAR 660-009-0005(11), the site characteristics may include such things as: a minimum acreage or site configuration (e.g. shape or topography), visibility, need for specialized services or infrastructure, and proximity to needed transportation. The identification of needed sites and site characteristics is included in this EOA document.

4. **Determine Employment land sufficiency.** (OAR 660-009-0025(2)). Cities must compare the need for employment land developed as described in 2 and 3, above, with the inventory of available employment sites described in 1, above.

3 ECONOMIC TRENDS AND FACTORS AFFECTING FUTURE ECONOMIC GROWTH IN EUGENE

Eugene 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, Eugene does not differ significantly from the broader region. For other factors, such as income, it does. Thus, Eugene 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 Eugene. Each heading in this chapter represents a key trend or economic factor that will affect Eugene's economy and economic development potential.

3.1 National, State, and Regional Trends

3.1.1 Short-term Trends

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

- The U.S. economy continues to recover from the deepest recession since World War II. The recession was brought about by instability of financial and housing markets and has impacted Oregon in a variety of ways, most notably with the labor market showing high unemployment and the housing market's oversupply of homes. While the national economy may begin to recover from the recession in 2010, the recovery may be a "jobless" recovery, where job growth is sluggish, even as production of goods and services begin to increase and the housing market begins to show signs of recovery. Oregon has seen gradual employment increases since the beginning of 2010.⁶
- According to the Oregon Employment Department, Oregon's employment peaked in the first quarter of 2008 (at more than 1.74

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

million jobs) and hit its lowest point in the first quarter of 2010 (at about 1.59 million jobs), losing 146,000 jobs over the two-year period. Between early 2010 and December 2012, Oregon added about 52,000 jobs.

- According to the Oregon Office of Economic Analysis (OEA) job growth since mid-2011 has been slow but continuous, at about 1.2% per year, which is less than half of the average growth rate during an expansion year. The OEA predicts continued slow growth.
- Nationally, housing demand decreased precipitously during 2008 and continued to decline through 2009. This decrease is the result of a number of factors, including the sub-prime lending crisis, difficulties with the financial industry and resulting tightening of credit availability, the impact of decreases in home value for existing homeowners, and the impact of job losses.

The national housing market appears to be stabilizing, with housing starts beginning to increase. While housing prices are increasing in some markets, they are holding stable or continuing to decrease in some housing markets. The OEA expects that Oregon's housing market should recover more easily than other states that had greater increases in housing prices during the recent housing boom.⁷

- The Oregon Index of Leading Indicators grew in late 2011 through early 2012 but declined sharply in June 2012. The overall decline was driven by large decreases in a few indicators, particularly those related to global economic slowdown in the manufacturing sector. In general, recent trends in the Index suggest near-term economic growth.⁸
- Governments across the globe attempted to stabilize the economy through economic stimulus. In the U.S. government stimulation that has directly impacted Oregon includes government subsidies for the housing market and the return of federal timber payments to Oregon's counties. But the federal timber payments were phased out over a four-year period which ended in 2011. The withdrawal of

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

⁸ Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2012, Vol. XXXII, No. 3., Page 6-7. <http://www.oregon.gov/DAS/OEA/docs/economic/forecast0912.pdf>, page 46.

these forms of stimulus may have adverse impacts on economic activity.⁹

- Oregon's economic health is dependent on the export market. Oregon's exports in the first half of 2012 decreased by 5.1% relative to 2011 levels.¹⁰ The countries that Oregon has the most exports to are China, Canada, Malaysia, Japan, and Taiwan. These economies were all affected by the global recession. Exports to China and Malaysia, which accounted for 30% of Oregon's exports in 2011, are down 28% in the first half of 2012. The manufacturing slowdown in China and the euro zone recession have negatively impacted Oregon exports. As foreign economies recover from the recession, their increased purchasing power will aid U.S. producers looking to export, including export firms in Oregon.

3.1.2 Long-term National Trends

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

- **Continued slow economic growth.** Analysis from the Congressional Budget Office (CBO) shows that the national economy expanded modestly in 2010, continuing the slow recovery from the 2007-2009 recession. The CBO forecasts continued slow growth through 2013. Between 2014 and 2018, the CBO forecasts growth rates of about 3.5% annually and average annual growth of about 2.25% between 2019 and 2023.
- The national economy is expected to start growing again in 2010. The U.S. Gross Domestic Product (GDP) decreased by 2.5% in 2009 but grew at more than 5% in the fourth quarter of 2009. The Congressional Budget Office (CBO) forecasts that the GDP is forecast to grow at about 2.2% for 2010, averaging to 4.4% for 2012-2014 and 2.4% for 2015-2020.¹¹

The CBO projects that the unemployment rate will peak in 2010, declining to an average of about 6.5% over 2012-2014 and averaging 5.0% over 2015-2020. In comparison, the average unemployment

⁹ Ibid., 50.

¹⁰ Ibid., 19-22.

¹¹ Congressional Budget Office. The Budget and Economic Outlook: Fiscal Years 2010 to 2020, January 2010. Page 24. <http://www.cbo.gov/publication/43907>

rate from 1999 to 2008 was 5.0%. The CBO projects that inflation will continue to average about 1% annually, gradually increasing as the economy approaches full employment. The CBO projects long-term inflation to average about 1.7% per year per year from 2015 to 2020.¹²

- **The aging of the baby boom generation, accompanied by increases in life expectancy.** The number of people age 65 and older will more than double by 2050, while the number of working age people under age 65 will grow only 19 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.¹³

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 1992.¹⁴ This trend can be seen in Oregon, where the share of workers 65 years and older grew from 2.9% of the workforce in 2000 to 4.1% of the workforce in 2010, an increase of 41%. Over the same ten-year period, workers 45 to 64 years increased by 15%.¹⁵

- **Need for replacement workers.** The need for workers to replace retiring baby boomers will outpace job growth. According to the Bureau of Labor Statistics, net replacement needs will be 33.7 million job openings over the 2010-2020 period, compared with growth in employment of 21.1 million jobs. The occupations with the greatest need for replacement workers includes: retail sales, food service, registered nurses, office workers and teachers.¹⁶

¹² Ibid., 38.

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

¹⁴ "The Health and Retirement Study," 2007, National Institute of Aging, National Institutes of Health, U.S. Department of Health and Human Services.

¹⁵ Analysis of 2000 Decennial Census data and 2010 U.S. Census American Community Survey, 1-Year Estimates for the table Sex by Age by Employment Status for the Population 16 Years and Over

¹⁶ "Occupational Employment Projections to 2010-2020," Bureau of Labor Statistics, February 2012.

- **The importance of education as a determinant of wages and household income.** According to the Bureau of Labor Statistics, a majority of the fastest growing occupations will require an academic degree, and on average they will yield higher incomes than occupations that do not require an academic degree. The fastest growing of occupations requiring an academic degree will be: health care service, computer programming, management and business services, college teachers, and architectural and engineering services. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for more than two-thirds of all new jobs by 2020. These occupations typically have lower pay than occupations requiring an academic degree.¹⁷

The national median income in 2010 was about \$40,700. Workers without a high school diploma earned \$17,600 less than the median income and workers with a high school diploma earned \$8,100 less than median income. Workers with some college earned slightly less than median and workers with a bachelor's degree earned \$13,300 more than median. Workers in Oregon experience the same patterns as the nation but pay is generally lower in Oregon than the national average.¹⁸

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

¹⁷ "Occupational Employment Projections to 2010-2020," Bureau of Labor Statistics, February 2012.

¹⁸ Bureau of Labor Statistics, Employment Projections, May 2011.
http://www.bls.gov/emp/ep_chart_001.htm

The Oregon Department of Employment projects that about 28% of job openings in Oregon between 2010 and 2020 will be in middle-skill occupations.¹⁹

- **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.²⁰
- **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.²¹
- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. High-quality natural resources continue to be important in some states, especially in the Western U.S. Increases in the population and in households' incomes, plus changes in tastes and preferences, have dramatically increased demands for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such

¹⁹ "A careful Analysis of Oregon's middle-Skill Jobs," July 2012 Oregon Employment Department.

²⁰ 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.

²¹ "Occupational Employment Projections to 2010-2020," Bureau of Labor Statistics, February 2012.

amenities contribute to a region's quality of life and play an important role in attracting both households and firms.²²

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

Energy consumption by type of fuel is expected to change over the planning period. By 2040, the US will consume a little less oil and more natural gas and renewables. Despite increases in energy efficiency and decreases in demand for energy by some industries, demand for energy is expected to increase over the 2013 to 2040 period because of increases in population and economic activity. Growth will remain slow early in the planning period, as the economy continues a gradual recovery from the recent recession.²³

- **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.²⁴ The increases in energy prices may impact willingness to commute long distances.
- **Possible effect of rising transportation and fuel prices on globalization.** Increases in globalization are related to the cost of transportation: When transportation is less expensive, companies move production to areas with lower labor costs. Oregon has benefited from this trend, with domestic outsourcing of call centers and other back office functions. In other cases, businesses in Oregon (and the nation) have “off-shored” employment to other countries, most frequently manufacturing jobs.

Increases in either transportation or labor costs may impact globalization. When the wage gap between two areas is larger than

²² For a more thorough discussion of relevant research, see, for example, Power, T.M. and R.N. Barrett. 2001. *Post-Cowboy Economics: Pay and Prosperity in the New American West*. Island Press, and Kim, K.-K., D.W. Marcouiller, and S.C. Deller. 2005. “Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes.” *Growth and Change* 36 (2): 273-297.

²³ Energy Information Administration, 2013, *Annual Energy Outlook 2013 with Projections to 2040 Early Release Overview*, U.S. Department of Energy, December 2012.

²⁴ Energy Information Administration, 2013, *Annual Energy Outlook 2013 with Projections to 2040 Early Release Overview*, U.S. Department of Energy, December 2012.

the additional costs of transporting goods, companies are likely to shift operations to an area with lower labor costs. Conversely, when transportation costs increase, companies may have incentive to relocate to be closer to suppliers or consumers.

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

- **Growing opportunities for “green” businesses.** Businesses are increasingly concerned with “green” business opportunities and practices. These business practices include “the design, commercialization, and use of processes and products that are feasible and economical while reducing the generation of pollution at the source and minimizing the risk to human health and the environment.”²⁵

Defining what constitutes a green job or business is difficult because most industries can have jobs or business practices that are comparatively environmentally beneficial. A 2009 study by the Pew Charitable Trust defines the clean energy economy as an economy that “generates jobs, businesses and investments while expanding clean energy production, increasing energy efficiency, reducing greenhouse gas emissions, waste and pollution, and conserving water and other natural resources.”²⁶

The Pew study classifies businesses in the clean energy economy into five separate categories:

- *Clean Energy.* Building sustainable energy for the future.
- *Energy Efficiency.* Reducing and managing our energy demand.
- *Environmentally Friendly Production.* Improving our products and processes.
- *Conservation and Pollution Mitigation.* Recycling and remediating waste.

²⁵ Urban Green Partnership at urbangreenpartnership.org

²⁶ “The Clean Energy Economy: Repowering Jobs, Businesses and Investments Across America.” The Pew Charitable Trusts. June 2009. Pages 8-11.
http://www.pewcenteronthestates.org/uploadedFiles/Clean_Economy_Report_Web.pdf

- *Training and Support.* Helping develop our clean energy economy.

The study found that clean energy jobs grew about two and one-half times faster than all jobs over the 1998 to 2007 period. Pew found that clean energy jobs grew at 9.1% annually between 1998 and 2007, compared with total job growth of 3.7% over the same period. In Oregon, clean energy jobs grew faster than the national average, with 50.7% annual growth, compared to total job growth of 7.5% annually. In 1998, Oregon had about 1,600 clean businesses and about 19,000 clean jobs by 2007.²⁷

- **Potential impacts of global climate change.** There is a consensus among the scientific community that global climate change is occurring and will have important ecological, social, and economic consequences over the next decades and beyond.²⁸ Extensive research shows that Oregon and other western states already have experienced noticeable changes in climate, and predicts that more change will occur in the future.²⁹

In the Pacific Northwest, climate change is likely to (1) increase average annual temperatures, (2) increase the number and duration of heat waves, (3) increase the amount of precipitation falling as rain during the year, (4) increase the intensity of rainfall events, and (5) increase sea level. These changes are also likely to reduce winter snowpack and shift the timing of spring runoff earlier in the year.³⁰

²⁷ Ibid., 8.

²⁸ Karl, T.R., J.M. Melillo, and T.C. Peterson, eds. 2009. *Global Climate Change Impacts in the United States*. U.S. Global Change Research Program. June. Retrieved June 16, 2009, from www.globalchange.gov/usimpacts; and Pachauri, R.K. and A. Reisinger, eds. 2007. *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*.

²⁹ Doppelt, B., R. Hamilton, C. Deacon Williams, et al. 2009. *Preparing for Climate Change in the Upper Willamette River Basin of Western Oregon*. Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon. March. Retrieved June 16, 2009, from http://climlead.uoregon.edu/pdfs/willamette_report3.11FINAL.pdf and Doppelt, B., R. Hamilton, C. Deacon Williams, et al. 2009. *Preparing for Climate Change in the Rogue River Basin of Southwest Oregon*. Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon. March. Retrieved June 16, 2009 from http://climlead.uoregon.edu/pdfs/ROGUE%20WS_FINAL.pdf

³⁰ Mote, P., E. Salathe, V. Duliere, and E. Jump. 2008. *Scenarios of Future Climate for the Pacific Northwest*. Climate Impacts Group, University of Washington. March. Retrieved June 16, 2009, from <http://cses.washington.edu/db/pdf/moteetal2008scenarios628.pdf>; Littell, J.S., M. McGuire Elsner, L.C. Whitely Binder, and A.K. Snover (eds). 2009. "The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate - Executive Summary." In *The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in*

These anticipated changes point toward some of the ways that climate change is likely to impact ecological systems and the goods and services they provide. There is considerable uncertainty about how long it would take for some of the impacts to materialize, and the magnitude of the associated economic consequences. Assuming climate change proceeds as today's models predict, however, some of the potential economic impacts of climate change in the Pacific Northwest will likely include:³¹

- *Potential impact on agriculture and forestry.* Climate change may impact Oregon's agriculture through changes in: growing season, temperature ranges, and water availability.³² 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.³³
- *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,³⁴ (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.

a Changing Climate, Climate Impacts Group, University of Washington. Retrieved June 16, 2009, from www.cses.washington.edu/db/pdf/wacciaexecsummary638.pdf; Madsen, T. and E. Figdor. 2007. *When it Rains, it Pours: Global Warming and the Rising Frequency of Extreme Precipitation in the United States*. Environment America Research & Policy Center and Frontier Group.; and Mote, P.W. 2006. "Climate-driven variability and trends in mountain snowpack in western North America." *Journal of Climate* 19(23): 6209-6220.

³¹ 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.

³² "The Economic Impacts of Climate Change in Oregon: A preliminary Assessment," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

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

- **Potential impacts arising from efforts to address global climate change.** The prospect of global climate change has prompted many proposals for changes in socioeconomic and political structures at the global, national, regional, and local level. These proposals are geared towards reducing the emissions of greenhouse gases and to preparing for changes in climate that cannot be avoided. Some of the most prominent proposals include:
 - *Tax on burning fossil fuels.* One approach is to impose a tax (or something equivalent to a tax, such as a cap-and-trade program) on activities that burn coal, petroleum, or other fossil fuels. For example, the Western Climate Initiative, a collaboration of western states (including Oregon) and Canadian provinces committed to working together to reduce greenhouse gas emissions at a regional level, recently released a design for a regional cap-and-trade program to be implemented by 2015.³⁵
 - *Tax carbon emissions.* Climate change legislation has also been introduced in Congress, and several current proposals would involve a tax on carbon emissions or a cap-and-trade program to limit emissions.³⁶
 - *Promote development of alternative energy sources.* Other local, regional, and national efforts seek to improve the energy efficiency of household, commercial, and industrial activities, and to promote the development of technologies that generate electricity from wind and other renewable sources of energy.³⁷

How these and other proposals, if enacted, would affect the local and regional economies remains unknown, but the proposals could lead to substantial changes in consumer-expenditure patterns and business practices.

³⁵ Western Climate Initiative. 2008. *Design Recommendations for the WCI Regional Cap-and-Trade Program*. September 23. Retrieved June 16, 2009, from http://www.westernclimateinitiative.org/component/remository/func-download/14/chk,31481d52c6ee4d4915ec18f21031f7e8/no_html,1/

³⁶ Pew Center on Global Climate Change website: http://www.pewclimate.org/what_s_being_done/in_the_states/

³⁷ See, for example, some of the state-level initiatives in Oregon at <http://www.oregon.gov/ENERGY/GBLWRM/index.shtml>

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.³⁸

Short-term national trends will also affect economic growth in the region, but these trends are difficult to predict. At times these trends may run counter to the long-term trends described above. A recent example is the downturn in economic activity in 2008 and 2009 following declines in the housing market and the mortgage banking crisis. The result of the economic downturn has been a decrease in employment related to the housing market, such as construction and real estate. Employment in these industries will recover as the housing market recovers and will continue to play a significant role in the national, state, and local economy over the long run. This report takes a long-run perspective on economic conditions (as the Goal 9 requirements intend) and does not attempt to predict the impacts of short-run national business cycles on employment or economic activity.

3.1.3 State, Regional, and Local Trends

State, regional, and local trends will also affect economic development in Eugene 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, and change in the types of industries in Oregon.

- **Continued in-migration from other states.** Oregon will continue to experience in-migration from other states, especially California and Washington. According to a U.S. Census study, Oregon had net interstate in-migration (more people moved *to* Oregon than moved *from* Oregon) during the period 1990-2010. Oregon had an annual average of 26,290 more in-migrants than out-migrants during the period 1990-2000. The annual average dropped to 9,800 during the

³⁸ “The Economic Impacts of Climate Change in Oregon: A preliminary Assessment,” Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

period 2000-2010.³⁹ Most in-migrants come from California, Washington, and other western states.⁴⁰

- **Concentration of population and employment in the Willamette Valley.** Nearly 70% of Oregon's population lives in the Willamette Valley. About 10% of Oregon's population lives in Southern Oregon, 9% lives in Central Oregon, and 6% live in Coastal counties. The Oregon Office of Economic Analysis (OEA) forecasts that population will continue to be concentrated in the Willamette Valley through 2040, increasing slightly to 71% of Oregon's population.

Employment growth generally follows the same trend as population growth. Employment growth varies between regions even more, however, as employment reacts more quickly to changing economic conditions. Total employment increased in each of the state's regions over the period 1970-2006 but over 70% of Oregon's employment was located in the Willamette Valley.

- **Change in the type of the industries in Oregon.** As Oregon has transitioned away from natural resource-based industries, the composition of Oregon's employment has shifted from natural resource based manufacturing and other industries to service industries. The share of Oregon's total employment in Service industries increased from its 1970s average of 19% to 45% in 2011, while employment in Manufacturing declined from an average of 18% in the 1970s to an average of 10% in 2011.
- **Shift in manufacturing from natural resource-based to high-tech and other manufacturing industries.** Since 1970, Oregon started to transition away from reliance on traditional resource-extraction industries. A significant indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry and concurrent growth of employment in other manufacturing

³⁹ Portland State University Population Research Center, Population Report, Components of Population Change for 1990-2000 and 2000-2010. <http://pdx.edu/prc/annual-oregon-population-report>

⁴⁰ 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.

industries, such as high-technology manufacturing (Industrial Machinery, Electronic Equipment, and Instruments), Transportation Equipment manufacturing, and Printing and Publishing.⁴¹

- **Continued importance of manufacturing to Oregon's economy.** Oregon's exports totaled \$19.4 billion in 2008, nearly doubling since 2000. Oregon's largest export industries were computer and electronic products and agricultural products, account for nearly 60% of Oregon's exports. Manufacturing employment is concentrated in five counties in the Willamette Valley or Portland area: Washington, Multnomah, Lane, Clackamas, and Marion Counties.⁴²
- **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 in 2009, 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 \$33,977 compared to the statewide average of for large businesses about \$45,814 in 2009.⁴³

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.

3.1.3.1 Availability of Labor

The availability of trained workers in Eugene will impact development of Eugene's economy over the planning period. Key trends that will affect

⁴¹ Although Oregon's economy has diversified since the 1970's, natural resource-based manufacturing accounts for more than nearly 40% of employment in manufacturing in Oregon in 2010, with the most employment in Wood Product and Food manufacturing.

⁴² Business Oregon, "Economic Data Packet"

⁴³ Business Oregon, "Economic Data Packet"

the workforce in Eugene over the next 20 years include Eugene’s growing population, aging population, and commuting trends.

Growing Population

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

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

Table 1 shows that Lane County grew slower than the State between 1990 and 2012, growing at 1.03% annually and adding over 71,000 people. About 45% of the County’s population lived in Eugene in 2012. Eugene’s population grew faster than the County average, at 1.56% annually, adding 45,666 residents over the twenty-two year period.

Table 1. Population in the U.S., Oregon, the Willamette Valley, Lane County, and Eugene, 1990-2012

Area	Population			Change 1990 to 2012		
	1990	2000	2012	Number	Percent	AAGR
U.S.	248,709,873	281,421,906	313,914,040	65,204,167	26%	1.06%
Oregon	2,842,321	3,421,399	3,883,735	1,041,414	37%	1.43%
Willamette Valley	1,962,816	2,380,606	2,729,660	766,844	39%	1.51%
Lane County	282,912	322,959	354,200	71,288	25%	1.03%
Eugene	112,669	137,893	158,335	45,666	41%	1.56%

Source: U.S. Census 1990 SF1 P001, U.S. Census 2000 SF1 P1, U.S. Census Population Estimates, <http://www.census.gov/popest/national/national.html>, the Population Research Center at Portland State University <http://www.pdx.edu/prc/population-estimates>

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 2010, in-migration accounted for 68% of Oregon’s population growth. Over the same period, in-migration accounted for 75% of population growth in Lane County, adding more than 51,000 residents over the twenty-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.⁴⁴

The average age of Eugene residents is increasing. Table 2 shows the change in age distribution for Eugene between 2000 and 2011. All age groups gained population, except for people five to 17 years old. The largest growing age group in terms of percentage was those between the ages of 18 and 24, gaining 33% or 7,883 people over the period.

Table 2. Change in age distribution, Eugene, 2000-2011

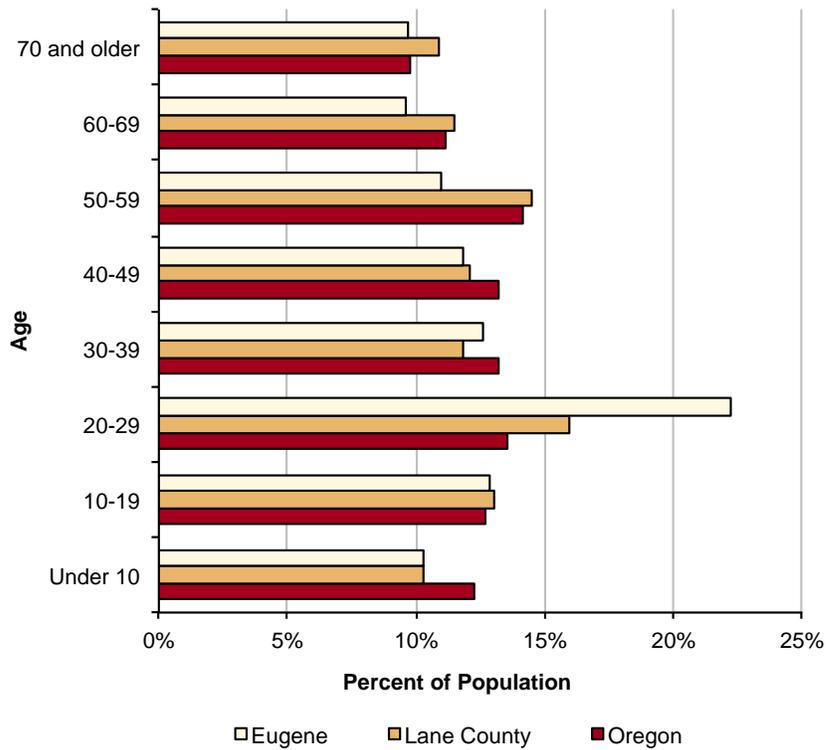
Age Group	2000		2011		Change 2000-2011		
	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	7,367	5%	8,367	5%	1,000	14%	0%
5-17	20,686	15%	19,487	12%	-1,199	-6%	-3%
18-24	23,868	17%	31,751	20%	7,883	33%	3%
25-44	39,247	28%	41,482	26%	2,235	6%	-2%
45-64	30,068	22%	34,808	22%	4,740	16%	0%
65 and over	16,657	12%	21,026	13%	4,369	26%	1%
Total	137,893	100%	156,921	100%	19,028	14%	0%

Source: 2000 U.S. Census SF1 P12, 2011 American Community Survey 1-year estimates B01001.

⁴⁴ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2008, *The 2008 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, April 10, 2008. *The Budget and Economic Outlook: Fiscal Years 2007 to 2016*, January; and Congressional Budget Office, 2005, *The Long-Term Budget Outlook*, December.

Figure 4 shows the age structure for Oregon, Lane County, and Eugene in 2011. Eugene had a larger share of residents between the ages of 20 and 29 than the County or the State, which can be attributed to the influence of the University of Oregon. Eugene has a smaller share of residents 40 years and older, compared with the County and State.

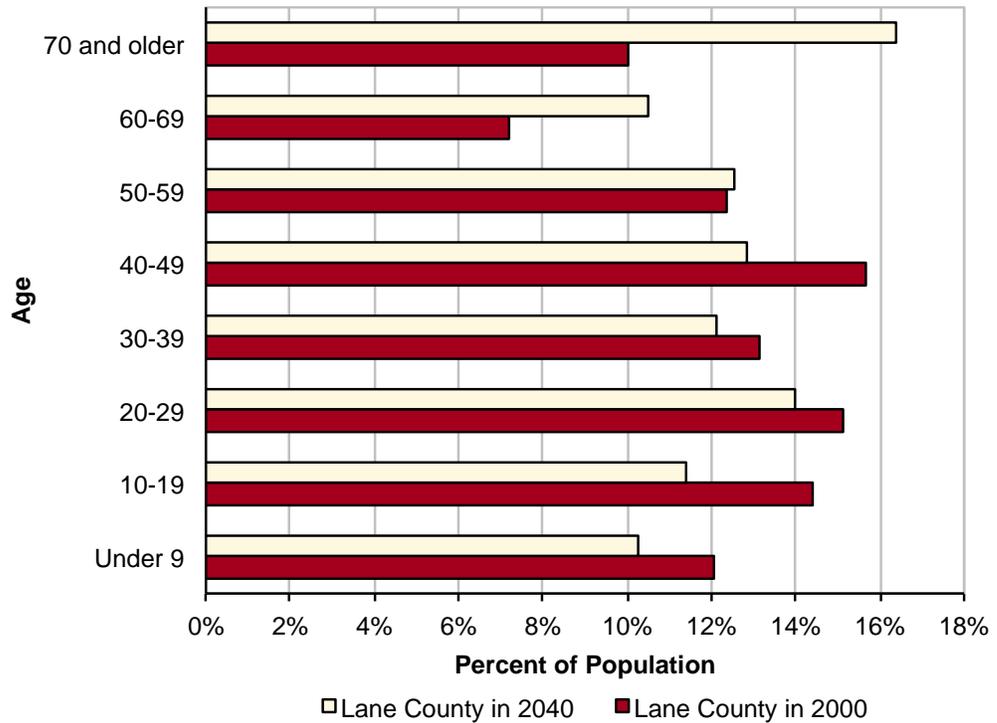
Figure 4. Population by age, Oregon, Lane County, and Eugene, 2011



Source: 2011 American Community Survey 1-year estimates B01001.

Figure 5 shows the population for age in Lane County in 2000 and the Oregon Office of Economic Analysis' (OEA) projection for 2040. The OEA projects the share of the population over the age of 59 in Lane County will grow from 17% in 2000 to 27% in 2040. In comparison, the OEA forecasts a similar shift in population over the age of 59 for the State, increasing from 17% of the population in 2000 to 26% in 2040.

Figure 5. Population by age, Lane County, 2000 and 2040



Source: Oregon Office of Economic Analysis, Long-Term County Forecast, http://www.oregon.gov/DAS/OEA/demographic.shtml#Long_Term_County_Forecast

Income

This section presents indicators that describe income in Eugene and Lane County in four categories of income:

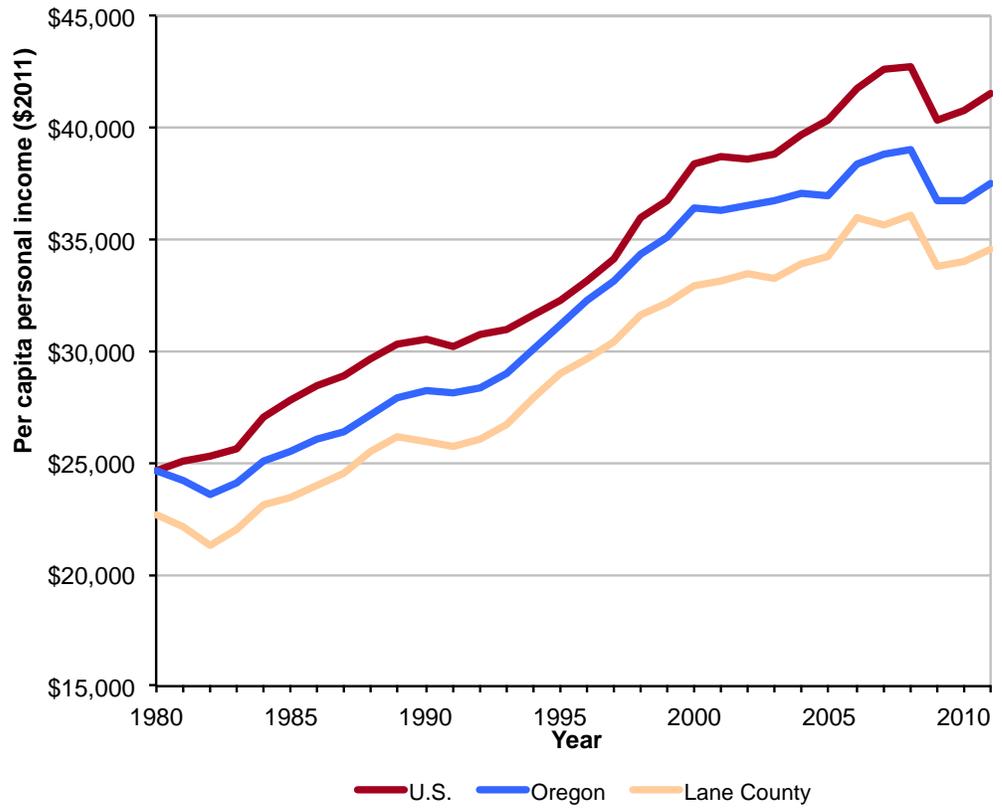
- Per capita income is income per person, including non-working people such as children or the elderly.
- Average wage is the amount paid per job per worker.
- Household income is income for all people in the household, whether they are related to each other or not.
- Family income is income for a family of related people who live together.⁴⁵

Figure 6 shows the change in per capita personal income for the U.S., Oregon, and Lane County between 1980 and 2011 (in constant 2011 dollars). Per capita income grew most years during the 31-year period, with the exception of a decrease during the 2007-2009 recession. Since 1980, Oregon's per capita personal income was consistently lower than the U.S. average. In 1980, Oregon's per capita person income was 100% of the national average. By 2011, Oregon's per capita income was 90% of the national average.

Lane County's per capita income was consistently lower than the State or national average. In 1980, Lane County's per capital income was 92% of the national average, decreasing to 83% by 2011. In 2011, Lane County's per capita income as \$35,561, compared to the State average of \$37,527 and the national average of \$41,560.

⁴⁵ The Census defines a household as: "A household includes all the people who occupy a housing unit as their usual place of residence." The Census defines a family as "A group of two or more people who reside together and who are related by birth, marriage, or adoption."

Figure 6. Per capita personal income in the U.S., Oregon, and Lane County, 1980-2011, (2011 dollars)



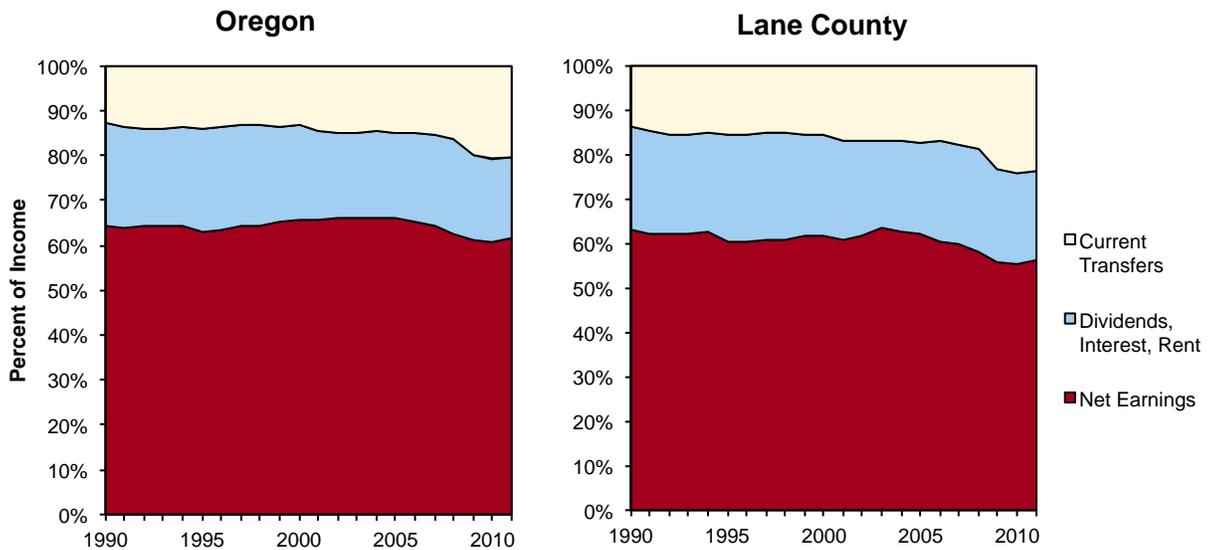
Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce, Table CA1-3. <http://www.bea.gov/iTable/iTable.cfm?ReqID=70&step=1>.

Figure 7 shows the major sources of per capita personal income for Oregon and Lane County between 1990 and 2011. Since the late-1980's, compared to State averages, Lane County residents have had a smaller share of personal income from net earnings and a larger share from transfer payments and dividends, interest, and rent. Figure 7 shows that the share of income from earnings decreased in Lane County and the State as a result of the 2007-2009 recession and has started to rebound.

Lane County's share of personal income from net earnings was 56% in 2011, lower than Oregon's average of 62%. The County's share of personal income from transfer payments and dividends, interest, and rent was about 44% in 2011, compared with the State average of 38%.

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 of age than the State average. Figure 4 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 7. Per capita personal income by major sources, Oregon and Lane County, 1990-2011



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

Table 3 shows average annual pay per employee in the U.S., Oregon, and Lane County for 2000 to 2011. The national average wage grew faster than State or County averages. The average U.S. wage increased by 36% (more than \$12,000), compared to the State increase of 31% (over \$10,300) or the County increase of 32% (nearly \$8,900). Wages in Lane County relative to the U.S. decreased by 2% over the eleven-year period.

Lane County's average pay fluctuated relative to the State average, rising as high as 88% of the state average in the 2002-2004 period. In 2011, wages in Lane County were 85% of the State average.

Table 3. Average annual pay, U.S., Oregon, and Lane County (nominal dollars), 2000-2011

Year	U.S.	Oregon	Lane County	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%
2007	\$44,450	\$39,566	\$34,328	77%	87%
2008	\$45,563	\$40,486	\$35,363	78%	87%
2009	\$45,559	\$40,742	\$35,475	78%	87%
2010	\$46,751	\$41,669	\$35,889	77%	86%
2011	\$48,040	\$43,092	\$36,773	77%	85%
Change 2000 to 2011					
Nominal Change	\$12,717	\$10,316	\$8,895		
Percent Change	36%	31%	32%		

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

Table 4 shows three measures of income for Oregon, Lane County, and Eugene: per capita income, median household income, and median family income. Eugene's incomes are lower than the State averages. The gap between median household and median family income is bigger for Eugene than the State average, which is likely attributable to Eugene's relatively large share of student households with lower incomes.

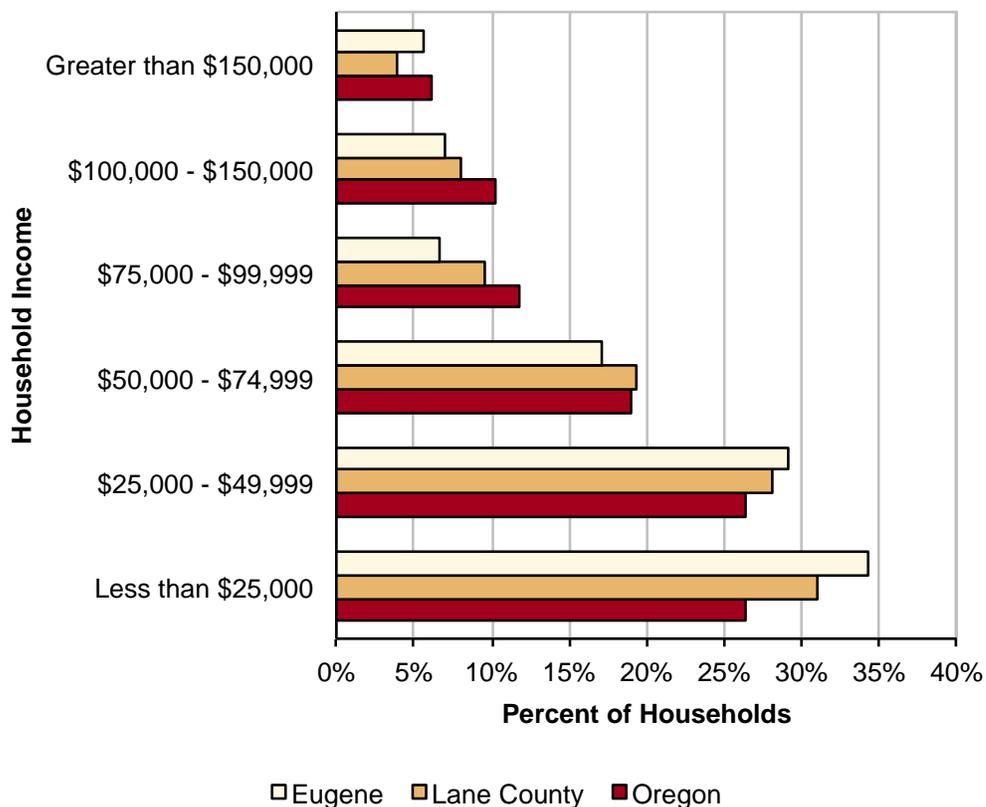
Table 4. Per Capita Income, Median Household Income, Median Family Income, Oregon, Lane County, and Eugene, 2011

	Per Capita Income	Median Household Income	Median Family Income
Oregon	\$25,228	\$46,816	\$58,356
Lane County	\$22,187	\$40,584	\$53,086
Eugene	\$22,625	\$37,339	\$55,063

Source: 2011 American Community Survey, B19013, B19113, B19301

Figure 8 shows the distribution of household income in Oregon, Lane County, and Eugene in 2011. About 64% of Eugene’s households had income of less than \$50,000, compared with 59% of County households and 53% of State households. About one-third of Eugene’s households had income less than \$25,000, compared with about a quarter of households in Oregon.

Figure 8. Distribution of household income of Oregon, Lane County, and Eugene, 2011



Source: 2011 American Community Survey, B19001

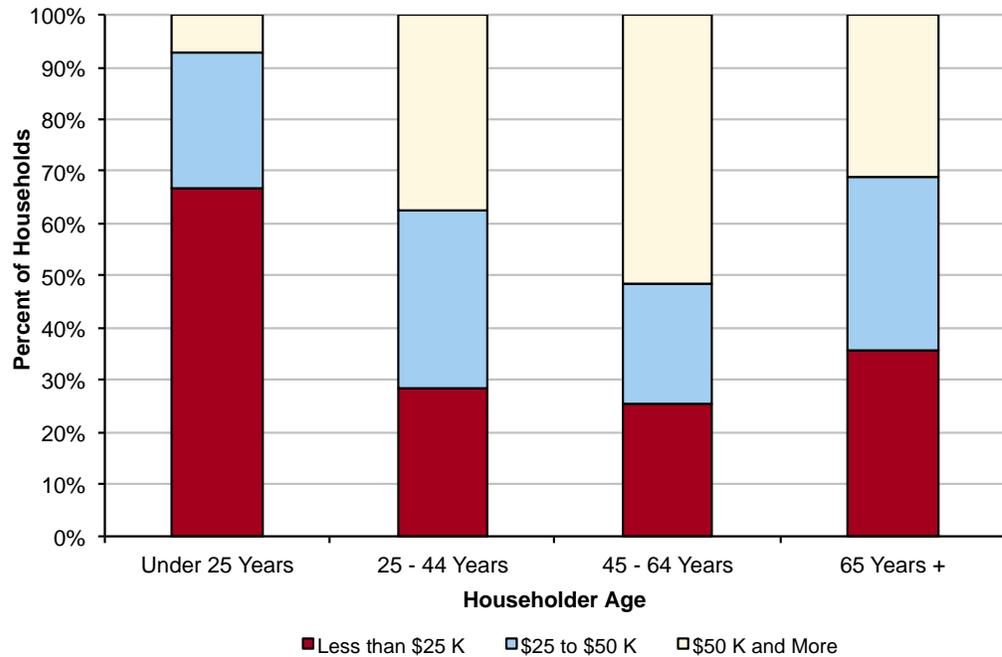
Eugene’s incomes are generally lower than State averages for a number of reasons:

- Eugene’s mix of businesses includes a comparatively high share of lower-wage jobs. For example, Eugene has a concentration of call center employment, which has relatively low wages. Eugene also has a concentration of video game developers, which is one of the lower paying forms of software development. In contrast, businesses locating in the Portland Region have higher than average wages. For example, Hillsboro has a higher than average concentration of engineering jobs, with wages of \$100,000 per year or more.

- Eugene’s lower per capita and median household income can be attributed, in part, to Eugene’s large share of young households, the majority of which are students at the University of Oregon. In 2011, 14% of Eugene’s householders were younger than 25 years old, compared with the County average of 8% and the State average of 5%.

These younger households typically have lower income compared with older households. Figure 9 shows household income by household age in Eugene in 2011. Approximately two-thirds of households younger than 25 years of age had income of less than \$25,000. In contrast, about one-quarter of households between 25 and 64 years had income of less than \$25,000.

Figure 9. Household income by age of householder, Eugene, 2011



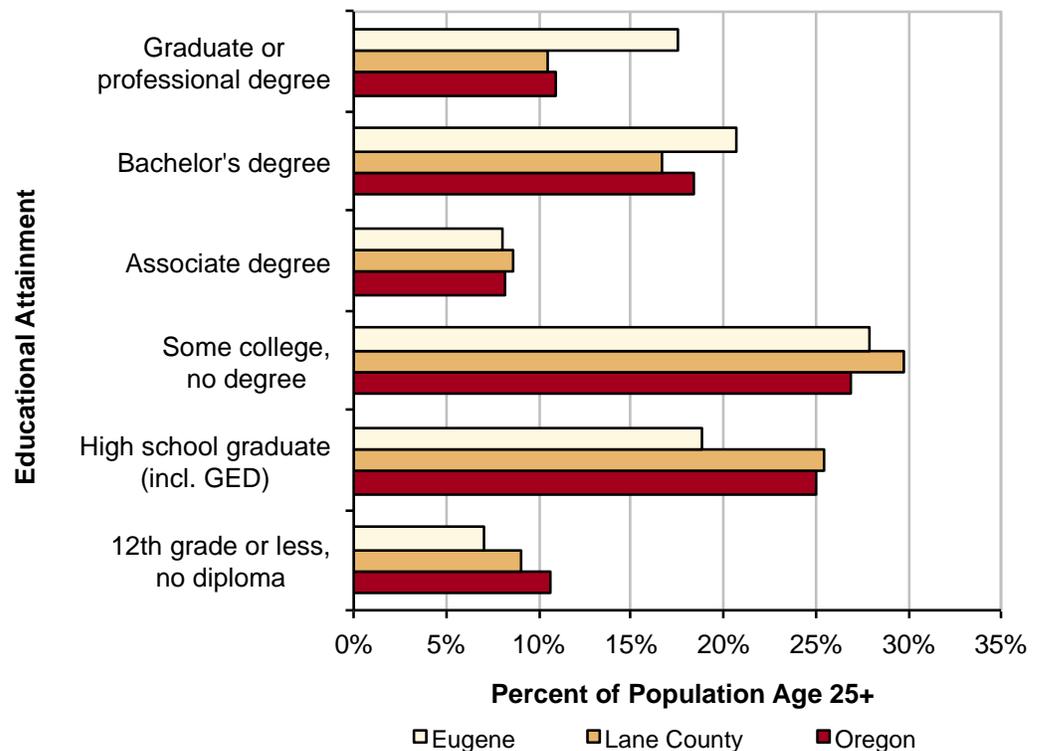
Source: 2011 American Community Survey, B19037

The low average income in Lane County and Eugene, relative to Oregon and the U.S., make Eugene 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. Eugene may be attractive to firms that need university student workers.

Educational Attainment

The availability of trained, educated workers affects the quality of labor in a community. Educational attainment is an important labor force factor because firms need to be able to find educated workers. Figure 10 shows the share of population by education level completed in Oregon, Lane County, and Eugene in 2011. In 2011, Eugene had a higher share of residents above the age of 25 with a bachelor's degree or higher (38%) than residents of Lane County or Oregon (27% and 29% respectively). Twenty-six percent of Eugene residents above the age of 25 did not attend any college, compared to 34% of Lane County residents and 36% of Oregon residents.

Figure 10. Educational attainment for the population 25 years and over, Oregon, Lane County and Eugene, 2011



Source: 2011 American Community Survey, B15002

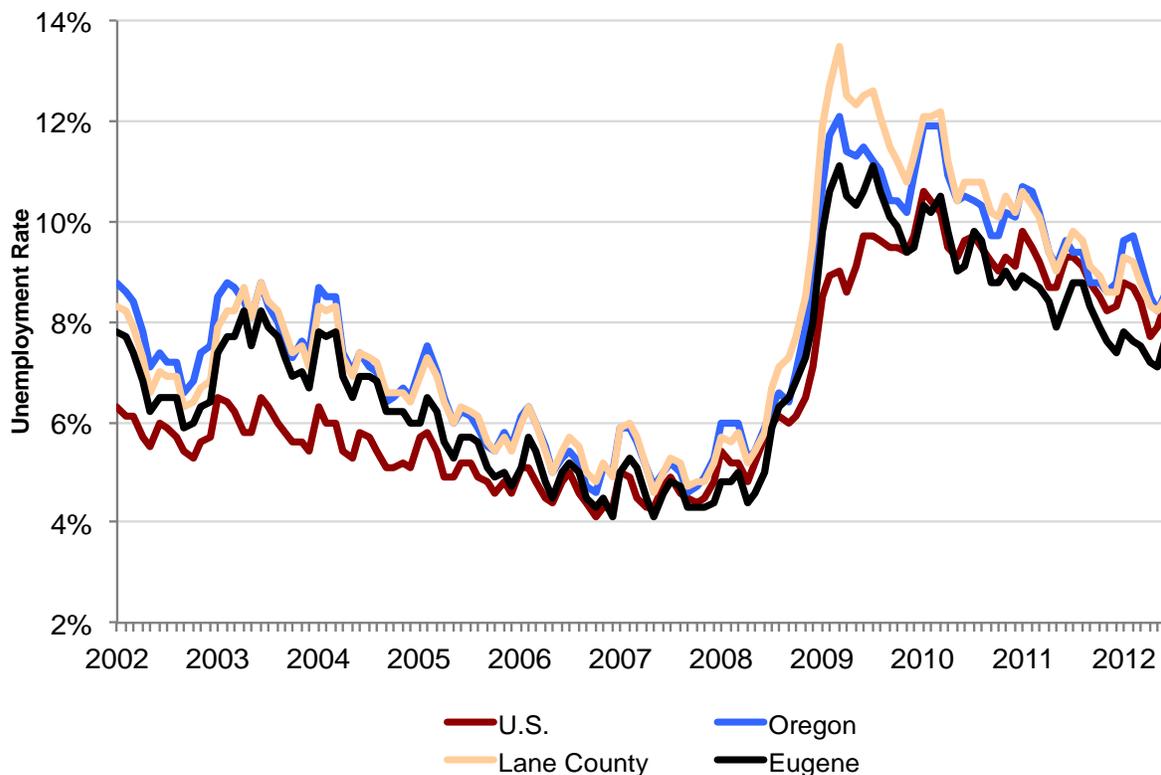
Opportunities for workforce training and post-secondary education for residents of the Eugene-Springfield area include: the University of Oregon, Lane Community College, Pacific University, Northwest Christian College, and Gutenberg College.

Workforce Participation and Unemployment

The current labor force participation rate is an important consideration in the availability of labor. The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2011 American Community Survey, Eugene has over 77,000 people in its labor force.

The unemployment rate is one indicator of the relative number of workers who are actively seeking employment. Figure 11 shows the unemployment rate for the United States, Oregon, Lane County, and Eugene for the past decade. During this period, Lane County's unemployment was similar to or lower than the statewide unemployment rate. The County and State unemployment rates were consistently higher than the national average. Eugene's unemployment rate was generally lower than the County or State average but above the national average. From 2010 to 2012, Eugene's unemployment rate was generally below the national average.

Figure 11. Unemployment rates for the U.S., Oregon, Lane County, and Eugene, January 2002 to June 2012

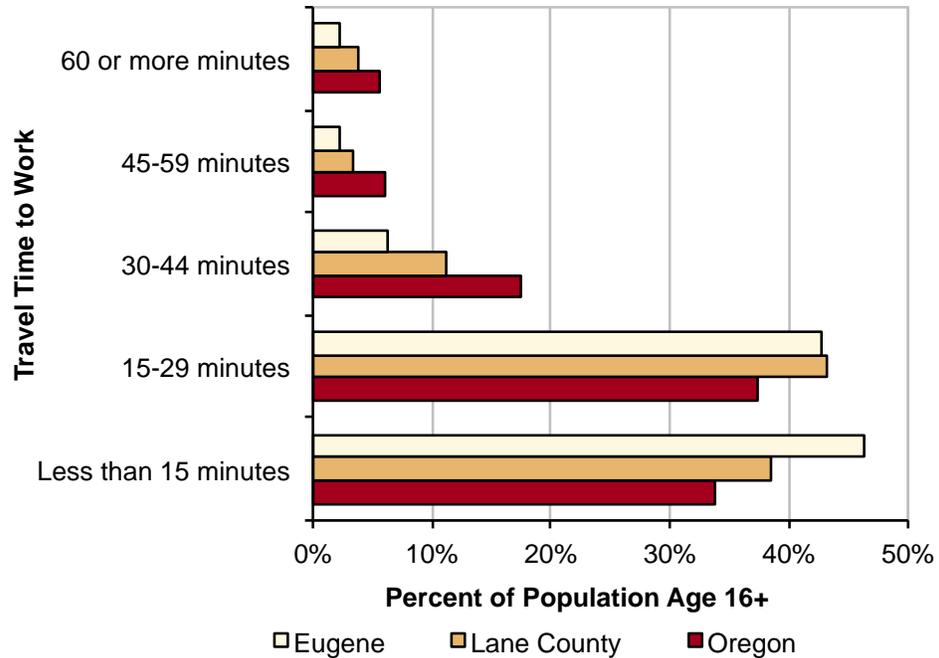


Source: Bureau of Labor Statistics, <http://data.bls.gov/PDQ/outside.jsp?survey=la>, <http://data.bls.gov/PDQ/outside.jsp?survey=ln>
Note: unemployment data is not seasonally adjusted

Commuting Patterns

Commuting plays an important role in Eugene's economy. Figure 12 shows a comparison of the commute time to work for residents 16 years and older for Oregon, Lane County, and Eugene in 2011. Eighty-nine percent of Eugene residents have a commute of less than 30 minutes compared to 82% of Lane County residents and 71% of Oregon residents.

Figure 12. Commuting time to work in minutes for residents 16 years and older, Oregon, Lane County, and Eugene, 2011



Source: 2011 American Community Survey, B08303

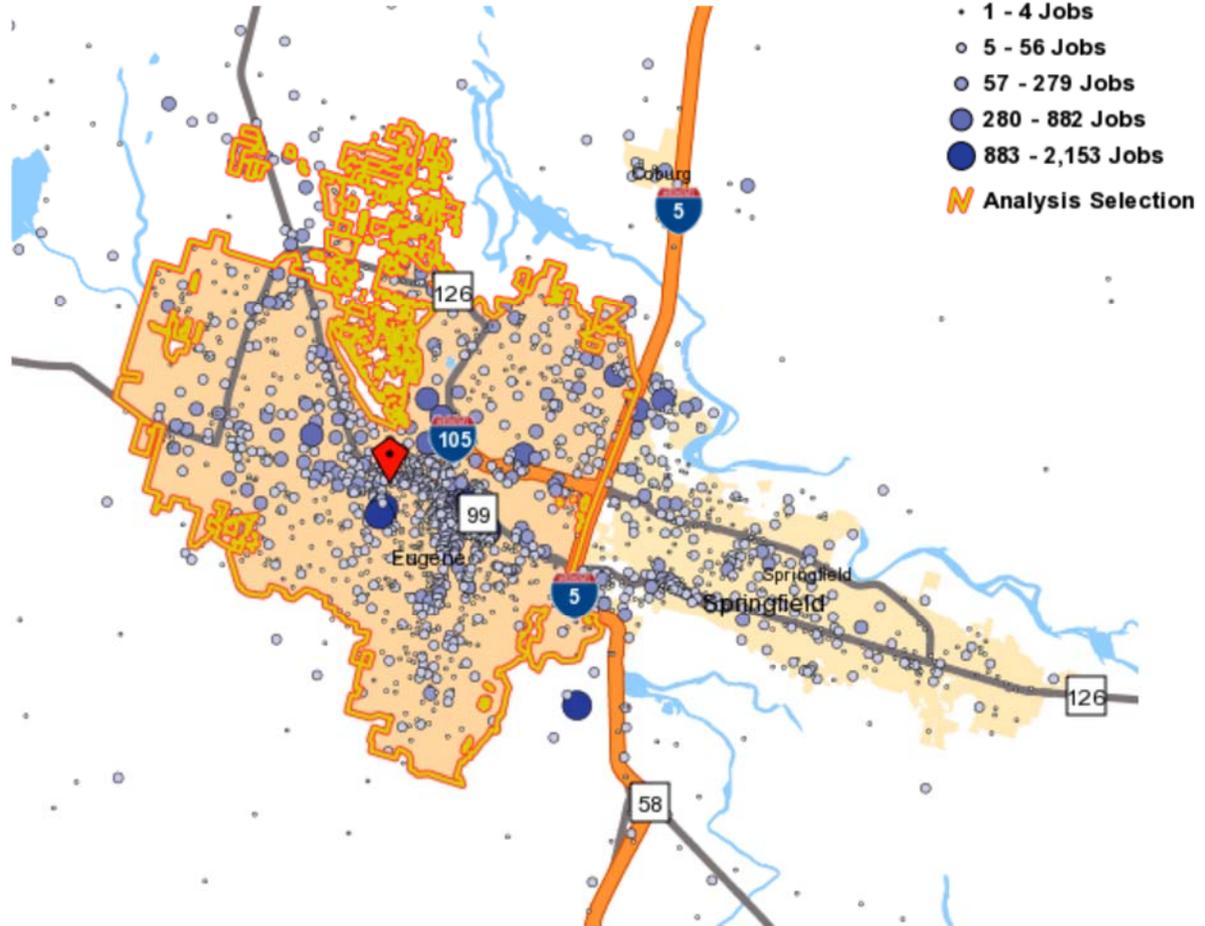
Table 5 and Figure 13 show the places where residents of Eugene were employed in 2010. Eighty-one percent of Eugene’s 57,000 working residents worked in Lane County, 60% worked within Eugene city limits, and 10% worked in Springfield.

Table 5. Places that residents of Eugene were employed, 2010

Location	Number	Percent
Lane County	46,365	81%
Eugene	34,195	60%
Springfield	5,836	10%
Multnomah County	2,231	4%
Portland	1,955	3%
Washington County	1,435	3%
Marion County	1,376	2%
Linn County	847	1%
Clackamas County	774	1%
Jackson County	540	1%
Douglas County	524	1%
Benton County	506	1%
Deschutes County	506	1%
All Other Locations	2,015	4%
Total	57,119	100%

Source: U.S. Census Bureau: LED on the Map,
<http://onthemap.ces.census.gov/>

Figure 13. Places that residents of Eugene were employed, 2010



Source: U.S. Census Bureau: Center for Economic Studies, OnTheMap. <http://onthemap.ces.census.gov>

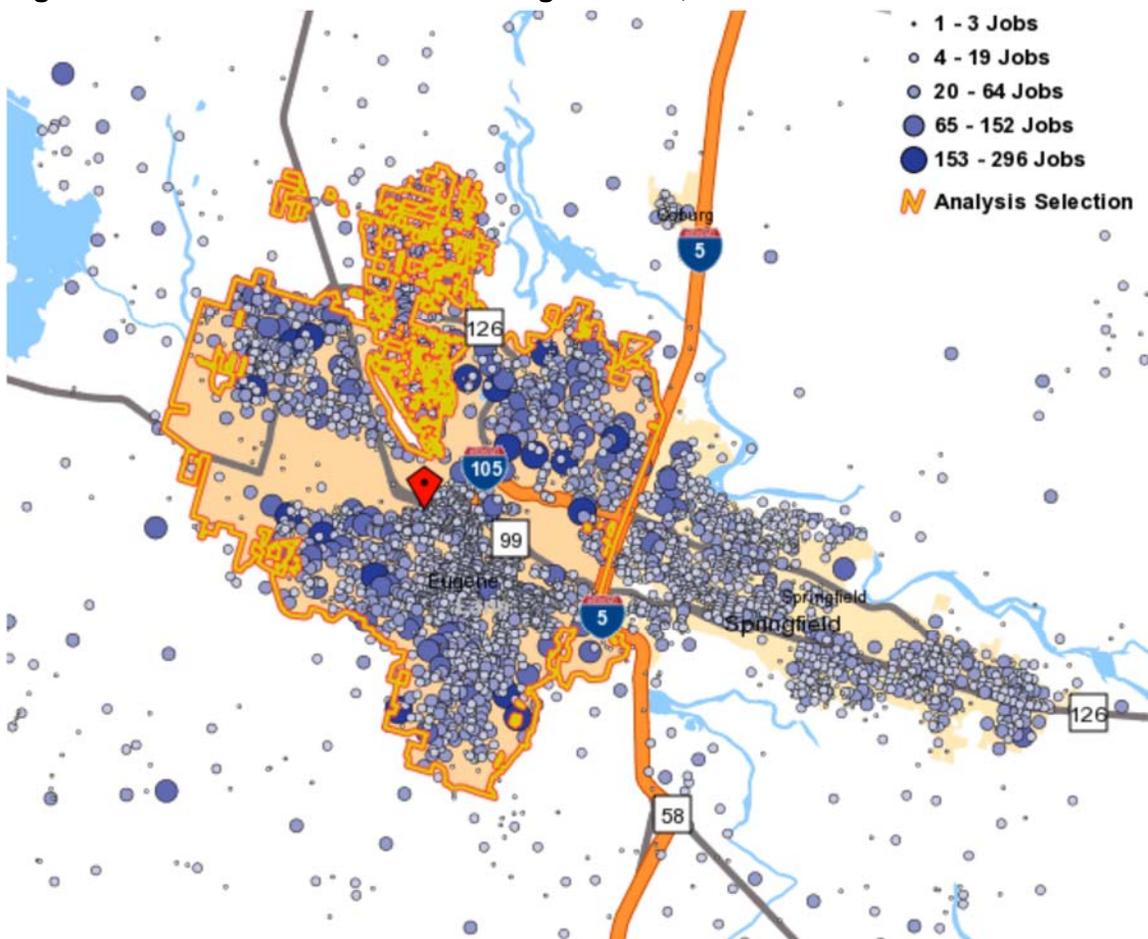
Table 6 and Figure 14 show where employees of firms located in Eugene lived in 2010. Eighty percent of Eugene’s workers lived in Lane County. Forty-four percent lived in Eugene, and 12% lived in Springfield. Roughly 21% of Eugene’s workers lived in unincorporated areas of Lane County and 20% lived outside of Lane County.

Table 6. Places where workers in Eugene lived, 2010

Location	Number	Percent
Lane County	62,435	80%
Eugene	34,195	44%
Springfield	9,011	12%
Unincorporated Lane County	16,465	21%
Linn County	2,113	3%
Multnomah County	1,985	3%
Washington County	1,558	2%
Douglas County	1,328	2%
Marion County	1,261	2%
Benton County	1,190	2%
Clackamas County	1,019	1%
Jackson County	885	1%
Deschutes County	773	1%
All Other Locations	3,228	4%
Total	77,775	100%

Source: U.S. Census Bureau: LED on the Map, <http://onthemap.ces.census.gov/>

Figure 14. Places where workers in Eugene lived, 2010



Source: U.S. Census Bureau: Center for Economic Studies, OnTheMap. <http://onthemap.ces.census.gov>

These commuting patterns show that Eugene firms have access to workforce living throughout the Eugene-Springfield region. Even though commutes in Eugene are generally shorter than the State average, these commuting patterns create demand for automotive and other forms of transportation, both within Eugene 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 workers living in the smaller cities around the Eugene-Springfield area (e.g., Veneta or Oakridge) because the commute to Eugene 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.

3.1.3.2 Changes in Employment

The economy of the nation changed substantially between 1980 and 2012. These changes affected the composition of Oregon's economy, including Lane County and Eugene. 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 Eugene, 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 Eugene over the next 20-years are: shifts in employment, growing importance of health care, continued importance of manufacturing, and outlook for growth in Eugene.

Lane County Employment Trends

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

In the 1970s Oregon started to transition away from reliance on traditional resource-extraction industries. An important indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry⁴⁶ and concurrent growth of employment in high-technology manufacturing industries (Industrial Machinery, Electronic Equipment, and Instruments⁴⁷).

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

The 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

⁴⁶ Lumber and Wood Products manufacturing is in Standard Industrial Classification (SIC) 24

⁴⁷ SIC 35, 36, 38

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 in 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.

Table 7 and Table 8 present data from the Oregon Employment Department that show changes in covered employment⁴⁸ for Lane County between 1980 and 2011. The changes in sectors and industries are shown in two tables: (1) between 1980 and 2000 and (2) between 2001 and 2011. 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 7 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

⁴⁸ 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.

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.

Table 7. 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, <http://www.qualityinfo.org/olmisj/CEP>. Summary by industry and percentages calculated by ECONorthwest

Table 8 shows the change in covered employment by sector for Lane County between 2001 and 2011. Employment decreased by 1,869 jobs or 1% during this period. The sectors that lost the greatest number of employees during this period were Manufacturing and Construction. The private sectors with the largest increases in numbers of employees were Health and Social Assistance, and Accommodations and Food Services.

Table 8. Covered employment in Lane County, 2001-2011

Sector	2001	2011	Change 2001 to 2011		
			Difference	Percent	AAGR
Natural Resources and Mining	2,338	1,898	-440	-19%	-2.1%
Construction	6,366	5,058	-1,308	-21%	-2.3%
Manufacturing	19,697	12,267	-7,430	-38%	-4.6%
Wholesale	5,300	5,278	-22	0%	0.0%
Retail	17,912	18,246	334	2%	0.2%
Transportation & Warehousing	2,606	2,635	29	1%	0.1%
Information	3,729	3,260	-469	-13%	-1.3%
Finance & Insurance	3,963	3,827	-136	-3%	-0.3%
Real Estate Rental & Leasing	2,508	2,087	-421	-17%	-1.8%
Professional, Scientific & Tech. Srv.	5,571	5,202	-369	-7%	-0.7%
Management of Companies	1,818	1,970	152	8%	0.8%
Admin. Support & Cleaning Srv.	6,399	7,399	1,000	16%	1.5%
Education	1,067	1,495	428	40%	3.4%
Health & Social Assistance	16,871	20,517	3,646	22%	2.0%
Arts, Entertainment & Recreation	1,542	1,762	220	14%	1.3%
Accommodations & Food Services	11,746	12,488	742	6%	0.6%
Other Services	5,552	5,411	-141	-3%	-0.3%
Private Non-Classified	49	30	-19	-39%	-4.8%
Government	22,398	24,733	2,335	10%	1.0%
Total	137,432	135,563	-1,869	-1%	-0.1%

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

Table 9 shows a summary of employment in Lane County in 2011. Table 9 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 9 shows:

- 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 42% of employment or over 57,000 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 28% of employment or more than 38,000 employees in Lane County.

Table 9. Covered employment in Lane County, 2011

Sector/Industry	Establishments	Employment	Percent of Employment	Average Pay per Employee
Natural Resources & Mining	220	1,898	1%	\$32,944
Construction	991	5,058	4%	\$44,468
Manufacturing	548	12,267	9%	\$45,114
Wood product manufacturing	65	3,401	3%	\$44,413
Food manufacturing	57	1,500	1%	\$37,358
Machinery manufacturing	44	1,421	1%	\$52,591
Wholesale	559	5,278	4%	\$46,852
Retail	1,186	18,246	13%	\$25,131
Motor vehicle & parts dealers	148	2,321	2%	\$39,172
Building material & garden supply stores	84	1,420	1%	\$28,928
Food & beverage stores	210	3,985	3%	\$21,516
General merchandise stores	50	3,863	3%	\$24,222
Miscellaneous store retailers	147	1,436	1%	\$20,555
Transportation, Warehousing & Utilities	244	2,635	2%	\$39,484
Information	165	3,260	2%	\$55,206
Finance & Insurance	522	3,827	3%	\$53,904
Real Estate Rental & Leasing	496	2,087	2%	\$28,344
Professional, Scientific & Technical Svcs	1,023	5,202	4%	\$44,977
Management of Companies	84	1,970	1%	\$62,168
Admin. & Support & Waste Mgmt	496	7,399	5%	\$25,800
Private Education	147	1,495	1%	\$25,275
Health & Social Assistance	1,067	20,517	15%	\$43,904
Ambulatory health care services	634	6,897	5%	\$55,705
Nursing & residential care facilities	214	4,343	3%	\$22,965
Arts, Entertainment & Recreation	137	1,762	1%	\$13,920
Accommodations & Food Services	871	12,488	9%	\$14,641
Other Services	1,504	5,411	4%	\$23,244
Private Non-Classified	40	30	0%	\$35,129
Government	363	24,733	18%	\$43,215
Federal	71	1,697	1%	\$62,956
State	55	7,717	6%	\$44,530
Local	237	15,320	11%	\$40,362
Education & Health Services	139	8,405	6%	\$33,794
Public Administration	47	4,023	3%	\$53,224
Total	10,660	135,564	100%	\$36,773

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

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 Eugene

Table 10 shows a summary of confidential employment data for Eugene in 2010. Eugene had 80,438 jobs at 6,667 establishments in 2010, with an average firm size of 12 employees. The sectors with the greatest employees were: Government (18%), Health Care and Social Assistance (14%), Retail (14%), Accommodation and Food Service (9%), and Manufacturing (9%). These sectors accounted for 51,914 or 65% of Eugene's jobs.

Table 10. Covered employment in Eugene, 2010

Sector / Industry	Establishments	Employees	
		Emp.	% of Total
Agriculture, Forestry, Fishing, Hunting, and Mining	25	197	0%
Construction	469	2,191	3%
Manufacturing	333	7,338	9%
Wood Product Manufacturing	28	1,753	2%
Machinery Manufacturing	31	1,065	1%
Food Manufacturing	47	998	1%
Fabricated Metal Product Manufacturing	54	643	1%
Computer and Electronic Product Manufacturing	16	634	1%
Chemical Manufacturing	13	501	1%
Furniture and Related Product Manufacturing	31	411	1%
Printing and Related Support Activities	24	264	0%
Other Manufacturing	89	1,069	1%
Wholesale Trade	408	3,499	4%
Retail Trade	740	11,445	14%
Food and Beverage Stores	113	2,294	3%
General Merchandise Stores	22	2,218	3%
Motor Vehicle and Parts Dealers	84	1,354	2%
Building Material, Garden Equipment & Supplies Dealers	53	1,070	1%
Clothing and Clothing Accessories Stores	98	968	1%
Sporting Goods, Hobby, Book, and Music Stores	68	805	1%
Health and Personal Care Stores	51	521	1%
Other Retail	251	2,215	3%
Transportation, Warehousing, and Utilities	113	996	1%
Information	121	1,633	2%
Publishing Industries (except Internet)	66	1,090	1%
Other Information Services	55	543	1%
Finance and Insurance	400	2,610	3%
Real Estate and Rental and Leasing	320	1,341	2%
Professional, Scientific, and Technical Services	824	4,419	5%
Management of Companies and Enterprises	60	1,342	2%
Admin. & Support & Waste Management Srv.	283	4,361	5%
Private Education Services	108	1,191	1%
Health Care and Social Assistance	770	11,114	14%
Arts, Entertainment, and Recreation	71	1,094	1%
Accommodation and Food Services	517	7,362	9%
Other Services	922	3,640	5%
Government	183	14,665	18%
Federal Government	28	690	1%
State Government	28	5,899	7%
Local Government	127	8,076	10%
Total	6,667	80,438	100%

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

Regional Business Activity

Eugene exists within with Eugene-Springfield regional economy. Regional business activity and trends will affect the types of businesses that are attracted to the region and choose to locate in Eugene. This section presents the large-scale regional business activities.

Continued Importance of Manufacturing

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 (\$18.3 billion) of revenue from exports in Oregon in 2012: Computer & Electronic Production, Machinery Manufacturers, Chemicals, Transportation Equipment, Food and Kindred Products, Wood Products, and Fabricated Metal Products.⁴⁹ These industries are all present in Lane County, accounting for 75% of manufacturing employment in the County.

Manufacturing continues to be important to the economy in Eugene and in Lane County. Manufacturing accounted for 9% of employment (more than 12,000 jobs) in Lane County and in Eugene (more than 7,000 jobs) in 2010.⁵⁰ Manufacturing employment decreased between 2006 and 2010, as a result of the national recession, from 14% of employment in Lane County and 12% in Eugene. Manufacturing industries continue to offer jobs with above-average wages, making these jobs more desirable.

Continuing changes in the economy may impact manufacturing in Lane County. For example, the economic downturn and high energy prices were factors that contributed to 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 the employment in these industries is located outside of Eugene, it affects residents of Eugene, either directly through job layoffs or indirectly through decreases in economic activity.

⁴⁹ Business Oregon Trade Statistics and Data, Oregon Exports by Industry, 2012
<http://www.oregon4biz.com/Grow-Your-Business/Export-assistance/Stats/>

⁵⁰ Oregon Employment Department

Tourism in Lane County

Tourism brings economic activity into Lane County from outside sources. Table 11 shows that tourism expenditures in East Lane County⁵¹ in 2011 were \$602 million. Tourism related spending resulted in 7,200 jobs, with earnings of \$136.8 million, in Lane County in 2011. Tax receipts from tourism spending was \$23.6 million in 2011.

Table 11. Direct Travel Spending, East Lane County, Fiscal Years 2000 to 2011

Years	Direct travel spending (\$million)	Employment	Employment Earnings (\$million)	Tax Receipts (\$million)
2000	\$430.6	6,340	\$100.0	\$15.3
2001	\$432.4	6,470	\$101.8	\$15.5
2002	\$440.7	6,570	\$105.8	\$15.8
2003	\$434.6	6,400	\$105.1	\$15.8
2004	\$467.3	6,570	\$110.2	\$17.0
2005	\$501.0	6,750	\$117.0	\$18.6
2006	\$550.2	6,920	\$123.8	\$19.9
2007	\$557.1	7,210	\$131.1	\$20.9
2008	\$594.0	7,700	\$140.4	\$22.0
2009	\$564.6	6,930	\$128.4	\$19.9
2010	\$605.1	6,930	\$129.0	\$20.2
2011	\$602.4	7,200	\$136.8	\$23.6
Change 2000-2011				
Amount	\$171.8	860	\$36.8	\$8.3
Percent Change	40%	14%	37%	54%
AAGR	3.1%	1.2%	2.9%	4.0%

Source: Dean Runyan Associates. 2011. Oregon Travel Impacts, 1991-2011p

Eugene levies a 9.5% transient lodging tax on overnight accommodations. Table 12 shows transient lodging tax revenue for Lane County and Eugene for fiscal year 2000 through 2012. Eugene's lodging tax revenue varied from \$2.7 million in fiscal year 2000 to over \$3.5 million in fiscal year 2012. Eugene's transient lodging tax revenues accounted for about half of total County lodging tax revenues in every year after 2000.

⁵¹ East Lane County includes areas east of the Coastal Mountains and Siuslaw National Forest.

Table 12. Local lodging tax revenues, Lane County and Eugene, Fiscal Years 2000 to 2012

Fiscal Year	Lane County	Eugene	Eugene's % of County
2000	\$5,095,869	\$2,742,012	54%
2001	\$5,378,361	\$2,876,024	53%
2002	\$6,016,364	\$3,136,485	52%
2003	\$6,611,718	\$3,529,159	53%
2004	\$5,095,869	\$2,742,012	54%
2005	\$5,378,361	\$2,876,024	53%
2006	\$6,016,364	\$3,136,485	52%
2007	\$6,611,718	\$3,529,159	53%
2008	\$7,229,995	\$3,742,933	52%
2009	\$6,769,782	\$3,543,640	52%
2010	\$6,273,289	\$3,204,731	51%
2011	\$6,879,677	\$3,500,579	51%
2012	\$7,242,202	\$3,560,301	49%

Source: Convention & Visitors Association of Lane County Oregon, CVALCO

Significance of Agriculture in Lane County

Agriculture continues to be important in Lane County's economy. Table 13 shows the market value of agricultural products and the top five agricultural products in Lane County in 2002 and 2007. In 2007, Lane County had approximately \$131 million in total gross sales from agriculture, a nearly 50% increase over the \$88 million in total gross sales in 2002.

The top five agricultural products in Lane County in 2007 were: Nursery and greenhouse (\$33 million); fruits, tree nuts, and berries (\$13.8 million); poultry and eggs (\$12.8 million); milk and dairy (\$11.1 million); and cattle and calves (\$9.9 million). The agricultural products that had the largest increase in sales between 2002 and 2007 were nursery and greenhouse (increase of \$11.8 million or 56%) and fruits, tree nuts, and berries (increase of \$7.1 million or 107%).

Table 13. Six agricultural products with the highest sales value, Lane County 2002 and 2007

Item	Value of Sales	Farms	Average Value of Sales per Farm
2007 Total Sales	\$131,089,000	3,355	\$39,073
Nursery, greenhouse, floriculture, & sod	\$32,810,000	204	\$160,833
Fruits, tree nuts, & berries	\$13,811,000	339	\$40,740
Poultry & eggs	\$12,794,000	433	\$29,547
Milk & other dairy products from cows	\$11,135,000	32	\$347,969
Cattle & calves	\$9,895,000	929	\$10,651
Vegetables, melons, potatoes, & sweet potatoes	\$5,743,000	110	\$52,209
2002 Total Sales	\$87,824,000	2,577	\$34,080
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

Source: USDA Census of Agriculture, 2007,
http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/Oregon/orv1.pdf

While agriculture is an important source of economic activity in Lane County, Eugene has relatively little employment directly involved with agriculture within the UGB. In 2010, less than 1% of Eugene’s covered employment (212 employees) were employed in the Agriculture, Forestry, Fishing, and Mining sectors.⁵² About half of these jobs were in Forestry and Logging.

Consistent with statewide land use policy, land within the Eugene UGB is committed for future urban uses, rather than agricultural uses. The types of natural resource related jobs that might locate in Eugene include: agricultural services, food processors, wineries and breweries, and manufacturers that depend on natural resources (e.g., lumber mills, furniture manufacturing, or fabricated metal products).

⁵² Oregon Employment Department Quarterly Census of Employment and Wages, 2010

Notable Business Sectors in Eugene

One way to assess the types of businesses that are likely to have future growth in Eugene is to understand existing specialties of employment in Eugene.

- **Natural resource manufacturing.** Eugene's industrial heritage is tied to natural resource extraction, forestry and agriculture. Eugene has concentrations of employment in wood and forestry products, construction building materials and production technologies, fabricated metals, farm machinery, and motor driven product industries. The legacy of investment in natural resource manufacturing, both capital and human capital investments, are innovated natural resource manufacturing firms.
- **Food and beverage manufacturing and distribution.** Eugene is located in a region with exceptional agricultural production. Eugene has a long history of growing foods, such as berries or mushrooms, and natural food production, such as organic ice creams, non-dairy frozen desserts. Eugene is also a center for wine and beer production. In addition, Eugene's retail chains and distribution businesses allow local food producers to grow. Examples of firms involved in food manufacturing and distribution include: Emerald Valley, Glory Bee, Hummingbird, McDonald Wholesale, Mountain Rose Herbs, Mycological, and SnoTemp. Examples of breweries include: Hop Valley, Falling Sky, Ninkasi, and Oakshire.
- **Sporting goods.** Eugene is the birthplace of Nike and is the home of firms that are part of the larger state's athletic goods and apparel cluster, such as Bike Friday, Sporthill, Burley, and Bowtech Archery.
- **Social science research.** Since the 1970s, numerous non-profit or grant-based research social and behavioral science institutions have spun off from the University of Oregon's College of Education, including the Oregon Research Institute, Oregon Social Learning Center, DIBELS, EPIC (Educational Policy Improvement Center) and ORCAS (formerly Oregon Center for Applied Science). As a center of social science research and innovation, the region has an above-average concentration of expertise in its workforce in these fields and an opportunity to encourage complementary employment within related industries or firms with related technical or scientific skill sets, such as software publishing.

Sustainability

The Oregon Employment Department's (OED) *The Greening of Oregon's Workforce* report details the growth of green or sustainable jobs in the Oregon economy in recent years. Oregon had over 43,000 green jobs in 2010, or 3% of the statewide total. The OED notes that these jobs are not in confined green industry sectors; they are spread across the entire economy. Oregon industries with the largest number of green jobs were construction, natural resources and mining, manufacturing, professional and technical services, and state and local government. These sectors are feasible in any region.

The idea of "attracting sustainable jobs" usually focuses more on attracting green firms to an area, though green jobs are emerging from industries that are already present in Lane County. Demand for green services will alter the mix of services offered by existing businesses and ultimately drive the growth of green jobs in the County. The effects are difficult to isolate on a small regional level, though the growth of green jobs on a statewide level appears to be healthy.⁵³

Domestic Outsourcing

The trend towards domestic outsourcing of back-office functions has led several companies to locate call centers in the Eugene-Springfield area. Companies that have located call centers or back-office functions in the Eugene-Springfield region include: Levi Strauss, Symantec, Enterprise, and Royal Caribbean. 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.

⁵³ Oregon Employment Department. *The Greening of Oregon's Workforce: Jobs, Wages, and Training*. <http://www.qualityinfo.org/pubs/green/greening.pdf>

3.1.3.3 Outlook for Growth in Lane County

Table 14 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 14. 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,
<http://www.oregon.gov/DAS/OEA/demographic.shtml>

Table 15 shows the Oregon Employment Department’s forecast for employment growth by industry for Lane County over the 2012 to 2022 period.⁵⁴ The sectors that will lead employment growth in Lane County for the ten-year period are Health Care & Social Assistance (adding 3,800 jobs), Government (adding 3,700 jobs), Leisure & Hospitality (adding 2,900 jobs), Professional and Business Services (adding 2,700 jobs), and Retail Trade (adding 2,100 jobs). Together, these sectors are expected to add 15,200 new jobs or 70% of employment growth in Lane County.

Table 15. Nonfarm employment forecast by industry in Lane County, 2012-2022

Sector / Industry	2012	2022	Change 2012-2022		
			Amount	% Change	AAGR
Natural Resources & Mining	2,100	2,500	400	19%	1.76%
Construction	5,100	6,400	1,300	25%	2.30%
Manufacturing	12,300	13,900	1,600	13%	1.23%
Durable Goods	8,400	9,700	1,300	15%	1.45%
Wood product mfg.	3,300	3,900	600	18%	1.68%
Transportation equip. mfg.	600	700	100	17%	1.55%
Nondurable goods	3,900	4,200	300	8%	0.74%
Transportation, & utilities	3,000	3,400	400	13%	1.26%
Wholesale trade	5,400	6,000	600	11%	1.06%
Retail trade	18,600	20,700	2,100	11%	1.08%
Information	3,200	3,500	300	9%	0.90%
Financial activities	7,000	8,000	1,000	14%	1.34%
Professional & business srv.	14,800	17,500	2,700	18%	1.69%
Administrative & support srv.	7,200	8,500	1,300	18%	1.67%
Education	1,700	2,000	300	18%	1.64%
Health care & social assist.	20,700	24,500	3,800	18%	1.70%
Health care	17,900	21,160	3,260	18%	1.69%
Leisure & hospitality	14,500	17,400	2,900	20%	1.84%
Accommodation & food srv.	12,700	15,300	2,600	20%	1.88%
Other srv.	4,800	5,400	600	13%	1.18%
Government	29,100	32,800	3,700	13%	1.20%
Federal government	1,600	1,700	100	6%	0.61%
State government	12,300	14,200	1,900	15%	1.45%
State education	9,800	11,000	1,200	12%	1.16%
Local government	15,200	16,900	1,700	11%	1.07%
Local education	8,200	9,300	1,100	13%	1.27%
Total nonfarm employment	142,300	164,000	21,700	15%	1.43%

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

⁵⁴ The employment growth rate for Eugene’s UGB is addressed in Chapter 5 of this EOA.

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

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

Table 16. Implications of national, state, and regional economic and demographic trends on economic growth in Eugene

National, State, and Regional Economic Trends	Implications for economic growth in Eugene
<p>Effects of the national recession</p> <p>The national recession that started at the end of 2007 has affected businesses and workers alike. Unemployment at the national level has been at or above 9% since January 2009, with Oregon’s unemployment rate at or above 10% since January 2009.</p> <p>The federal government’s economic forecast suggests slow economic growth, with gradual increases of employment starting in the second quarter of 2010 and continuing through 2011. Economic growth in Oregon typically lags behind national growth</p>	<p>The national recession is likely to result in slower than average employment growth in Eugene over the next two to five years.</p> <p>The higher levels of unemployment and slow employment growth are likely to slow growth in wages over the next two to five years throughout Oregon, including in Eugene.</p>

National, State, and Regional Economic Trends	Implications for economic growth in Eugene
<p>Growth of service-oriented sectors</p> <p>Increased worker productivity and the international outsourcing of routine tasks led to declines in employment in the major goods-producing industries. Projections from the Bureau of Labor Statistics indicate that U.S. employment growth will continue to be strongest in healthcare and social assistance, professional and business services, and other service industries. Construction employment will grow with the economy but manufacturing employment will decline. These trends are also expected to affect the composition of Oregon’s economy.</p>	<p>The changes in employment in Lane County have followed similar trends as changes in national and state employment. The sectors with the greatest change in share of employment since 1980 were Services, adding more than 45,500 or 85% of new jobs. Industrial sectors and Government added more than 8,000 jobs, accounting for about 15% of new jobs.</p> <p>Oregon Employment Department forecasts that the sectors likely to have the most employment growth over the 2010 to 2010 period are: Health Care & Social Assistance, Local and State Government, Retail Trade, Professional and Business Service, and Accommodation and Food Services. These sectors represent employment opportunities for Lane County.</p>
<p>Lack of diversity in Oregon’s economy</p> <p>Oregon’s economy has diversified since the 1960’s but Oregon continues to rank low in economic diversity among states. A recent analysis, based on 2007 data, ranked Oregon 31st.</p> <p>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.</p>	<p>Employment in Eugene is concentrated in a few sectors: Government, Health Care and Social Assistance, Retail Trade, and Manufacturing. Employment in the government and health care sectors tends to be stable, well-paying employment. Employment in Manufacturing is generally well-paying but may be volatile.</p> <p>Eugene’s employment in traded-sectors is concentrated in Government (the University of Oregon), Health Care, Manufacturing and Professional Services.</p> <p>Opportunities for growth of traded-sector employment include: manufacturing of “green” products, specialty food processing; high tech; traded-sector services; and forest products.</p>

National, State, and Regional Economic Trends	Implications for economic growth in Eugene
<p>Importance of small businesses in Oregon's economy</p> <p>Small business, with 100 or fewer employees, account for 51% of private sector employment in Oregon. Workers of small businesses typically have had lower wages than the state average.</p>	<p>Businesses with 100 or fewer employees account for 70% of private employment in Eugene. Businesses with 9 or fewer employees account for 18% of private employment in Eugene.</p> <p>Growth of small businesses presents opportunities for economic growth in Eugene.</p>
<p>Availability of trained and skilled labor</p> <p>Businesses in Oregon are generally able to fill jobs, either from available workers living within the State or by attracting skilled workers from outside of the State.</p> <p>Availability of labor depends, in part, on population growth and in-migration. Oregon added more than 980,000 new residents and about 475,000 new jobs between 1990 and 2008. The population-employment ratio for the State was about 1.6 residents per job over the 18-year period.</p> <p>Availability of labor also depends on workers' willingness to commute. Workers in Oregon typically have a commute that is 30 minutes or shorter.</p> <p>Availability of skilled workers depends, in part, on education attainment. About 28% of Oregon's workers have a Bachelor's degree or higher.</p>	<p>Employment in Lane County grew at about 1.7% annually over the 1990 to 2007 period, while population grew at about 1.1% over the same period. Eugene's population, however, grew at 1.8% annually over the 18 year period. This growth pattern is consistent with Eugene's status as the regional employment center.</p> <p>Eighty-five percent of workers in the Eugene lived in Lane County, with nearly half of workers living within Eugene. Firms in Eugene attracted workers from the Willamette Valley, from Portland southward.</p> <p>Eugene's residents were more likely to have a Bachelor's degree or higher (41%) than the State average (28%).</p>

National, State, and Regional Economic Trends	Implications for economic growth in Eugene
<p>Aging of the population</p> <p>The number of people age 65 and older will more than double between 2010 and 2050, while the number of people under age 65 will grow only 20 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.</p> <p>People are retiring later than previous generations, continuing to work past 65 years old. This trend is seen both at the national and State levels. Even given this trend, the need for workers to replace retiring baby boomers will outpace job growth. Management occupations and teachers will have the greatest need for replacement workers because these occupations have older-than-average workforce.</p>	<p>The changes in the age structure in Eugene are similar to the State, with the most growth in people 45 years and older. Eugene had a larger share of people aged 20 to 29 and a smaller share of people between 40 and 69 years than the State average.</p> <p>The State projects the share of the population over the age of 60 in Lane County will double between 2000 and 2030.</p> <p>Firms in Eugene will need to replace workers as they retire. Demand for replacement workers is likely to outpace job growth in Eugene, consistent with State trends.</p>
<p>Increases in energy prices</p> <p>Energy prices are forecast to return to relatively high levels, such as those seen in the 2006 to 2008 period, possibly increasing further over the planning period.</p>	<p>Increases in energy prices are likely to affect the mode of commuting before affecting workers' willingness to commute. For example, commuters may choose to purchase a more energy efficient car, use the train, bus, or carpool.</p> <p>Very large increases in energy prices may affect workers' willingness to commute, especially workers living the furthest from Eugene or workers with lower paying jobs.</p>

National, State, and Regional Economic Trends	Implications for economic growth in Eugene
<p>Comparatively low wages</p> <p>The income of a region affects the workforce and the types of businesses attracted to the region. Average income affects workers and businesses in different ways. Workers may be attracted to a region with higher average wage or high wage jobs. Businesses, however, may prefer to locate in regions with lower wages, where the cost of doing business may be lower.</p> <p>Since the early 1980's, Oregon's per capita personal income has been consistently lower than the U.S. average. In 2007, Oregon's per capita wage was 91% of the national average.</p>	<p>Per capita income in Lane County was lower than the State and national averages.</p> <p>Income in Oregon has historically 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 (in part due to the presence of a large number of college students). To a certain degree, these factors are all true for both Oregon and Lane County and result in lower income.</p> <p>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 and Lane County that are dependent on natural resources (e.g., timber and wood processing or R.V. manufacturing).</p> <p>The lower wages in Eugene may be attractive to firms that typically pay lower wages, such as call centers or firms that outsource professional services such as accounting or technical support.</p>

National, State, and Regional Economic Trends	Implications for economic growth in Eugene
<p>Education as a determinant of wages</p> <p>The majority of the fastest growing occupations will require an academic degree, and on average they will yield higher incomes than occupations that do not require an academic degree. The fastest growing of occupations requiring an academic degree will be: computer software application engineers, elementary school teachers, and accountants and auditors. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for about half of all jobs by 2018. These occupations typically have lower pay than occupations requiring an academic degree.</p>	<p>Eugene’s residents were more likely to have a Bachelor’s degree or higher (41%) than the State average (28%).</p> <p>The relatively low wages in Eugene are the result of the composition of the regional economy, rather than the availability of workers with an academic degree. Increasing the relatively low wages in the region are dependent on changing the composition of the regional economy, through growing or attracting businesses with higher paying occupations.</p>
<p>Importance of high quality natural resources</p> <p>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.</p>	<p>The region’s high quality natural resources present economic growth opportunities for Eugene, ranging from food and beverage production to amenities that attract visitors and contribute to the region’s high quality of life.</p>

4 ASSESSMENT OF EUGENE'S ECONOMIC POTENTIAL

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, competitive advantages affect the pattern of economic development in a region relative to other regions. Goal 9 and OAR 660-009-0015(4) recognize this by requiring plans to include an analysis of the relative supply and cost of factors of production.⁵⁵ An analysis of competitive advantage depends on the geographic areas being compared. In general, economic conditions in Eugene will be largely shaped by national and regional economic conditions affecting the Willamette Valley. Many of these are discussed in the preceding chapter.

Oregon and Eugene to help establish the context for economic development in Eugene. Local economic factors will help determine the amount and type of development in Eugene relative to other communities in the Willamette Valley and Oregon. This chapter focuses on the competitive advantages of Eugene for attracting businesses relative to the Willamette Valley and Oregon.

4.1 Location

Eugene, the second-largest city in Oregon with a population of approximately 157,010 people in the city limits in 2011 plus approximately 20,000 people living within Eugene's portion of the UGB, is located in the Southern Willamette Valley⁵⁶. Interstate 5 runs to the east of Eugene, Highway 126 runs east-west through Eugene, and Highway 99 runs north-south through Eugene. Eugene is located generally south and west

⁵⁵ 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." This Chapter of the EOA considers potential advantages and disadvantages referenced in the OAR and Goal, along with other factors important for assessing Eugene's economic potential for accommodating the needs of possible employers.

⁵⁶ 2011 population estimates from PSU Population Center, 2011 Annual Population Report Tables. <http://pdx.edu/prc/population-estimates-0>. Accessed September 4, 2012.

of the Willamette River. Eugene's location will impact Eugene's future economic development:

- Eugene shares a border with Springfield, the 9th largest city in the State of Oregon, with approximately 59,695 people in the city limits in 2011. The Eugene-Springfield Metropolitan Statistical Area (MSA), which includes all of Lane County, had more than 353,000 people in 2011, accounting for 9% of Oregon's population.
- Eugene has easy access to the State's highway system and other transportation opportunities. In addition to the multiple freeways running by and through the City, residents and businesses can access other modes of transportation in Eugene, including the Eugene Airport, Greyhound bus service, and Amtrak passenger rail service.
- Eugene is located at the southern end of the Willamette Valley. It is the largest city on I-5 between Portland and Sacramento.
- Residents of Eugene have easy access to shopping, cultural activities, indoor and outdoor recreational activities, and other amenities in Eugene, Springfield, and rural Lane County.
- Eugene residents have several nearby opportunities for post-secondary education, including: the University of Oregon, Lane Community College, Northwest Christian University, and Gutenberg College.
- Businesses in Eugene have access to natural resources, such as wood products or agricultural products, from resource lands in western Oregon.

Eugene's location, access to I-5, urban amenities, the presence of the University of Oregon, and access to natural resources are primary competitive advantages for economic development in Eugene.

4.2 Availability of Transportation Facilities

Businesses and residents in Eugene 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).

Eugene has excellent automotive access for commuting and freight movement. Eugene is located along Interstate 5, the primary north- south transportation corridor on the West Coast, linking Eugene to domestic markets in the United States and international markets via West Coast ports. In west Eugene, Highway 99 connects Eugene with Junction City, Harrisburg, and rural areas to the north. Businesses and residents of Eugene also have access to Highway 126, connecting Florence to the Bend/Redmond area, and Highway 58 in Pleasant Hill.

Other transportation options in Eugene are:

- **Rail.** Union Pacific rail lines serve Eugene, providing freight service. Amtrak passenger service is also available, connecting Eugene to cities all across the west coast. The train station is located immediately northwest of downtown Eugene. Union Pacific Railroad provides freight service to Eugene businesses. The Eugene Rail yard is located in northwest Eugene off the NW Expressway.
- **Transit.** The Lane Transit District (LTD) provides transit service to the Eugene-Springfield region. LTD serves Eugene with multiple bus lines, both within Eugene and connecting Eugene to Springfield and other outlying communities such as Junction City, Coburg, Veneta, and Cottage Grove. LTD's bus rapid transit (BRT) system, called EmX, provides service between Eugene Station and Springfield Station as well as between Springfield Station and the RiverBend Hospital/Gateway Mall area. LTD is currently in the design phase for expanding EmX service to West Eugene via 6th/7th, Garfield, and West 11th Avenues.
- **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 four commercial airlines, and is the primary airport for a six county region.

Transportation is a competitive advantage that primarily affects the overall type of employment and its growth in Eugene.

4.3 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 within a region. These factors are: the availability and cost of labor, transportation, raw materials, and capital. The availability and cost of these production factors are usually similar within a region.

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

The public facilities in this section describe Eugene's pollution control measures, which are designed to comply with the standards and requirements of Oregon's Department of Environmental Quality (DEQ) and national regulations such as the Clean Water Act or the Clean Air Act.

4.3.1 Water

Eugene's water provider is the Eugene Water and Electric Board (EWEB). EWEB provides water from the McKenzie River to nearly 200,000 consumers. EWEB's Hayden Bridge Water Filtration Plant is the largest full-treatment plant in the State. The plant added an extra 15 million gallon reservoir and a 120 million-gallon-per-day pump station in May 2003. The plant can sustain treating 72 million gallons of river water per day. EWEB maintains 35 miles of pipelines and 754 miles of mains, and relies on 27 covered reservoirs, holding nearly 100 million gallons of water.

EWEB's Water Management Services (WMS) leads the efforts to manage water resources and the supply infrastructure to ensure an adequate supply for the City of Eugene. WMS focuses on maintaining an adequate supply and product education. WMS works to ensure that water system capital investments are timed to match growth and are not installed before necessary. WMS also coordinates product education to provide customers the information they need to efficiently manage their water use.⁵⁷

⁵⁷ EWEB Facts and Figures 2007. <http://www.eweb.org/About/facts/EWEB_facts.pdf>

EWEB currently has rights on the McKenzie River for 300 cubic feet of water per second and has seen peak usage of around 100 cubic feet of water per second. EWEB's contractual water rights are projected to be sufficient for 100 years.

The Hayden Bridge Filtration Plant in east Springfield is EWEB's water treatment plant. The plant is currently undergoing an expansion that will increase the capacity to more than 80 million gallons per day. Peak summertime water demand has come close to the pre-expansion capacity of 68 million gallons per day. The Hayden Bridge expansion meets Eugene's water needs for the next 30 years, and similar expansions are planned for 2039 and 2050.⁵⁸

4.3.2 Wastewater

The Metropolitan Wastewater Management Commission (MWMC) manages the wastewater treatment facilities serving Eugene. The Water Pollution Control Facility in Eugene is designed to treat 50 million gallons of wastewater per day during dry weather and 200 million gallons per day during wet weather.

MWMC facilities were recently expanded to satisfy projected growth through 2025. The expanded system has a 277 million gallon peak day wet weather capacity.

4.3.3 Air Quality

Air quality is regulated by the Lane Regional Air Protection Agency (LRAPA) for Lane County. LRAPA complies with national air quality laws, as well as maintaining clean air consistent with local priority and goals. LRAPA carries out its mission to protect and enhance air quality through a combination of regulatory and non regulatory programs and activities. LRAPA's compliance activities include permitting, compliance and enforcement.

4.4 Land Supply

Businesses locating or growing in Eugene require land with a wide range of site characteristics. OAR 660-009 describes site characteristics as including (but not limited to): "a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a

⁵⁸ Eugene Water and Electric Board. *From Source to Tap: 2008 Consumer Confidence Report*. <http://eweb.org/public/documents/water/WaterQualityReport.pdf>

particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes.” Each business has preferences for site characteristics that are unique to the business.

Business’ locational decisions are an indicator of whether Eugene’s land base meets the needs of businesses that want to expand or locate within the Willamette Valley in general and in Eugene in particular. Many businesses have grown, expanded, and located in Eugene over the past decade. This section presents examples of businesses that have considered expanding or locating in Eugene but chose to locate elsewhere. It includes discussion of the types of sites, focusing on size of site, that these types of businesses require when deciding where to locate.

4.4.1 Businesses that Relocated Outside of Eugene

The limited land supply in Eugene, especially in industrial zoned lands of a certain parcel size (10 acres and greater) with easy access to utilities and transportation may be a constraining factor for future employment growth opportunities. Industrial and general employment businesses that have relocated because of limited land supply or regulatory barriers include:

- **Rexius** is a local wood products, yard debris recycling, and landscaping company which has been headquartered in West Eugene since the early 1930s. Over time, the company’s growing production and shop facilities became surrounded by incompatible commercial and residential development. In the mid 2000’s, Rexius began looking for a suitable site on which to relocate these aspects of the business. After attempting to locate in the industrially zoned northwest corridor of Eugene, Rexius moved its operations to a suitable site in Coburg in 2011. The total size of that site is over 100 acres. There was no such site available in Eugene.
- **Grain Millers** is a manufacturer of grains produced in the Willamette Valley. Grain Millers has been located near Eugene’s downtown since the 1980’s, although the silos it used were constructed in the 40’s. In the mid-2000’s, Grain Millers started searching for a new location for their operation. They needed a larger site that would allow them more room for train cars and other processing operations.

They searched for sites in Eugene and other parts of the Willamette

Valley. They could not find a site in Eugene to match their needs. The site they identified for expansion is located in Junction City, along Highway 99. The site is about 100 acres in size, with about 50 acres of land suitable for development. The site gives Grain Millers access to rail lines, as well as the space to maneuver trains within the site.

- **Symantec** is a software company that operated a service center in downtown Eugene until 2002. At that time the company moved approximately 550 high tech jobs to a 14+ acre Springfield parcel.
- **Peace Health** is one of two organizations with hospital facilities in the Eugene-Springfield area. Peace Health established a hospital in Eugene in the 1930's. Around 2004, Peace Health started searching for a site to build a new, larger hospital facility in the Eugene-Springfield region.

PeaceHealth considered different sites in Eugene, including a Crescent Drive site, a downtown redevelopment site, and a 2nd and Chambers redevelopment site, but these sites required land assembly and/or ran into political opposition at the local level based, primarily, on compatibility issues.

Peace Health ultimately built its new hospital in Springfield, the Sacred Heart Medical Center at RiverBend on 180 acres. Peace Health's facility in Eugene continues to function at a reduced capacity, as the Sacred Heart Medical Center University District.

4.4.2 Businesses That Considered Locating in Oregon

One of the key factors that businesses consider when making decisions about where to locate is the availability of vacant, large, and flat parcels of land. Table 17 shows examples of traded-sector firms that considered locating in Oregon and Southern Washington since 1997. Table 17 shows that firms looking for office or flex space required sites from 30 acres up to more than 100 acres. Warehouse and distribution firms looked for sites between about 50 and 200 acres. Manufacturing firms required sites from 25 acres to 250 acres in size.

These firms are similar to the types of firms with potential growth in the Eugene area. Few, if any, of these firms considered locating in Eugene, in part, because the City does not have a selection of sites meeting the requirements of these businesses.

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

Table 17. Examples of firms that considered locating in Oregon and Southern Washington between 1997 and 2010

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

Source: Business Oregon

According to information from Business Oregon and the Lane Metro Partnership, the following types of businesses considered locating in the Eugene-Springfield region over the last five to seven years:

- **Solar module and energy chemical manufactures.** One firm was looking for a 10 to 20 acre site for about 400 jobs (for an employment density of between 20 to 40 employees per acre). The other firm was looking for a 65 acre site (for about 300 jobs for an employment density of about 5 employees per acre).
- **Food processing and distribution firms.** One firm was looking for a 30 acre or larger site for about 200 jobs (for an employment density of about 7 employees per acre).
- **Life science and biopharmaceutical manufacturing.** The firm was looking for a site of about 60 acres with an estimate of 1,000 jobs (for an employment density of about 17 employees per acre).

- **Other manufacturing.** Several other manufacturing firms considered locating in the region, with site needs ranging from about 10 acres to 25 acres, with one firm looking for more than 200 acres. The employment density for manufactures was generally between 2 to 12 employees per acre, averaging about 6 employees per acre.

4.4.3 Site Needs of Businesses that May Consider Locating in Oregon or the Eugene-Springfield Region

Table 18 shows the characteristics required to make a site competitive for businesses considering locating or expanding in Oregon, based on information from Business Oregon. Sites for most manufacturing uses are generally between 10 acres to 50 acres. Some large industrial uses, such as businesses in the renewable and clean energy sector, require sites of 100 acres. Regional distribution centers require sites of 200 acres. Industrial users need sites that are relatively flat, generally with a slope of 5% or less.

Table 18. Site characteristics of common business types in Oregon

Industry Sector	Site size* (Acres)	Site Topography (Slope)	Site Access Max distance in miles to interstate or major arterial	Utilities (Min. line size in inches) Water / Sanitary Sewer
Regionally to Nationally Scaled Clean-Tech Manufacturer	50	0-5%	10	10 / 10
Globally Scaled Clean Technology Campus	100	0-5%	10	10 / 10
Heavy Industrial/ Manufacturing	25	0-5%	10	8 / 8
General Manufacturing	10	0-5%	20	8 / 8
Food Processing	20	0-5%	30	10 / 10
High-tech Manufacturing or Campus Industrial	25	0-7%	15	10 / 10
Regional (multistate) Distribution Center	200	0-5%	5 Only Interstate highway or equivalent	4 / 4
Warehouse/Distribution	25	0-5%	5 Only Interstate highway or equivalent	4 / 4
Call Center / Business Services	3	0 to 12%	Not applicable	4 / 4

Source: Business Oregon

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

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

Table 19 shows examples of business park sites in the Portland Metro area. Business parks in the Portland area generally range in size from 25 acres to 75 or 100 acres in size. Some of the business parks are primarily industrial (e.g., Beaverton Creek, Columbia Commerce Park, or Southshore Corporate Park), some are primarily commercial (e.g., Creekside Corporate Park or Nimbus Corporate Center), and some are office and flex space (e.g., Cornell Oaks Corporate Center)

Table 19. Examples of business park sites, Portland Metro area

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

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

In addition, the Portland Metro area has the following types of major employment sites, on sites ranging from 25 to more than 500 acres:⁵⁹

- **General industrial.** The Portland region has 21 general industrial major employment sites, ranging in size from 25 acres to 164 acres and averaging 53 acres. Firms on these sites range from beverage

⁵⁹ These examples are documented in the Portland Metro 2009-2030 Urban Growth Report, Appendix 4

manufacturers to construction product manufacturers to specialty manufacturing enterprises.

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

4.5 Eugene's Competitive Advantages

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

There is little that Eugene can do to influence national and state conditions that affect economic development. However, Eugene can influence local factors that affect economic development. Eugene's primary competitive advantages are: location, access to transportation, access to highly educated and skilled labor, University of Oregon, existing business clusters, quality of life, and public policy. These factors make Eugene attractive to residents and businesses that want a high quality of life where they live and work.

Eugene's location within the Willamette Valley and proximity to natural resources (e.g., lumber or ocean-products), access to outdoor recreational opportunities, and reputation as "Track Town" make Eugene a unique place to live and do business. These factors are key to Eugene's competitive advantages, as summarized below:

- **Location.** Eugene is located in Lane County, west of I-5 and adjacent to Springfield. Eugene is Oregon's second largest city, located in one of Oregon's most populous metropolitan areas, with more than 350,000 people or about 9% of the state population. Eugene is home to the University of Oregon, the largest state university in Oregon. Businesses in the City have

access to natural resources from surrounding rural areas, such as agricultural products, lumber, and other resources.

- **Transportation.** Businesses and residents in Eugene have access to a variety of modes of transportation: automotive (I-5, Highways 99 and 126, and local roads); rail (freight service from Union Pacific and passenger service with Amtrak); transit (LTD buses and bus rapid transit); and air (Eugene Airport).

Businesses that need relatively easy automotive access to I-5 and other major roads in the region may be attracted to Eugene. The distance from some industrial areas, especially those in western Eugene, to I-5 may discourage some types of firms, such as warehousing and distribution, from locating in Eugene.

- **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.

Businesses in Eugene have access to highly educated skilled workers, University of Oregon students, and unskilled workers. The University of Oregon may result in spin-off companies or attract entrepreneurs to Eugene. These businesses will need access to Eugene's pool of skilled labor.

Commuting is common in the Eugene-Springfield region. More than half of Eugene's workers live outside of Eugene. The commuting patterns show that businesses in Eugene are able to attract skilled and unskilled workers from across the Eugene-Springfield region.

- **University of Oregon.** The University of Oregon creates a range of economic advantages for Eugene. Businesses that need access to educated workers (e.g., software publishers, engineering companies, and other professional, technical services) benefit from access to graduating students. The University contributes to Eugene's quality of life through its cultural amenities and sporting events, making Eugene more attractive to businesses that want to locate in a high-quality setting and likely to hire advanced degree-holders. The University increases Eugene's visibility and national profile.
- **Existing business clusters.** Eugene has existing clusters of natural resource manufacturing (e.g., wood products manufacturing or metals manufacturing), food and beverage manufacturing and distribution, sporting goods manufacturing,

and social science research. These business clusters provide opportunities for the growth of additional businesses in these and related businesses.

- **Access to natural resources.** Eugene is located in an agricultural valley, about one hour from the Oregon Coast and a little more than an hour from the Cascade Mountains. Businesses that need natural resource inputs (e.g., lumber, forest products, seafood or ocean products, or agricultural products) may choose to locate in Eugene.
- **Quality of life.** Eugene’s high quality of life and urban amenities are a competitive advantage for attracting businesses to the City. Eugene’s quality of life attributes include: access to outdoor recreation, a mild climate, cultural amenities (e.g., the Hult Center for the Performing Arts, programs at the University of Oregon, and other performing arts venues), sporting events, shopping opportunities, quality of the school system, and availability of parks and open space. Eugene’s high quality of life is likely to attract businesses and entrepreneurs that want to locate in a high-amenity area.
- **Attraction to visitors.** Eugene’s access to outdoor recreation, “Track Town” athletic identity and events, presence of viticulture, and fast-paced growth among its craft breweries make Eugene attractive to tourists. Industries that serve tourists, such as food services and accommodations, are likely to grow if tourism increases.
- **Public policy.** Public policy can impact the amount and type of economic growth in a community. The City can impact economic growth through its policies about the provision of land and redevelopment. Success at attracting or retaining firms may depend on availability of attractive sites for development and public support for redevelopment. In addition, businesses may choose to locate in Eugene (rather than in a different part of the Southern Willamette Valley) based on: City’s tax policies, development charges (i.e., systems development charges), availability of public infrastructure (i.e., transportation or sanitary sewer), and attitudes towards businesses.

Eugene’s comparative advantages, as they relate to the nation, are similar to Oregon’s comparative advantages. Compared to Oregon, Eugene’s labor force has higher levels of educational attainment and lower unemployment but lower than average pay. Some businesses in Eugene are experiencing difficulties in finding or recruiting some types of skilled

workers to the region, but many of its high-tech firms are still managing to hire sufficiently skilled workers to grow their businesses. As a regional center, the City of Eugene has a full range of services to support businesses and a full complement of amenities to offer a high quality of life.

Factors that will influence the quality of future employment growth include: (1) the quality of local education, the success of local and state “P-20” (an educational concept of pre-Kindergarten through postsecondary education and workforce participation) initiatives, (2) job retraining services, and (3) an ability to develop and retain high-tech firms.

The factors that may constrain employment and economic growth in Eugene are: (1) availability of affordable housing, especially workforce housing, (2) a comparatively small commercial and industrial land supply, and (3) lack of large sites for industrial and other large employers.

The limited land supply in Eugene, especially in industrial zoned lands of a certain parcel size (10 acres and greater) with easy access to utilities and transportation may be a constraining factor for future employment growth opportunities. Businesses that have relocated because of limited land supply or regulatory barriers include Rexius, Grain Millers, Symantec, and Peace Health. In addition, Oregon Business reported between June 2010 and September 2011 that 2 of the 10 development opportunities lost required more than 50 acres, a site size of which Eugene has no inventory in 2012.

4.6 Summary of Production Factors That May Affect Economic Development in Eugene

Table 20 provides a summary of production factors in Eugene as well as comments on local opportunities and constraints. It also discusses implications of each factor for future economic development in Eugene.

Table 20. Summary of production factors and their implications for Eugene

Category	Opportunities	Challenges	Implications
Labor	<ul style="list-style-type: none"> • Access to labor from across the Eugene-Springfield Region • Highly educated labor force 	<ul style="list-style-type: none"> • Commuting within the Eugene-Springfield region 	<p>The City has access to labor from the region. 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.</p> <p>Firms that need access to the regional labor market may benefit from additional sites located near I-5.</p>
Land	<ul style="list-style-type: none"> • Opportunities for redevelopment, especially in Downtown 	<ul style="list-style-type: none"> • Availability of commercial land and parcels larger than 25 acres of commercial or industrial land • Distance between I-5 and undeveloped industrial land 	<p>Firms that prefer large, undeveloped parcels near highways or major arterials such as warehousing and distribution or manufacturers that require freight access are unlikely to locate in Eugene under current conditions because of a lack of suitable sites larger than 10 acres with necessary transportation access.</p>

Category	Opportunities	Challenges	Implications
Local infrastructure	<ul style="list-style-type: none"> • Proximity to I-5 and Highways 99 and 126 and availability of freight shipping by rail • Opportunities for transportation via transit, bicycle, and pedestrian • Access to electricity produced in the Northwest, which is typically less expensive than electricity produced in other regions • Access to the national energy distribution system, including distribution of natural gas, gasoline, heating oil, and electricity • Availability of existing infrastructure in areas for redevelopment 	<ul style="list-style-type: none"> • Cost of providing new infrastructure • Cost of providing transportation infrastructure in support of the existing commuting patterns within the region • Cost of energy, both electricity and gasoline, is subject to increases in prices at the regional level (the Pacific Northwest) and the national level 	<p>The cost of providing infrastructure to support employment growth will be an issue for both greenfield development and areas with redevelopment.</p> <p>The City Council will need to make policy decisions about how to fund infrastructure to accommodate employment growth.</p> <p>There is a larger, regional issue that the City will need to work with Lane County and neighboring communities to address: If Eugene continues to be the economic center of the region and workers continue to commute to Eugene from outlying cities, how will the necessary upgrades to transportation infrastructure be funded?</p> <p>Updates to Eugene’s Transportation System Plan are underway to implement Eugene’s local Comprehensive Plan.</p>
Access to markets	<ul style="list-style-type: none"> • Proximity to I-5 and Highways 99 and 126 and availability of freight shipping by rail • Availability of air transportation from the Eugene Airport for transportation of people and small quantities of goods 	<ul style="list-style-type: none"> • Lack of sites with good transportation access, especially to I-5 	<p>Eugene’s highway and rail access is sufficient to attract firms that need access to markets via highways.</p> <p>Eugene is relatively unlikely to attract firms that need to move large quantities of freight via trucks on I-5.</p> <p>Eugene may attract firms that ship products via air freight if additional sites are provided near the Eugene airport.</p>

Category	Opportunities	Challenges	Implications
Materials	<ul style="list-style-type: none"> • Proximity to natural resources (e.g., timber or agricultural products) • Access to multiple rail lines 	<ul style="list-style-type: none"> • Cost of shipping raw and finished products 	Eugene may be attractive to manufacturers that need access to natural resources. However, firms dependent on highway access to transport large quantities of materials may not locate in Eugene until infrastructure needs are addressed.
Support Services	<ul style="list-style-type: none"> • Existing businesses that provide professional, construction, retail, telecommunication, and other necessary support services 	<ul style="list-style-type: none"> • Businesses that have specialized support service needs not currently met in the region may need to work with other businesses or organizations in the region to develop new support services 	Eugene is the economic center of the Southern Willamette Valley. Businesses in Eugene have access to a full range of business services.
Entrepreneurship	<ul style="list-style-type: none"> • Presence of the University of Oregon • Quality of life • Availability of skilled workers at a cost that is lower than the national average 	<ul style="list-style-type: none"> • Lack of existing business clusters to support some growth industries that may appeal to entrepreneurs, such as biotech, software development, or clean energy manufacturing 	Eugene may be attractive to entrepreneurs who value the City's quality of life attributes, access to outdoor recreation, and other locational attributes.
Regulation	<ul style="list-style-type: none"> • Eugene has an existing policy framework that describes the development process in the City 	<ul style="list-style-type: none"> • The City may have difficulty overcoming the perception that Eugene is not business friendly. 	<p>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.</p> <p>The City plans to adopt its Economic Development Goals and Policies as part of the new comprehensive plan.</p>

Category	Opportunities	Challenges	Implications
Taxes and Fees	<ul style="list-style-type: none"> Taxes and fees can be used to fund infrastructure improvements necessary to retain and attract businesses. 	<ul style="list-style-type: none"> Comparatively high System Development Charges (SDCs) 	<p>Eugene 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 or taxes.</p> <p>Firms may choose to locate on land that investments and incentives are directed towards.</p>
Industry clusters	<ul style="list-style-type: none"> Existing business clusters in the region, such as business services, food and beverage manufacturing, and wood products 	<ul style="list-style-type: none"> Developing new clusters Availability of sites Transportation access Labor availability 	<p>Eugene can build off of existing business clusters, such as business services, to promote economic development. Elected officials have expressed a desire to develop businesses in targeted industries in Eugene.</p>
Quality of life	<ul style="list-style-type: none"> High quality of life, including access to recreation, proximity to cultural amenities, regional shopping opportunities and environmental quality 	<ul style="list-style-type: none"> Growth management challenges, such as balancing development with protection of environmental quality 	<p>Eugene’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.</p>
Innovative capacity	<ul style="list-style-type: none"> Educated regional workforce Existing professional and business service firms Proximity to the University of Oregon Existing businesses, clusters, and innovators in the Region 	<ul style="list-style-type: none"> Attracting and retaining good workers in the region Availability of higher-end housing and cultural amenities to attract creative class workers 	<p>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.</p>

4.7 Summary of Issues Considered in Developing Eugene’s Economic Development Policies

Goal 9 requires that cities must consider the following issues when developing comprehensive plan policies for economic development. The following summary describes the factors and where they are addressed in the EOA or other City of Eugene policies.

- **The health of the current economic base.** Chapter 3 describes the implications of national, state, and regional trends for Eugene’s economy. Sub-section 3.1.3 provides specific information about Eugene’s economic base.
- **Materials and energy availability and cost.** Sub-section 3.1.2 describes the importance to access to materials and long-range trends in energy availability and costs.
- **Labor market factors.** Subsection 3.1.3.1 describes the labor market factors that affect availability of workers for businesses in Eugene.
- **Educational and technical training programs.** Subsection 3.1.3.1 describes educational attainment for residents of Eugene and educational and training opportunities in Eugene.
- **Availability of key public facilities.** Subsection 4.3 describes availability of transportation facilities and Subsection 4.3 describes availability water and wastewater facilities.
- **Necessary support facilities.** Subsection 4.2 and 4.3 describe support facilities necessary for businesses, such as access to the Eugene Airport or access to rail, as well as access to public facilities.
- **Current market forces.** Subsection 3.1.3.2 describe market forces and long-term employment trends in Lane County and Eugene.
- **Location relative to markets.** Subsection 4.1 describes Eugene’s location relative to markets and Subsection 4.2 describes transportation facilities that businesses in Eugene use to access markets.
- **Availability of renewable and non-renewable resources.** In Eugene, the renewable and non-renewable resource that the City’s target

industries may need are available within the Southern Willamette Valley region.

- **Availability of land.** The 2012 Employment Buildable Lands Inventory describes Eugene’s employment land base. Subsection 4.4 describes land characteristics of businesses that considered locating in Oregon.
- **Pollution control requirements.** Eugene’s water quality policies demonstrate the City of Eugene’s commitment to meeting federal and state pollution regulations. Businesses in Eugene is regulated by the Lane Regional Air Protection Agency for compliance with federal and state air pollution regulations.

4.8 Eugene’s Economic Development Policies

In the context of considering the adoption of this EOA document, Eugene and Lane County will consider adoption of the Envision Eugene Comprehensive Plan. That Plan will include the City’s economic development policies and text. The policies will provide direction in the City’s economic development planning and programs and provide a framework to implement the Economic Opportunity pillar of Envision Eugene.

In addition to other policies that are derived from the extensive citizen involvement program utilized by the City of Eugene for this project, the comprehensive plan policies and text to be adopted by the City and County will:

- State the overall objectives for economic development in the planning area;
- Identify categories or particular types of industrial and other employment uses desired by the community, based on the analysis in this EOA;
- State that a competitive short term supply of land is a community objective for the industrial and other employment uses selected through the EOA;
- Commit to designating an adequate number of employment sites of suitable sizes, types and locations;

- Commit to providing necessary public facilities and transportation facilities for the planning area, through public facilities planning and transportation system planning;
- Include detailed strategies for preparing the total land supply for development and for replacing the short-term supply of land as it is developed, including dates, events or both, that trigger local review of the short-term supply of land.

5 EMPLOYMENT GROWTH AND TARGET INDUSTRIES IN EUGENE⁶⁰

Goal 9 and its implementing rules require cities to prepare an estimate of the amount of employment land that will be needed over a 20-year planning period in terms of both acreage and number of sites. The estimate of employment land need, addressed in section 5.1, based on an “employee-per-acre” (EPA) approach. Section 5.2 describes the types of employers that Eugene is likely to, and wishes to, attract during the 20-year planning period.

5.1 Employment Forecast

Demand for commercial and industrial land will be driven by the expansion and relocation of existing businesses and new businesses locating in Eugene. The level of this business expansion activity can be measured by employment growth in Eugene. This chapter presents a projection of future employment levels in Eugene 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 Eugene’s UGB presented in Table 10. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in Eugene.
2. **Project total employment.** The projection of total employment over the 20-year planning period is based on the forecast published by the Oregon Employment Department. This basis for projecting job growth is endorsed as a “safe harbor” in State rules.
3. **Allocate employment.** This step involves allocating employment to different land-use types.

The employment projections in this Chapter build off of Eugene’s existing employment base, assuming future growth similar to the County’s past employment growth rates. The employment forecast does not take into account a major change in employment that could result from the location

⁶⁰ For purposes of this EOA, the term “target industries” refers to the types of employers identified as both likely to locate in Eugene (based on trends and considering the assessment of Eugene’s economic potential) and consistent with the City’s economic development objectives.

(or relocation) of one or more large employers in the community during the planning period. Major economic events, such as the successful recruitment of a very large employer, are very difficult to include in a study of this nature. Such a major change in the community's employment would be addressed through the City's growth monitoring program.

5.1.1 Employment Base for Projection

The forecast of employment growth in Eugene starts with a base of employment growth on which to build the forecast. Table 19 shows ECO's estimate of total employment in the Eugene UGB in 2010. To develop the figures, ECO started with estimated covered employment in the Eugene UGB from confidential QCEW (Quarterly Census of Employment and Wages) data provided by the Oregon Employment Department. Based on this information, Eugene had about 80,400 covered employees in 2010.

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 72% 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 determine the number of non-covered employees. This allowed us to determine the total employment in Eugene. Table 21 shows Eugene had an estimated 111,772 *total* employees within its UGB in 2010.

Table 21. Estimated total employment in the Eugene UGB by sector, 2010

Sector	Covered Employment	Estimated Total Employment	
		Employees	% of Total Emp.
Industrial	14,221	16,784	15%
Agriculture, Forestry, Fishing & Hunting	197	265	0%
Construction	2,191	3,601	3%
Manufacturing	7,338	7,369	7%
Wholesale Trade	3,499	4,102	4%
Transportation & Warehousing & Utilities	996	1,447	1%
Retail Trade	11,445	14,233	13%
Commercial (non-retail)	40,107	63,210	57%
Information	1,633	2,060	2%
Finance & Insurance	2,610	4,678	4%
Real Estate & Rental & Leasing	1,341	4,593	4%
Professional, Scientific, and Technical Services	4,419	9,001	8%
Management of Companies and Enterprises	1,630	1,669	1%
Admin. & Support & Waste Mgt. & Remediation Srv.	4,361	6,229	6%
Private Educational Services	1,191	2,817	3%
Health Care & Social Assistance	10,826	13,641	12%
Arts, Entertainment, & Recreation	1,094	2,982	3%
Accommodation & Food Services	7,362	8,055	7%
Other Services (except Public Administration)	3,640	7,485	7%
Government	14,665	17,545	16%
Total	80,438	111,772	100%

Source: 2010 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department.

Note: Covered employment as a percent of total employment calculated by ECONorthwest using data for Lane County employment from the U.S. Department of Commerce, Bureau of Economic Analysis (total), and the Oregon Employment Department (covered).

Employment Projection

The employment forecast covers the 2012 to 2032 period, requiring an estimate of total employment for Eugene in 2012. The recovery from the recent recession was weak between 2010 and 2012. As a result, we assumed that employment in Eugene did not change between 2010 and 2012. Based on this assumption, the 2012 employment base is 111,772 employees located within the Eugene UGB.

There is no required method for employment forecasting. OAR 660-024-0040(9) sets out some optional “safe harbors” for determining employment land need. A “safe harbor” is a State-endorsed, or pre-authorized, method of calculation.

Eugene is relying on the safe harbor at OAR 660-024-0040(9)(a)(A), which provides a method for determining Eugene’s employment growth rate by assuming that the current number of jobs in the Eugene urban area will grow during the 20-year planning period at a rate equal to “the county or regional job growth rate provided in the most recent forecast published by the Oregon Employment Department.” Table 22 shows the OED’s employment forecast for Lane County for 2012 to 2032, which has an average annual growth rate of **1.43%**.⁶¹

The City of Eugene is using the OED employment forecast growth rate (1.43% average annual growth) for Lane County for the 2012 to 2022 period as the basis for the forecast of future employment growth. This approach is consistent with OAR 660-024-0040(9)(a)(A).⁶²

Table 22 shows employment growth in Eugene between 2012 and 2032, based on the assumption that Eugene will grow at an average annual growth rate of 1.43%. Eugene will have 148,460 employees within the UGB by 2032, an increase of 36,688 employees (33%) between 2012 and 2032.

⁶¹ The OED’s newest employment forecast for Lane County became available in March 2014. Even before this forecast was available, Eugene was planning for employment growth at an average annual rate of 1.4% per year, based (in part) on historical growth rates in Lane County, as well as the Regional Prosperity Plan and developing local economic development policies.

⁶² The OED forecast for Lane County is available from the following link:

<http://www.qualityinfo.org/olmisj/PubReader?itemid=00003222>

Table 22. Employment growth in Eugene’s UGB, 2012–2032

Year	Total Employment
2012	111,772
2032	148,460
Change 2012 to 2032	
Employees	36,688
Percent	33%
AAGR	1.43%

Source: ECONorthwest

5.1.2 Allocate Employment to Different Land Use Types

The next step in forecasting employment growth is to allocate Eugene’s future employment among broad categories to provide better information for estimating the amount of land / sites that will be needed to accommodate Eugene’s future employees. We grouped employment into four broad categories based on North American Industrial Classification System (NAICS): industrial, commercial, retail, and government (as grouped in Table 19).

Table 23 shows the expected shares of employment in these four land use types in 2012 and the forecast of employment growth by these same land use types in 2032 in Eugene’s UGB.

The forecast shows growth in all categories of employment, with the most growth in industrial employment. This assumption is based on consideration of trends, the assessment of Eugene’s economic potential and on the City’s economic development policies that support the growth of traded-sector businesses. There is an expectation of continued growth in all employment categories but the City’s economic development policies target a higher rate of growth of industrial traded-sector businesses such as advanced manufacturing, food and beverage manufacturing, clean technology and renewable energy, as well as other types of manufacturing. To reflect the expectation that the City’s policy direction will lead to growth in the city’s share of such industrial jobs, the EOA assumes a modest increase in share of industrial employment. This modest increase is the only way in which Eugene’s target industries factor into the City’s estimate of land need.

Prior to the 2007-2009 recession, about 18% of Eugene’s employment was in industrial sectors. Growth of the share of industrial employment in Eugene will both replace industrial jobs that were lost in the recession and provide new industrial jobs. This type of employment growth is consistent with the

City's broad economic development goal of increasing household prosperity because industrial jobs typically have higher-than-average wages.

Table 23. Forecast of employment growth by land use type, Eugene UGB, 2011–2031

Land Use Type	2012		2032		Change 2012 to 2032
	Employment	% of Total	Employment	% of Total	
Industrial	16,784	15%	28,207	19%	11,423
Commercial	63,210	57%	81,654	55%	18,444
Retail	14,233	13%	17,815	12%	3,582
Government	17,545	16%	20,784	14%	3,239
Total	111,772	100%	148,460	100%	36,688

Source: ECONorthwest

Note: Land needed for government employment is addressed in the Public and Semi-public Land analysis, which is in a separate document. The remainder of this document does not address land needed for government employment.

5.2 Target Industries

An analysis of growth industries in Eugene 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 Eugene's economic objectives? As noted above, for Eugene, the term "target industries" refers to the types of employers that are both likely to locate in Eugene (based on trends and considering the assessment of Eugene's economic potential) and consistent with the City's economic development objectives. Through recent economic development work in Eugene and direction given by the Eugene City Council, the City has expressed that the types of industries that Eugene wants to attract at higher percentages than it has been able to attract in the past are those that offer: 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 Eugene's community values. The trend analysis and the assessment of Eugene's economic potential show that Eugene is well-suited to attract certain industries with these attributes.

The characteristics of Eugene will affect the types of businesses most likely to locate in Eugene. Some of Eugene's attributes that may attract firms are: the City's proximity to I-5, air service at the Eugene Airport, high quality of life, presence of the University of Oregon and Lane Community College, access to an educated workforce, availability of skilled and semi-skilled labor, and proximity to indoor and outdoor recreational opportunities. In addition, public investments that foster innovation, such as the Regional Accelerator and Innovation Network (Oregon RAIN), may affect the types of businesses that grow and expand in Eugene.

The selection of target industries is also based on Eugene's Economic Development Goals and Policies, economic conditions in Eugene and Lane County, and the City's competitive advantages.

The following are Eugene's target industries for accommodating new employees as found in the City's comprehensive plan:

- Advanced manufacturing
- Food and beverage manufacturing
- Health and wellness
- Clean technology and renewable energy
- Software and educational technology
- Biomedical and biotechnology

These industries more accurately represent clusters of industries, most including both industrial and commercial aspects, activities and employers. The purpose of identified industries within this EOA is to ultimately identify site characteristics of those employers, so that potential land can be accurately evaluated for its ability to serve those employers. In addition to these target industries, the City has a number of existing industries that it intends to continue supporting, but which are well served by the existing land supply. These industries include:

- Warehouse and distribution
- Construction
- Tourism
- Corporate or regional headquarters
- Service centers
- Back office functions
- Services for seniors
- Services for residents

Because land use is generally divided into industrial and commercial uses, those categories of employers are evaluated below for why they are likely to locate in Eugene and how they meet the City's economic development objectives.

- **Manufacturing.** Eugene's attributes (e.g., lower cost of electricity, availability of labor, and transportation access) are likely to attract manufacturing firms. The type and size of manufacturing firm may depend on land availability and the community's preferences for clean industries.

Examples of manufacturing include specialty apparel, metal fabrication, heavy machinery, high-tech electronics, avionics equipment, or recreational equipment.

Eugene's Economic Development Policies promote growth in the following types of manufacturing:

- **Advanced / High Tech Manufacturing.** Eugene's access to highly educated labor, access to comparatively inexpensive electricity, and high quality of life may make Eugene attractive to advanced manufacturing firms. The types of firms that may be attracted to Eugene range from specialized instruments to electric vehicles to optical systems to specialized computer and networking hardware.

- **Food and Beverage Manufacturing/ Processing.** Eugene’s proximity to agricultural resources and community values may make the City attractive to specialty food processing firms. In addition, Eugene participates in the Willamette Valley Farm and Food Coalition, which promotes the purchase of locally grown and produced foods. The types of specialty food and beverage companies that might locate in Eugene include those that specialize in organic or natural foods, breweries and wineries, or other locally grown foods (e.g., berries or grains).
- **Clean Tech and Renewable Energy.** The positive attitude about environmentally sustainable industries among residents of Eugene and the City government may make Eugene more attractive to firms involved in clean tech and renewable energy production. The types of businesses that may choose to locate or expand in Eugene include: firms engaged in clean tech and renewable energy product research and development, contractors involved in the installation of clean tech or renewable energy products, alternative energy production (e.g., manufacturing solar panels or bio-fuels), and other types of clean tech and renewable energy production.
- **Biomedical.** The presence of the University of Oregon, the highly educated workforce, and high quality of life in Eugene make it attractive to biomedical research and production firms.
- **Wood product manufacturing.** Eugene’s history of logging and access to raw lumber make it attractive to wood product manufacturers, such as firms that produce home and garden products, furniture, or paper.
- **Warehouse and distribution.** Eugene’s location along I-5, between Seattle and San Francisco, make the City attractive to warehouse and distribution businesses. The types of warehouse and distribution firms that may locate in Eugene include those that are part of or are serving the manufactures in Eugene and Springfield, as well as distribution firms serving businesses along the I-5 corridor.
- **Construction.** As the regional economic center of the Southern Willamette Valley, Eugene is likely to be the home of construction firms. Local attitudes and support for sustainable development may make Eugene more attractive to firms involved with sustainable construction, such as firms that use LEED-certified building practices, or that specialize in innovative, energy-efficient, or small housing products.

- **Professional and Technical Services.** Eugene’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, architecture and design, research, legal services, information technology services, and other professional services that are attracted to high-quality settings. Some specific examples are:
 - **Software Development.** Eugene’s access to highly educated labor, existing base of software firms, and high quality of life may make the City attractive to software development firms. Eugene may attract software publishers in a variety of industries, including gaming, industrial fabrication, education, medical software, inventory management, business productivity, web search and utilities, web and marketing, and other types of software development.
 - **Health and Wellness.** The growing population in and around Eugene, including the aging of the population, and the presence of hospitals in Eugene and in the broader region make Eugene attractive to health and wellness businesses. Eugene may attract health care professionals, alternative health care providers, care and assistance for seniors and disabled population, and businesses involved in active transportation and outdoor recreation.
 - **Corporate or Regional Headquarters.** Eugene’s quality of life, location along I-5, and availability of educated workers may make Eugene attractive as a place to locate corporate or regional headquarters.
 - **Service Centers.** The existing service center cluster may attract additional customer service centers to Eugene. The potential for growth in service centers in the Eugene-Springfield area will depend on the availability of skilled labor.
 - **Back-Office Functions.** Eugene’s high quality of life, availability of skilled labor, and relatively low wages may attract back-office functions, such as the Levi Strauss financial center. 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. Eugene 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 Eugene 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.
- **Services for seniors.** Eugene’s growing population of those near or in retirement may attract or create demand for health services that cater to the elderly, such as assisted living facilities, retirement centers, and medical services.
- **Services for Residents.** Population growth will drive development of retail, medical services, and government services, especially education, in Eugene.

The clusters of employers identified above and in Eugene’s economic development policies as “targeted industries” are those that both (1) are likely to be attracted to the Eugene-Springfield area and (2) best meet Eugene’s economic objectives.

6 LAND DEMAND AND SITE NEEDS

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

The rule does state that “[i]ndustrial or other employment uses with compatible site characteristics may be grouped together into common site categories.” OAR 660-009-0015(2). The rule suggests, but does not require, that the City “examine existing firms in the planning area to identify the types of sites that may be needed.” For example, site types can be described by: (1) plan designation (e.g., heavy or light industrial), (2) general size categories that are defined locally (e.g., small, medium, or large sites), or (3) industry or use (e.g., manufacturing sites or distribution sites). For purposes of the EOA, Eugene groups its future employment uses into categories based on their need for land of particular size within a broad plan designation (i.e., industrial or commercial).⁶³

This chapter provides an estimate of employment land needs based on information about the amount of employment growth that will require new land, employment densities, and land need by site size. This chapter provides a *demand-based* approach to estimating employment land needs. It projects employment land need using the forecast of employment growth and recent employment densities (e.g., the number of employees per acre) to estimate future commercial and industrial land demand.⁶⁴

This chapter is divided into two sections:

⁶³ Some of Eugene’s targeted industries have more specific needs. These are discussed in more detail in sub-section 6.1.2. The analysis of particular land to determine its suitability to meet these more particular needs is carried out as a next step, in the City’s Goal 14 work, not in the EOA.

⁶⁴ Eugene does not use Woodburn’s “target industry” approach to establish the number of acres and sites the City will need in its 2012-2032 Employment BLI. The methodology in this EOA (Section 6.1) is based on an “employees-per-acre [EPA] approach, under which a local government simply projects employment growth and divides that growth by a statistically accepted number of employees per acre of land in order to arrive at the number of acres needed to support employment growth.” *1000 Friends of Oregon v. LCDCC*, 260 Or App 444, 447-448 (2014). To arrive at a more accurate land need determination, the EPA calculation is performed separately for commercially-designated land and different size categories of industrially-designated land. In Section 6.2, this EOA identifies certain site characteristics needed to attract the City’s target industries. These characteristics will be a consideration in the City’s process of identifying which sites (not how many sites) to add to its 2012 employment land supply as identified in Part I of this Employment Land Supply Study.

- **Employment land demand.** Section 6.1 provides a forecast of commercial and industrial land demand based on the employment forecast in the prior chapter and the capacity of land with existing development to accommodate additional development based on recent employee-per-acre figures. This section shows that Eugene has a deficit of commercial land and of industrial land on sites larger than 10 acres.
- **Characteristics of sites needed to accommodate employment growth in Eugene.** Section 6.2 describes the most basic site characteristics needed by target industries based on the characteristics of existing employment sites in Eugene, businesses that relocated outside of Eugene, and businesses that considered locating in the Willamette Valley. These characteristics will be considered by the City in its process of identifying the sites to add to its employment land inventory to make up the deficit described above.

6.1 Employment Land Demand

This section presents an estimate of land needed for commercial and retail employment growth (i.e., employment generally locating on land designated for commercial uses) and for industrial employment growth (i.e., employment generally locating on land designated for industrial uses). It begins with a discussion of factors that may affect employment land demand in Eugene, such as employment densities. Based on these factors and the employment forecast, the section presents a forecast for commercial and industrial employment demand and land sufficiency.

6.1.1 Factors Affecting Employment Land Demand in Eugene

The following sub-section describes the characteristics of employment land in Eugene, as well as employment densities (number of employees per acre) at businesses in Eugene. Through the following sub-sections, the analysis of the characteristics of employment in Eugene refers both to employment data in 2013 (the most recently available data) and employment data from 2006, which was developed as part of ECLA.

We retain the analysis from 2006 for several reasons. Employment data from 2006 reflects changes in Eugene's economy as a result of the 2007-2009 recession. For example, comparing employment by industry using 2006 data and more recent data give an indication of decreases in efficient use of built space. This information informs the analysis of potential capacity for existing buildings to accommodate new employment.

In addition, if employment densities (number of employees per acre) changed significantly between 2006 and 2012, they likely decreased. The analysis of 2006 data reflects future densities based on longer-term growth patterns, rather than the results of the recent recession.

6.1.1.1 Employment Not Requiring New Employment Land

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

- **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.

In 2006, 15% of employment was located in residential plan designations.⁶⁵ About 10% of this employment was businesses located in non-employment plan designations (such as a corner store in a neighborhood) and about 5% was people working from home.⁶⁶ This estimate excludes workers that are not covered by unemployment insurance, such as sole proprietors. Although these workers may be more likely than covered employees to locate on land with non-employment designation, we do not have information about where non-covered workers are located.

This analysis assumes that 15% of new employment will occur outside of commercial and industrial built space or land, consistent with the historical trend.

- **Some employment growth will not require new commercial or industrial built space or land.** As firms add employees, they may fit many of them into existing office spaces. That would occur if current vacancy rates were much higher than average (because future employment growth could then be partially accommodated in existing built space until the natural, frictional vacancy rate were reached). It could also occur in occupied buildings through filling vacant cubicles or offices or increasing the density of use in existing workspaces (e.g., by adding new cubicles). There is no study that quantifies how much employment is commonly accommodated in existing built space over a 20-year period in a city.

There is no data that documents the amount of employment located in existing built space. The loss of jobs in the recent recession resulted in capacity in existing commercial and industrial buildings, which will decrease the demand for new building in the immediate future. Clearly some employment is accommodated through this type of intensification of existing

⁶⁵ This information is based on analysis of employment located in residential plan designations using Quarterly Census of Employment and Wages data from the Oregon Employment Department.

Residential plan designations include: High Density Residential, Medium Density Residential, and Low Density Residential.

⁶⁶ This information is based on analysis of employment located in residential plan designations using Quarterly Census of Employment and Wages data from the Oregon Employment Department.

built space but, equally clearly, not all employment can be accommodated this way.

The city lost more than 15,000 jobs during the recession, between 2006 and 2010. It is likely that some of the future job growth in Eugene could be accommodated in the existing built space that was vacated.

Table 24 shows the amount of jobs lost during 2006-2010 that could be accommodated through existing built space:

- **Commercial and retail.** We project that the vacant spaces resulting from commercial and retail jobs lost during the 2006 to 2010 period will be refilled with new employment growth.
- **Industrial.** Refill of built industrial space is not as efficient as refill of commercial space since industrial sites are often custom-built for special purposes. Due to re-purposing inefficiencies, we project that industrial built space will refill on sites smaller than 10 acres to only a portion of pre-recession capacity. Table 24 assumes that 3,454 new employees will locate in existing industrial built spaces, which is 55% of the industrial jobs that were lost during the 2006-2010 period.

Table 24. Estimate of infill of jobs in existing built space

	Infill in existing business		
	Number of jobs lost 2006-2010	Percent of lost jobs that will locate in existing built space	Jobs locating in existing built space
Industrial	6,334	55 %	3,454
Commercial	7,705	100%	7,705
Retail	1,187	100%	1,187
Total	15,226		12,346

Source: Analysis of Quarterly Census of Employment and Wages for 2006 and 2010, from the Oregon Employment Department

6.1.1.2 Employment Densities

The primary factor that Eugene considered in determining employment land demand is employment density, which is the ratio of labor to land. There are several ways to measure employment density. The City of Eugene used the **Employees per acre (EPA)** measurement. EPA is the total number of employees divided by the size of the site.

Table 25 shows EPA estimates by plan designation for employment in Eugene in 2006, based on employment density in selected, representative sample areas. 22 areas within Eugene’s UGB were selected and analyzed to estimate employment by plan designation. The sample areas represented a range of employment types, from dense development in downtown to less dense industrial areas, and include a little more than half of the employment in Eugene. The sample areas used to estimate employment by plan designation are shown in Map 1.

Table 25 shows that Eugene’s average employment density was 24 EPA in commercial and industrial plan designations. Density in commercial designations ranged from 36 EPA in the Commercial designation to 54 EPA in the Major Retail Center designation. The average employment density across all commercially-designated land was 39 EPA, with nearly three-quarters of employment in the Commercial designation, which had an average density of 36 EPA. The average employment density across all industrially-designated land was 13 EPA, ranging from 8 EPA in the Heavy Industrial and Special Heavy Industrial designations to 21 EPA in the Campus Industrial designation.

Table 25. Estimate of employees per acre (EPA) by plan designation in selected sample areas, Eugene, 2006

Plan Designation	Employees	Acres (net)	Employees per Net Acre
Commercial	46,369	1,181	39
Commercial	33,942	936	36
Major Retail Center	9,642	179	54
Mixed Use	1,642	37	45
Commercial Mixed Use	1,143	29	40
Industrial	21,904	1,716	13
Light Medium Industrial	11,502	730	16
Heavy Industrial & Special Heavy Industrial	6,524	799	8
Campus Industrial	3,878	188	21
EPA for Commercial and Industrial Plan Designations	68,273	2,897	24

Source: ECONorthwest based on analysis of Quarterly Census of Employment and Wages for 2006, from the Oregon Employment Department

The summary of employment density in Table 25 does not tell the full story about employment density in Eugene. Employment density of employment land varies substantially throughout Eugene, depending on the location and type of use. Table 26 shows EPA for several commercial office, retail, and industrial sites in Eugene (shown on Map 1).

Employment density in retail sites varied from 14 EPA at the retail area along West 11th at Seneca Road (the Fred Meyer’s shopping center) to 22 EPA at Valley River Center and Santa Clara Square. Oakway Center’s employment density was higher than most other retail sites in Eugene, at 37

EPA. Sites with a mixture of retail and office uses typically have higher employment densities, around 30 to 35 EPA.

Office employment densities are generally higher than retail employment densities, ranging from 30 EPA to higher. Table 26 shows office employment densities for established sites in and near Eugene’s downtown and along Country Club Road, where densities ranged from about 53 to 93 EPA. Office buildings in these areas are typically four stories or higher. Areas with two story office buildings are more likely to have employment densities closer to 30 to 40 EPA.

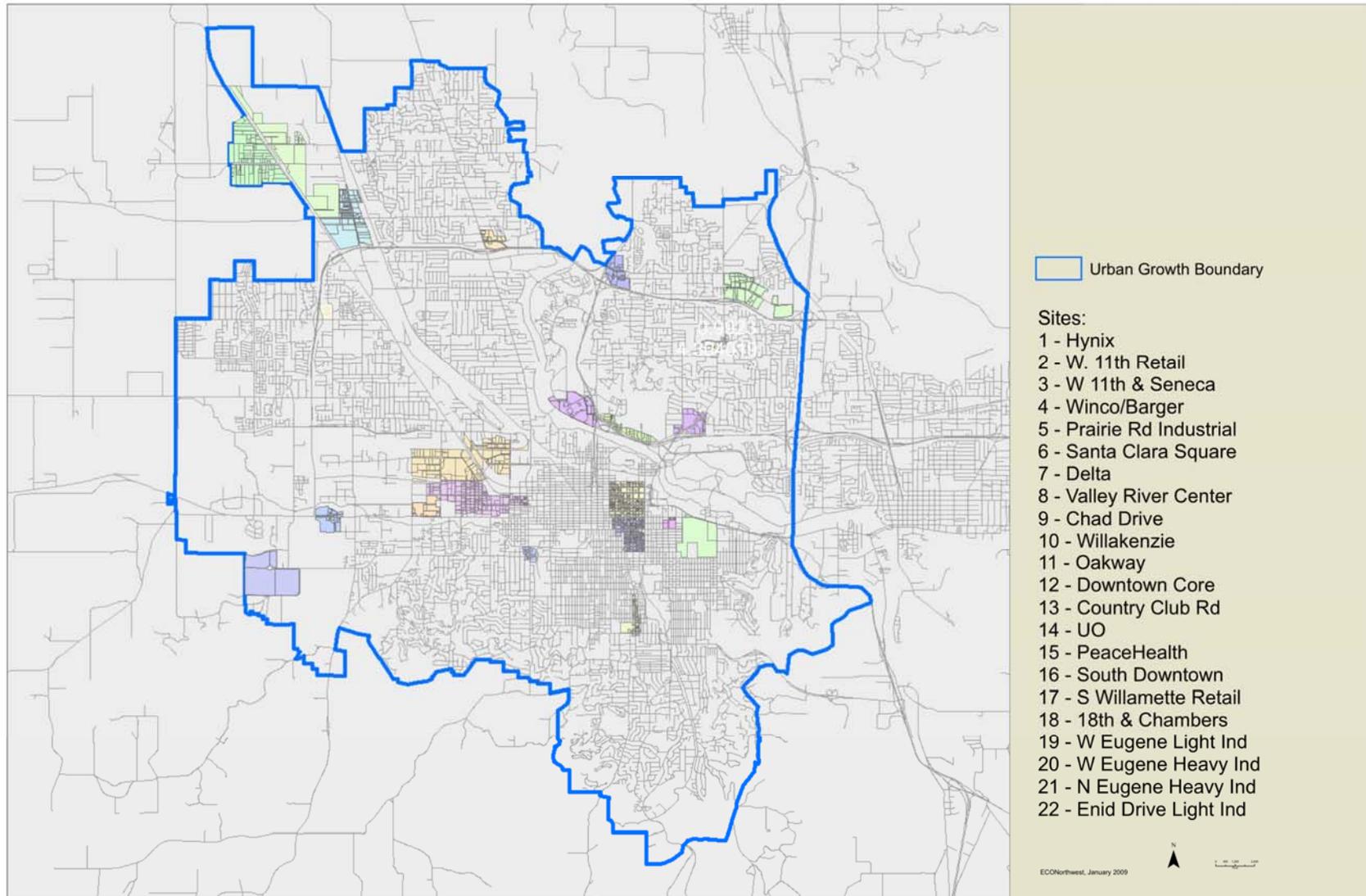
Table 26. Estimate of employees per acre (EPA) for sample sites, Eugene, 2006

Site Type	Site	Acres	Employees	Employees per Net Acre
Regional Retail Center				
	Valley River Center	89	1,990	22
Community Retail Center				
	West 11th Retail	49	780	16
	West 11th and Seneca St.	44	613	14
	Winco Shopping Center at Barger	12	251	21
	Santa Clara Square	32	682	22
	Delta	53	1,082	20
	Chad Drive	126	2,384	19
	Willakenzie	21	740	36
	Oakway	53	1,976	37
	South Willamette St.	33	1,160	35
	18th & Chambers	15	444	30
Other Commercial				
	Country Club Rd	37	2,854	77
Downtown				
	Downtown Core	93	8,689	93
	South of Downtown	64	3,390	53
Industrial				
	Prairie Road	165	1,168	7
	West Eugene Light Industrial	181	3,027	17
	Highway 99 Y Heavy Industrial	315	1,747	6
	North Eugene Heavy Industrial	289	956	3
	Enid Drive	240	1,118	5
	Chad Drive	126	2,384	19
Specialty				
	University of Oregon and PeaceHealth*	139	8,581	62
Total		2,177	46,016	21
Commercial		720	27,035	38
Industrial		1,317	10,400	8
Speciality		139	8,581	62

Source: ECONorthwest based on analysis of Quarterly Census of Employment and Wages for 2006 , from the Oregon Employment Department

*Note: The University of Oregon and Peace Health are combined to preserve confidentiality of employment data for Peace Health
Note: Table 24 does not include data about Hynix because of confidentiality of employment data

Map 1. Employment Density Sample Sites



Source: ECONorthwest based on analysis of Quarterly Census of Employment and Wages for 2006 , from the Oregon Employment Department

6.1.2 Commercial Land Demand and Sufficiency

The forecast of commercial land demand is based on information from the employment forecast (Table 23), the analysis of commercial employment need for new land (Table 27), and the analysis of employment densities (Table 26).

The first step in determining land need is to estimate the number of commercial jobs that will not require new (vacant) employment land. This estimate is derived by first establishing the number of new commercial employees and the number of those employees that will locate in non-employment designated lands (sub-section 6.1.1.2) and in existing built space (Table 24), then subtracting the latter number from the former. Table 27 presents this estimate of commercial employment that will not require vacant employment land. Table 27 shows:

- **New employment.** Table 23 shows that Eugene will add 22,026 employees in commercial and retail sectors over the 20-year planning period.
- **Employment locating in non-employment designations.** The analysis in sub-section 6.1.1.2 indicates that 15% of Eugene’s new commercial employment (3,304 employees) will locate in non-employment plan designations, mostly on land designated for residential uses. Ten percent of these employees will locate in residential land designations zoned for neighborhood commercial uses and 5% will locate in residences as home occupations.⁶⁷
- **Employment in existing built space.** Table 24 shows that 7,705 commercial employees and 1,187 retail employees will be fit into existing office and retail spaces or vacant commercial spaces. This estimate is based on the number of commercial jobs lost between 2006 and 2010, during the recent recession. This analysis assumes that Eugene has enough underutilized or vacant commercial space to accommodate these employees.

⁶⁷ These assumptions are based on analysis of the Oregon Employment Department’s Quarterly Census of Employment and Wages (QCEW) data presented in sub-section 6.1.1.2.

Table 27 shows that 55% of new commercial (including retail) employment will not require new employment land. Eugene will need to accommodate about 9,830 new commercial employees on new commercial land over the 20-year planning period.

Table 27. Estimate of commercial employment that will require new employment land, Eugene 2032

Land Use Type	New Employment Growth	Commercial Employment Growth not Requiring New Employment Land				Employment Requiring New Land
		Non-employment designations	Existing Built Space	Total	% of New Employment	
Commercial	18,444	2,767	7,705	10,472	57%	7,972
Retail	3,582	537	1,187	1,724	48%	1,858
Total	22,026	3,304	8,892	12,196	55%	9,830

Source: ECONorthwest

The estimate of employment requiring new land is based on subtracting the total "employment not requiring new employment land" from "new employment growth." (18,444 new employees minus 10,472 employees not requiring land equals 7,972 employees requiring new land)

The next step in determining employment land needs for the 20-year period is to estimate commercial land need based on the number of jobs that will need to be located on new employment land, and the expected employment density. Table 28 estimates employment land need by land use type using existing employment densities presented in the prior subsection. It shows that Eugene will need about 248 acres of land for commercial (including retail) employment uses between 2012 and 2032. The analysis uses the following assumptions to convert employment into land need:

- **Eugene’s future employment densities will be similar to current employment densities.** Table 28 uses EPA assumptions based on 2006 employment data from Table 26. The EPA assumption for commercial is based on commercial centers, such as Downtown, the area south of Downtown, Country Club Road, or mixed retail and office sites. This results in an assumption that new commercial uses will have 68 EPA. The EPA assumption for retail is based on the observed EPA in retail centers, such as Valley River Center, Oakway Center, or West 11th and Seneca. This results in an assumption that new retail uses will have 23 EPA.
- **Employment sites will require additional land for right-of-way and other public uses.** The EPA assumptions are employees per *net* acre (e.g., acres that are in tax lots). As land gets divided and developed, some of the land goes for right-of-way and other public uses. The City of Eugene estimates the amount of land needed for employment including public right-of-way by converting from *net* to *gross* acres using estimates of the amount of land needed for

right-of-way. A net to gross conversion is expressed as a percentage of gross acres that are in public rights-of-way.

The amount of land used for rights-of-way varies based on use. An empirical analysis of commercial and retail sites in Eugene had a net to gross factor ranging from: about 17% in community retail centers, 31% in Downtown, and 34% in the area directly south of Downtown Eugene.⁶⁸ Based on this information, a reasonable net to gross factor assumption is 20% for commercial and retail development.

Table 28. Estimate of commercial land need Eugene, 2032

Land Use Type	Employment Requiring New Land	Employees per Acre	Land Demand (Net Acres)	Land Demand (Gross Acres)
Commercial	7,972	68	117	147
Retail	1,858	23	81	101
Total	9,830		198	248

Source: ECONorthwest

The estimate of land demand (net acres) is based on dividing the employees requiring new land by the EPA. (7,972 employees divided by 68 employees per acre equals 117 net acres)

The estimate of gross land demand is based on increasing net land demand by 20%.

Table 29 compares Eugene’s supply of commercial land (from the 2012 Employment Buildable Lands Inventory) to Eugene’s demand for commercial land (from Table 28). Table 29 presents the following estimate of the supply of commercial land from the 2012 Employment Buildable Lands Inventory (“BLI”):

- **Vacant commercial land.** The 2012 employment land supply identified 108 acres of land as vacant in commercial and mixed-use plan designations.⁶⁹
- **Partially vacant commercial land.** City staff and a technical advisory group engaged in a parcel-by-parcel review of all commercially-designated developed parcels to identify land with additional development capacity (i.e., partially vacant land). This

⁶⁸ The net-to-gross conversion ratio was developed based on analysis of existing development by plan designation in Eugene.

⁶⁹ This includes land in the following Comprehensive Plan Designations: Commercial, Major Retail Center, Mixed Use and High Density Mixed Use.

review identified about 17 acres of partially vacant commercial land.⁷⁰

- **Redevelopable commercial land.** City staff and a technical advisory group developed a tool to estimate redevelopment potential on commercial lands in Eugene.⁷¹ This tool produced an estimate of redevelopment that is reasonably likely without interventions from the City, referred to as the baseline redevelopment estimate. The 2012 employment land supply provides details about the methodology for estimating redevelopable commercial land.

Commercial land sufficiency is calculated by subtracting the estimated demand (from Table 28) from the existing supply. Table 29 shows that Eugene has a deficit of 94 acres of land for commercial development over the 20-year planning period.

Table 29. Commercial land sufficiency, Eugene 2012-2032

	Acres of Commercial Land
Supply	154
Vacant	108
Partially Vacant	17
Redevelopable	29
Demand	248
Sufficiency	(94)

Source: ECONorthwest
 The sufficiency of Eugene's commercial land is calculated by subtracting the demand (248acres) from the supply of commercial land (154 acres), which equals a deficit of 94 acres.

⁷⁰ This analysis is documented in the Envision Eugene report *Commercial Employment Supply Draft Technical Report: March 14, 2012*.

⁷¹ This analysis is documented in the Envision Eugene report *Commercial Employment Supply Draft Technical Report: March 14, 2012*.

6.1.3 Industrial Land Demand and Sufficiency

The forecast of industrial land demand starts on information from the employment forecast (Table 23). The forecast of industrial land then divides industrial employment growth into categories based on site size: smaller than 10 acres, 10 to 19.99 acres, 20 to 49.99 acres, 50 to 74.99 acres, and 75 to 100 acres before applying the employees-per-acre divisor.

This sub-section is divided into three steps:

- **Allocate industrial employment by site size**, divides forecasted industrial employment growth into site sizes ranging from less than 10 acres to sites of 75 to 100 acres;
- **Estimate the number of sites needed**, uses employment density (EPA) and site size assumptions to forecast the number of sites needed in each size range; and
- **Industrial land sufficiency**, compares the supply of industrial land to the demand for industrial land by site size.

6.1.3.1 Allocate Industrial Employment by Site Size

Based on our analysis of recent industrial development in Eugene and the Eugene area, on information provided by Business Oregon and the Lane Metro Partnership, and trends that inform the City's expectations for future economic growth opportunities, we assume that the most significant percentage of new employees will continue to be located on small (less than 10 acre) sites. Both trends and City policies indicate significant growth in the types of industries that are likely to locate on industrial sites smaller than 10 acres, including (but not limited to): small-scale manufacturing (such as small food and beverage manufacturers, small biomedical firms, or small wood products manufacturers), construction companies, or small-scale warehouse and distribution firms.

This sub-section presents the forecast of industrial growth over the 20-year period by size of site, ranging from sites smaller than 10 acres to sites larger than 75 acres. Historical consumption patterns over the last 20 years and the fact that several large companies have left Eugene in search of larger sites suggests a strong likelihood that additional large lot industrial development would have occurred in Eugene in the last 20 years, had there been suitable sites. Since Eugene's job growth on large sites has been constrained due to lack of available land, we must look to job growth and land inventory statistics in comparable cities that have not had such constraints. In Springfield, 33% of their industrial jobs are on sites larger

than 20 acres, most on sites larger than 50 acres. In Salem, over 40% of their vacant industrial lands are in sites larger than 20 acres. It is reasonable to assume that Eugene's historic job growth would have distributed among varying lot sizes, much like Springfield's, if Eugene had large lots in its inventory of employment land.

The analyses, information, trends and City policies also support a conclusion that 33% of Eugene's new employment will be located on industrial sites that are 20 acres or larger. It is reasonable to assume that this 33% will be split almost evenly between lots of 20-50 acres (12%), lots of 50-75 acres (11%), and lots of more than 75 acres (10%). With the assumption that 55% of new employees will locate on sites smaller than 10 acres, the remaining 12% are assumed to locate on sites between 10 to 20 acres. The employers likely to locate on these larger industrial sites include (but are not limited to) industries such as: mid-sized and large-scale manufacturers (such as advanced manufacturing, large food and beverage manufacturers, clean tech and renewable energy, biomedical, or wood products manufacturing), large construction businesses, and large warehouse and distribution firms.

There is ample evidence of future demand for these larger industrial sites in Eugene (See Chapter 4):

- A comparison of buildable lands data between the 2012 employment land supply and a 1990 inventory of vacant industrial sites larger than 20 acres shows that three sites larger than 50 acres were developed over the past two decades.⁷²
- The limited supply of industrial sites larger than 10 acres, especially sites with easy access to utilities and transportation, has resulted in businesses relocating outside of Eugene. For example:
 - Rexus was headquartered in Eugene since the early 1930's and was unable to find a suitable site for relocation, after several years of searching, and moved to Coburg.
 - Grain Millers has been located in downtown Eugene since the 1980's. They were unable to find a larger site that would allow them more room for train cars and processing operations. Grain Millers identified an expansion site (of 100 acres, with 50 suitable acres) in Junction City, along Highway 99.
 - In 2002, Symantec moved from downtown Eugene to an approximately 14 acre site in Springfield.

⁷² Metro Industrial Lands Special Study Inventory Report, LCOG, 1991.

- After searching for a suitable site in Eugene for a new major hospital, Peace Health ultimately selected a 180 acre site in Springfield for its new hospital.
- According to Business Oregon and the Lane Metro Partnership, a number of businesses searched for industrial sites in Oregon between 1997 and 2010. Examples included solar manufacturers, data centers, food processors, biotech, other large manufacturers, and warehouse and distribution firms. These businesses needed sites of 25 acres or larger and some needed sites larger than 100 acres.

A comparison of the industrial land bases in Springfield and Salem provide a contrast to Eugene’s industrial land base. All three of these cities have economic development goals of growing industrial employment, including businesses that require sites larger than 10 acres. The characteristics of industrial land in Springfield and Salem are more supportive of this goal than Eugene’s industrial land base. These cities provide information about the characteristics of industrial land that Eugene will need to achieve its economic development goal of providing opportunities for growth of businesses that need large sites, as well as those that need small sites.

- **Springfield** is part of the Eugene-Springfield economic region. We have evidence that some businesses in Eugene relocated into Springfield, in large part, because of Eugene’s lack of large employment sites. (See Chapter 4).

About one-third of Springfield’s industrial employment is located on sites 50 acres or larger and about 50% of industrial employment is located on sites five acres or smaller. This information describes the important role that both large and small sites play in Springfield’s developed industrial land base.⁷³

- **Salem** is Oregon’s third largest city, after Portland and Eugene, and is located along I-5 in the mid-Willamette Valley. Salem has a relatively large inventory of vacant industrial land, mostly concentrated in the Mill Creek area. Salem has the largest supply of vacant industrial land in Western Oregon, outside of the Portland

⁷³ Springfield’s *Commercial and Industrial Buildable Lands Inventory and Economic Opportunities Analysis*, ECONorthwest, 2009.

Metro area. About 42% of Salem’s vacant industrial land is in sites 20 acres and larger.⁷⁴

Based on this information, it is reasonable to assume that, if Eugene had a larger base of vacant, suitable industrial sites, Eugene would attract a share of the businesses considering locating or expanding in Western Oregon and the Southern Willamette Valley. The City’s economic development policies (see sub-section 4.7) will support development of these industries (including those that require sites larger than 10 acres) and development of the necessary land base.

Table 30 presents a forecast of the employment growth that is projected to occur on industrially-designated land, by site size, starting with the number of new employees forecasted to be located on industrial land in Table 23, which projects 11,423 new employees over the course of the planning period.

Table 30. Industrial employment forecast by site size, Eugene 2012-2032

Site size (Suitable Acres)	Percent of New Jobs	Number of Jobs
Less than 10 acres	55%	6,283
10 to 20 acres	12%	1,371
20 to 50 acres	12%	1,371
50 to 75 acres	11%	1,257
75 acres and larger	10%	1,142
Total	100%	11,423

Source: City of Eugene Technical Resource Group review and analysis; Calculations by ECONorthwest.

⁷⁴ Salem-Keizer Metropolitan Area Regional Economic Opportunities Analysis 2012-2032, ECONorthwest, 2011.

6.1.3.2 Estimate Amount of Land and Sites Needed

This sub-section estimates industrial land and sites needed for: (1) sites smaller than 10 acres, and (2) sites 10 acres or larger. These estimates build from the forecast in Table 30.

For sites smaller than ten acres, Table 31 estimates land needed for employment growth on industrial land. Table 29 makes the following assumptions:

- **Employment in existing built space.** Eugene lost about 6,334 industrial jobs between 2006 and 2010. Since the majority of Eugene's industrial jobs are located on sites smaller than 10 acres, it is reasonable to assume that most of these jobs were previously located on sites in this size class. Industrial firms are less efficient at reusing existing built spaces than commercial firms, given the special needs of industrial business processes. **As a result, we assume the capacity of existing built space is 55% of the employment lost over the four-year period (3,454 jobs).**
- **Employment density.** The estimate of employment density for industrial jobs on sites smaller than 10 acres builds from the analysis of historical employment densities shown in Table 25 and Table 26. The average industrial employment density in industrial plan designations was 13 employees per acre (EPA). The range of densities in sample industrial areas was 3 to 5 EPA in the North Eugene Heavy Industrial area and Enid Drive to 17 to 19 EPA in the West Eugene Light Industrial area and Chad Drive.

Considering this data, it is reasonable to assume that new industrial employment will be between 6 and 14 EPA. **For estimating employment land needs on sites smaller than 10 acres, we use an assumption of 10 EPA, the mid-point between 6 and 14 EPA.**

Table 31 shows that Eugene will need land for 2,829 new industrial jobs, based on subtracting the jobs in existing built space (3,454) from all new jobs (6,283). Eugene will need 283 suitable gross acres of industrial land on sites smaller than 10 acres, based on the assumption of 10 employees per acre (2,829 employees divided by 10).

Table 31. Industrial employment land need on sites smaller than 10 acres, Eugene, 2012-2032

	Sites smaller than 10 acres
Number of Jobs	6,283
Employment in existing built space	3,454
New jobs requiring vacant land	2,829
Employment density (EPA)	10
Gross Acres Needed	283

Source: ECONorthwest
 New jobs requiring vacant land was calculated by subtracting employees locating in existing built space (3,454) from new jobs (6,283).
 Acres needed was calculated by dividing employees on new land by an EPA of 10 (2,829 employees divided by 10 employees per acre equals 283 acres).

For sites 10 acres or larger, Table 32 illustrates the reasonable range of land and sites needed to accommodate employment growth on industrial land in Eugene. Table 32 builds on the employment forecast in Table 30 and uses the following assumptions.

- **Range of land need.** The range of land need uses the projection that industrial employment will develop at densities between 6 and 14 EPA. For example, for employment on sites between 10 to 20 acres, Eugene will need between 98 acres (at 14 EPA) to 229 acres (at 6 EPA) to accommodate the forecast of 1,371 new jobs.
- **Sites needed.** The range of needed sites is based on projections about the size of the site at the high and low end of the size range. For example, Eugene would need between five sites (at a size of 20 acres per site for 98 acres of land) to 23 sites (at a size of 10 acres per site for 229 acres of land). The average number of sites is the average in the range (e.g., 14 is the average between 5 and 23 sites).

Table 32. Range of land and suitable sites needed to accommodate industrial employment, sites larger than 10 acres, Eugene, 2012-2032

Site size (Suitable Acres)	Number of Jobs	Range of land need				Sites needed				
		Employees Per Acre		Gross Acres Needed		Site Size (Suitable Gross Acres)		Range of Needed Sites		
		Low	High	Low	High	Low	High	Low	High	Average
10 to 20 acres	1,371	6	14	98	229	10	20	5	23	14
20 to 50 acres	1,371	6	14	98	229	20	50	2	12	7
50 to 75 acres	1,257	6	14	90	210	50	75	2	5	3
75 acres and larger	1,142	6	14	82	190	75	100	1	3	2

Source: ECONorthwest
 The **gross acres needed** is based on the number of jobs and the EPA range. For example, for sites 10 to 20 acres, the low acreage need (98) is based on the high EPA (14) divided by the number of jobs (1,371 divided by 14). The high acreage need (229) is based on the low EPA (6) divided by the number of jobs (1,371 divided by 6).
 The **gross site size** is based on the low and high of the site size. For example, for sites 10 to 20 acres, the low site size is 10 acres and the high is 20 acres.
 The **range of needed sites** is based on dividing the gross site size by the EPA. For example, for sites 10 to 20 acres, the

low (5 sites) is based on the low acreage need (98) divided by the high site size (98 divided by 20). The high sites (23) is based on the high acreage need (229) divided by the low site size (229 divided by 20). The average sites needed is the arithmetic mean of the low and high, rounded to the nearest whole number. For example, for sites 10 to 20 acres, the average between 5 and 23 sites is 14 sites.

Table 33 shows Eugene’s industrial land and site needs for employment on sites larger than 10 acres. It shows that Eugene will need a total of 820 suitable gross acres of industrial land on sites larger than 10 acres over the 20-year planning period. Table 33 shows:

- **Needed Sites**, based on the average shown in Table 32 (e.g., 14 sites between 10 and 20 acres).
- **Average site size**, generally based on the average between the low and high site size in Table 33. For example, the average site size for sites between 10 to 20 acres is 15 acres.
- **Suitable Gross Acres needed**, the number of needed sites multiplied by the average site size.

Table 33. Land and sites needed to accommodate industrial employment, sites larger than 10 acres, Eugene, 2012-2032

Site size (Suitable Acres)	Needed Sites	Average site size (suitable acres)	Average Suitable Gross Acres Needed
10 to 20 acres	14	15	210
20 to 50 acres	7	35	245
50 to 75 acres	3	63	189
75 acres and larger	2	88	176
Total	26		820

Source: ECONorthwest

The needed sites is from Table 32.

The average site size is the arithmetic average of the site size category.

For example, the average of 10 to 20 acre site sizes is 15 acres.

The acres needed is based on multiplying the needed sites by average site size (14 sites times 15 acres equals 210 acres).

The average site size is rounded to the nearest whole number.

6.1.3.3 Industrial Land Sufficiency

A comparison of the supply of industrial land, based on the 2012 employment land supply (Part I of the Employment Land Study), with the demand for industrial land in the previous sub-section results in a determination of whether Eugene has enough industrial land to accommodate growth over the 20-year period (i.e., whether Eugene has sufficient industrial land).

Industrial Sites Smaller than 10 Acres

Table 34 shows industrial land sufficiency for sites smaller than 10 acres. The 2012 employment land supply shows that Eugene has 435 vacant or redevelopable acres of industrial land. Eugene has 404 acres of vacant industrial land on sites smaller than 10 acres. Table 34 estimates that Eugene's existing industrial land base has about 31 acres of redevelopment capacity.⁷⁵ Table 31 shows that Eugene has demand for 283 acres of industrial land on sites smaller than 10 acres.

The sufficiency of Eugene's industrial land on sites smaller than 10 acres was calculated by subtracting the land need from the supply of land. Eugene has a surplus of 152 industrial acres located on smaller than 10 acres.⁷⁶ In other words, Eugene has an adequate supply of sites smaller than 10 acres to meet its demand for the next 20 years. Eugene assumes that this extra capacity of small sites, along with measures taken to encourage economic development inside its current UGB, will accommodate its need for the small employment sites (less than 10 acres) sought by some of its target industries.

⁷⁵ This assumption is consistent with the finding of the redevelopment capacity of Eugene's commercial land base, which showed that about 5% of new commercial employment can be accommodated through redevelopment. This analysis assumes that the industrial land base for sites smaller than 10 acres can accommodate about 5% of new employment (310 jobs) through redevelopment. At a density of 10 EPA, this results in 31 acres of industrial redevelopment.

⁷⁶ The 152 acre surplus was derived by subtracting land demand from land supply (435 minus 283 equals 152).

Table 34. Industrial land sufficiency, sites smaller than 10 acres, Eugene 2012-2032

	Acres in Sites smaller than 10 acres
Land supply (gross acres)	435
Vacant	404
Redevelopment	31
Land Needed (gross acres)	283
Land surplus (gross acres)	152

Source: ECONorthwest

The sufficiency of industrial land on sites smaller than 10 acres was calculated by subtracting the land need (283 acres) from the land supply (435 acres).

Industrial Sites 10 Acres or Larger

Table 35 shows the following information about the supply of industrial sites larger than 10 acres:

- **Vacant.** Eugene has four vacant sites between 10 and 20 acres and four vacant sites between 20 to 50 acres. The 2012 employment land supply documents Eugene’s industrial land inventory in detail.
- **Redevelopable.** Eugene has three redevelopable industrial sites in the 10 to 20 acres. These sites all have small amount of development (e.g., a single dwelling or a parking lot). Eugene also has one redevelopable site between 20 and 50 acres.⁷⁷
- **Brownfield / Assembly.** The City’s policies are to actively pursue a strategy of creating new industrial sites through brownfield remediation, site assembly, or both. Based on these policies, the City assumes that there is capacity for three sites in the 10 to 20 acre range for development over the planning period. The land for these sites is assumed to come from the 152-acre surplus of industrial land on sites smaller than 10 acres.

Eugene is documenting its measures to increase employment development in a subsequent part (Part IV) of the Envision Eugene Employment Land Supply Study. The Envision Eugene Employment Land Supply Study is an appendix to the Envision Eugene Comprehensive Plan).

A comparison of the supply of sites with the need for sites (Table 35) shows that Eugene has a deficit of industrial sites in all categories of sites

⁷⁷ This information is documented in Part I of the City’s Employment Land Supply Study.

10 acres or larger. As discussed elsewhere in this EOA, sites larger than 10 acres will be needed to meet the needs of target manufacturers, business parks/ flex space, and warehouse / distribution firms.

Table 35. Industrial site sufficiency, sites larger than 10 acres, Eugene 2012-2032

Site size (Suitable Acres)	Supply (Sites)			Sites Needed	Site Sufficiency
	Vacant	Redevelop- able	Brownfield / Assembly		
10 to 20 acres	4	3	3	14	(4)
20 to 50 acres	4	1	0	7	(2)
50 to 75 acres	0	0	0	3	(3)
75 acres and larger	0	0	0	2	(2)
Total	8	4	3	26	(11)

Source: ECONorthwest

The sufficiency of industrial land on sites larger than 10 acre was calculated by subtracting the supply of sites from the number of sites. For sites 10 to 20 acres, the supply is 10 total sites minus 14 sites needed, which equals a deficit of 4 sites. Note: Brownfield and parcel assembly is a land-use efficiency measure, which is documented in the Land Use Efficiency Strategies report.

Table 36 shows the deficit of industrial land on sites 10 acres or larger in terms of acreage. Land sufficiency is derived by subtracting estimated demand for sites from the existing supply. Using the average site size assumption in Table 36, the site deficit calculation results in a deficit of approximately 495 suitable acres.

Table 36. Industrial land sufficiency, sites larger than 10 acres, Eugene 2012-2032

Site size (Suitable Acres)	Site sufficiency	Average site size (suitable acres)	Average Suitable Gross Acres Needed
10 to 20 acres	(4)	15	(60)
20 to 50 acres	(2)	35	(70)
50 to 75 acres	(3)	63	(189)
75 acres and larger	(2)	88	(176)
Total	(11)		(495)

Source: ECONorthwest

The land deficit was calculated by multiplying the site deficit by the average site size in Table 31. For sites 10 to 20 acres, there is a deficit of 4 sites at an average size of 15 acres (4 sites times 15 acre sites equals a 60 acre deficit).

In summary, Eugene has a deficit of 94 acres of commercial land for all types of commercial employment uses (including retail). This deficit will be addressed by the City of Eugene through efficiency measures.

Eugene has a surplus of 152 acres of industrial land on sites smaller than 10 acres and a deficit of 11 sites of industrial sites larger than 10 acres with

a total estimated average of 495 acres. The deficit of large industrial lots cannot be met through efficiency measures, and so will be addressed by an expansion of the urban growth boundary.

6.2 Site Needs for Target Industries

Eugene's target industries, described in section 5.2.1, range from a variety of types of manufacturing, professional services, and services for residents and visitors to the Eugene-Springfield region. Eugene's 2012 inventory of employment land (shown on the 2012 employment land supply) is well suited for some of these target industries, but not for others. This section describes the minimum site needs for the target industries that are *not* served by Eugene's 2012 inventory of employment land or are intended to be served through efficiency measures. These un-served target industries are primarily manufacturing employers located independently or in business parks/flex space. The particular site needs of these types of employers are evaluated below.

This focus on the site characteristics of these unserved target industries is intended to assist the City in its process of identifying new land for its employment land inventory and to ensure that Eugene's 2012-2032 land supply will include some land suitable for those target industries. The land need determination for Eugene is limited to the land expected to develop with employment uses over the 20 year planning period. It does not include additional land for purposes of "market choice." As such, it is extremely important that the land added to Eugene's 2012 employment land inventory has the characteristics sought by employers.

As this EOA has already established, Eugene has a deficit of industrial sites of 10 acres and larger (Table 35). These manufacturing businesses require sites larger than 10 acres. Other basic requirements of manufacturing employers are also discussed in this section.

The Goal 9 Administrative Rule (OAR 660-009) requires that jurisdictions include policies in their comprehensive plan that "identify categories or particular types of industrial and other employment uses desired by the community" and that they commit "to designate an adequate number of sites of suitable sizes, types and locations." The Rule requires the City to identify the "site characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies." (OAR 660-009-0020(1); -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.

Employers' locational decisions are an indicator of whether Eugene's land base meets the needs of employers that want to expand or locate within the Willamette Valley in general and in Eugene in particular. Many employers have grown, expanded, and located their businesses in Eugene over the past decade. Chapter 4 presents examples of businesses that considered expanding or locating in Eugene, but chose to locate elsewhere on sites with characteristics not available in Eugene.

6.2.1 Characteristics of Needed Sites

This sub-section identifies the characteristics of sites needed to address the identified deficits of industrial land in Table 35. Eugene has deficits of industrial land in all size categories larger than 10 acres. These sites are necessary to provide employment opportunities in target industries that are currently un-served.

We have already established that Eugene, as a community, has characteristics that make it attractive to major employers that Eugene would like to accommodate. When considering Eugene as a potential location, these target industries will begin their site⁷⁸ consideration by seeking out developable sites (sites not prohibitively encumbered by development constraints) of sufficient size. If they find such sites, they will make their final site selection based largely on whether a site has the specific characteristics needed to enable the successful operation of the particular use. To meet the community needs, Eugene must ensure that its 2012-2032 Employment BLI includes sites with the characteristics needed by the target industries.

6.2.1.1 Manufacturing

Eugene has identified the following types of manufacturing target industries: advanced manufacturing, food and beverage manufacturing /processing, clean tech and renewable energy, biomedical, wood products

⁷⁸ The definition of "site" becomes important in this analysis. A site is a cohesive property (or group of adjacent properties) that functions as a single unit.

manufacturing, specialty apparel, metal fabrication, heavy machinery, high-tech electronics, avionics equipment, and recreational equipment.

The following summarizes a range of the site characteristics Eugene should seek when identifying the sites that will address its employment land deficit, in terms of the Oregon Court of Appeals' opinion in *Friends of Yamhill County v. City of Newberg*, 62 Or LUBA 5 (2010), *aff'd* 240 Or App 738 (2011). The conclusion will identify those key site characteristics that the City will focus on through the expansion analysis.

- **Site size / minimum acreage.** Sites for manufacturing firms range in size from 10 acres up to more than 100 acres for large-scale industrial firms. Some manufacturing firms prefer to locate in a manufacturing or flex business park, which range in size from about 25 acres to several hundred acres. Considering historic employment patterns and trends, along with Eugene's efforts to attract mid- and large-sized manufacturing firms, it is likely that manufacturing firms will be seeking to locate in Eugene on sites of all sizes offered.

Business Oregon, the State of Oregon's economic development agency, has studied manufacturer's site needs and determined that competitively sized general manufacturing firms select sites 10 acres in size. Competitive sites for heavy manufacturing, high-tech manufacturing, or campus industrial manufacturing require 25-acre sites. Regionally-scaled clean-tech manufacturers require 50-acre sites, and globally-scaled clean technology campuses require 100 acres. (Table 18).

Some businesses seek a location in a manufacturing or flex business park. Business parks are typically at least 25 acres in size, to allow for development of multiple buildings and associated parking. In the Portland area, established parks generally range in size from about 25 acres to 50 acres, with a few examples of parks around 75, 100, or 300 acres. (Table 19).

Industrial businesses that considered locating in Oregon (including businesses that relocated away from Eugene) needed sites ranging in size from 10 acres to 200 acres or larger. Major employment sites with general industrial uses in the Portland Metro area range in size from 25 to 160 acres and average about 50 acres in size. Businesses parks will need to be at least 25 to 50 acres and possibly as large as 75 to 100 acres.

For the operations of manufacturing firm to be successful, its site needs to be large enough to accommodate the needed built space, as well as to accommodate storage. In addition, the site needs to be large enough to accommodate not only the general industrial uses, but also parking, on-site circulation, connections to public transportation, rail connections, and other access to the transportation network. These factors are born out in the Chapter 4 data about sites actually selected in recent years by the types of manufacturers Eugene needs to attract.

There is ample evidence that businesses have relocated or expanded outside of Eugene because they were unable to find sites big enough to support the successful operation within Eugene. Examples of such firms include Rexius, Grain Millers, Symantec, and Peace Health's new hospital. A number of these firms searched for expansion sites within Eugene and only moved or expanded to sites outside of Eugene after they were unable to find a suitable, big enough site within Eugene.

- **Land ownership.** Sites with two or fewer owners are necessary to reduce the cost and uncertainty of land assembly. Developing an industrial building on a site on two or more tax lots requires negotiating land assembly. Land assembly is difficult and often costly for a number of reasons. People own land for a variety of reasons, such as the desire to develop the land, keep the land undeveloped, or sell the land for a profit. Getting landowners to sell land can be difficult, especially if the ownership is legally disputed, as is the case with some inheritances. If a landowner is a willing seller, they may have an unrealistic expectation of their land's value, in the context of comparable land values. In addition, one parcel of land may have multiple owners, compounding the issues described above.

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

- **Proximity / access to a major automotive route.** Manufacturers seek sites that located on arterial or major collector streets with good access to an interstate highway (or equivalent).

Manufacturers reject sites that would force their industrial traffic to be routed through residential neighborhoods.

Business Oregon has determined that manufacturing and industrial firms need to be located relatively close to an interstate highway or principle arterial road, with varying minimum proximity requirements depending upon the specific type of manufacturer, not exceeding 20 miles. (Table 18). Local experts indicate that close proximity to a freight route is typical for local manufacturers. Effective industrial operations rely on close proximity to an arterial or collector street to avoid conflicts with the community / residential areas by minimizing the amount of traffic on local streets and freight traffic in residential neighborhoods. More direct access to freight routes also improves the industry's mobility provides for efficient long distance travel.

- **Topography / no or little slope.** Eugene considers a slope exceeding 5% to be a development constraint for purposes of identifying possible land for industrial employment. Business Oregon has determined that most industrial sectors on Eugene's list of targeted industries select sites with a slope of 5% or less, except high tech manufacturing and campus industrial, which accept a slope of 7% or less. (Table 18). Eugene has indicated that "no more than a 5% slope" would be an important site characteristic, if not treated as an actual development constraint, because the successful operation of industrial buildings requires level floorplates to reduce costs and offer maximum flexibility, as well as level areas to provide for freight access and pedestrian walkways that meet ADA standards. The real estate development literature describes the increases in development costs and other difficulties associated with industrial development on a sloped site.⁷⁹
- **Floodplain.** Eugene considers land located in the Special Flood Hazard Areas (SFHA) as a development constraint for purposes of identifying possible land for industrial employment. OAR 660-009-0005(2) says: "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

⁷⁹ Peiser, Richard B. "Professional Real Estate Development: The ULI Guide to the Business," Urban Land Institute, 1992.

and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas. Goal 7 specifically defines "...floods (coastal and riverine)..." as one type of natural hazard.

Development within the SFHA is likely to become even more difficult for developers to obtain financing or obtain insurance during the 20-year planning period. There is increasing uncertainty about development within the SFHA as a result of the settlement agreement that Federal Emergency Management Agency (FEMA) reached with several environmental groups.⁸⁰ Under the terms of the settlement agreement, FEMA will now require applicants for certain types of changes to the Oregon floodplain maps to demonstrate that the map change will not cause a loss of habitat. Second, the settlement agreement requires FEMA to initiate a "consultation" under the Endangered Species Act (ESA) with the National Marine Fisheries Service (NMFS) to determine the impacts of the National Flood Insurance Program (NFIP) on fifteen salmon and steelhead species that are listed as threatened or endangered under the ESA. The outcome of this process is still pending, and may result in stringent requirements for development regulations for development in or near the floodplains. Even under existing regulations, commercial developments are required to either elevate or flood-proof structures located in the floodplain, significantly increasing costs or impacting pedestrian and freight access to the site. Eugene has indicated that "location outside the SFHA" would be an important site characteristic, if not treated as an actual development constraint, because it is very risky for a manufacturer to invest in a development site in the SFHA under the current regulatory uncertainty.

- **Compatible surrounding land uses.** Manufacturers reject sites located in areas where a manufacturing operation will be incompatible with surrounding uses (established or planned). OAR 660-009-0025(6) recognizes that compatibility is an important factor when locating new employment land. It strongly encourages cities to manage the encroachment and intrusion of incompatible uses with employment uses. Industrial buildings used for manufacturing are generally compatible with other industrial uses, commercial uses, and some public uses. Industrial uses may be

⁸⁰ *Audubon Society of Portland, National Wildlife Federation, Northwest Environmental Defense Center, Association of Northwest Steelheaders v. Federal Emergency Management Agency in the United States District Court, District of Oregon, Case No. 3:09-cv-729-HA*

compatible with agricultural uses, provided that the industrial use does not encroach on the agricultural uses. Industrial uses are able to operate efficiently where they are not in conflicts with adjacent land uses that could disrupt industrial business activity. Noise or odors from the manufacturing process and/or traffic from employees and/or shipping can cause conflicts with nearby residential uses. This could result in requiring a manufacturer to make changes that negatively impact its operations. For this reason, manufacturing firms require a location that does not present incompatibility concerns.

6.2.2 Summary of Site Needs for Target Industries

Based on the criteria of specific targeted industries above, the City of Eugene will seek land with the characteristics listed below.

- **Constraints.** Sites must not be:
 - Land that has a slope of 5 percent or greater
 - Land within a Special Flood Hazard Areas (SFHA)
 - Land subject to Statewide Planning Goal 5 protections
 - Tax lots committed to a use or development that is not reasonably likely to be discontinued during the planning period, making industrial redevelopment highly unlikely during planning period
- **Site Characteristics.** Sites must:
 - Be a contiguous area comprised of one or two tax lots that could accommodate one of the following:
 - An industrial site of 75 acres or larger (Eugene needs to add 2 such sites)
 - An industrial site of between 50 and 75 acres (Eugene needs to add 3 such sites)
 - An industrial site of between 20 and 50 acres (Eugene needs to add 2 such sites)
 - An industrial site of between 10 and 20 acres (Eugene needs to add 4 such sites)
 - Have access via existing or planned roads within close proximity to a State Designated Freight Route. State Designated Freight Routes within one mile of the study area are:
 - Interstate 5
 - Interstate 105 west of I-5
 - Randy Papé Beltline
 - Highway 99 north of Randy Papé Beltline
 - Highway 126 west of Randy Papé Beltline

7 CONCLUSIONS

The key findings from the Economic Opportunities Analysis are as follows and as shown in Table 37:

- Eugene has a deficit of 94 acres of commercial land for all types of commercial employment uses (including retail).
- Eugene has a surplus of 152 acres of industrial land on sites smaller than 10 acres.
- Eugene has a deficit of 495 acres for industrial sites larger than 10 acres. That deficit is in the following size categories:
 - Sites 10 to 20 acre: 4 sites or approximately 60 acres
 - Sites 20 to 50 acres: 2 sites or approximately 70 acres
 - Sites 50 to 75 acres: 3 sites or approximately 189 acres
 - Sites 75 acres and larger: 2 sites or approximately 176 acres

Table 37. Summary of all land deficit or surplus, Economic Opportunities Analysis Conclusions, Eugene 2012-2032

Plan Designation / Use	Land sufficiency (deficit) (gross acres)
Commercial	
Employment Uses	(94)
Non-retail commercial	(57)
Retail	(37)
Public and Semi-Public Uses	TBD
Residential development in Commercial Plan Designations	TBD
Total Commercial	(94)
Industrial	
Employment Uses	
Sites smaller than 10 acres	152
Sites larger than 10 acres	(495)
Public and Semi-Public Uses	TBD

Source: ECONorthwest

Eugene will address the commercial land deficit through new land use measures affecting the use of land within the current UGB. The industrial land deficit will be addressed through a UGB expansion. These actions are explained in a subsequent Parts of the Envision Eugene Employment Land Supply Study (an appendix to the Envision Eugene Comprehensive Plan).

Part III. Public and Semi-Public Uses on Employment Land (2012-2032)

Part III includes the following sections and tables:

1. Introduction
2. Historical Public and Semi-Public Land Uses
3. Public and Semi-Public Land Needs
4. Summary of Public Land Uses on Employment Land
5. Summary of 2012 Employment Land Supply After Public Need Deductions
6. 2012 Employment Land Supply Conclusions

Table 1. Where Public and Semi-public Demand Will be Met Inside the Current UGB on Employment Land, in gross acres, 2012-2032

Table 2. Estimate of Public Land Need on Employment Land, inside the current Eugene UGB, gross acres, 2012-2032

Table 3. Summary of Employment Land Supply After Public Need Capacity Deductions, in gross acres, 2012-2032

1. Introduction

This Part addresses the 20-year public and semi-public uses which are likely to be located on employment land inside the urban growth boundary (UGB). These uses displace capacity for jobs that would otherwise occur on the employment land identified in Part I of this Study, and this loss must be incorporated into the capacity analysis of employment lands. Using the analysis below, the amount of employment capacity lost due to accommodating public uses on employment land can be accounted for when determining the capacity of employment land (see summary section).¹

2. Historical Public and Semi-Public Land Uses

Cities need to plan for public and semi-public facilities such as schools, governments, churches, parks, and other non-profit organizations that will expand as population increases. For the purpose of estimating land needed for these uses, land is classified into four categories:

- **Land needed for public operations and facilities.** This includes lands for City offices and maintenance facilities, county facilities, state facilities, federal facilities, and other related public facilities.
- **Land needed for parks and open space.** This includes all land for publicly-owned park and open space use within the Eugene UGB.

¹ All acreage estimates are rounded to the nearest whole number. For exact acreage estimates see the *Summary of Public Facilities and Operations Land Needs* and *Park-By-Park Methodology* documents in the Technical Support portion of the public record.

- **Land needed for schools.** This includes 4J and Bethel school districts’ plans for new schools by general location within the City and potential plans for selling surplus school properties.
- **Land needed for semi-public uses.** This includes land for churches, non-profit organizations, and related semi-public uses.

3. Public and Semi-Public Land Needs

This section summarizes the forecast of needed public and semi-public land on employment land in Eugene for the planning period 2012-2032. Table 1 summarizes where the 57 acres of public and semi-public demand will be met on employment designations inside the UGB:

Table 1. Where Public and Semi-public Demand Will be Met Inside the Current UGB on Employment Land, in gross acres, 2012-2032

Plan Designation	City of Eugene				EWEB water	University of Oregon	City of Eugene parks	School districts	Total (rounded)
	storm-water	waste-water	building facilities	fire					
Commercial	8	-	-	-	-	15	4	-	27
Industrial	27	0.5	-	3	-	-	-	-	31
Total	35	0.5	0	3	0	15	4	-	57

The 57 acre public land need on employment land is based on the following assumptions:

- **Public operations and facilities** may be smaller in the future than the current level of service (6.7 gross acres per 1,000 people²) because Eugene already has most of the large public facilities the City is likely to need over the 20-year planning period.
 - Recently built **public facilities** include: a new Federal building, a new Library, a new site for EWEB (Eugene Water and Electric Board) facilities, new fire and emergency facilities and a new police station. The City anticipates building a new city hall on publicly owned property.
 - The community may need some new, smaller public facilities over the 20-year period that will require City land acquisition or easements on land. Review of City of Eugene master plans and capital improvement project lists identify several smaller infrastructure facility projects that are planned to occur within the 20-year planning period to address stormwater, wastewater and fire needs, totaling a need for just over 38 acres of employment land inside the UGB³. The majority of the 38 acres needed is for stormwater facilities (35 acres), specifically for 7.6 acres on Commercial land and 27.4

² From Lane County Tax Assessor data regarding property within public and semi-public ownership. For more information, see excerpt from the Eugene Comprehensive Lands Assessment, Table D-1 in the Technical Support portion of the public record.

³ Smaller public facility needs were identified through review of the following: the City of Eugene stormwater basin plans for stormwater, the 2013 Capital Improvement Projects list for buildings and transportation, the Wastewater Master Plan and Public Facilities Plan for wastewater, the 2010-2015 Capital Improvement Projects list for fire stations, and November 2011 correspondence with Brad Taylor, Water Planning Supervisor from the Eugene Water and Electric Board for water.

on Industrial land, the balance being 3 acres for fire stations and a 0.5 acre site for wastewater facilities. Note that specific utility needs that might occur within the right-of-way of new development (e.g. roads, utility lines) are already accounted for in the density assumptions used to determine the capacity of the buildable lands inventory and are therefore not included in this estimate.⁴

- The **University of Oregon** anticipates no or an insignificant amount of student growth for the next 20 years.⁵ The University also has a goal of providing on-campus housing for 25% of its underclassmen. To that end, the University plans to add 1,250 additional beds during the planning period which can be accommodated on the existing campus.⁶

The University also forecasts a need for 45 acres of land adjacent to the main campus and the Autzen Stadium complex for non-residential uses. Some lands near these two locations that are suitable for university expansion are currently in the Commercial plan designation. Based on how much land around these areas is designated Commercial, the need is estimated to be 15 acres of Commercial land (the other 30 acres is from non-employment plan designations).⁷

- Lane County, EWEB, and the University of Oregon indicated that they do not have land that they classify as **surplus land** at this time.⁸
- Table 1 is a **summary** of the amount of employment land needed for new public operations and facilities inside the UGB. The acreage needed inside the UGB reduces the 2012 employment land supply's capacity as reflected in the Conclusion section, below.
- **Park** land need determinations use the projects identified in the Parks, Recreation & Open Space (PROS) Project and Priority Plan as guidance for anticipated future park need. This plan was adopted as a fiscal plan related to system development charges in 2006 and identifies acquisition and development priorities for a population consistent with that identified in

⁴ Specifically, the employment density assumptions used in the buildable lands analysis are adjusted to account for road and utility needs that would occur within the right-of-way of development; e.g. a net-to-gross conversion factor is applied to the density assumption.

⁵ This information was provided by JP Monroe, Director of Institutional Research at the University of Oregon in an interview on May 9, 2013.

⁶ This was provided by Chris Ramey, University Architect and Associate Vice President of Campus Planning and Real Estate at the University of Oregon in an interview on May 8, 2013, and the *University of Oregon Residential Hall Modernization Study*, 2011, pages 6 and 7. No distinction was made regarding whether the land needed is developed or vacant because in either scenario, the University use would be displacing either existing or future capacity that needs to be accounted for.

⁷ This information was provided by Chris Ramey, University Architect and Associate Vice President of Campus Planning and Real Estate at the University of Oregon in an interview on May 8, 2013.

⁸ City staff asked staff at public agencies in Eugene about surplus land. Chris Ramey, Associate Vice President at the University of Oregon, said that the University does not expect to have surplus land over the 20-year planning period. EWEB staff indicate that the agency does not currently have land that is designated as surplus. Staff at Lane County indicate that the County does not currently have plans to surplus County properties, including the Lane County Fairgrounds.

Envision Eugene.⁹ The City's park land need is discussed in greater detail in its findings documents, specifically addressing the need for an expansion to accommodate the need for two new community parks. Approximately 95 acres inside the UGB will be required for park land that might otherwise be used for residential or employment uses. As the City's need for park land relates to the 2012 Employment Buildable Land Inventory, based on the locations of the needed park land, only about 4 acres will be on Commercial land (the remainder of the 95 acres will be on residential land).

- **School** land needs are based on the estimate of land need provided by the school districts. The City's school land need is discussed in greater detail in its findings documents, addressing the need for an expansion to accommodate the need for one new school site for the Bethel School District. Neither the **4J School District** nor the Bethel School District anticipates a need for a new school facility inside the current UGB over the 2012 to 2032 period. The 4J School Board has identified three sites (47.9 acres) as surplus: Dunn / Opportunity Center (4.5 acres), Bailey Hill (5.6 acres), and Coburg Farm (28.0 acres). The District may sell, trade, or lease these properties at some time in the future.¹⁰ These sites were addressed in Part I of this Study. The Bethel School District does not have surplus property.¹¹
- The need for **Semi-public uses** is forecast to be similar to historical needs, at about 1.3 acres per 1,000 people or 44 gross acres over the 20-year period; 29 in Low Density Residential and 15 in Commercial plan designations. Current trends have resulted in many semi-public uses (e.g. religious organizations) accommodating their growth on their existing property rather than requiring additional land. The Envision Eugene Technical Resource Group reviewed several parcels with existing semi-public uses and found that many of these sites that have not yet expanded appear to have room for a building expansion. Therefore, the entire need is anticipated to be accommodated through redevelopment and infill and not require any additional land.

4. Summary of Public Land Uses On Employment Land

The following Table 2 summarizes the public land uses that will be accommodated on employment land inside the UGB.

⁹ The *PROS Project and Priority Plan* was adopted as a fiscal plan and not as a land use plan nor as part of the local comprehensive plan. However, it provides the most detailed analysis for potential future park acquisition needs, so it is reasonable to estimate future acquisition needs using the *PROS Project and Priority Plan* list.

¹⁰ This information was provided by Barb Bellamy, Communications Director at 4J in an interview on August 21, 2012.

¹¹ This information was provided by Pat McGillivray, Communications Relations for the Bethel School District in an interview on March 12, 2009.

Table 2. Estimate of Public Land Need on Employment Land, inside the current Eugene UGB, gross acres, 2012-2032

Type of Use	Estimated need inside UGB on employment land 2012-2032
Public Facilities and Operations	
Stormwater, wastewater and fire	38
University of Oregon	15
Parkland needed inside the current UGB	4
Schools	0
Semi-public uses	0
Total	57

Source: 4J and Bethel School Districts, The University of Oregon, PROS Project and Priority Plan, EWEB staff, City of Eugene public facilities plans and City Public Works staff.

5. Summary of 2012 Employment Land Supply After Public Need Deductions

The 57 acres needed to accommodate public uses on employment land equates to 57 acres of lost capacity for jobs on employment land to be deducted from the capacity of the 2012 employment land supply. The capacity of the 2012 employment land supply is discussed in the Employment Economic Opportunities Analysis (EOA) at Part II of this Study as follows:

- The EOA finds that Eugene has a deficit of 93 acres of Commercial land. Accounting for the 27 acres of Commercial land that is needed for public and semi-public land increases the deficit of Commercial land to 121 acres.
- The EOA finds that Eugene has a surplus of 152 acres of Industrial land on sites that are smaller than 10 acres in size.¹²
- The EOA finds that Eugene has deficit of 11 sites, or about 495 acres Industrial land that are 10 acres or larger in size.

6. 2012 Employment Land Supply Conclusions

The next step is to combine the analysis from Parts I, II, and III of this Study to identify whether the City’s baseline, 2012 employment land supply can accommodate the projected demands on employment land for the next 20 years if Eugene continues to develop according to recent trends and existing codes and

¹² The EOA finds that Eugene has deficit of 11 sites, or about 495 acres Industrial land that are 10 acres or larger in size. This deficit accounts for 3 sites to be provided through remediation efforts of three brownfield sites. Those sites are also discussed under Part IV Measures to Increase Employment Development, but are accounted for here.

programs. If the City has a deficit in employment land, the City is required by State law to take actions to accommodate the entire 20 year employment demand.

Based on the analysis in the preceding three Parts of the Employment Land Study, as shown in Table 3 the City has:

- A deficit of about 121 acres of Commercial land
- A surplus of about 152 acres of Industrial sites smaller than 10 acres
- A deficit of 11 sites, or about 495 acres of Industrial sites larger than 10 acres, as follows:
 - Sites 10 to 20 acres: 4 sites or approximately 60 acres
 - Sites 20 to 50 acres: 2 sites or approximately 70 acres
 - Sites 50 to 75 acres: 3 sites or approximately 189 acres
 - Sites 75 acres and larger: 2 sites or approximately 176 acres

Given that the City's analysis shows that Eugene does not have enough land under current conditions to accommodate all of the demands for Commercial land or Industrial sites larger than 10 acres in size, the City has to make policy choices to accommodate these remaining demands. These actions are discussed in the subsequent Parts of the Employment Land Supply Study, Part IV Measures to Increase Employment Development and Part V UGB Expansion Areas to Address Industrial Land Deficit.

Table 3. Summary of Employment Land Supply After Public Need Capacity Deductions, in gross acres, 2012-2032

Plan Designation	Gross Acres (deficit)
Commercial	
2012 Land Supply	154
Vacant	108
Partially Vacant	17
Redevelopment	29
2032 Land Need	248
2012 Land Sufficiency	(94)
2032 Public and Semi-public Demand	27
Preliminary Land Sufficiency Conclusion	(121)
Industrial (less than 10 acres in size)	
2012 Land Supply	435
Vacant	404
Redevelopment	31
2032 Land Need	283
2012 Land Sufficiency	152
2032 Public and Semi-public Demand	31
Preliminary Land Sufficiency Conclusion	121
Industrial (greater than 10 acres in size)	
2012 Land supply	15
Vacant	8
Redevelopment	4
Brownfield/ Parcel Assembly	3
2032 Land Need	26
2012 Land Sufficiency	(11)
2032 Public and Semi-public Demand	-
Preliminary Land Sufficiency Conclusion	(11)

Part IV. Measures to Increase Employment Development (2012-2032)

Part IV includes the following sections and tables:

1. Information and Assumptions
2. List of Measures and Analysis
3. Conclusion

Table 1. Acres re-zoned to C-2 Community Commercial or E-2 Mixed Use Employment

Table 2. Acres re-zoned to E-1 Campus Employment Zone

Table 3. Capacity of Measures to Increase Commercial Employment on Industrial Land

Table 4. Employment Land Supply After Measures to Increase Development, in gross acres, 2012-2032

Table 5. Industrial Sites Larger than 10 acres After Measures to Increase Development

Table 6. Land Deficiency for Industrial Sites Larger than 10 acres

1. Information and Assumptions

The next step in establishing a 2012-2032 Employment Buildable Lands Inventory is to identify any new capacity that can be created through City actions. This part of the Employment Land Supply Study provides more information about the measures the City has taken to add employment capacity within the 2012 urban growth boundary (UGB). These measures increase the number of jobs that can fit inside our current UGB by using regulatory changes (e.g. zone changes), programs or development incentives to achieve more jobs than Eugene would otherwise see under current development trends.

After reviewing numerous potential measures, those strategies pursued by Eugene (outlined below) were selected based on several key factors. First, the City already has several codes and programs in place that facilitate compact development. In 2001 the City adopted extensive changes to Eugene Code Chapter 9, Land Use. These amendments included several provisions that allow land to be used more efficiently. The City also has existing programs that help facilitate denser urban development, such as tax increment financing downtown.¹ The employment measures attempt to balance the efficiency of compact urban growth with concerns about livability and compatibility by focusing incentives primarily on redevelopment of the city core for multi-family and commercial jobs, and making underutilized industrial lands more viable. These strategies reflect the guiding pillars and strategies of the Envision Eugene Recommendation (2012) and subsequent City Council direction.

The following includes a list of quantifiable measures Eugene has taken to increase the supply of employment land or increase the employment capacity of that land since the 2012 Employment Land Supply (Part I of this Study) and EOA (Part II of this Study) were prepared. The assumptions and methods used to determine their effect on the land need are detailed below for each of the actions taken. Efficiencies gained is shown for each and shown all together in the Conclusion and Table 4.

¹ These existing measures and programs are documented in *Existing Land Use Efficiency Measures* in the Technical Support portion of the public record.

2. List of Measures and Analysis

1. Creation and Application of New E-1 and E-2 Employment Zones

a) E-2 Mixed Use Employment Zone / W. Eugene Industrial Flexibility

Applicability: Certain areas designated Industrial and zoned industrial or commercial.

Assumptions: Creating a new E-2 Mixed Use Employment zone to allow more office type uses than in the I-2 Light Medium Industrial and C-4 Commercial Industrial zones will create more capacity for retail and office jobs and reduce the need to expand the UGB for Commercial jobs.

Analysis: The West Eugene Study Area will have a more flexible commercial-industrial zone and consistent development standards through the rezone of some land to the new E-2 Mixed Use Employment zone and some land to the existing C-2 Community Commercial zone. This will occur due to the following new E-2 provisions and existing C-2 provisions:

Allow a mixture of commercial and industrial uses. The C-4 Commercial-Industrial zone was intended to accommodate a range of uses found in west Eugene, recognizing the auto-oriented character of the area. The E-2 Mixed-Use Employment zone replaces C-4 and allows a mix of uses throughout the zone with an emphasis on employment zone flexibility and the retail character of the transit corridor.

Do no harm to existing businesses. The West 11th Avenue corridor is a jumble of the commercial and industrial zones. The zone changes will unify most of the area under the E-2 and C-2 zones. The goal of the amendments is to avoid non-conformities in E-2 by combining the currently allowed list of permitted uses in I-2 and C-4.

Clarity and consistency in standards. The height, setback, landscape requirements, and other basic development standards in the E-2 zone build upon the C-2 zone standards to: (1) provide clarity and familiarity to those working with the code; and (2) create a consistent development pattern and attractive streetscape to the greatest degree possible. Transition standards are added where E-2 abuts residential zones.

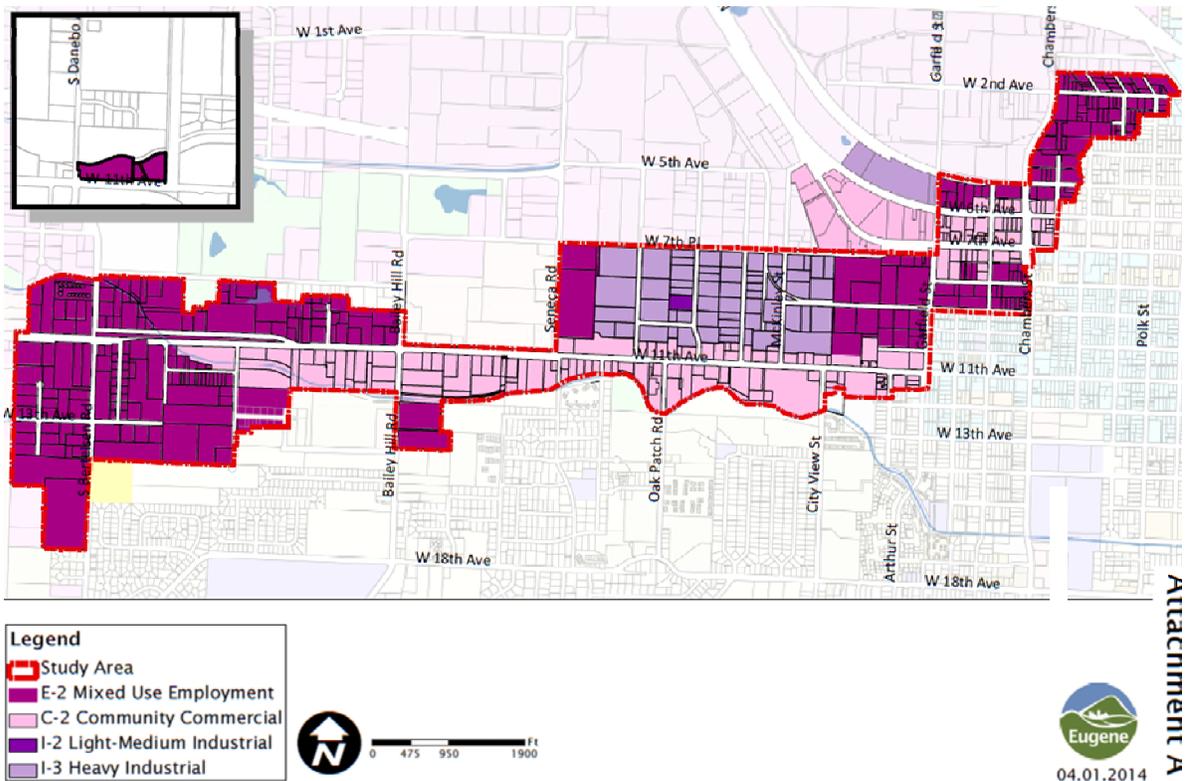
Pedestrian friendly and transit supportive development standards. The E-2 development standards promote the compact development and efficient transportation options pillar of Envision Eugene. The standards attempt to strike a balance among the needs of pedestrians, transit users, and automobile drivers, as well as among businesses, customers, and travelers. The front setback and development standards for buildings and drive-through aisles are important pieces of creating a transit supportive and pedestrian friendly corridor.

Table 1. Acres re-zoned to C-2 Community Commercial or E-2 Mixed Use Employment

Study Area	Acres	Rezoned from*	Rezoned to
West Eugene	0.4	C-1	C-2
	30.5	C-4	C-2
	35.3	I-2	C-2
	1.8	S-C	C-2
	Total to C-2	68	
	1.1	C-2	E-2
	12.8	C-4	E-2
	245.2	I-2	E-2
	12.2	I-3	E-2
	Total to E-2	271	

Zoning districts: C-1 Neighborhood Commercial, C-2 Community Commercial, C-4 Commercial Industrial, S-C Chambers Special Area, I-2 Light-Medium Industrial, I-3 Heavy Industrial, R-1 Low Density Residential

W. 11th Avenue Adopted Zone Changes Map (68 acres to C-2, 271 acres to E-2)



Of the 271 acres that are rezoned to E-2, about 42 acres are vacant and less than 10 acres in size. It is assumed that all of those 42 small-lot surplus acres will be suitable for commercial uses therefore decreasing the surplus of such sites. Additionally, with 271 acres of I-2 land being rezoned, it is reasonable to assume that some portion of the developed land in this area would

be suitable for new commercial uses as well. Additionally, Table 1 shows that about 35 acres of I-2 was rezoned to C-2 which also allows more office and retail uses.

After accounting for the capacity gained from re-designation to Commercial in the Crow Road Area (Measure 2), E-1 zone changes (Measure 1b), and the 42 acres of vacant rezoned to E-2 (portion of Measure 1a), the remaining commercial need is for about 15.5 acres of land. Given the large amount of land rezoned to E-2 and the demand for a mixture of commercial and industrial in this area, it is reasonable to assume that this 15.5 acre need will be accommodated on developed land throughout the E-2 and C-2 rezone area. This still leaves about 93% percent of the E-2 land in this area available for smaller industrial needs through redevelopment.²

In summary, as shown in Table 3, the E-2 rezone results in capacity for 1,670 commercial jobs, or 54.5 acres of commercial capacity on Industrial land.³

Timing: The City Council adopted the new E-2 Mixed Use Employment Zone on May 14, 2014. The City's action was acknowledged by the Oregon Department of Land Conservation and Development pursuant to ORS 197.625(1)(a).

b) E-1 Employment Zone / Campus Industrial Flexibility

Applicability: Certain areas designated Campus Industrial and zoned I-1 Campus Industrial.

Assumptions: Amending the I-1 zone to be the E-1 Campus Industrial zone and allowing more office type uses will create more capacity for office jobs and reduce the need to expand the UGB for Commercial office jobs.

Analysis: The City's three areas designated as Campus Industrial (Chad Drive, Willow Creek, and Greenhill Technology Park) were re-zoned⁴ to the new E-1 Campus Employment zone to create more business and job development opportunities. This will occur due to the following new provisions:

² Of the 271 I-2 acres rezoned to E-2, 42 acres are vacant and assumed to be suitable for commercial uses, which leaves 229 developed I-2 acres in this area. With 15.5 of these acres assumed suitable for commercial uses, that leaves 213.5 E-2 acres (79% of the E-2 zoned land in this area, or 93% of the developed E-2 zoned area) available for Industrial uses through redevelopment.

³ The conversion of jobs to acres uses the same assumption used to calculate capacity on employment land; 68 EPA for (non-retail) commercial jobs and 23 EPA for retail jobs. The portion that is commercial office versus commercial retail jobs is based on the split of commercial jobs forecasted in the 2011 Oregon Employment Department forecast; the commercial demand is projected to be 59.09% office jobs and 40.72% retail jobs. For 1,670 jobs, 59.09% of these jobs are assumed to be office which is 14.86 jobs divided by 68 EPA is 14.86 acres and 40.72% of the jobs are assumed to be retail which is 659 retail jobs divided by 23 EPA is 28.65 acres. This 43.6 acres divided by .8 acre for the net-to-gross conversion is 54.5 ac of new commercial capacity on industrial land.

⁴ Some sites in these areas were rezoned from one zoning to the new E-1 Campus Employment zone. The sites in these areas where the property was already zoned I-1 Campus Industrial did not have to be rezoned because the City renamed the I-1 Campus Industrial zone to E-1 Campus Employment so those properties would automatically be subject to the new Campus Employment Zone standards.

Rename zone to reflect purpose and intent of the zone to better reflects the intent of the revised use list. This relates to a changing economy where businesses often blur the lines between commercial and industrial, or combine several employment uses on a property.

Add to the use list to increase employment opportunities. The Code amendments are intended to respond to new market realities in the Campus Employment areas by allowing a wider range of employment and support uses. For example, rather than limiting the types of office-based employment uses, the amendments allow all office development. The uses also allow a wider range of medical uses, such as doctor’s offices, dentists, and clinics. In addition, some uses were deleted to better preserve the lands for the intended employment uses; these include churches and schools, although existing permit holders are allowed to remain and expand on their existing property.

Adjust regulations that pose unnecessary barriers to employment opportunities. Several Special Use Limitations have proven difficult to use for both developers and for City staff. By revising or deleting these limitations, the code should make the Campus Employment areas more appealing to future development, resulting in increased employment density. The changes include:

- deleting limitation 1; (which requires complicated and restrictive accounting of square footage for different uses),
- deleting references to “business park” approval (which is difficult to administer across multiple ownerships and is replaced by explicit standards), and;
- allowing more flexibility for accessory uses and support uses in the zone.

Maintain the campus character while allowing additional flexibility. The code retains green space percentage requirements, adds large facility development standards, and allows outdoor storage with siting and screening standards.

Improve residential compatibility/ transitions such as height limits, special height limits adjacent to residential areas, and landscape buffers to improve neighborhood livability in those residential areas adjacent to the Employment and Industrial zones.

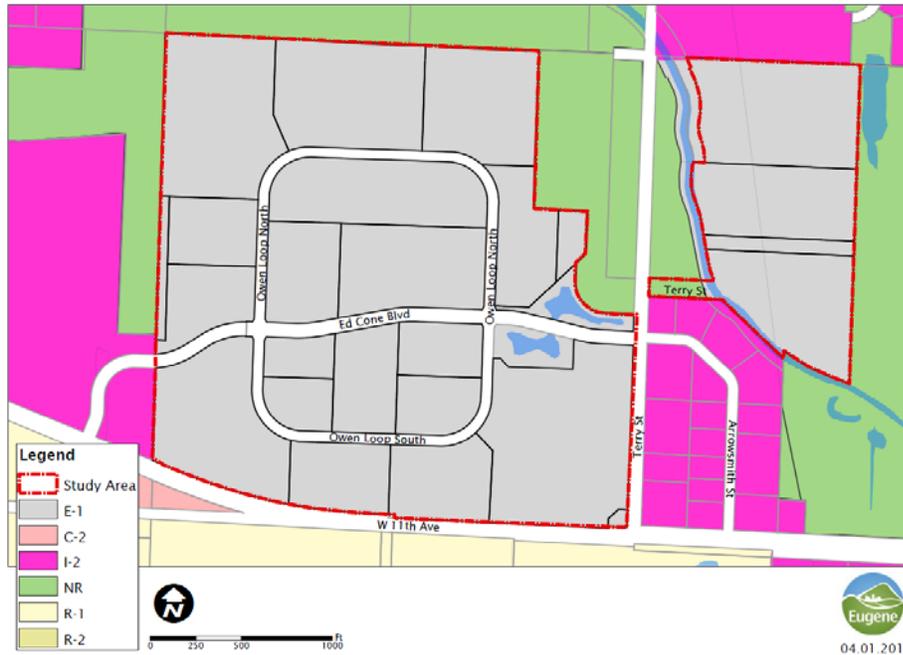
The following acres were rezoned or are now subject to the new E-1 standards. These estimates represent the number of acres that are impacted by the rezone, regardless of their disposition (e.g. vacant or developed). While these estimates are not meant to imply or expect that all of the acres will convert or develop with office use, the amount rezoned is significantly more than the deficit of 4,250 commercial jobs (Table 3) would require, therefore it is reasonable to assume that the office deficit will be accommodated by this E-1 and the E-2 zone changes discussed above.

Table 2. Acres re-zoned to E-1 Campus Employment Zone

Study Area	Acres	Previous Zoning*	New Zoning
Greenhill Technology Park	161	I-1	E-1
Willow Creek	224	I-1	E-1
Chad Drive	152	I-1	E-1
	6.4	R-1	E-1
Total to E-1	543		

*Zoning districts: I-1 Campus Industrial, R-1 Low Density Residential, E-1 Campus Employment

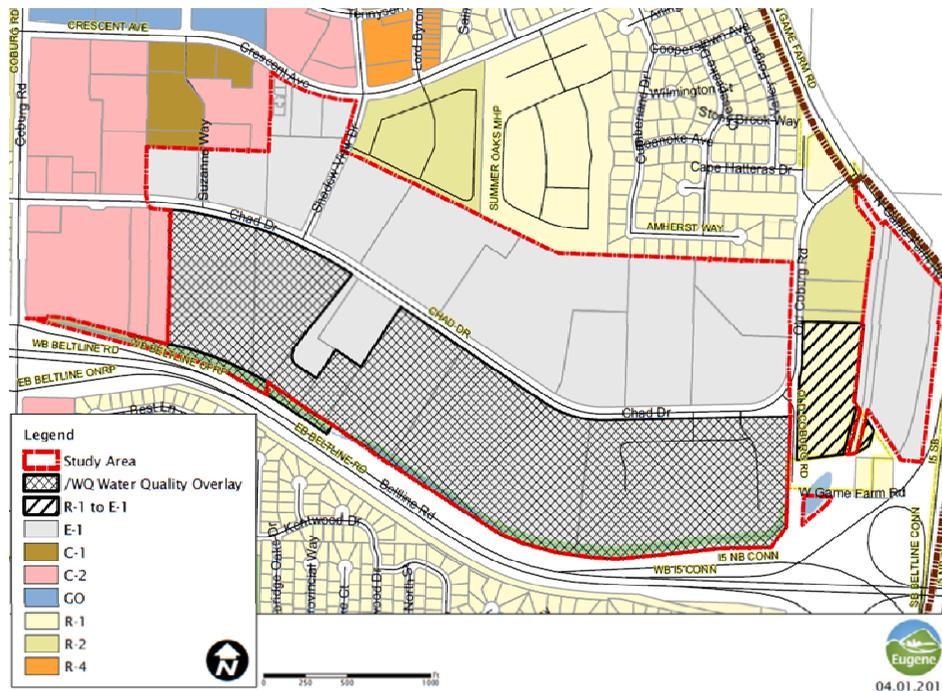
Greenhill Technology Park Zone Change Map (about 161 acres to E-1)



Willow Creek Zone Change Map (about 224 acres to E-1)



Chad Drive Zone Change Map (about 159 acres to E-1)



Of the 543 acres that were rezoned to E-1, about 139 of these acres are vacant with about 87 of those vacant acres being smaller than 10 acres in size.⁵ The remaining commercial job need after the E-2 re-zone/code amendments (Measure 1a) is about 47.5 acre or 2,584 commercial jobs.⁶ It is assumed that at minimum 47.5 of the smaller E-1 vacant acres may be suitable for these commercial-type uses, thereby accommodating the remaining commercial job need. As a result of Measures 1a and 1b, the 121 acre surplus of Industrial sites less than 10 acres in size identified in Part III of this Study is further reduced, as reflected in Table 4 below.

Timing: The City Council adopted the new E-1 Employment Zone on May 14, 2014. The City’s action was acknowledged by the Oregon Department of Land Conservation and Development pursuant to ORS 197.625(1)(a).

The resulting capacity of these two measures is for 4,254 commercial jobs on Industrial land:

⁵ Based on review of the inventory of vacant Industrial sites 10 acres or greater, about 52 of the 139 vacant acres in the three E-1 study areas are 10 acres or greater.

⁶ The conversion of jobs to acres uses the same assumption used to calculate capacity on employment land; 68 EPA for (non-retail) commercial jobs and 23 EPA for retail jobs. For these 2,584 campus industrial jobs, all are assumed to be office jobs (not retail), divided by 68 EPA is 38 acres. This 38 acres divided by .8 acre for the net-to-gross conversion is 47.5 ac of additional commercial jobs capacity on Industrial land.

Table 3. Capacity of Measures to Increase Commercial Employment on Industrial Land

Measure	Gross ac 100%	Net ac 80%	office		retail		Total jobs
			% of net 59.09%	Jobs/ac 68	% of net 40.72%	Jobs/ac 23	
			acres	jobs	acres	jobs	
Campus Industrial Flexibility (E-1 zone)	47.5	38	38	2,584	0	-	2,584
W. Eugene Industrial Flexibility (E-2 zone)	54.5	43.6	14.9	1,011	28.7	659	1,670
Total	102						4,254

ac= acres

- **Efficiency Gained:** Together, measures 1a and 1b equate to 4,254 commercial jobs, or 102 acres of commercial jobs capacity on Industrial land. The reduction to the 152 acre surplus of Industrial sites less than 10 acres in size is also reflected in Table 4.

Additional notes:

The E-1 and E-2 code amendment package also included amendments to the I-2 Light-Medium Industrial Zone that increase allowances for on-site sales of goods manufactured on-site. The I-2 zone accommodates many small-scale manufactures that need to have a retail component. The pre-2014 code (before these measures were adopted) allowed retail trade in I-2 when it is “secondary, directly related to, and limited to products manufactured, repaired, or assembled on the development site.” This clause has no clear and objective standard for simple permitting, and as such, it has been difficult to implement consistently. The 2014 adopted I-2 code amendments create clear, measurable standards for accessory uses directly related to the primary use, and small-scale independent retail uses to serve employees in the zone. While the impact of these amendments are not quantified, they may add additional retail capacity in the I-2 zone due to increased flexibility.

2. Re-designation of Land to Commercial Designation

As a result of a comprehensive look at how the Crow Road area might develop in the future, some portions of this area were re-designated to Commercial.

Applicability: Portions of three sites in the Crow Road Study Area, south of W. 11th Avenue and east of Greenhill Road. These sites were designated Medium Density Residential. Two of the sites were identified as partially vacant sites on the City’s 2012 Employment Land Supply in Part I of this Study.

Assumptions: Re-designation of partially vacant land from Medium Density Residential to Commercial will add capacity for commercial jobs.

Analysis: A total of 10.3 acres on three sites were re-designated from Medium Density Residential to Commercial. One of the sites had 0.7 acres of Commercial designation but is developed and therefore was not assumed to add capacity at this time. The two other sites have a total of 1.2 acres

of development on the Commercial designation portion of the sites. The result is about 8.4 acres of additional commercial capacity.

Timing: The City Council adopted the re-designation of the 10.3 acres of MDR to Commercial on July 9, 2014, and it became effective 30 days later. The City's action was acknowledged by the Oregon Department of Land Conservation and Development pursuant to ORS 197.625(1)(a).

- **Efficiency Gained:** 8.4 acres of Commercial land.

3. Downtown & Mixed Use Code Amendments

The City has taken actions to boost redevelopment downtown. Measures 4 and 5 are included in these actions.

Applicability: C-2 Community Commercial Zone, C-3 Major Commercial Zone (downtown), /ND Nodal Development Overlay Zone, and /TD Transit Oriented Development Overlay Zone.

Assumptions: The goal of these amendments is to facilitate compact urban development in downtown, on key transit corridors, and in core commercial areas, consistent with Envision Eugene. The amendments address this as follows:

Surface Parking Limitation. The goal of this amendment is to provide flexibility for redevelopment sites within downtown by allowing up to 20 additional surface parking spaces for sites where all vehicle access is via an alley, and removing the prohibition on stand-alone surface parking lots.

Large Commercial Facilities Standards. The goal of this amendment is to ensure that development standards applicable to downtown developments are appropriate for a high quality urban setting by exempting downtown developments from certain large commercial facility standards.

Commercial Landscaping Standards. The goal of this amendment is to make the commercial landscaping standards align with desired urban development and a pedestrian-oriented streetscape design by reducing the minimum landscape area requirement downtown and removing the required width for front yard landscape beds.

Nodal Development Overlay Zone. The goal of this amendment is to provide flexibility while adding clarity, in application of these standards by allowing for all properties to seek adjustments to the development standards, by adding relevant adjustment review criteria, and by clarifying applicability of the standards.

Traffic Impact Analysis/Level of Service in Downtown. The goal of this amendment is to provide clarity in the expected outcome for property owners and affected community members by remove the TIA requirement and reduce the allowed level of service for projects within the Downtown Plan area, with the exception of the properties subject to the EWEB master plan.

General Commercial Standards. The goal of these amendments is to simplify the structure of one section of the land use code. Section headings and subheadings are simplified and clarified.

Analysis: These code amendments clearly make it easier to do development downtown. They are part of the City’s overall program to help facilitate more jobs and housing downtown.

Timing: The City Council adopted the package of code/plan amendments on July 22, 2013, and they become effective August 24, 2013. The City’s action was acknowledged by the Oregon Department of Land Conservation and Development pursuant to ORS 197.625(1)(a).

➤ **Efficiency Gained:** See “Efficiency Gained” under Measure 5, below.

4. Downtown Riverfront Special Area Zone

Applicability: The new Downtown Riverfront Special Area Zone, intended to; support the creation of an active, vibrant, people place, along Eugene’s downtown riverfront; to achieve an appropriate balance between redevelopment certainty and flexibility; to further economic development, incorporate educational aspects, support appropriate enhancement of riverfront habitat; and to promote a mix of uses that complement and support existing downtown riverfront uses.

Assumptions: This new special area zone applies to about 27 acres of land on the east side of downtown, along the riverfront (also known as the Eugene Water and Electric Board – EWEB-riverfront site). Consistent with Envision Eugene’s goal of compact urban development and accommodating more multi-family homes and jobs inside the current UGB, City staff provided support to the Eugene Water and Electric Board’s (EWEB) design staff and a nine-member Community Advisory Team for development of the EWEB Riverfront Master Plan. The new special area zone for the site is intended to implement the plan.

Analysis: The EWEB riverfront site has been and will continue to be the focus of several City resources and tools in order to help facilitate redevelopment of the site. These include the site currently sitting within both the newly adopted Multiple Unit Tax Exemption (MUPT) boundary and the urban renewal district, adoption of the Riverfront Special Area Zone for the EWEB site, project coordination assistance, permit facilitation, and commitments to park and infrastructure improvements. The EWEB redevelopment scenarios for the site include eight acres of new development space focused on commercial and restaurants. Depending on how it is developed, job capacity for these eight acres could range from 320 jobs (similar to Oakway Center shopping center) to 720 jobs (similar to downtown).⁷

Timing: The City Council adopted the Downtown Riverfront Special Area Zone on July 8, 2013. The City’s action was acknowledged by the Oregon Department of Land Conservation and Development pursuant to ORS 197.625(1)(a).

⁷ Based on ECONorthwest analysis of approximate densities of commercial centers around Eugene, which found a range of about 40 employees per acre at Oakway Center to about 90 employees per acres in downtown.

- **Efficiency Gained:** Together, Measures 4 and 5, along with market incentives and pressures, should gain 331 retail jobs or about 18 acres.⁸

5. Brownfield / Parcel Assembly

Applicability: This measure affects any type of Industrial land that is a brownfield site or perceived brownfield site in Eugene or other smaller Industrial land sites.

Assumptions: One to three 10 acre or greater in size Industrial sites will become available for development through brownfield remediation efforts or by assembling smaller Industrial parcels into 10 acre or larger parcels, therefore reducing the need for a UGB expansion for industrial uses.

Analysis: Two efforts will address this. In 2013, the Eugene/Springfield/Lane County Brownfields Coalition received over half a million dollars in funding from the federal government to inventory and assess potential brownfield sites. This funding positions the metro area to establish a brownfields program and begin to see cleanup and re-development of key properties. In Eugene, work is focused on the downtown, west Eugene, and the Highway 99 industrial areas. Vacant or underused properties can be redeveloped into residential, commercial, or industrial uses, helping to re-use land inside the existing UGB and reduce the amount of UGB expansion. In the past two years, the Brownfields Coalition has completed an inventory of 400 sites, identified priority areas of focus, and conducted site assessments on 13 properties.

Additionally, Eugene's 2012 Employment Land Supply identified 404 acres of Industrial land sites that are less than 10 acres in size. Based on the 2012 Employment Land Supply at Part I of this Study and on capacity and demand assumptions in the EOA at Part II, the City has a surplus of about 121 acres on industrial sites that are less than 10 acres in size, some of which could be consolidated into larger sites.

The 121 acre Industrial small site surplus is reduced by approximately 102 acres to create additional capacity for commercial uses (see measure 1, Table 3 above). As documented in the EOA, ECONorthwest found that it is reasonable to assume that three sites 10-20 acres would be made available through these measures (brownfield redevelopment and parcel assembly). As an example, in conservative estimate,⁹ 45 acres of the 121 acre surplus could create the three sites of 10-20 acres based on the three sites having an average site size of 15 acres.

⁸ The conversion of jobs to acres uses the same employees per acre assumption used to calculate capacity on employment land; 68 EPA for (non-retail) commercial jobs and 23 EPA for retail jobs. All of these jobs are assumed to be retail (not office) jobs. 331 jobs divided by 23 EPA is 14.39 acres. This 14.39 acres divided by 0.8 acre for the net-to-gross conversion results in the total estimate of 17.99 acres of additional Industrial capacity.

⁹ This estimate assumes that the site assembly will occur among the surplus of sites that are less than 10 acres in size. However, it is also possible that all three sites will be derived from sites 10 acres or larger in size that are developed brownfield clean-up sites that are not included in the 2012 Employment Land Supply and thus would not deduct from the surplus of sites less than 10 acres in size.

Timing: Phase I environmental site assessments for the brownfield work has been conducted on eligible sites to assess the potential for hazardous substances and petroleum contamination. Phase II environmental site assessments have been conducted on a smaller number of sites to determine if there is any contamination on these sites, the exact nature and extent of contamination, and options for remediation or even clean-up—if necessary. Parcel assembly will be coordinated with willing property owners as available. This “willing seller” information will be provided to the Chamber of Commerce and other entities that help the City to facilitate the location of new employment opportunities and job growth in Eugene.

- **Efficiency Gained:** The gain of three 10-20 acre sized industrial sites was already accounted for in the EOA as shown in Table 5. The reduction to the 152 acre surplus of Industrial sites less than 10 acres in size is also reflected in Table 4.

3. Conclusion

Based on the measures above, the City has created additional capacity for employment land within its 2012 UGB. The capacity identified in the 2012 Employment Land Supply in Part I of this Study and the Economic Opportunities Analysis (EOA) in Part II of the Study, together with the capacity identified through these measures, determines whether the City has enough employment land for the next 20 years or whether it needs to expand its UGB to meet all of the employment demand.

As shown in the following tables, the capacity identified on the 2012 Employment Land Supply (Part I of this Study) and in the EOA (Part II of this Study), together with the above measures results in:

- The demand for the non-industrial employment land need (commercial office, retail) is met. The measures create a small surplus of about 7 acres of Commercial land.
- There is a deficit of about 26 acres of Industrial land less than 10 acres in size.
- There is still a need for 11 sites of Industrial land 10 acres or greater.

Table 4. Employment Land Supply After Measures to Increase Development, in gross acres, 2012-2032

Plan Designation	Gross Acres (deficit)
Commercial	
2012 Land Supply	154
Vacant	108
Partially Vacant	17
Redevelopment	29
2032 Land Need	248
2012 Land Sufficiency	(94)
2032 Public and Semi-public Demand	27
Preliminary Land Sufficiency Conclusion	(121)
Land Supply Gained from Measures to Increase Commercial Employment	128
E-1 Employment Zone	47.5
E-2 Employment Zone	54.5
Re-designation to Commercial (Crow Road Area)	8.4
Downtown and Mixed Use Amendments / S-DR Zone	18
Final Land Supply Sufficiency -- Surplus	7
Industrial (less than 10 acres in size)	
2012 Land Supply	435
Vacant	404
Redevelopment	31
2032 Land Need	283
2012 Land Sufficiency	152
2032 Public and Semi-public Demand	31
Preliminary Land Sufficiency Conclusion	121
Land Supply Lost from Measures to Increase Commercial Employment (for Commercial jobs)	147
E-1 Employment Zone	48
E-2 Employment Zone	54
(for Industrial sites 10 acres or greater)	
Parcel assembly to create 3 15-acre sites	45
Final Land Supply Sufficiency -- Deficit	(26)
Industrial (greater than 10 acres in size)	
2012 Land supply	15
Vacant	8
Redevelopment	4
Brownfield/ Parcel Assembly	3
2032 Land Need	26
2012 Land Sufficiency	(11)
Final Land Supply Sufficiency -- Deficit	(11)

Table 5. Industrial Sites Larger than 10 acres After Measures to Increase Development

Site size (Suitable Acres)	Supply (Sites)			Sites Needed	Land Sufficiency
	Vacant	Redevelop-able	Parcel Assembly /Brownfield Remediation		Site Sufficiency (deficit)
10 to 20 acres	4	3	3	14	(4)
20 to 50 acres	4	1		7	(2)
50 to 75 acres	0	0		3	(3)
75 acres and larger	0	0		2	(2)
Total	8	4	3	26	(11)

Table 6. Land Deficiency for Industrial Sites Larger than 10 acres

Site size (Suitable Acres)	Site sufficiency (deficit)	Average Site Size (Suitable Acres)	Average Land (Deficit) (Suitable Acres)
10 to 20 acres	(4)	15	(60)
20 to 50 acres	(2)	35	(70)
50 to 75 acres	(3)	63	(189)
75 acres and larger	(2)	88	(176)
Total	(11)		(495)

Based on the City actions, Eugene’s 2012 UGB includes a 20 year supply of land for Commercial employment. Because there is still a remaining need for 11 sites of Industrial land 10 acres or larger in size, the City is required to expand the UGB to address this need. In the subsequent Parts of this Employment Land Study, the City will address the remaining deficit to fulfill the 20 year land demand. The full 20 year employment land supply for both Commercial and Industrial land is identified in Part VI Employment Buildable Lands Inventory (2012-2032).

Part V. UGB Expansion Areas to Address Industrial Land Deficit

Part V includes the following sections and tables:

1. Introduction
2. Conclusion

Table 1. Employment Land Supply Including Policy Decisions, in gross acres, 2012-2032

Table 2. Land Deficiency for Industrial Sites Larger than 10 acres

1. Introduction

The next step is to identify a UGB expansion area that will accommodate the remaining need for large Industrial sites. The City conducted a detailed study of the land surrounding Eugene’s 2012 UGB to identify the appropriate area for a UGB expansion to accommodate the remaining industrial land need. Combining the analysis from the previous Parts of this Study with the expansion area analysis shows how the City will accommodate the entire employment land needs through 2032.

The City’s expansion study, the City of Eugene Urban Growth Boundary Expansion Analysis for Employment Land, details how the proposed UGB expansion for Industrial land accommodates the remaining need for 11 Industrial sites at least 10 acres or greater in size.¹ The Study resulted in the expansion area and large lot portfolio that is part of the City’s 20-year supply and is shown in Figure 3 of Part VI of this Study: Employment Buildable Lands Inventory (2012-2032).

2. Conclusion

As shown in the following Tables 1 and 2, based on the analysis in the preceding Parts of this Employment Land Study and including the UGB expansion illustrated on Figure 1, above, the entire 20 year (2012-2032) employment land demand will be met.

¹ The *Urban Growth Boundary Industrial Expansion Study* is included in the “findings” attached to the City’s 2017 Ordinance adopting the UGB expansion.

Table 1. Employment Land Supply Including Policy Decisions, in gross acres, 2012-2032

Plan Designation	Gross Acres (deficit)
Commercial	
2012 Land Supply	154
Vacant	108
Partially Vacant	17
Redevelopment	29
2032 Land Need	248
2012 Land Sufficiency	(94)
2032 Public and Semi-public Demand	27
Preliminary Land Sufficiency Conclusion	(121)
Land Supply Gained from Measures to Increase Commercial Employment	128
E-1 Employment Zone	47.5
E-2 Employment Zone	54.5
Re-designation to Commercial (Crow Road Area)	8.4
Downtown and Mixed Use Amendments / S-DR Zone	18
Final Land Sufficiency -- Surplus	7
Industrial (less than 10 acres in size)	
2012 Land Supply	435
Vacant	404
Redevelopment	31
2032 Land Need	283
2012 Land Sufficiency	152²
2032 Public and Semi-public Demand	31
Preliminary Land Sufficiency Conclusion	121
Land Supply lost from Measures to Increase Commercial Employment (for Commercial jobs)	147
E-1 Employment Zone	48
E-2 Employment Zone	54
(for Industrial sites 10 acres or greater)	
Parcel assembly to create 3 15-acre sites	45
Final Land Supply Sufficiency -- met ³	(26)

² As the Table shows, this 152-acre surplus of smaller Industrial sites inside the UGB is depleted by the public uses need on Industrial land of (31 acres -- See Part III of this Study) and the efficiency measures that create new employment zones that allow for greater employment flexibility (147 acres -- See Part IV of this Study).

³ As demonstrated in Figure 2 and 3 of Part VI of this Study, the City addresses this deficit of 26 small industrial acres through the inherent need to include some smaller industrial sites in the UGB expansion area.

Industrial (greater than 10 acres in size)	Sites (deficit)
Land supply	15
Vacant	8
Redevelopment	4
Brownfield/ Parcel Assembly	3
2032 Land Need	26
2012 Land Sufficiency	(11)
Land Supply gained from UGB expansion	11
Final Land Supply Sufficiency -- met	0

Table 2. Land Sufficiency for Industrial Sites Larger than 10 acres

Site size (Suitable Acres)	Site sufficiency (deficit)	Average Site Size (Suitable Acres)	Average Land (Deficit) (Suitable Acres)	UGB Expansion Sites	Land Sufficiency (deficit)
10 to 20 acres	(4)	15	(60)	4	
20 to 50 acres	(2)	35	(70)	2	
50 to 75 acres	(3)	63	(189)	3	
75 acres and larger	(2)	88	(176)	2	
Total	(11)		(495)	11	0

The entire 20 year employment land supply and maps are provided in Part VI Employment Buildable Lands Inventory (2012-2032).

Part VI. Employment Buildable Lands Inventory (2012-2032)

Part VI includes the following table and figures:

Table 1. Vacant Employment Land, Eugene 2012-2032

Table 2. Employment Land, Partially Vacant & Baseline Redevelopment, Eugene 2012-2032

Table 3. Additional Employment Land Supply from Measures to Increase Development, in gross acres, Eugene 2012-2032

Table 4. Industrial Sites Larger than 10 acres Sufficiency After Measures to Increase Development and UGB Expansion, Eugene 2012-2032

Table 5. Employees per Acre for Vacant and Partially Vacant Land, Eugene 2012-2032

Figure 1. Employment Lands Supply (2012-2032) and UGB Expansion

Figure 2. Employment Lands Supply (2012-2032) (tiles 1 through 10)

Figure 3. Clear Lake Area UGB Expansion Industrial Large Lot Portfolio (2012-2032)

1. Final 2012-2032 Buildable Lands Inventory

This final Part of the Employment Land Supply Study provides the 20-year Employment Buildable Lands Inventory (BLI) for Eugene. The BLI incorporates the changes made to the 2012 land supply by the Part IV Measures to Increase Employment Development and the Part V UGB Expansion Areas.

As previously shown in Table 1 of Part V, the addition of capacity from actions the City took to increase employment inside the UGB, in addition to expanding the UGB for Industrial sites 10 acres or greater in size, results in the following:

- There is a minor surplus of 7 acres of Commercial land
- The entire need for Industrial land in less than 10 acre sites is accommodated
- The entire need for Industrial sites 10 acres or greater is accommodated

The final BLI maps and acreage in Tables 1-2 and 4-5 in this Part VI reflect the changes in plan designation described in Part IV of this Study (e.g. 10 acres of medium density residential in the Crow Road area were changed to Commercial land) and the UGB expansion in the Clear Lake Road area described in Part V of this Study.

Table 1. Vacant Employment Land, Eugene 2012-2032

Plan Designation	Vacant Land Acres
Commercial	96.9
Commercial Mixed Use	3.8
Campus Industrial	175.7
Government & Education	0.2
Heavy Industrial	102.5
Light Medium Industrial	319.7
Major Retail Center	3.9
Mixed Use	3.1
Parks and Open Space	63.0
Parks/OpenSpace Mixed Use	0.0
Special Heavy Industrial	5.7
University Research	2.6

As documented in Part I and Part II of this Study, the City identified some additional development capacity to accommodate some jobs on employment land that has existing development:

Table 2. Employment Land, Partially Vacant & Baseline¹ Redevelopment, Eugene 2012-2032

Plan Designation	Partially Vacant Acres	Redevelopment/ Infill Acres or Sites
Commercial	25	29 acres (not mapped)
Commercial	23.8	
Commercial Mixed Use	1	
Industrial	0	See below
Sites smaller than 10 acres	0	31 acres (not mapped)
Sites larger than 10 acres	0	4 sites (mapped)

As documented in Part IV of this Study, additional capacity was identified as a result of actions the City has taken to accommodate more jobs inside the UGB:

¹ Baseline redevelopment is the natural amount of redevelopment expected to occur without additional actions taken by the City to encourage it, as opposed to redevelopment that is stimulated by City actions (e.g. because of enacting measures that increase residential development). Table 4 shows the amount of baseline employment potential on employment land. See also Table 3 for additional capacity created through measures to increase development.

Table 3. Additional Employment Land Supply from Measures* to Increase Development, in gross acres, Eugene 2012-2032

	Gross Acres
Commercial	120 acres
Policy changes for uses on Campus Industrial	48
Policy changes in West Eugene Industrial Areas	54
Boosting Redevelopment	18
Industrial (greater than 10 acres in size)	3 Sites
Land Supply gained from Measures to Increase Employment	
Parcel assembly to create 3 15-acre sites 10 acres or greater	3

*Excludes land supply gained from re-designations. These gains are represented in Tables 1 and 2.

Table 4 shows the full portfolio of the 26 large Industrial sites and the average amount of suitable acres provided in the UGB expansion area².

Table 4. Industrial Sites Larger than 10 acres After Measures to Increase Development and UGB Expansion, Eugene 2012-2032

Site size (Suitable Acres)	Supply Sites					Total Supply Sites	UGB Expansion Average Suitable Acres
	Sites Needed	Vacant	Redevelop -able	Parcel Assembly /Brownfield Remediation	UGB Expansion Sites		
10 to 20 acres	14	4	3	3	4		60
20 to 50 acres	7	4	1		2		70
50 to 75 acres	3	0	0		3		189
75 acres and larger	2	0	0		2		176
Total	26	8	4	3	11	26	495

As documented in Part II of this Study (the Economic Opportunities Analysis), the following employees per acre, shown in Table 5, are used to estimate capacity on employment lands:

² The average amount of suitable acres needed in the UGB expansion area is based on the average size of sites in each site size category; see Part II, EOA at Table 36.

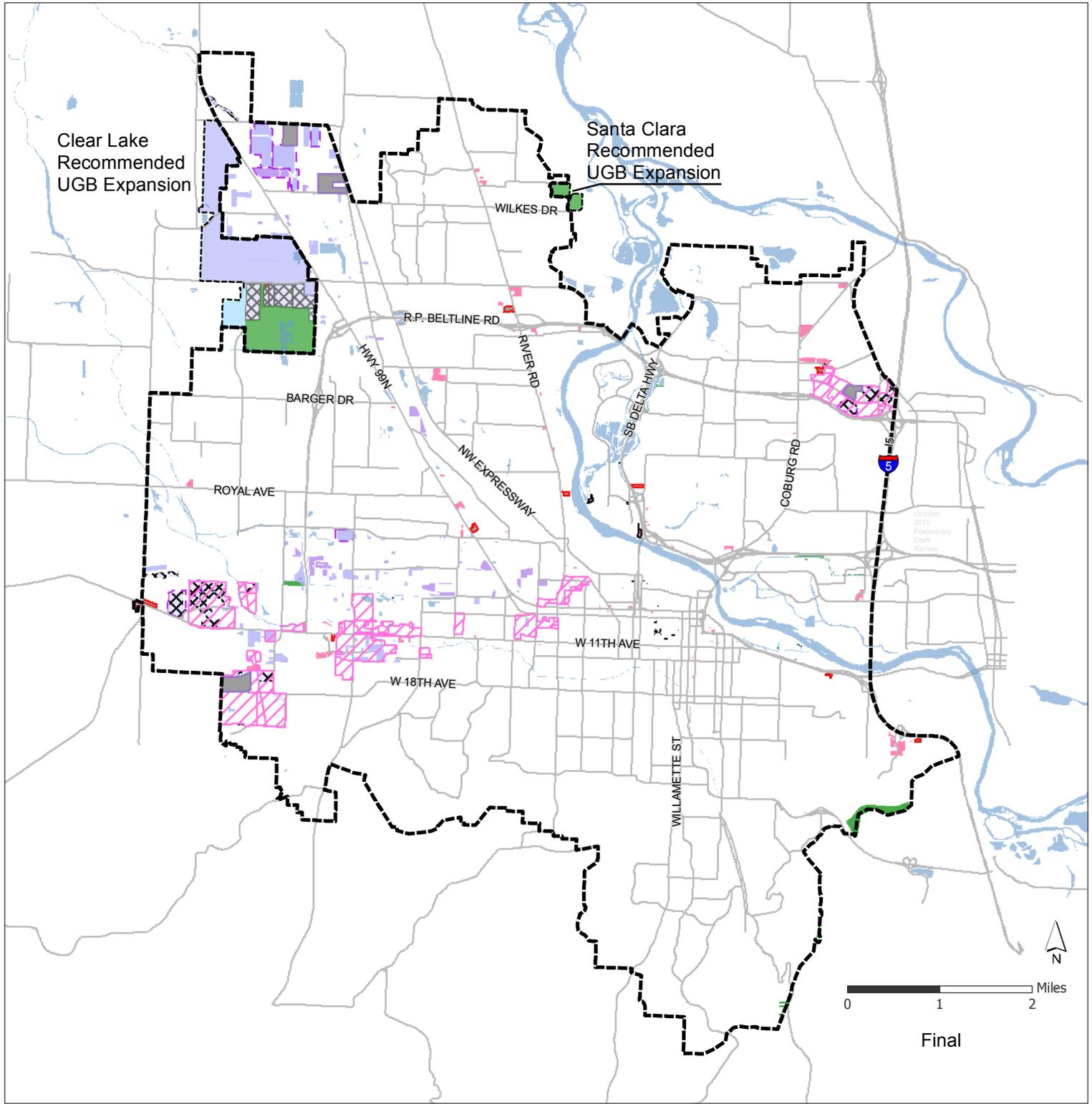
Table 5. Employees per Acre for Vacant and Partially Vacant Land, Eugene 2012-2032

Plan Designation	Employees per Acre³
Commercial	
Commercial	68
Retail	23
Industrial	
Sites smaller than 10 acres	10
Sites larger than 10 acres	6-14

In summary, taken together, the vacant, partially vacant and large site supply included in Figures 1 through 3 and Tables 1 through 3 with the employees per acre assumptions provided in Table 4, and the redevelopment estimates provided in Table 2, constitute Eugene’s 2012-2032 Employment Land Buildable Land Inventory.

³ This is employees per net acre. A net-to-gross conversion ratio of 20% is established in Part II of this Study, the Economic Opportunities Analysis at Table 28.

Figure 1. Employment Land Supply (2012-2032) and UGB Expansion



 Urban Growth Boundary (2012)
 Water Bodies
 — Roads

Plan Designation - Vacant Employment Lands

- | | | | |
|---|--|--|---|
| Commercial | Heavy Industrial | Campus Industrial | Parks and Open Space |
| Major Retail Center | Special Heavy Industrial | University Research | Parks/Open Space Mixed Use |
| Commercial Mixed Use | Light Medium Industrial | Government & Education | Mixed Use |

- Partially Vacant (PV) or Redevelopment Employment Lands**
- | | |
|---|--|
| Industrial (IND) Partially Vacant (PV) / Redevelopment | Industrial (IND) Vacant >= 10 acres |
| Commercial (COM) Partially Vacant (PV) | Employment (E) Zone |

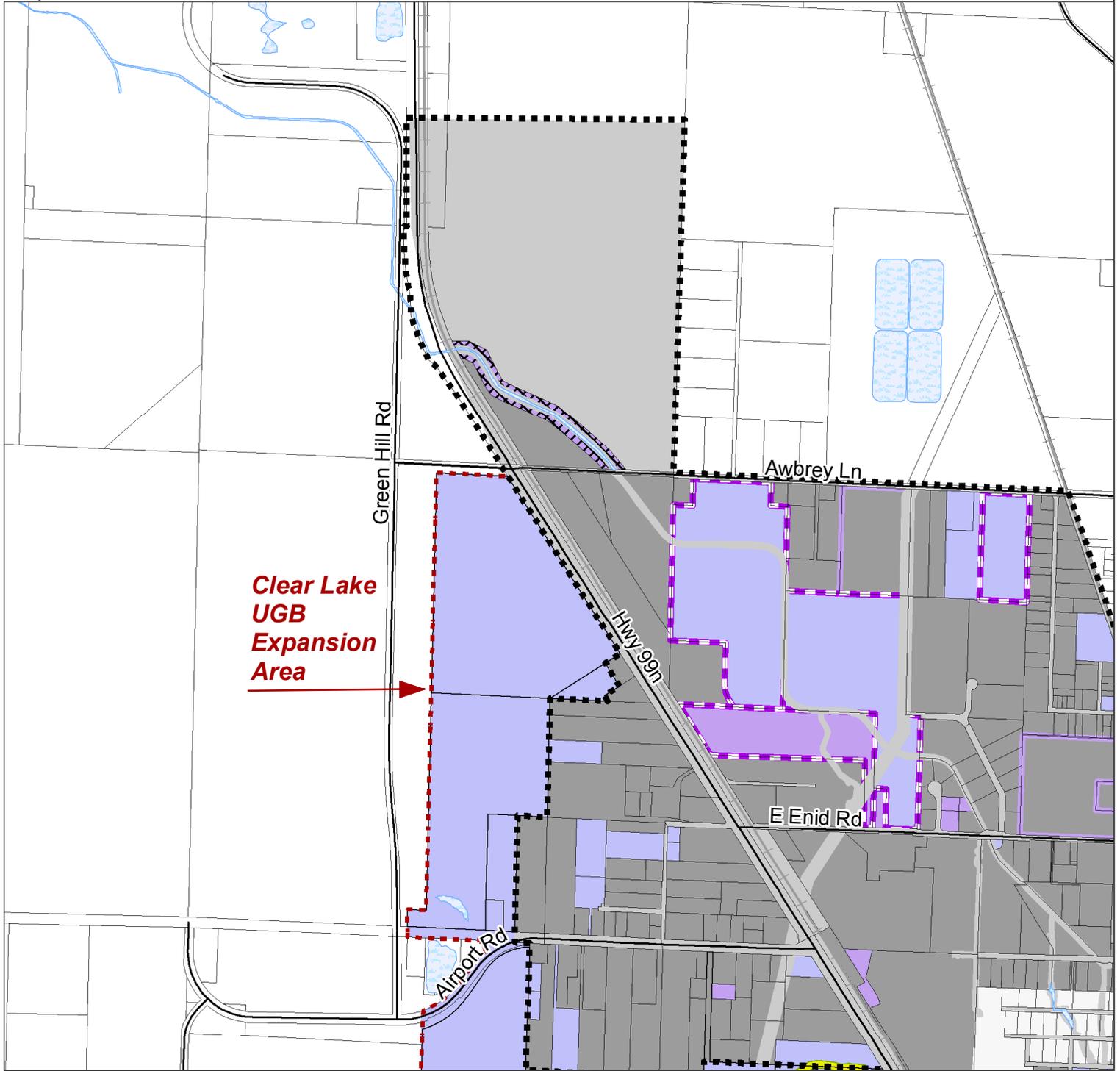
Caution: This map is not suitable for legal, engineering, or surveying purposes.

The location of the UGB line on these maps is imprecise; for the precise location see the Figure 2 2032 Employment Land Supply maps.

Final

Figure 2. Employment Land Supply (2012-2032)

Map tile 1 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Plan Designations - Vacant Employments Lands

- Commercial
- Special Heavy Industrial
- Government & Education
- Major Retail Center
- Light Medium Industrial
- Parks and Open Space
- Commercial Mixed Use
- Campus Industrial
- Parks/Open Space Mixed Use
- Heavy Industrial
- University Research
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Industrial (IND) vacant >= 10 acres
- Commercial (COM) Partially Vacant
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

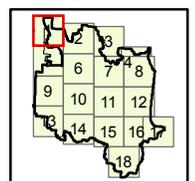
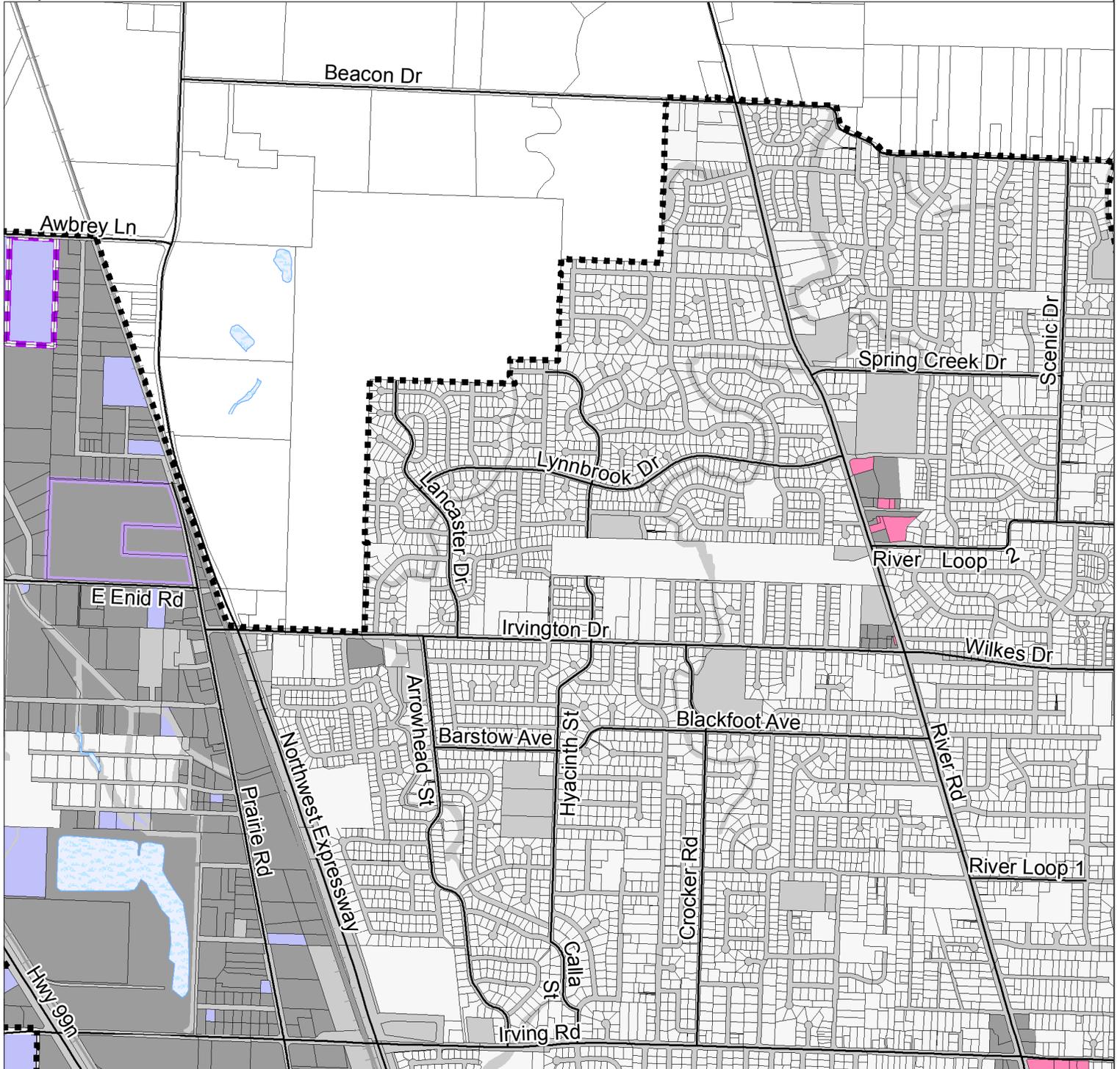


Figure 2. Employment Land Supply (2012-2032)

Map tile 2 of 18



- Urban Growth Boundary
- UGB Expansion Boundary
- 2012 BLI Taxlots
- Water Bodies
- Major Streets
- Rail Road



Final

Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

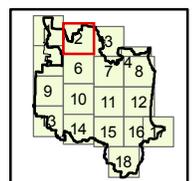
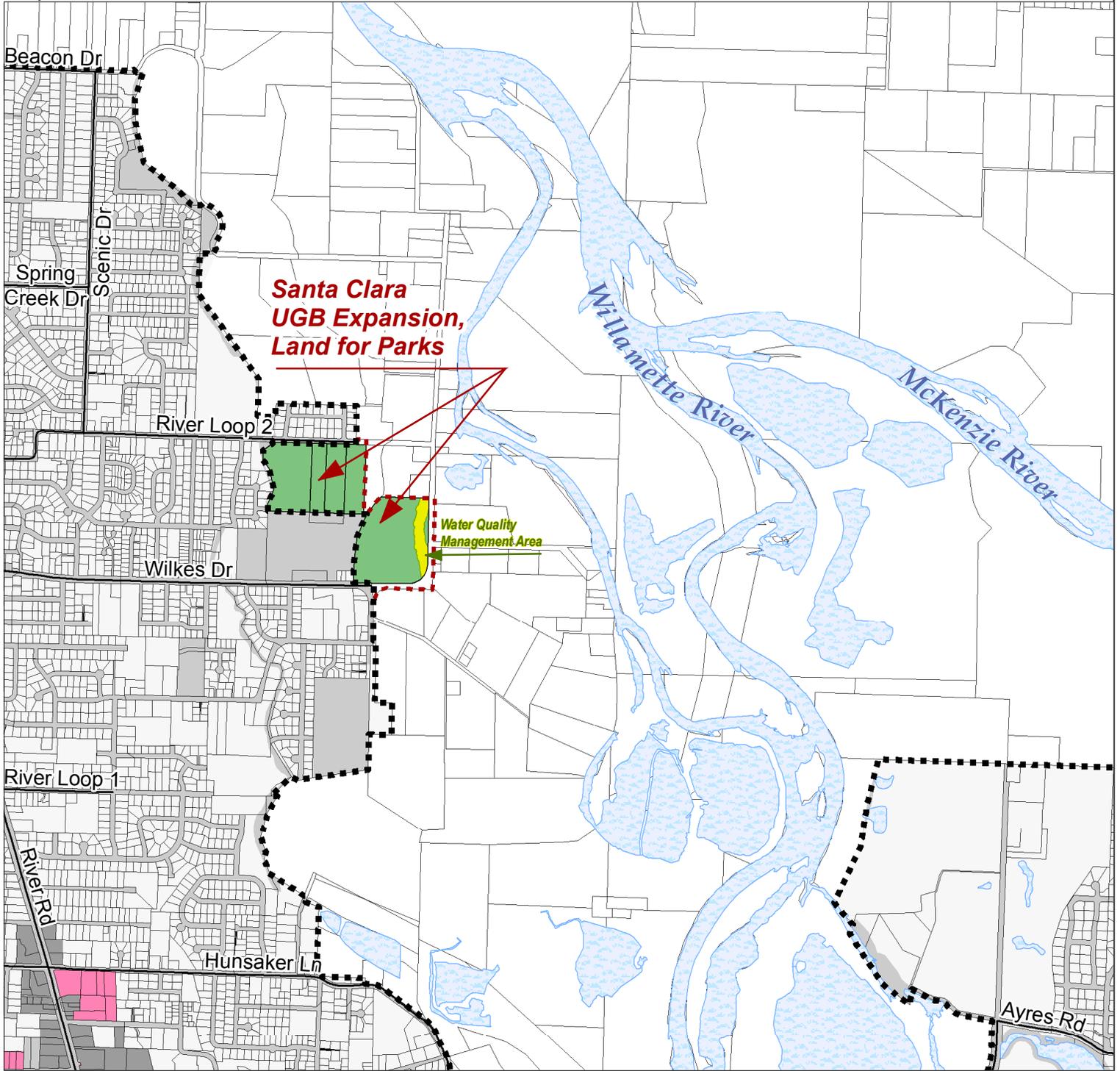
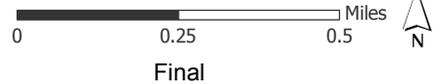


Figure 2. Employment Land Supply (2012-2032)

Map tile 3 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Plan Designations - Vacant Employment Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

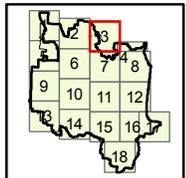
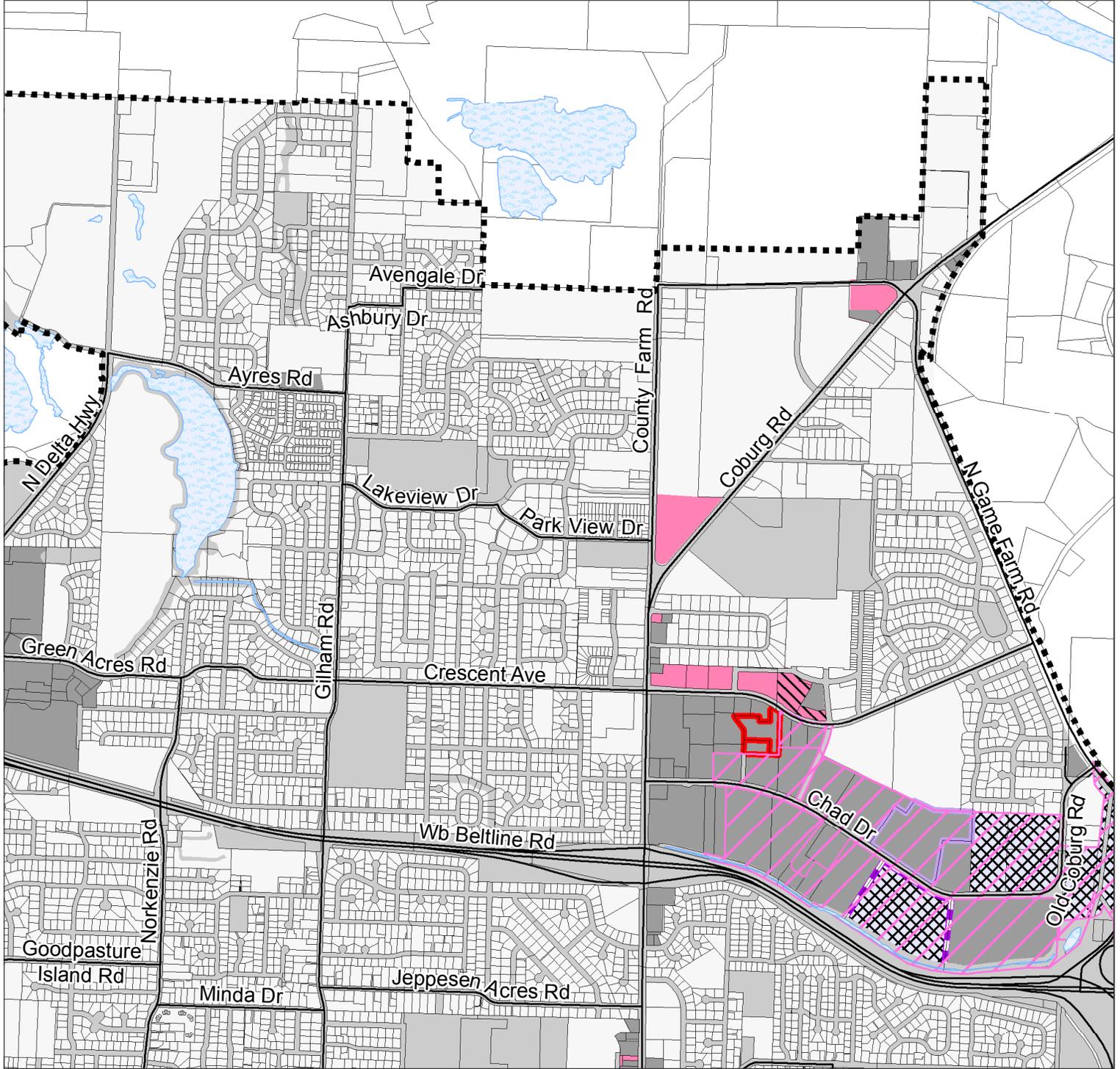


Figure 2. Employment Land Supply (2012-2032)

Map tile 4 of 18



- Urban Growth Boundary
- UGB Expansion Boundary
- 2012 BLI Taxlots
- Water Bodies
- Major Streets
- Rail Road



Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

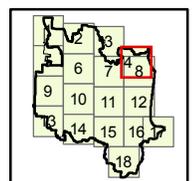
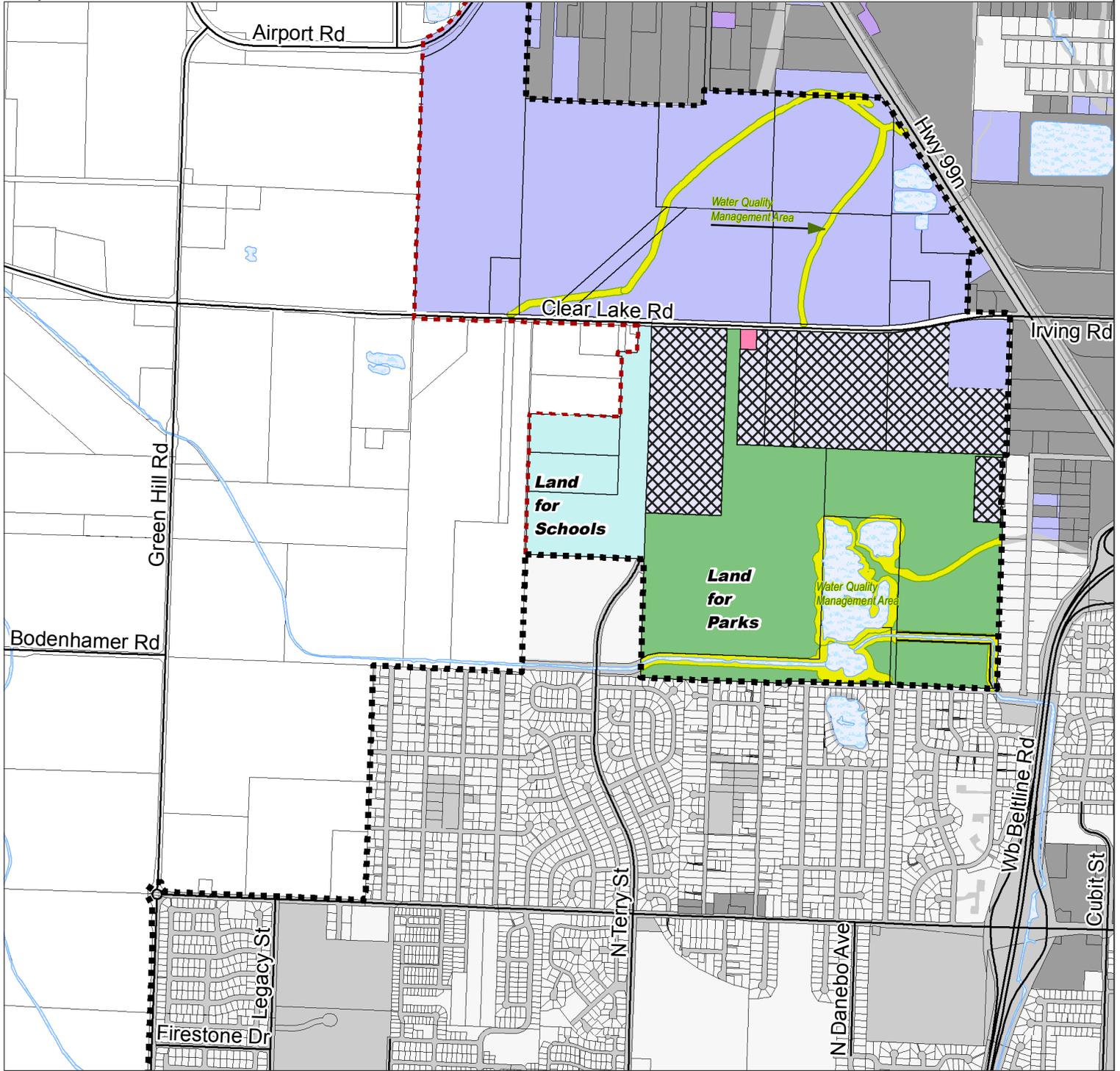


Figure 2. Employment Land Supply (2012-2032)

Map tile 5 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Plan Designations - Vacant Employment Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

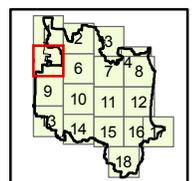
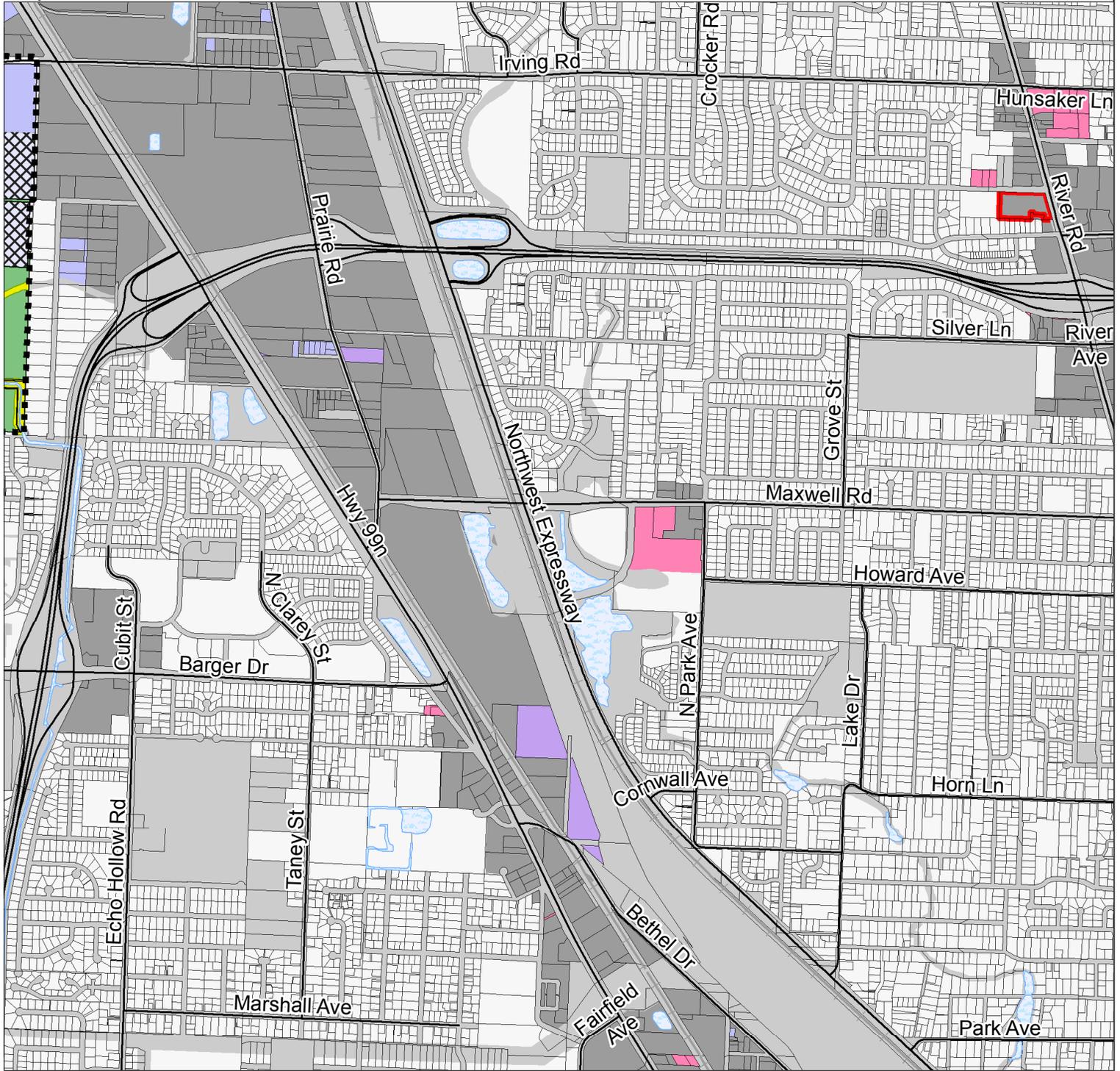


Figure 2. Employment Land Supply (2012-2032)

Map tile 6 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Final

Plan Designations - Vacant Employment Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

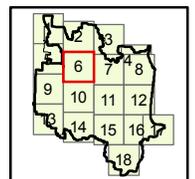
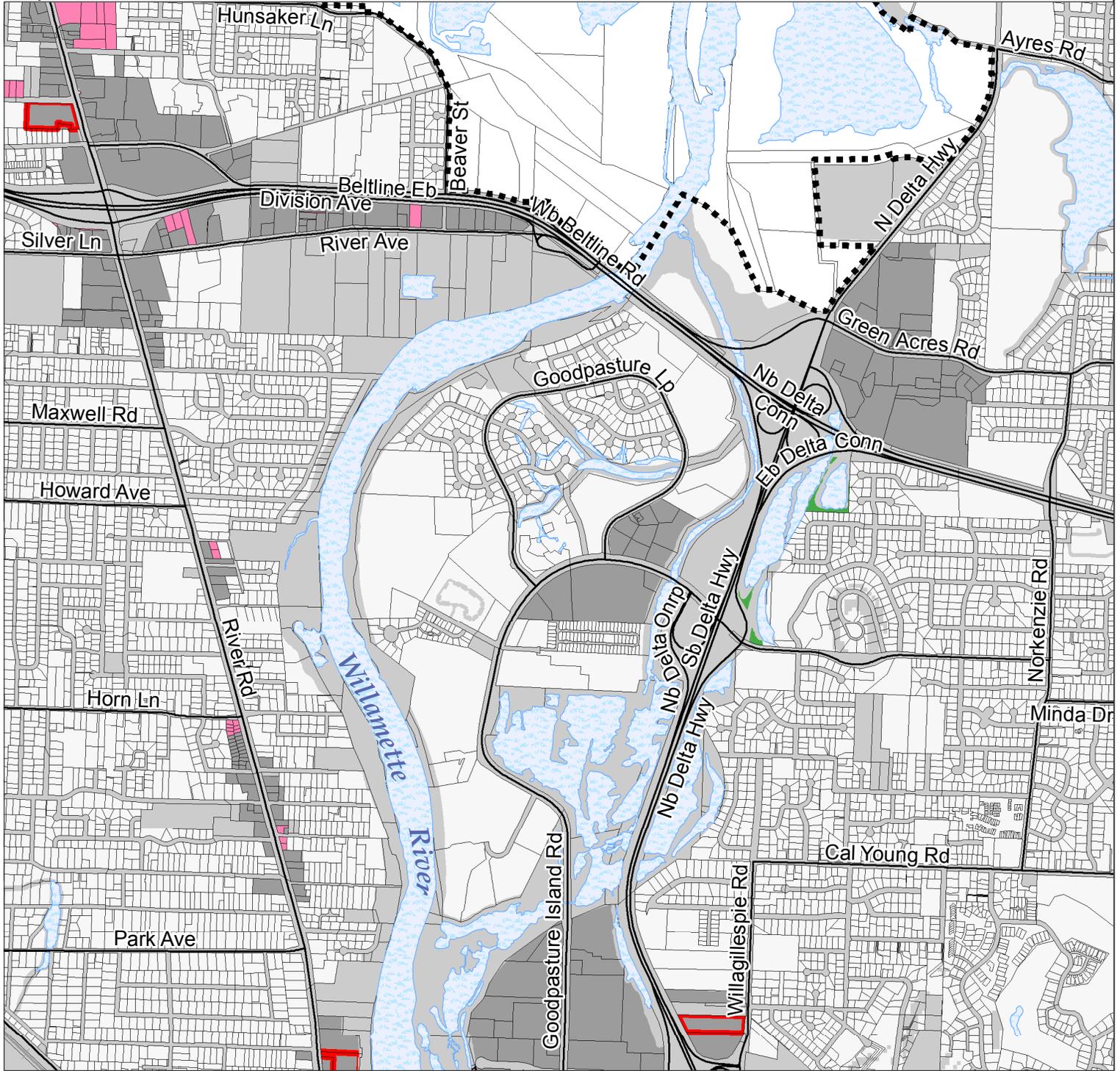
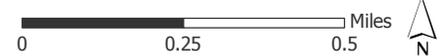


Figure 2. Employment Land Supply (2012-2032)

Map tile 7 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Final

Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

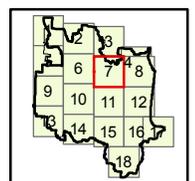
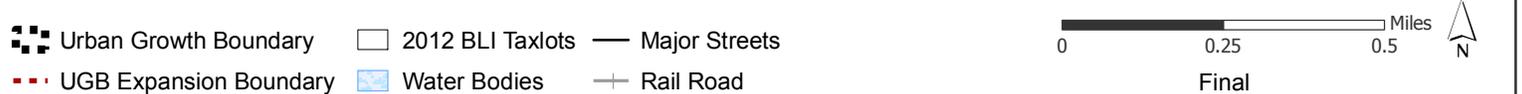
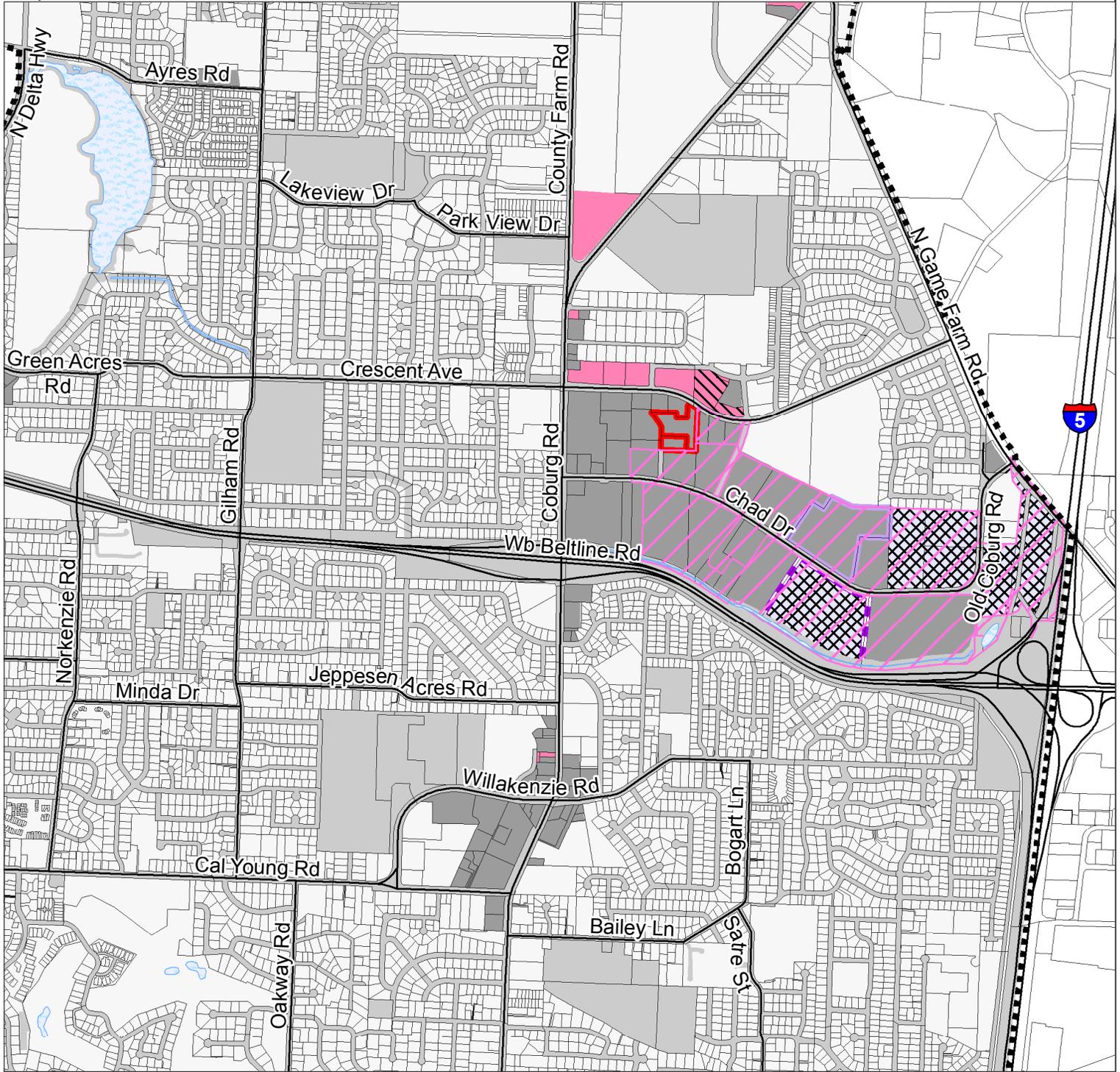


Figure 2. Employment Land Supply (2012-2032)

Map tile 8 of 18



Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

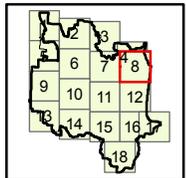
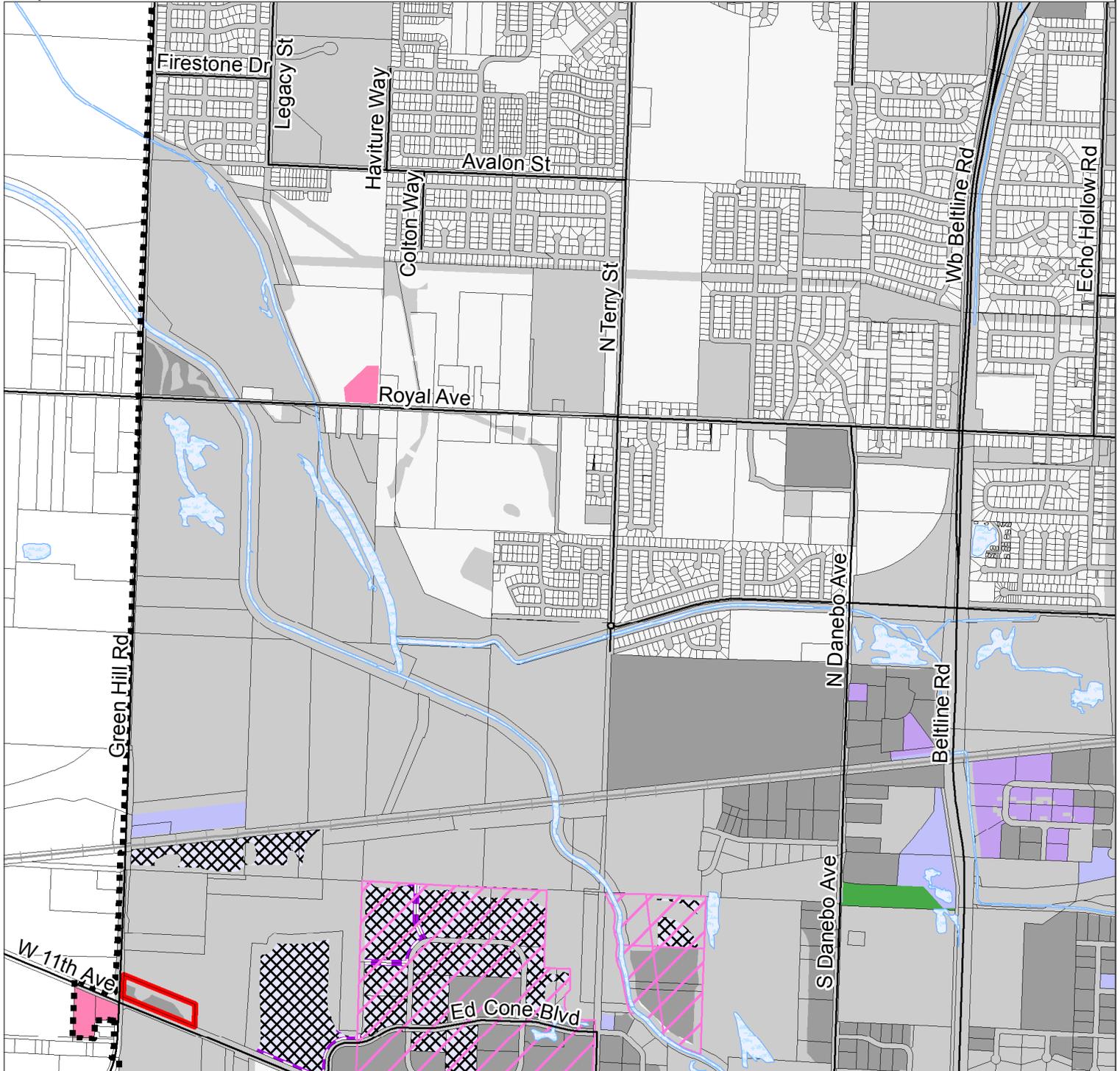


Figure 2. Employment Land Supply (2012-2032)

Map tile 9 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

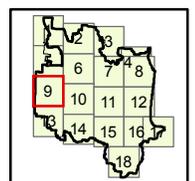
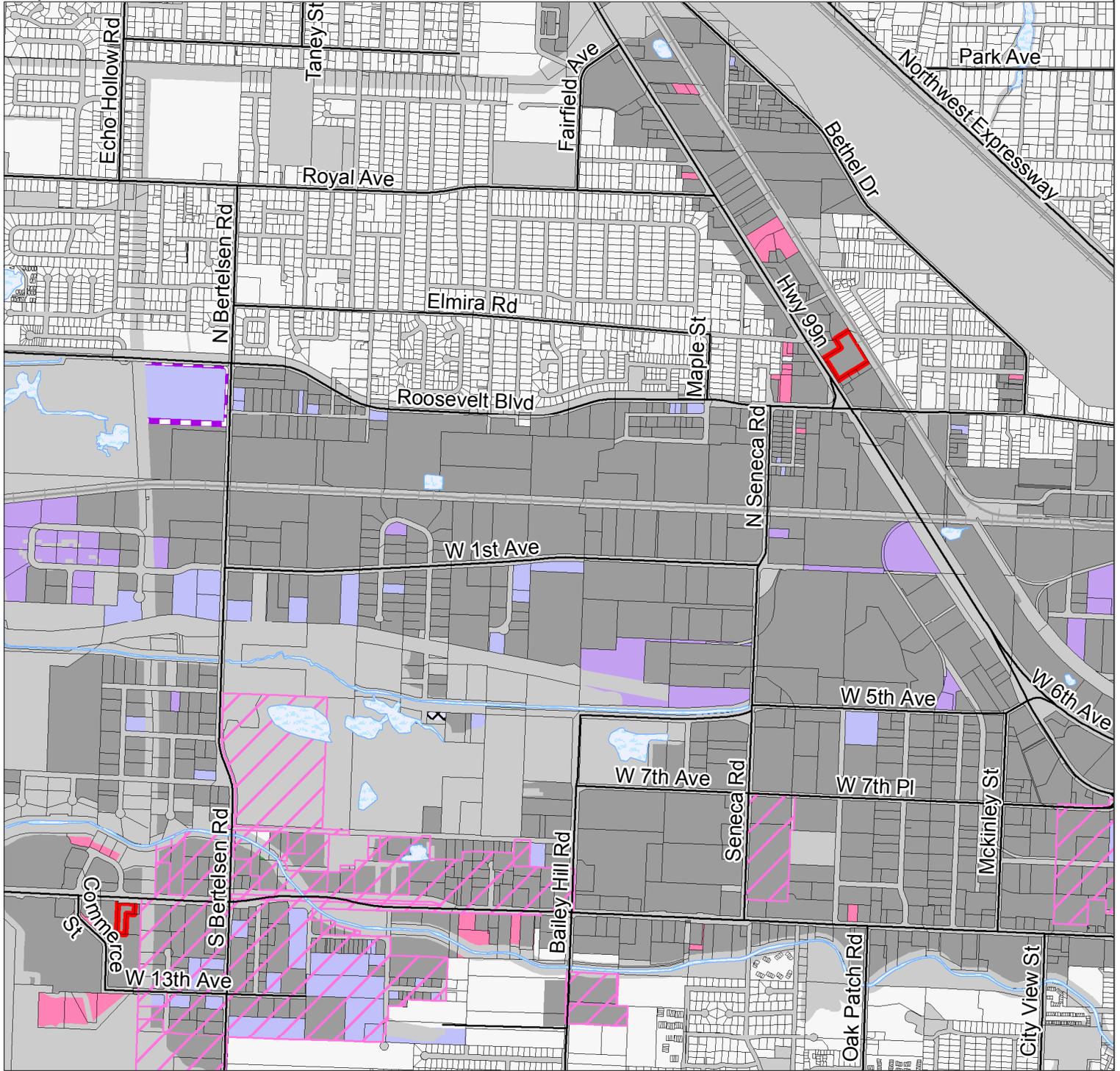


Figure 2. Employment Land Supply (2012-2032)

Map tile 10 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Final

Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

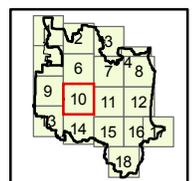
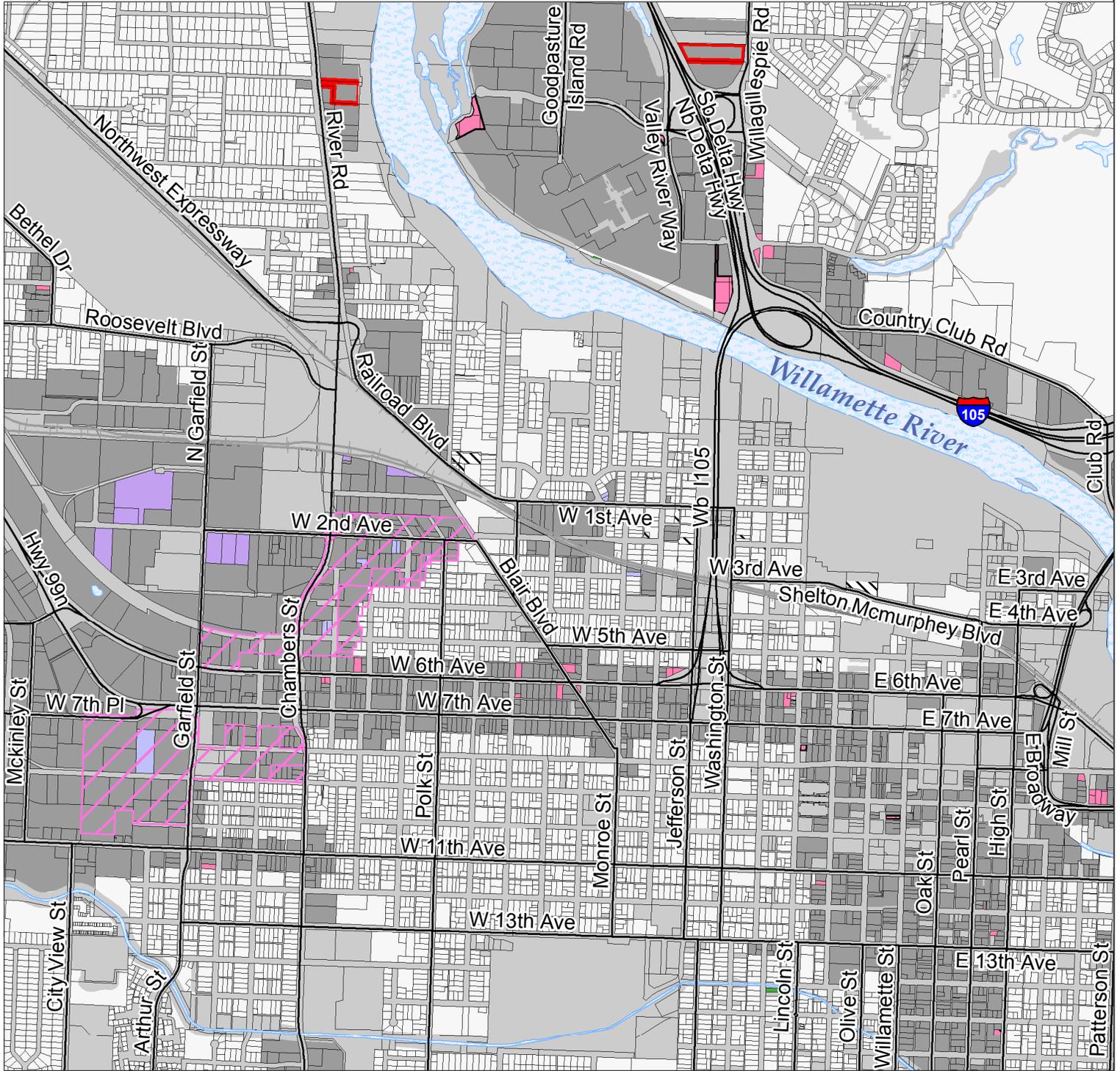


Figure 2. Employment Land Supply (2012-2032)

Map tile 11 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road

Plan Designations - Vacant Employments Lands

- Commercial
- Special Heavy Industrial
- Government & Education
- Major Retail Center
- Light Medium Industrial
- Parks and Open Space
- Commercial Mixed Use
- Campus Industrial
- Parks/Open Space Mixed Use
- Heavy Industrial
- University Research
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Commercial (COM) Partially Vacant
- Committed or Protected Lands (in UGB)



Final

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

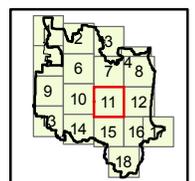
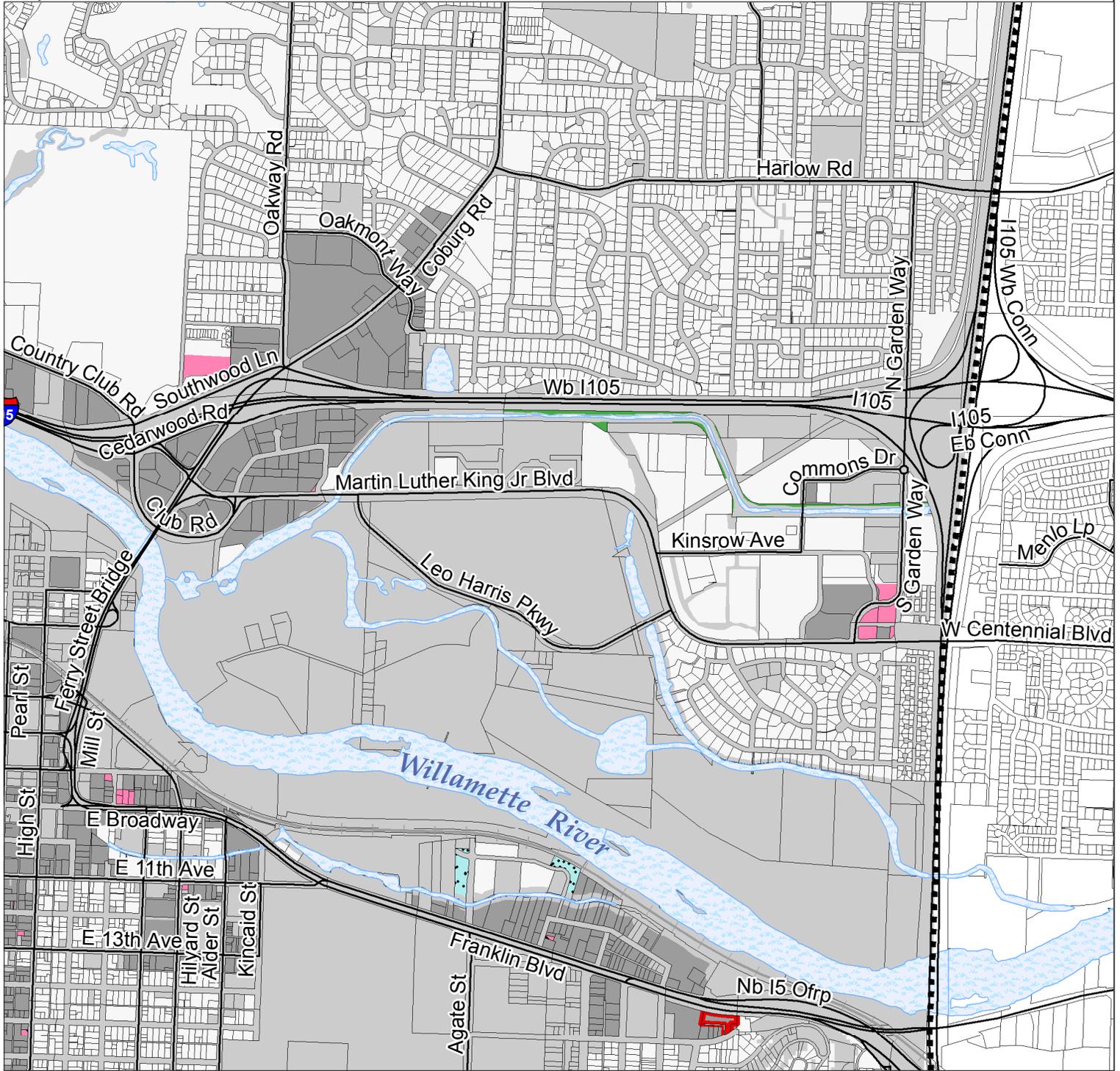
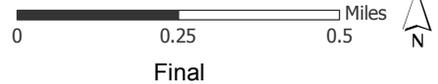


Figure 2. Employment Land Supply (2012-2032)

Map tile 12 of 18



- Urban Growth Boundary
- UGB Expansion Boundary
- 2012 BLI Taxlots
- Water Bodies
- Major Streets
- Rail Road



Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

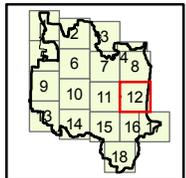
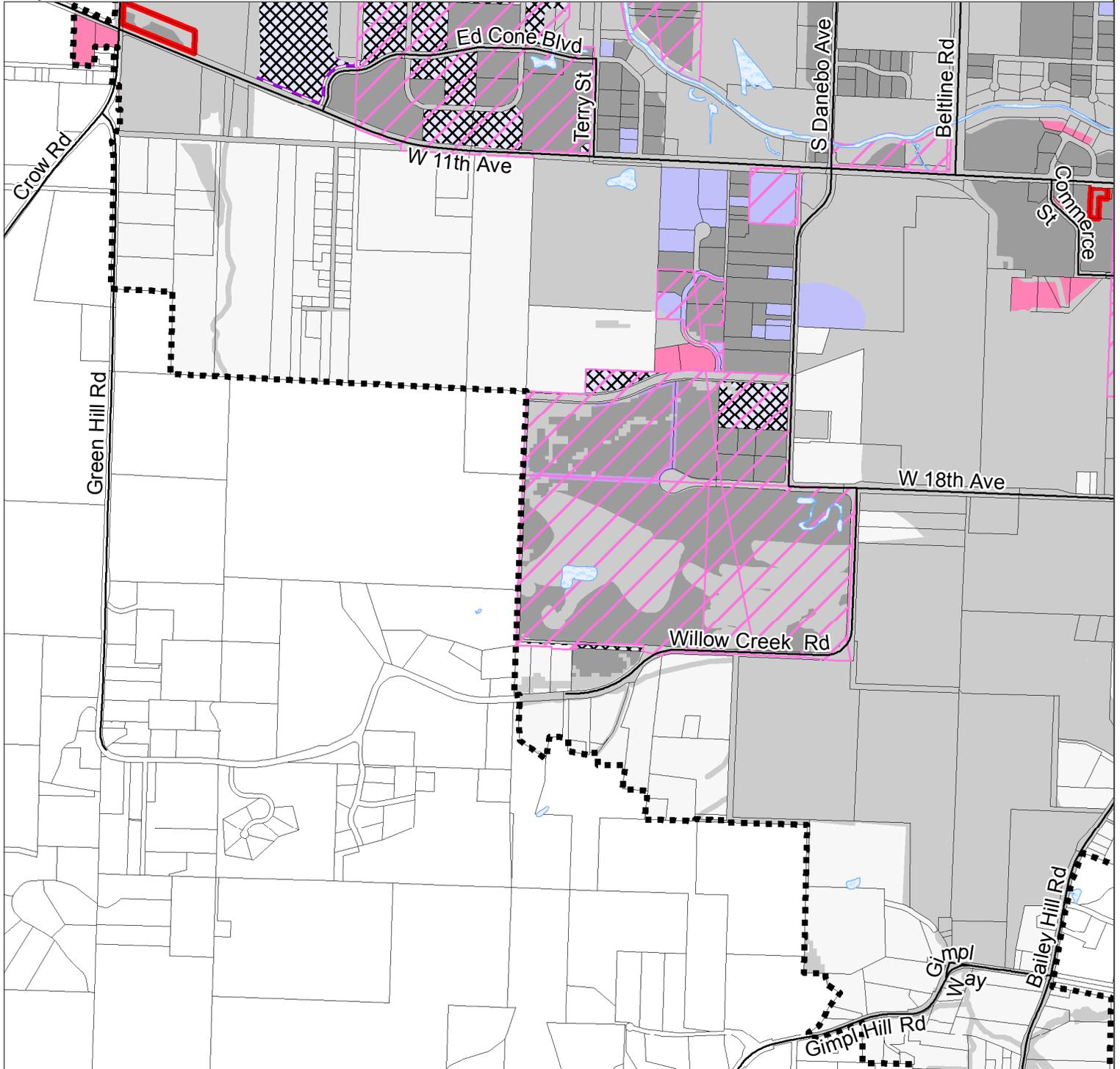


Figure 2. Employment Land Supply (2012-2032)

Map tile 13 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Final

Plan Designations - Vacant Employment Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

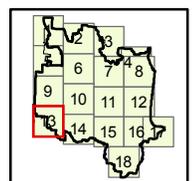
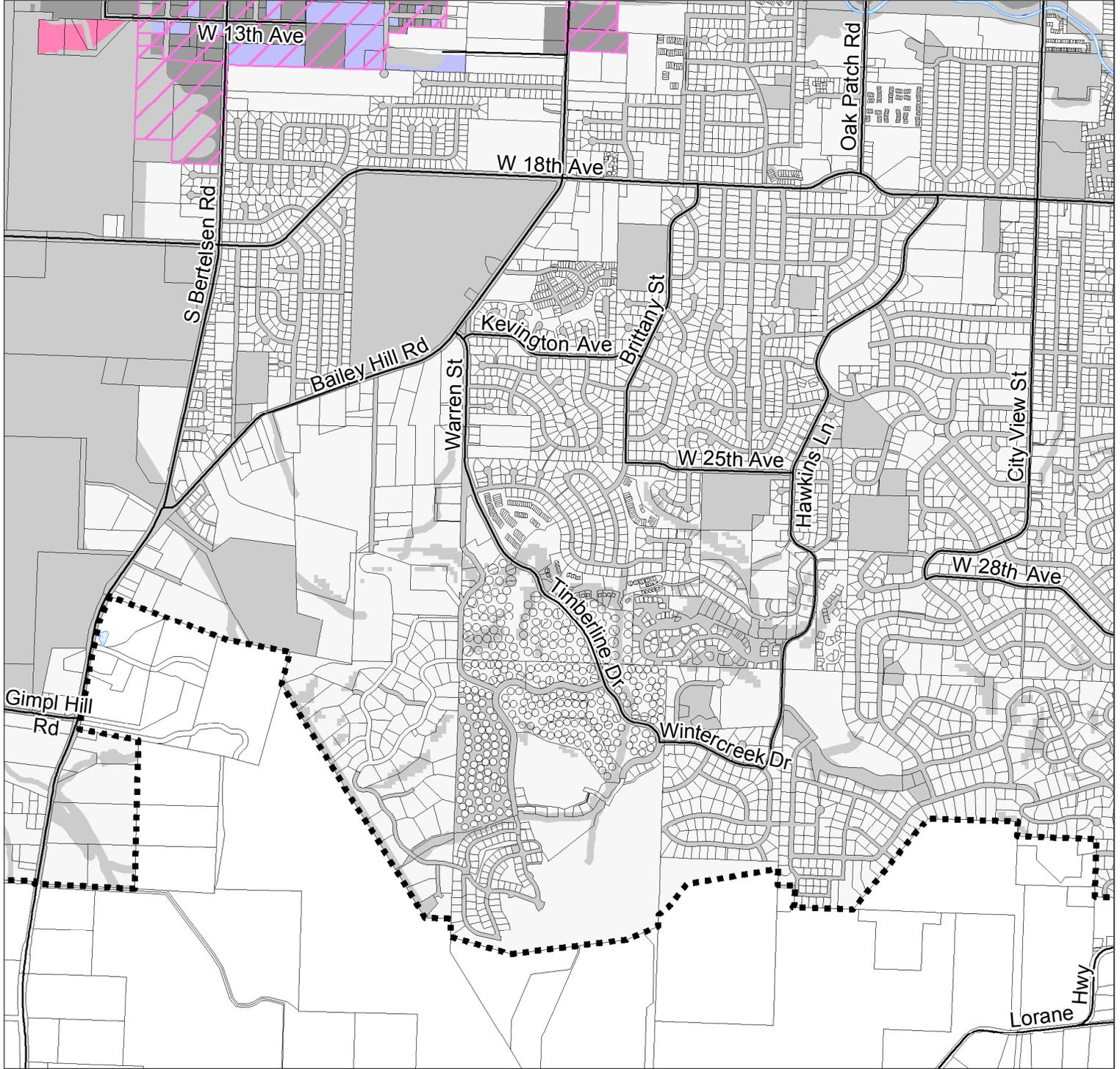
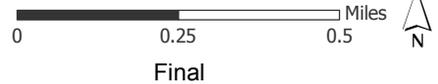


Figure 2. Employment Land Supply (2012-2032)

Map tile 14 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

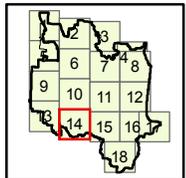
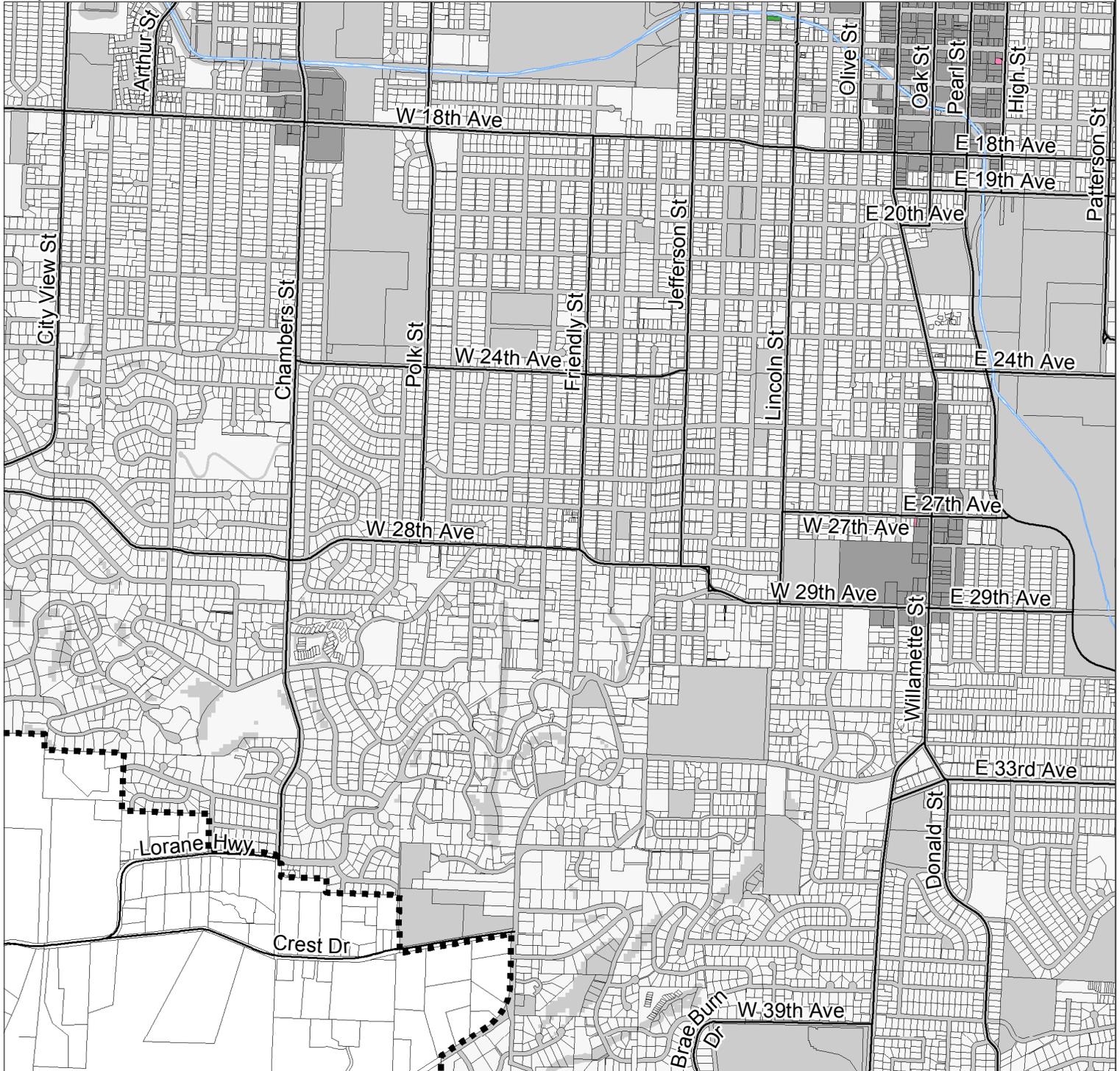


Figure 2. Employment Land Supply (2012-2032)

Map tile 15 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Plan Designations - Vacant Employments Lands

- Commercial
- Special Heavy Industrial
- Government & Education
- Major Retail Center
- Light Medium Industrial
- Parks and Open Space
- Commercial Mixed Use
- Campus Industrial
- Parks/Open Space Mixed Use
- Heavy Industrial
- University Research
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Industrial (IND) vacant >= 10 acres
- Commercial (COM) Partially Vacant
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

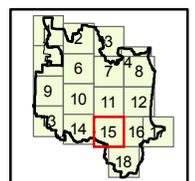
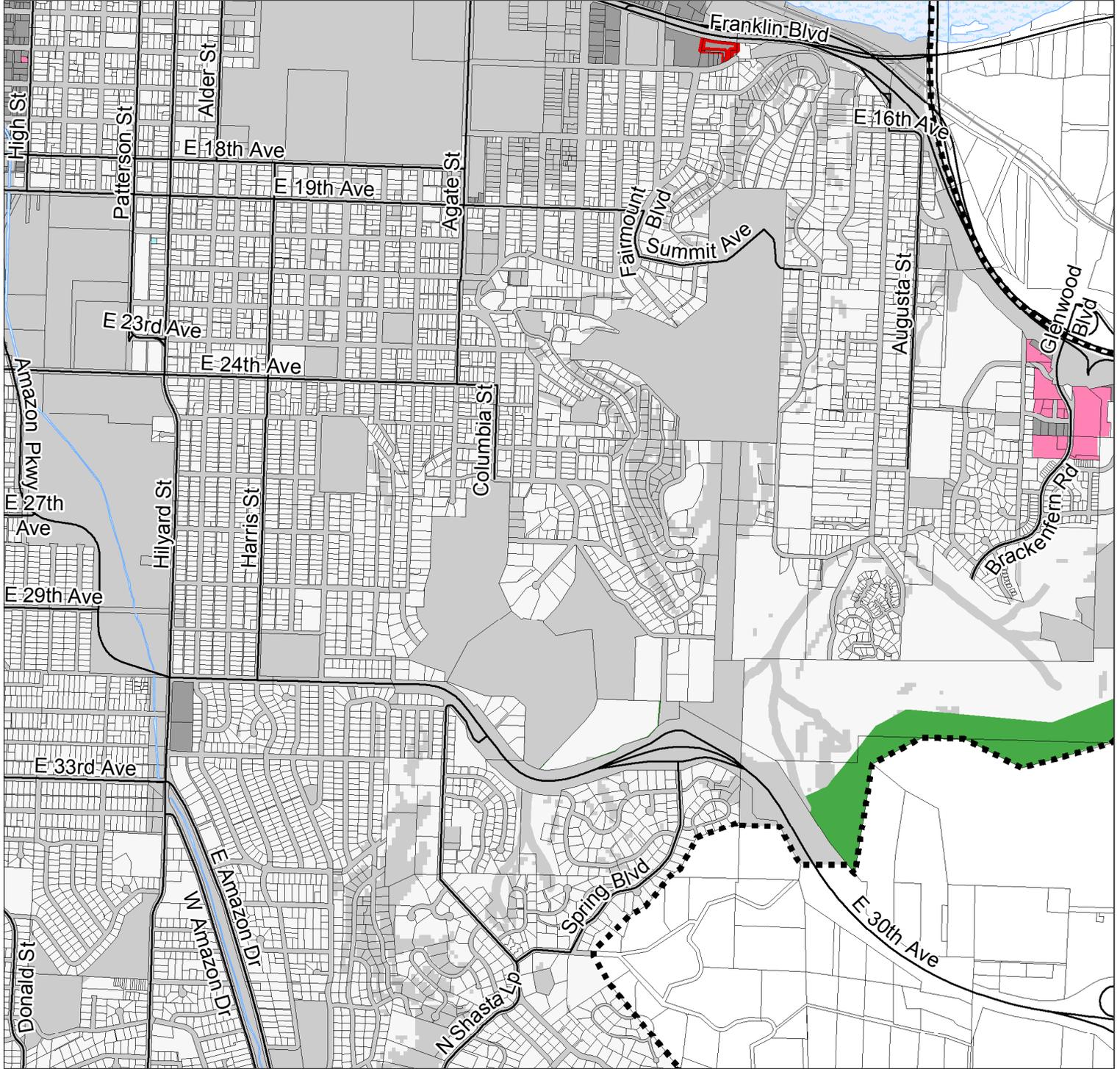
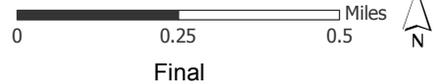


Figure 2. Employment Land Supply (2012-2032)

Map tile 16 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Plan Designations - Vacant Employments Lands

- Commercial
- Major Retail Center
- Commercial Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Light Medium Industrial
- Campus Industrial
- University Research
- Government & Education
- Parks and Open Space
- Parks/Open Space Mixed Use
- Mixed Use

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

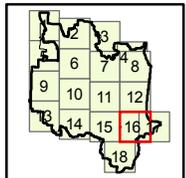
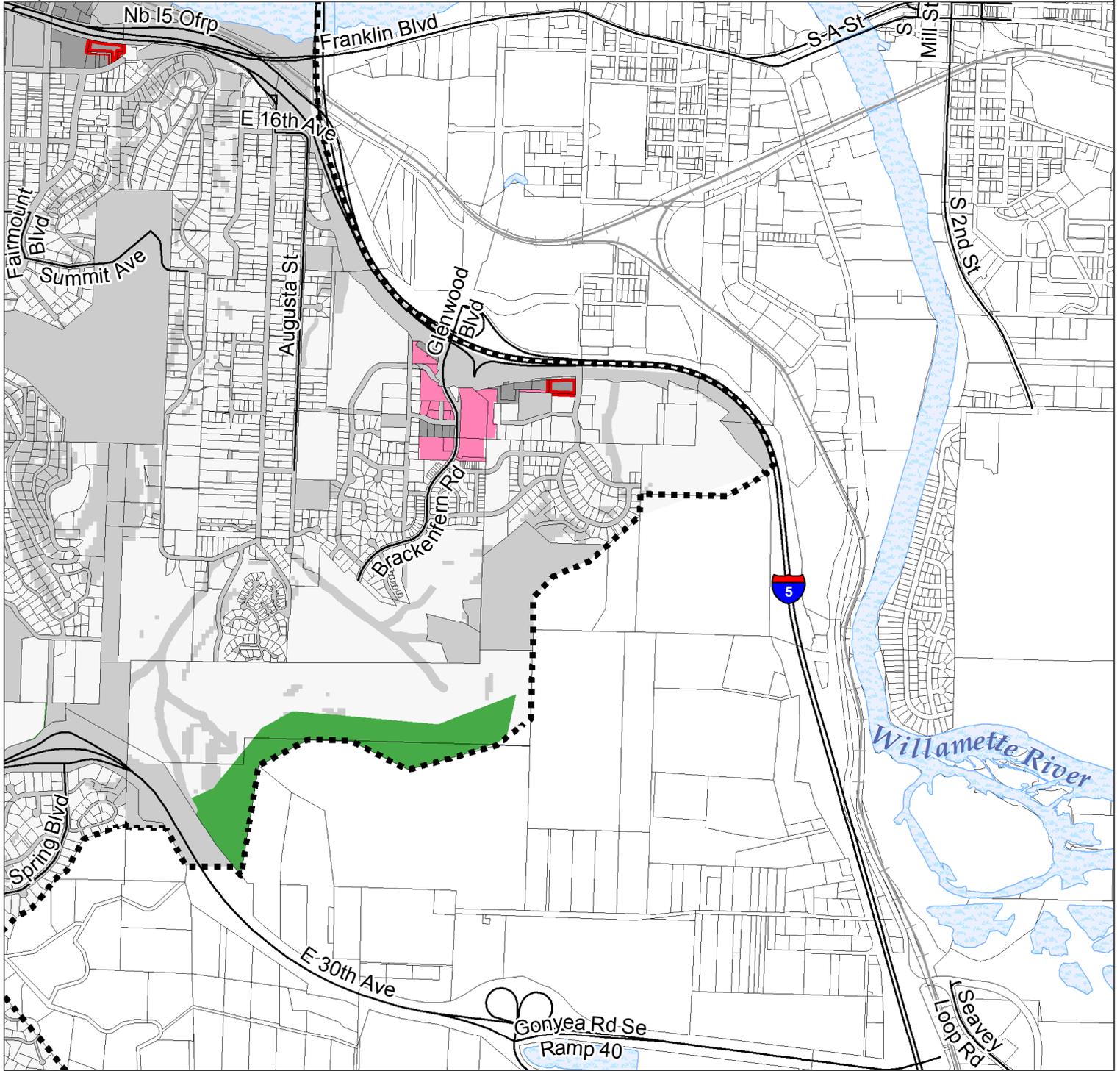


Figure 2. Employment Land Supply (2012-2032)

Map tile 17 of 18



- Urban Growth Boundary
- 2012 BLI Taxlots
- Major Streets
- UGB Expansion Boundary
- Water Bodies
- Rail Road



Plan Designations - Vacant Employments Lands

- Commercial
- Light Medium Industrial
- Parks and Open Space
- Major Retail Center
- Campus Industrial
- Parks/Open Space Mixed Use
- Commercial Mixed Use
- University Research
- Mixed Use
- Heavy Industrial
- Special Heavy Industrial
- Government & Education

Partially Vacant (PV) or Redevelopment Employment Lands

- Industrial (IND) Partially Vacant / Redevelopment
- Commercial (COM) Partially Vacant
- Industrial (IND) vacant >= 10 acres
- Employment (E) Zone
- Developed Commercial & Industrial Lands
- Committed or Protected Lands (in UGB)

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

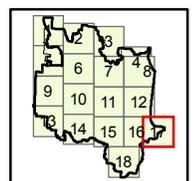
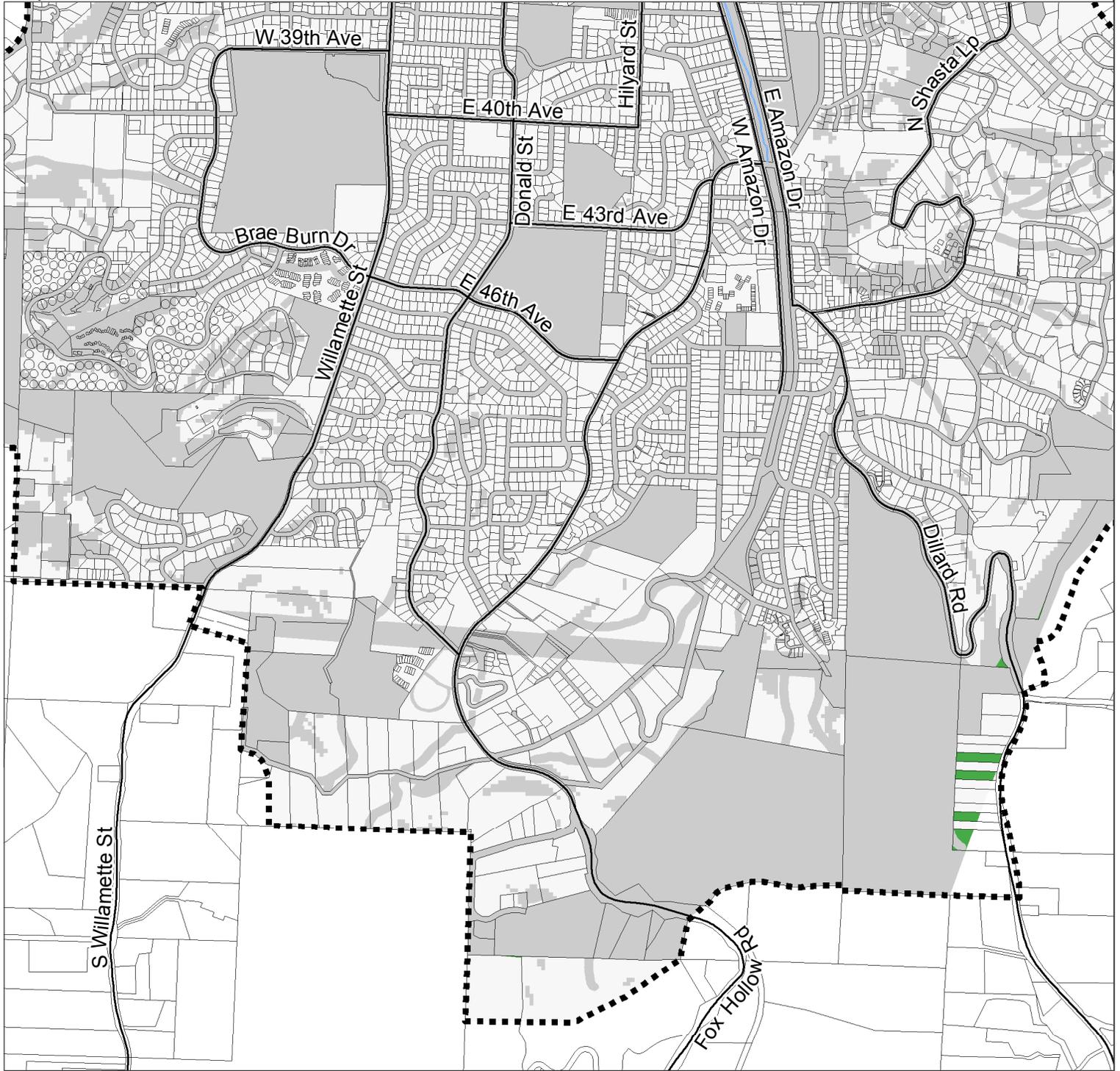


Figure 2. Employment Land Supply (2012-2032)

Map tile 18 of 18



Urban Growth Boundary	2012 BLI Taxlots	Major Streets	Miles 0 0.25 0.5 Final	
UGB Expansion Boundary	Water Bodies	Rail Road		

Plan Designations - Vacant Employment Lands

- | | | |
|----------------------|--------------------------|----------------------------|
| Commercial | Special Heavy Industrial | Government & Education |
| Major Retail Center | Light Medium Industrial | Parks and Open Space |
| Commercial Mixed Use | Campus Industrial | Parks/Open Space Mixed Use |
| Heavy Industrial | University Research | Mixed Use |

- Caution: This map is not suitable for legal, engineering, or surveying purposes.
 - Data Sources: City of Eugene, RLID.
 - The land supply was conducted at a sub-tax lot level analysis; tax lot boundaries are shown for reference only and may change over time.
 - For assumed capacity of land shown on the land supply, see Table 5 of Part VI.

Partially Vacant (PV) or Redevelopment Employment Lands

- | | |
|---|---|
| Industrial (IND) Partially Vacant / Redevelopment | Industrial (IND) vacant >= 10 acres |
| Commercial (COM) Partially Vacant | Employment (E) Zone |
| | Developed Commercial & Industrial Lands |
| | Committed or Protected Lands (in UGB) |

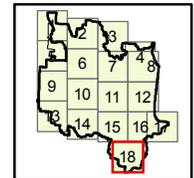
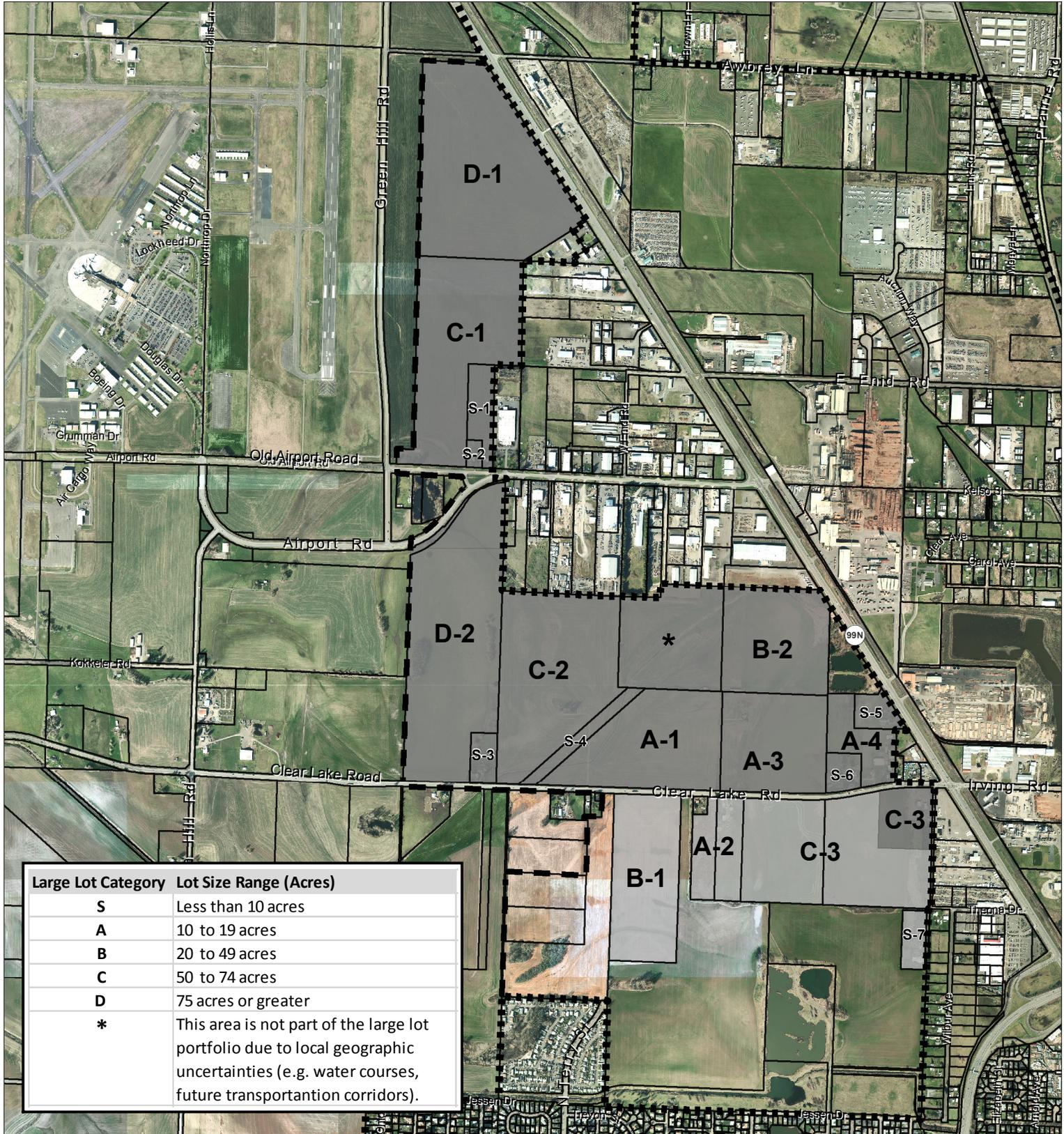
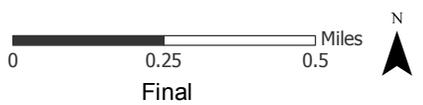


Figure 3. Clear Lake Area UGB Expansion Industrial Large Lot Portfolio (2012-2032)



Large Lot Category	Lot Size Range (Acres)
S	Less than 10 acres
A	10 to 19 acres
B	20 to 49 acres
C	50 to 74 acres
D	75 acres or greater
*	This area is not part of the large lot portfolio due to local geographic uncertainties (e.g. water courses, future transportation corridors).

- UGB Expansion Boundary
- Urban Growth Boundary (2012)
- Taxlots
- Light-Medium Industrial (LMI) designation
- Campus Industrial designation



Caution: This map is not suitable for legal, engineering, or surveying purposes.
Data Sources: City of Eugene, RLID.

