CORVALLIS
CITY COUNCIL WORK SESSION

AUGUST 16, 2016
3:30 pm -5:30 pm

Madison Avenue Meeting Room
500 SW Madison Avenue

I. Call to Order

II. Adoption Process for Urbanization Study

III. Imagine Corvallis 2040 Vision Development Update

IV. Community Comments (*Accepted on agenda items for this work session only. Members of the community wishing to offer advance written comments are encouraged to use the public input form at www.corvallisoregon.gov/publicinput*.)

V. Adjournment

If you need special assistance to participate in this meeting, please contact the City Recorder at (541) 766-6901 (for TTY services, dial 7-1-1). Notification at least two business days prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to the meeting. (In compliance with the Americans with Disabilities Act, 28 CFR 35.102-35.104 ADA Title I and ORS 192.630(5)).

A Community That Honors Diversity

TO: City Council for August 16, 2016 Council Worksession

FROM: Paul Bilotta, Community Development Director

DATE: August 5, 2016

THROUGH: Mark W. Shepard, P.E., City Manager

SUBJECT: Adoption Process for Urbanization Study (includes Buildable Lands Inventory, Housing Needs Analysis, Economic Opportunities Analysis, Land Sufficiency and Conclusions, Appendices, and Maps)

Action Requested:

Staff requests the City Council review and provide feedback on the recommended next steps for adoption of the Urbanization Study.

Discussion:

Background

Article I of the Corvallis Comprehensive Plan explains the relationship between Oregon's Statewide Planning Goals and the local framework for land use planning in the Corvallis Urban Growth Boundary (UGB), which is the City's Comprehensive Plan. Article 14 addresses urbanization of the Corvallis UGB consistent with Statewide Planning Goal 14, which is to "provide for an orderly and efficient transition from rural to urban land use." In particular, land use policies contained in these Comprehensive Plan articles are intended to provide a logical framework for how Corvallis plans for and manages the growth of its population and economy. As stated in Finding 14.2.b, elements of Corvallis' growth management system include the Comprehensive Plan and Buildable Land Inventory and Land Need Analysis (BLI). The current BLI incorporated development data through July 1 of 1996, was completed and adopted in the fall of 1998, as part of Periodic Review, and projected Corvallis' land use needs through the year 2020.

In February of 2015, a Departmental Advisory Committee was formed to develop a scope of work and hire a consultant to produce a new BLI, to address Corvallis' land use needs for the next 20-year planning cycle. In June 2015, the City awarded a contract to ECONorthwest, to develop an Urbanization Study for Corvallis. The Urbanization Study includes an inventory of buildable lands within the Corvallis Urban Growth Boundary, as well as a housing needs analysis and economic opportunities analysis consistent with Statewide Planning Goals 9 (Economy) and 10 (Housing). Immediately following notice of award of the contract, staff began meeting with ECONorthwest and members of the Urbanization Report's Departmental Advisory Committee, to finalize a scope of work for the project and to begin data collection. The final scope of work and contract was accepted by all parties in August of 2015.

Additionally, staff solicited City Council's acknowledgment of a population forecast for Corvallis for the twenty-year planning period ending in 2036. The population forecast was developed in consultation with the Oregon Department of Land Conservation and Development (DLCD) and the Portland State University Population Research Center, and is in compliance with Oregon Administrative Rules (OAR 660, Division 32), which outlines the methods that cities are required to use for population forecasts associated with land use planning. The City Council reviewed and accepted the population forecast on September 28, 2015. Acceptance of the population forecast then provided a baseline for ECONorthwest to begin analyzing buildable land needs for the 20 year planning period, including a housing needs analysis, and an economic opportunities analysis. An initial draft of the Urbanization Study was provided to staff at

the end of January. After several rounds of review and revisions, a final draft of the Urbanization Study was provided on July 1, 2016. Staff have coordinated with the Oregon Department of Land Conservation and Development (DLCD) since then to ensure that these studies comply with applicable State requirements. DLCD has verbally indicated that the final draft of the Urbanization Study is adequate to submit for formal review.

The final draft of the Urbanization Study is included as **Attachment 1** to this memorandum, and includes several documents. For an overview, staff recommend that City Council focus on the 37-page summary report, which provides a high-level overview of the key findings and conclusions of the more in-depth, 221-page technical report.

The technical report includes four main elements:

1. Buildable lands inventory

   ECONorthwest and city staff collaborated on data acquisition and analysis to complete a buildable land inventory, using methods that are consistent with the legal requirements of Oregon Revised Statute (ORS) and State Administrative Rules (OAR).

   The buildable lands inventory provides a snapshot, point in time of all lands within the Corvallis UGB that are either developed, vacant, partially vacant, or public / exempt. Those lands identified as either vacant or partially vacant were further examined for constraints such as Natural Features protections and Planned Development Overlays, and the resultant inventory provides a detailed set of tables and maps, based on Comprehensive Plan land use designations such as residential, commercial and industrial.

   Lands such as those with a Planned Development Overlay are considered constrained because they do not provide a clear and objective path to development approval, and require additional discretionary approvals before development can occur. However, the City's Land Development Code provisions will allow for some development to occur on these constrained lands. Housing on constrained lands can supplement, but cannot be considered part of the base supply for housing needs. In other words, based on State rules, Corvallis must find sufficient capacity for housing that it needs on lands that are unconstrained.

2. Housing needs analysis

   ECONorthwest completed a housing needs analysis consistent with the legal requirements of ORS and OAR, as well as Statewide Planning Goal 10. The purpose of this analysis is to identify the need for the various types of housing (attached and detached single family, and multi-family) that the community must consider under State law, using the City's adopted population forecast for the 2016-2036 planning period of 69,527 persons within the Corvallis UGB.

3. Economic opportunities analysis

   ECONorthwest completed an economic opportunities analysis, consistent with the legal requirements of ORS and OAR, as well as Statewide Planning Goal 9. This analysis includes an evaluation of the City's economic development objectives, including consultation with key community stakeholders, and resulted in conclusions regarding Corvallis' need for buildable lands that can support the community's economic vision.

4. Land sufficiency and conclusions

   The final chapter of the technical report includes a summary of the land use needs for housing, commercial and industrial lands, and public / institutional / park land for the 20 year planning period, and conclusions on whether the community currently has enough land with the appropriate land use designations to meet those needs.

   It is important to recognize that the State law concerns itself with the amount of developable land within the UGB, not within the City limits. Even if there are adequate planned future growth areas outside of the City, unless they were to be annexed, they are not readily available for development, so there can still be perceived market land shortages within the City, even if large areas are planned and available for growth in the UGB.

Urbanization Study Findings

Based on Statewide Planning Goals 9 and 10, Corvallis is expected to plan for growth by ensuring that it provides enough buildable land within its UGB, with the appropriate land use designations, to accommodate its future needs for housing and economic development. The land sufficiency analysis and conclusions contained in Chapter 5 of the technical report highlight the following facts:

1. Land for Housing:

   Overall, Corvallis has a need for 3,548 dwelling units over the 2016-2036 period. Based on an analysis of buildable lands that are unconstrained and either vacant or partially vacant, there is capacity for 9,127 dwelling units. This includes buildable lands inside city limits, as well as lands designated for residential uses in the urban fringe (the area located between the city limits and the UGB).

   However, State rules also require that Corvallis plan for housing in a way that encourages “the availability of adequate numbers of housing units in price and rent ranges, commensurate with the financial capabilities of its households.” In short, compliance with Goal 10 is not just dependent on a total number of dwelling units, but also the appropriate mix of various types of housing to meet the diverse housing needs of the community. State rules specify that Corvallis must include an appropriate mix of single family detached, single family attached, and multi-family (apartment) building types in order to meet its overall housing needs for the planning period.

   After factoring in the housing mix and density requirements specified by ORS and OAR, Corvallis can meet the need for housing within the UGB in all comprehensive plan designations with the exception of High Density Residential. In fact, the amount of buildable land available for housing in other designations such as Low, Medium and Medium High Density Residential can accommodate more than 9,000 dwelling units, which is approximately 2.5 times our overall housing need for 3,548 dwelling units. The key finding reached is that the city has a deficit of 309 dwelling units attributed to the High Density Residential classification. This translates into the need for approximately 12 acres of land with a designation that supports High Density Residential (greater than 20 units per acre). Redevelopment is likely to continue to play a role in the supply of all housing, but is most likely to occur in areas where properties are underutilized based on underlying zoning allowances for higher density.

   An additional key finding is that only 12% of the community’s residential land capacity is within city limits. Based on historical rates of development, and not factoring in economic and

entitlement constraints, buildable residential land could be depleted in as little as four to five years. The limited availability of developable residential land in the short term potentially impacts housing affordability.

The housing sufficiency analysis also includes supplemental analysis of lands that are either partially constrained and/or that have a Planned Development Overlay. Recent Land Use Board of Appeals (LUBA) rulings indicate that needed housing must occur on lands that are not constrained. Therefore, the capacity in additional units that was determined to be available using the supplemental analysis augments Corvallis' housing supply, but should not be factored in when determining the community's "needed housing".

2. Land for Jobs:

Overall, Corvallis has a need for 337 acres of land to accommodate employment uses over the 2016-2036 planning period. Based on an analysis of lands that are unconstrained, and either vacant or partially vacant, there is an overall capacity of 495 acres of employment (commercial or industrial land use designation) lands within city limits, and almost 900 acres within the UGB. A high percentage of this land is designated for industrial land uses.

However, Goal 9 rules specify that the city's need for employment lands should be based on forecast for employment growth, the City's economic development objectives and the specific needs of target industries. More specifically, the State rules require that Corvallis determine its need for both industrial and "other employment uses". In considering Corvallis' comprehensive plan land use designations that support the community's diverse employment needs, key findings in the land sufficiency analysis indicate that, while Corvallis has a surplus of more than 700 acres of buildable land to meet its broad range of intended industrial users, Corvallis has a deficit of 103 acres of land in commercial plan designations (either Mixed Use Commercial or Professional Office), and a deficit of 54 acres of Public Institutional lands.

Additional key findings are that 60% of Corvallis' commercial land is located within city limits, and 55% of Corvallis' industrial land is located within city limits.

Based on the key findings in the Land Sufficiency analysis, and Statewide Planning Goal 10 compliance stipulations, Corvallis is required to address the identified deficit in High Density Residential land before the city can formally adopt the Housing Needs Analysis. However, State rules regarding Goal 9 compliance and adoption of the Economic Opportunities Analysis are different, and Corvallis has the option at this time of adopting the EOA study without addressing the identified deficiencies in MUC and PO designations. Chapter 5 of the Technical Report identifies some ways in which the community can address the deficits in both categories. Recommendations include a primary focus on map-based adjustments to the inventory (Comprehensive Plan Map Amendments).

Perhaps more importantly, with completion of the Urbanization Study, Corvallis is now eligible to begin the formal process of submitting the study to DLCD for their formal review, in order to obtain acknowledgment of the community's 20-year land use planning horizon, and to provide a baseline analysis for a formal Comprehensive Plan Amendment process.

Potential Future Policy Actions for Council

Chapter 5 also includes recommendations for adjustments to land use policies or other actions to help reduce or eliminate the deficiencies. ECONorthwest has provided an analysis of existing Corvallis

Comprehensive Plan Policies (**see Attachment 1 - Appendix B**), along with recommendations to address deficiencies in those policies that would more closely align with Statewide Planning Goals 9 and 10.

Relative to the housing element of Corvallis' Comprehensive Plan, the community's housing policies are compliant with Goal 10 and therefore would likely not be required to be changed. However, the consultant has indicated that additional adjustments to these policies may further the community's housing goals.

Relative to the economy element of the Comprehensive Plan, ECONorthwest concluded that Corvallis is not currently in compliance with Goal 9, and has provided recommendations to address the compliance issues. A summary of the consultant's key recommendations are as follows:

Housing Land Sufficiency	
	• Update the housing element of the Comprehensive Plan, primarily focusing on policy revisions that strongly emphasize affordability and availability • Address 309-unit deficit in capacity for high density multifamily housing through amendments to the Comprehensive Plan Map, by increasing the land designated Residential – High Density (approx. 12 acres) • Address low percentage of residential land capacity within city limits through annexation and/or re-designation of lands within city limits • Foster development of high-density multifamily housing as part of mixed-use development • Continue and expand monitoring of residential development and re-development • Incorporate the new Housing Needs Analysis and BLI as an appendix to the Comprehensive Plan
Employment Land Sufficiency	
	• Update the economy element of the Comprehensive Plan to achieve compliance with newer Goal 9 requirements • Address 153-acre deficit in Commercial Plan designations through amendments to the Comprehensive Plan Map, by increasing the land designated MUC (Mixed Use Commercial) and PO (Professional Office); and/or allow a broader range of commercial uses within existing industrial zones • Address low percentage of commercial land capacity within city limits through annexation and/or re-designation of industrial lands within city limits • Address deficit in Commercial Plan designations for certain zones such as Central Business through downtown or near-downtown redevelopment • Address deficit of Public Institutional lands through amendments to the Comprehensive Plan Map • Implement economic development goals through other actions such as financial incentives and/or

	infrastructure investment • Continue monitoring commercial and industrial development • Incorporate the new Economic Opportunities Analysis and BLI as an appendix to the Comprehensive Plan
Public / Semi-Public Land Sufficiency	
	• It is anticipated that the community's public and semi-public land use needs (churches, parks, community services) can be met on lands with low, medium, and medium-high density residential designations, since these areas have excess capacity for residential development, and the underlying zones typically allow these uses

As noted in the consultant's recommendations, re-designating land from one land use to another involves trade-offs. Since deficits are identified both in housing and employment lands, the city must be careful that addressing one deficit does not directly result in increasing the deficit of lands with another classification. When re-classifying lands, additional factors should be weighed such as geographic constraints and advantages, the willingness of property owners to re-designate their lands, neighborhood consensus, transportation impacts and advantages, and compatibility issues that may arise based on existing and potential future uses. The Comprehensive Plan Map Amendment process is the only and appropriate process to consider these changes, as it provides opportunities for property owners and the community at-large to comment and become actively engaged in decision making, and includes decision making criteria that address these broader community-wide concerns.

Recommendation:

Given the findings and recommendations contained in the Land Sufficiency and Conclusions, staff recommend that the City Council move to initiate a process for a Comprehensive Plan Map and Text Amendment. Staff propose structuring the initiation process in two steps.

First, staff propose conducting an informal community information session in late August or early September, so that the community is made aware of the study, its conclusions and recommendations. This would be to present the Urbanization Study to the community so that the complexities of its components, legal requirements and conclusions can be broadly understood. This would be supported with a dedicated webpage, social media and other City promotional outlets.

Second, staff propose that the topic of initiation of a Comprehensive Plan Amendment be brought before the City Council in mid- to late-September, so that the City Council can formally initiate the process for adoption of the study and transmittal to DLCD.

LDC Section 2.1.30.01 states that Comprehensive Plan Amendments may be initiated by a majority vote of the City Council. City Council initiation of Comprehensive Plan Map Amendments shall be considered to accomplish the following:

- Respond to changed circumstances
- Correct inconsistencies with state goals
- Accomplish legislative changes affecting a relatively large number of properties or community-wide issues
- Correct inconsistencies between the Comprehensive Plan Map and other policies and maps

- Respond to changes in property boundaries; and /or
- Respond to changes as a result of neighborhood or area-specific master planning efforts

Once the Comprehensive Plan Amendment process has been formally initiated by the City Council, staff will transmit the study and appropriate PAPA notice to DLCD for its review and comments.

If the City Council concurs with this recommendation, staff will coordinate the informal community information session, prepare a recommended task list and project schedule, and coordinate with the City Manager's Office to place the subject of the formal CPA initiation on a September City Council agenda. It should be understood that the portion dealing with deficiencies in housing land supply will not be able to be formally adopted until the housing deficiencies have been addressed.

If the City Council approves the CPA item on the September agenda, staff recommend that the city quickly initiate a process to begin to seek community input on these deficits and to start down the path towards formally bringing the city into compliance with Statewide Planning Goals 9 and 10 by providing sufficient land to accommodate the next 20 years of the community's growth. The issues related to planning for future growth will likely be of great interest to the community and could impact many areas both within and outside the City limits.

The rest of the following staff recommendation provides an outline of the short term task list following the City Council meeting in September for addressing the deficiencies and moving towards adoption of the housing portions of the study in the near future.

Staff recommend that the process for updating the Comprehensive Plan map begin first with extensive community input sessions and building upon the recommendations anticipated from the Vision 2040 process as well as other City Council goals currently moving towards review and adoption.

Staff recommend this phase begin with a series of workshops seeking community comment and ideas on land use concerns, opportunities and other Comprehensive Plan mapping issues. Staff would not be proposing any changes in this stage but rather creating a process for community discussion about current and future land use issues to solicit feedback at the neighborhood level. These workshops would be facilitated by staff rather than a consultant because it is anticipated there could be significant community engagement and staff would like to have the flexibility to add additional workshops as necessary to reach interested community members. The workshops would be well promoted and designed to also facilitate online input opportunities.

Following the community input workshops, staff would compile the community input, publish both the conclusions and the raw data and then based on the input received, make a recommendation on future steps to address the planning needs and community input. Depending on the input received, the future steps could also involve work sessions with the Benton County Planning Commission, the Corvallis Planning Commission, the City Council, or others and issues may arise from the community input that necessitates further study. Staff can't predict the path until the community input is received. Of course, whatever next steps are chosen, there will also be the need for formal Planning Commission and City Council public hearings for the Comprehensive Plan Amendment.

Finally, while the Comprehensive Plan Amendment process is proceeding, staff also propose to implement all of the recommendations associated with monitoring both residential and commercial/ industrial development, as part of adjustments to the analyses contained in the annual Land Development Information Report. The goal will be to turn that report into a more user friendly document that provides a better snapshot of current conditions and alerts the City Council and Community to land use supply and

demand issues before they reach crisis levels. It is hoped that this early alert mechanism would allow the City Council to make any necessary policy adjustments in a proactive and gradual way to minimize community disruption in the future.

Budget Impact:

Community Development staff have anticipated that addressing deficits identified in the Buildable Land Inventory would require significant additional staff time, and that will likely involve additional public meetings with the Planning Commission and City Council. Depending on the results of initial community input, it is possible that it will be necessary to seek the assistance of consultants, which will require additional expense. Staff will attempt to minimize consultant costs through the use of the temporary funding of a long range planner. The staff and public hearing expenses are already factored into the Community Development Department and City Manager's FY 2016-2017 budget although undertaking a community conversation on land use could consume a significant amount of the available long range planning resources depending on the level of interest in the community.

Attachments:

1. Urbanization Study
    - *a.* Summary Report
    - *b.* Technical Report
        - *i.* Buildable Lands Inventory
        - *ii.* Housing Needs Analysis
        - *iii.* Economic Opportunities Analysis
        - *iv.* Land Sufficiency and Conclusions
        - v. Appendices
    - c. Maps

Corvallis Housing Needs Analysis and Economic Opportunities Analysis

Draft Summary Report

June 2016

ECONorthwest
ECONOMICS • FINANCE • PLANNING

Acknowledgements

ECONorthwest prepared this report for the City of Corvallis. ECONorthwest and the City of Corvallis thank the many people who helped develop the Corvallis Housing Needs Analysis and Economic Opportunities Analysis.

Urbanization Study Department Advisory Committee

Mike Beilstein, City Councilor (Ward 5)
Hal Brauner, City Councilor (Ward 9)
Roger Lizut, Planning Commissioner (former)
Jim Ridlington, Planning Commissioner

State of Oregon

Ed Moore, Regional Representative – Oregon Department of Land Conservation and Development

City of Corvallis

Paul Bilotta, Community Development Director
Ken Gibb, Community Development Director (former)
Tom Nelson, Economic Development Manager
Mark Shepard, City Manager
Kent Weiss, Housing and Neighborhood Services Division Manager
Jason Yaich, Senior Planner and Project Manager
Kevin Young, Planning Division Manager

Interview Participants

Consulting Team (ECONorthwest)

Bob Parker, Project Director
Beth Goodman, Senior Planner and Project Manager
Erik Rundell, Senior GIS Analyst

For over 40 years ECONorthwest has helped its clients make sound decisions based on rigorous economic, planning, and financial analysis. For more information about ECONorthwest visit: www.econw.com. For more information about this report, please contact:

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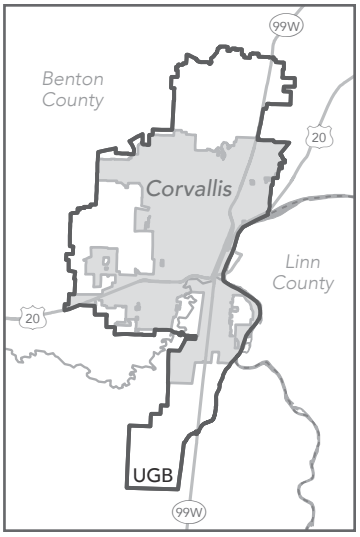
Introduction

Corvallis' economy and housing market are unique within Oregon. Corvallis in 2016 is home to more than 56,000 people, including many of the nearly 25,000 students attending Oregon State University. Corvallis is a regional employment center, with major employers such as Oregon State University, Good Samaritan Hospital, Hewlett-Packard, and a range of other businesses of all sizes.

This report summarizes the Corvallis Urbanization Study. The purpose of the Urbanization Study is to develop information as a basis for policies that capitalize on Corvallis' opportunities and help address the city's challenges. The Urbanization Study includes technical analysis to address a range of questions that Corvallis faces.

The Corvallis Urbanization Study includes four parts:

- **Buildable Lands Inventory** presents an inventory of land within the Corvallis city limits and urban growth boundary. It identifies land with development capacity, excluding land that is already developed, public or exempt, and land with development constraints such as steep slopes or locally protected wetlands.
- **Housing Needs Analysis** describes Corvallis' housing need over the 2016-2036 period in the context of housing market trends and demographic and socioeconomic trends. The basis of the analysis is a forecast of Corvallis' population growth over the next 20 years. The analysis considers the capacity of vacant residential land and determines whether the city has enough land to accommodate 20 years of growth.
- **Economic Opportunities Analysis** forecasts Corvallis' employment growth over the 2016-2036 period in the context of the local, regional, statewide, and national economic trends that will affect economic development in Corvallis. The analysis forecasts employment growth and land demand in Corvallis within the context of the City's economic development goals and policies. The analysis determines whether Corvallis has enough commercial and industrial land to accommodate 20 years of growth.
- **Policy Analysis** examines Corvallis' existing Comprehensive Plan Economy and Housing policies and makes recommendations for changes to address issues identified in the Urbanization Study.



Corvallis Study Area
The 2016 City Limits are shown in the shaded area. The UGB is indicated by the black line.

This document summarizes the results of the Urbanization Study, presenting the results of the Buildable Lands Inventory, Housing Needs Analysis, and the Economic Opportunities Analysis. Throughout this report, unless otherwise noted, the data in this document are from the U.S. Census.

Buildable Land Inventory and Methodology

Comprehensive Plan Designations

Low Density Residential (LDR)

Medium Density Residential (MDR)

Medium-High Density Residential (MHDR)

High Density Residential (HDR)

Mixed Use Residential (MUR)

Central Business District (CBD)

Mixed Use Commercial (MUC)

Professional Office (PO)

Limited Industrial (LI)

Limited Industrial – Office (LIO)

Mixed Use Employment (MUE)

General Industrial (GI)

Intensive Industrial (II)

Mixed Use Transitional (MUT)

General Industrial – Office (GIO)

Public / Institutional (PI)

Open Space – Agriculture (OSA)

Open Space – Conservation (OSC)

The purpose of the buildable lands inventory was to identify land with development capacity within Corvallis' Urban Growth Boundary (UGB). The buildable lands inventory differentiates between land with development capacity within the city limits and all land with development capacity within the UGB.

The buildable lands inventory builds from information about: the UGB, city boundary, tax lots, comprehensive plan designations, zoning, and environmental constraints (e.g., wetlands, streams, riparian corridors, significant vegetation, floodways, 100-year floodplain, steep slopes, and elevation).

The inventory was completed through a multi-step process which included substantial review to ensure accuracy from ECONorthwest staff and City staff.

A key step in the buildable lands analysis was to classify tax lot lands into a set of mutually exclusive categories based on development status, as defined below.

Residential Land Classifications:

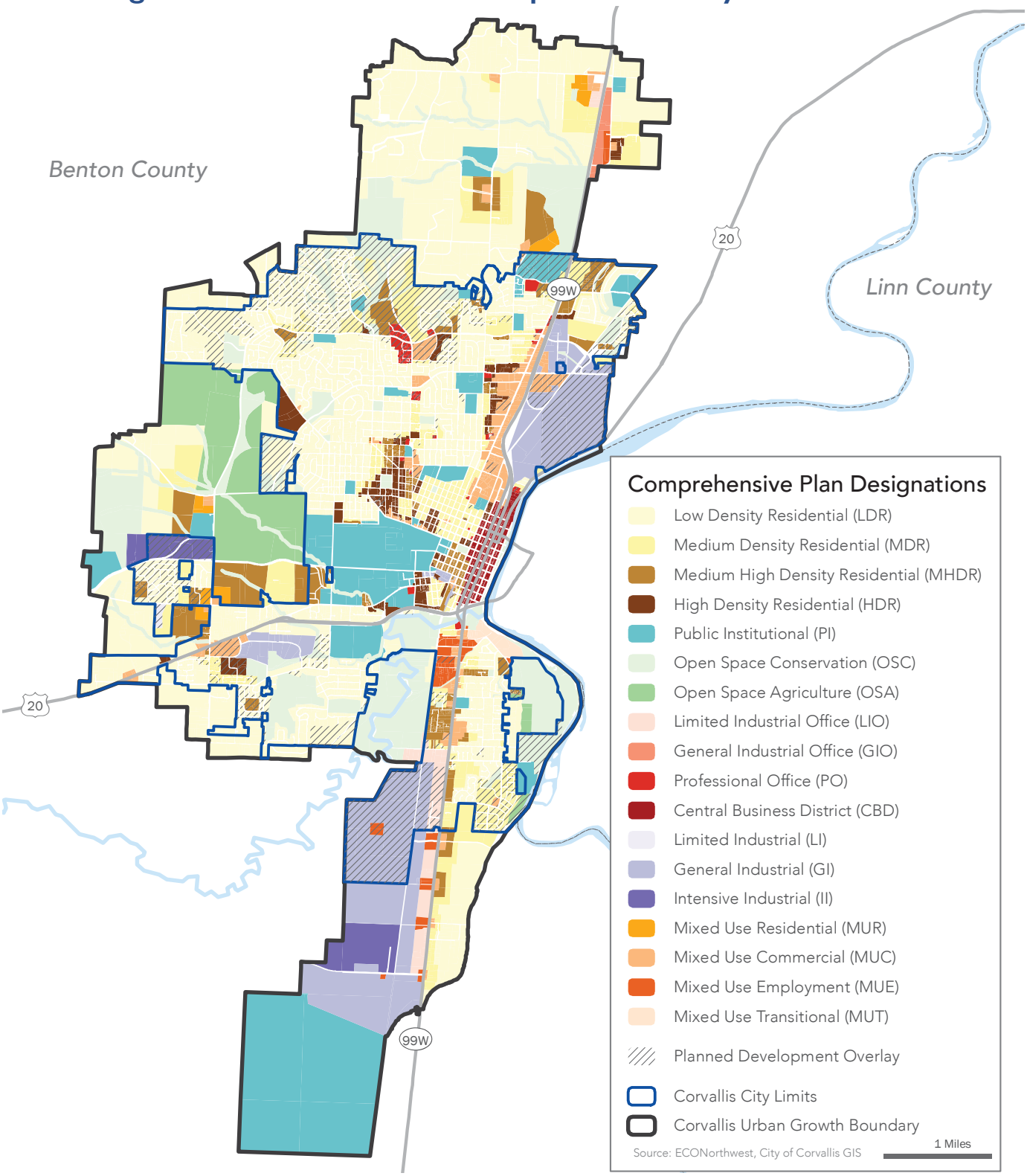
- **Vacant Land.** Tax lots that have no structures or have buildings with improvement values under $10,000 (excluding lots with mobile homes).
- **Partially Vacant Land.** Partially vacant tax lots are those occupied by a use but which contain enough land to be further subdivided without need of rezoning.
- **Developed Land.** Land that is developed at densities consistent with zoning and improvements that make it unlikely to redevelop during the analysis period.
- **Public or Exempt Land.** Lands in public or semi-public ownership are considered unavailable for development.

Commercial and Industrial Land Classifications:

- **Vacant Land.** A tax lot that does not contain a permanent building or improvement or a parcel 5 acres or larger where less than one half-acre is occupied by permanent buildings or improvements.
- **Partially Vacant Land.** Partially vacant tax lots are those between one and five acres occupied by a use that could still be further developed based on the zoning.
- **Developed Land.** Non-vacant land that is unlikely to be redeveloped during the planning period.
- **Public or Exempt Land.** Lands in public or semi-public ownership are considered unavailable for development.

Corvallis Comprehensive Plan

Plan Designations and Planned Development Overlay



Residential Buildable Land

Corvallis has a total of 1,642 acres of unconstrained vacant and partially vacant residential buildable land. About one-quarter of this land (426 acres) is within Corvallis' city limits and the remaining three-quarters (1,216 acres) is located within Corvallis' urban growth boundary but outside of the city limits.

About 12% (204 acres) of Corvallis' unconstrained vacant and partially vacant land is in areas with a Planned Development Overlay, which has specific development standards that are described in Corvallis' Land Development Code.

Corvallis has about 263 acres of partially constrained residential land. This is land with constraints that decrease development capacity but do not prohibit development.

Unconstrained Vacant and Partially Vacant Land

This is land without constraints that prohibit or limit development.

Planned Development Overlay

This is an overlay that can be applied to any residential zone at the discretion of the property owner. Land in this overlay has additional regulation, as described in Chapter 3.33 of Corvallis' Land Development Code.

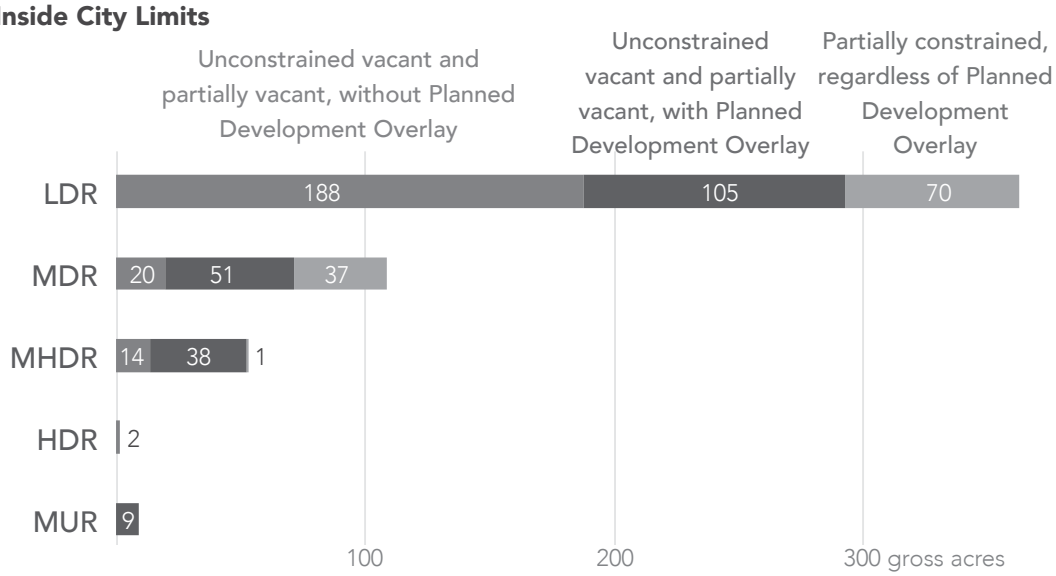
Partially Constrained Land

These are constraints on residential lands that include partially protected wetlands, partially protected riparian corridors, partially protected significant vegetation, partially protected areas in the 100 year floodplain, and land on slopes of 25% to 35%.

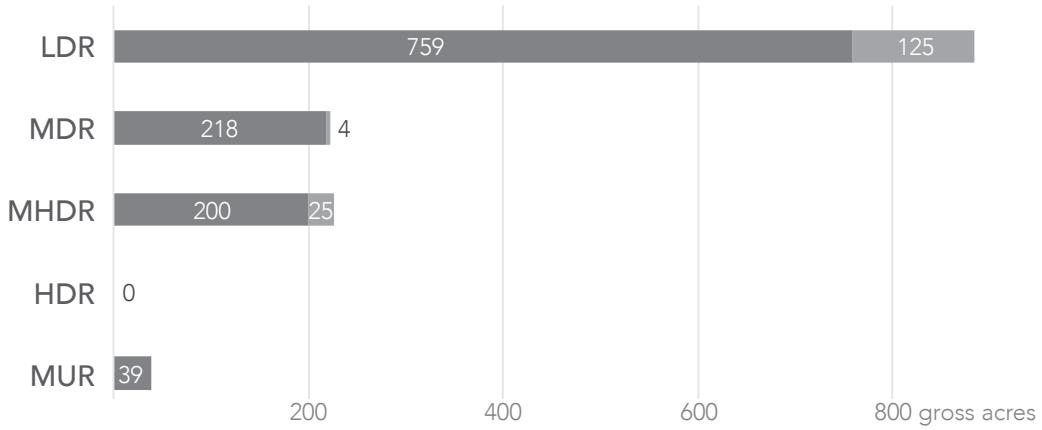
RESIDENTIAL BUILDABLE LAND BY PLAN DESIGNATION, GROSS ACRES, 2016

Source: ECONorthwest Analysis of Corvallis GIS data

Inside City Limits



Outside City Limits, Inside UGB



Commercial and Industrial Buildable Land

Corvallis has a total of 898 acres of unconstrained vacant and partially vacant commercial and industrial buildable land. About 55% of this land (494 acres) is within Corvallis' city limits and the remainder (404 acres) is located within the Corvallis' urban growth boundary but outside of the city limits.

Corvallis' vacant employment land is concentrated in a few Plan Designations.

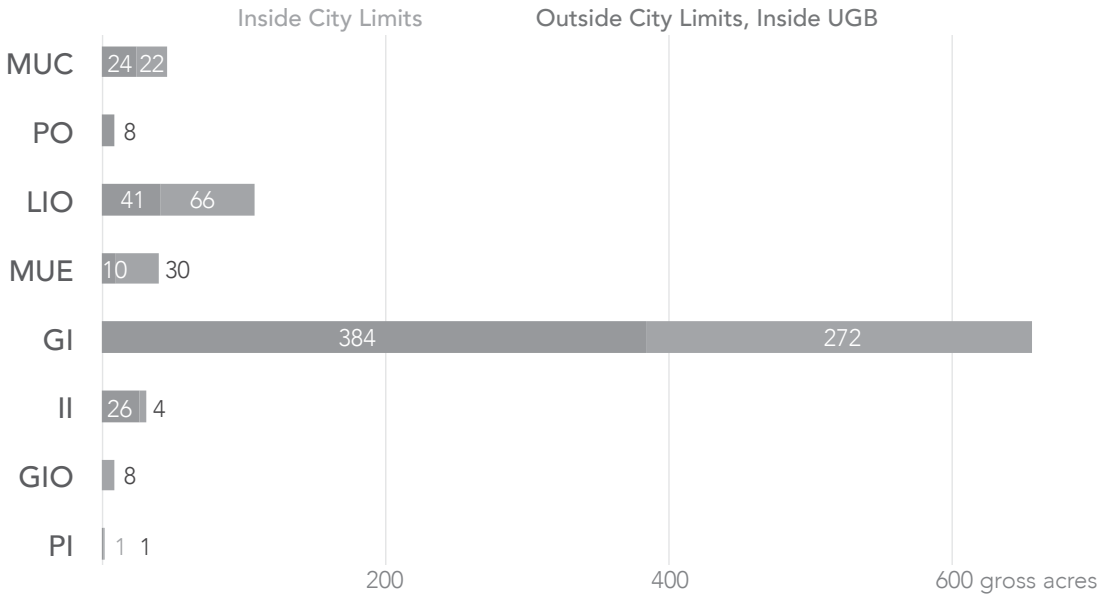
Eighty percent of Corvallis vacant commercial land is located in Mixed-Use Commercial (MUC).

Seventy-eight percent of Corvallis' industrial land is located in General Industrial (GI).

Several Plan Designations have 0 acres of unconstrained vacant and partially vacant land: Central Business District, Limited Industrial, and Mixed Use Transitional.

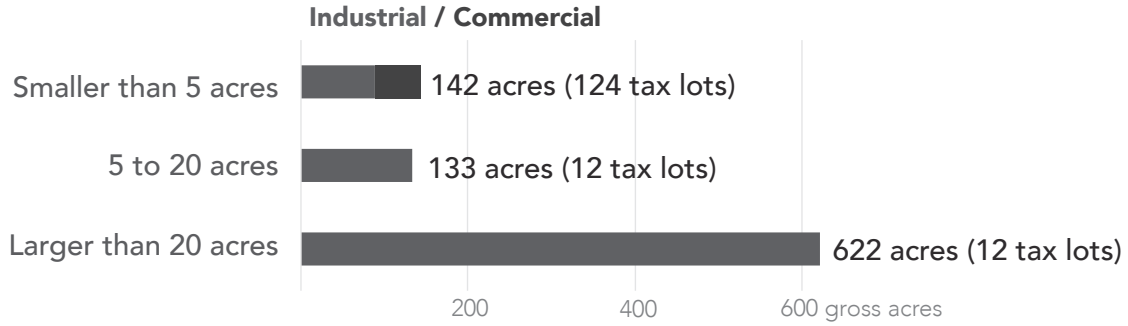
COMMERCIAL AND INDUSTRIAL BUILDABLE LAND IN UNCONSTRAINED VACANT AND PARTIALLY VACANT TAX LOTS BY PLAN DESIGNATION (REGARDLESS OF PLANNED DEVELOPMENT OVERLAY), CORVALLIS UGB, 2016

Source: ECONorthwest analysis of Corvallis GIS data



LOT SIZE BY PLAN DESIGNATION, BUILDABLE ACRES, CORVALLIS UGB, 2016

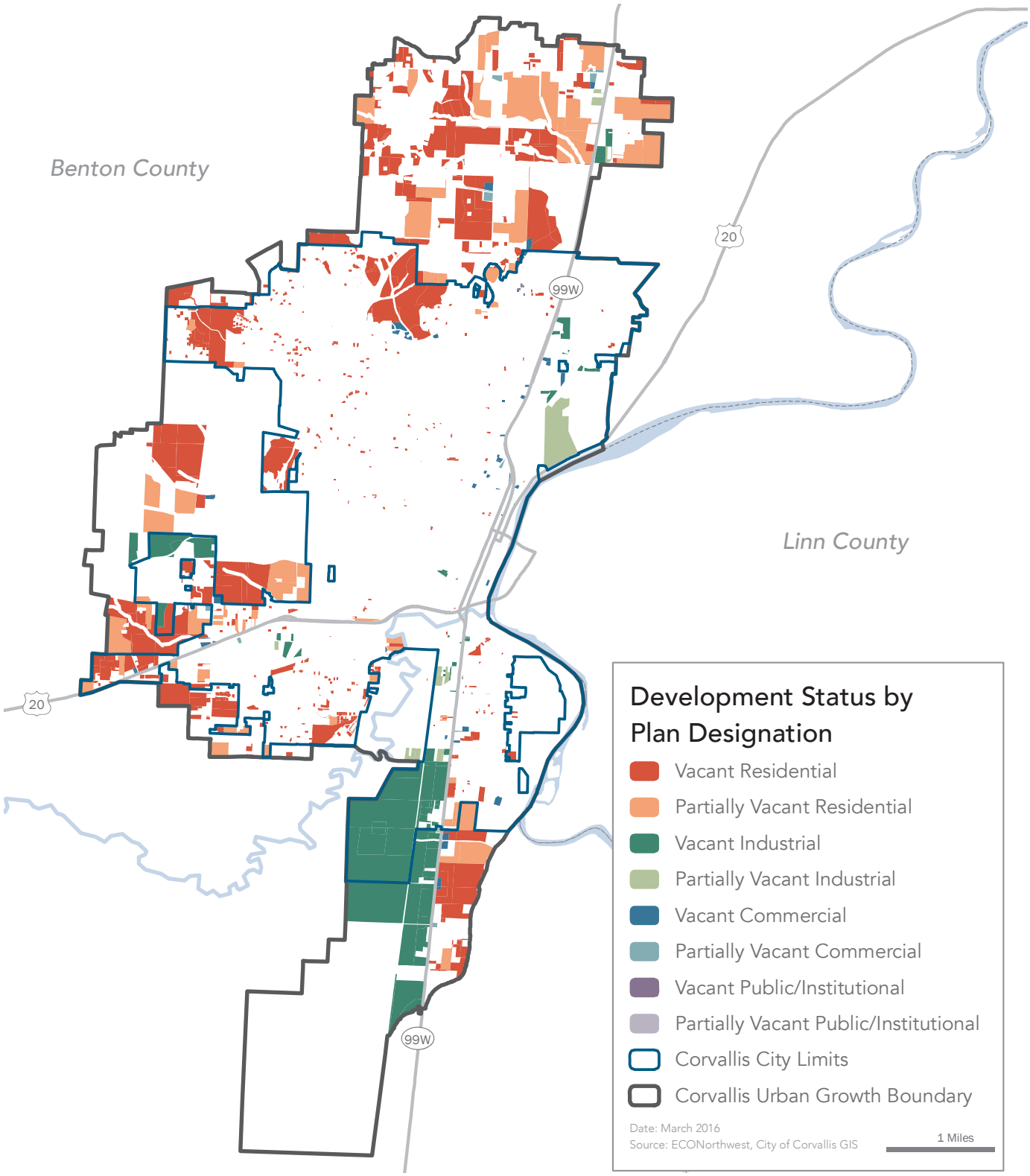
Source: ECONorthwest analysis of Corvallis GIS data



Corvallis has 3 acres of partially constrained commercial land and 47 acres of partially constrained industrial land.

Corvallis Buildable Land Inventory 2016

Vacant and Partially Vacant Land by Plan Designation



Housing Needs Analysis: Introduction

Corvallis is a growing city, adding more than 7,200 new residents between 2000 and 2013, accounting for more than two-thirds of the population growth in Benton County. Growth in population has resulted in growth in housing, with Corvallis adding nearly 2,800 new dwelling units within the Urban Growth Boundary (UGB) between 2000 and 2013, about half of which were single-family detached housing and half were multifamily housing.

Corvallis' population growth was driven in large part by growth of students at Oregon State University (OSU). Between 2000 and 2015, full- and part-time enrollment at OSU's Corvallis campus grew from about 12,230 students to 23,450 students, an increase of more than 11,200 students.

As the City's population and housing stock grew over the last decade, housing has become less affordable to people living in Corvallis. Homeownership has become less affordable in Corvallis since 2000. In 2013, the average house cost 6.9 times the median household income, compared to 4.3 times median household income in 2000. About 46% of Corvallis' households are unable to afford their current housing (i.e., they spend more than 30% of gross income on housing), with 66% of renters unable to afford their housing costs.

Corvallis must plan to accommodate residential growth over the 2016 to 2036 period, both for full-time, year round residents and for students at OSU. An important part of that planning is understanding historical trends in Corvallis' housing market, as well as demographic and socioeconomic trends that may affect Corvallis' housing market over the 20-year planning period.

The Housing Needs Analysis presents information about these and other issues that will shape housing demand in Corvallis over the 2016 to 2036 period. It provides the City with information about Corvallis' housing market, housing stock and land supply, and future housing demand for the 2016-2036 period. This information will provide a factual basis to support updates to the City's Comprehensive Plan Housing Element.

The Housing Needs Analysis complies with statewide planning policies that govern planning for housing and residential development, including Goal 10 (Housing), OAR 660 Division 8, and ORS 197.296.

The following section of the Summary report presents the results of the longer, more detailed Housing Needs Analysis presented in the Urbanization Study. For more details on the issues discussed in this report, please refer to the Urbanization Study.

Corvallis' Population and Households

Population and housing characteristics are useful for better understanding Corvallis and the people who live here. Characteristics such as population growth, age of residents, household size and composition, commuting patterns, average pay per employee, and home ownership provide useful information about how the characteristics of Corvallis' households compare to Benton County and Oregon.

Unless otherwise noted, all data in this document are from the U.S. Census.

Corvallis has a large population of college students.

In 2013, about 19,000 of Corvallis' residents were undergraduate, graduate, and professional students, accounting for 35% of Corvallis' population.

Corvallis has a large percentage of college-aged students

About 89% of Corvallis' residents aged 18 to 24 years old were college students, including undergraduate, graduate, and professional students.

AVERAGE POPULATION GROWTH PER YEAR, 2000-2014

Corvallis | Benton Co. | Oregon

POPULATION, 2014

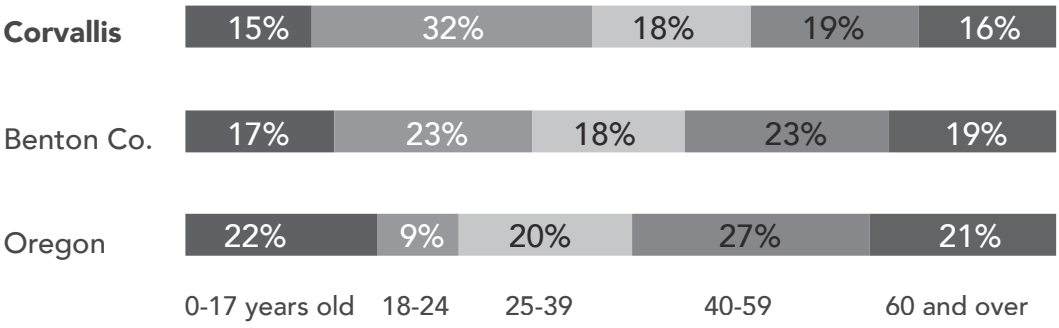
Source: Portland State University, Population Research Center

56,535	**88,740**	**3,962,710**
Corvallis	Benton Co.	Oregon

MEDIAN AGE, 2013

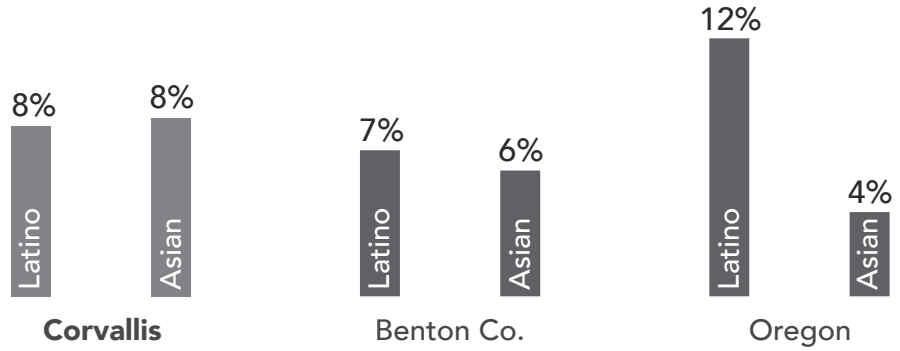
27	**33**	**39**
Corvallis	Benton Co.	Oregon

AGE DISTRIBUTION, 2013



CORVALLIS' POPULATION AND HOUSEHOLDS

PERCENT OF POPULATION THAT IS HISPANIC/LATINO AND ASIAN, 2013

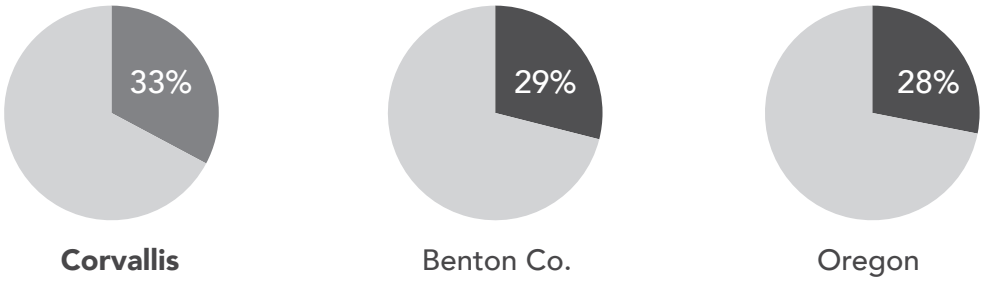


Corvallis' largest ethnic and racial minority populations are Latino and Asian, with each accounting for 8% of Corvallis' population.

AVERAGE NUMBER OF PEOPLE PER HOUSEHOLD, 2013

2.4	**2.4**	**2.5**
Corvallis	Benton Co.	Oregon

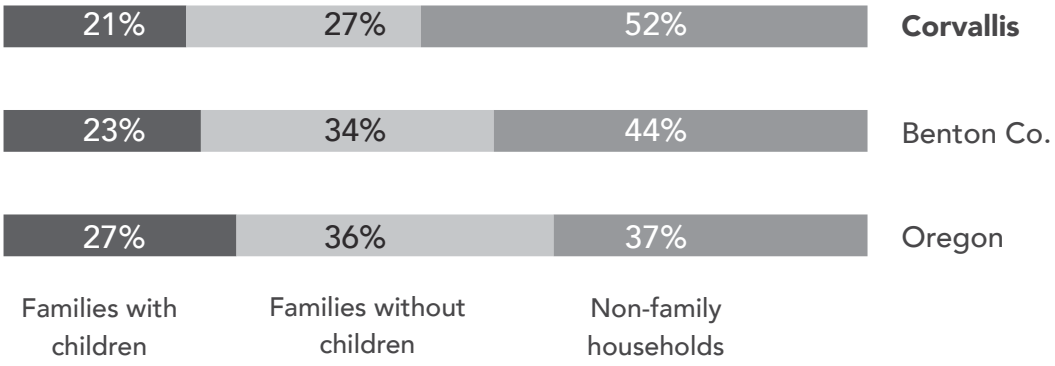
PERCENT OF HOUSEHOLDS THAT ARE SINGLE-PERSON, 2013



Corvallis has a larger percentage of single-person households than the county or state.

HOUSEHOLD COMPOSITION, 2013

A family household is one in which the resident is related to at least one other person in the household by birth, marriage, or adoption. Non-family households include people living alone, unmarried couples, and unrelated housemates.



Corvallis has a larger percentage of non-family households than the county or state.

Corvallis' Income Characteristics

Income is one of the key determinants in housing choice and a household's ability to afford housing. The information below shows multiple measures of income in Corvallis to show the impact of the large number of students in Corvallis. We compare income for all households and for families. Household income includes all income for all members of all households, which includes student households. Family income includes income only for families, which the Census defines as a household with people who are related by birth, marriage, or adoption.

Corvallis' income is affected by the large number of students living in the city.

Corvallis' median household income is about $10,000 *lower* than the State average but family income is $15,000 *higher* than the State average. This difference is attributable to the fact that more than one-third of people living in Corvallis are college students.

Income is substantially lower for young households.

More than three-quarters of Corvallis' households under 25 have income of less than $25,000 per year. Corvallis has a large percentage of population aged 18 to 25 (32% compared to the State average of 9%). The large percentage of college-aged people in Corvallis accounts, at least partially, for the lower household incomes.

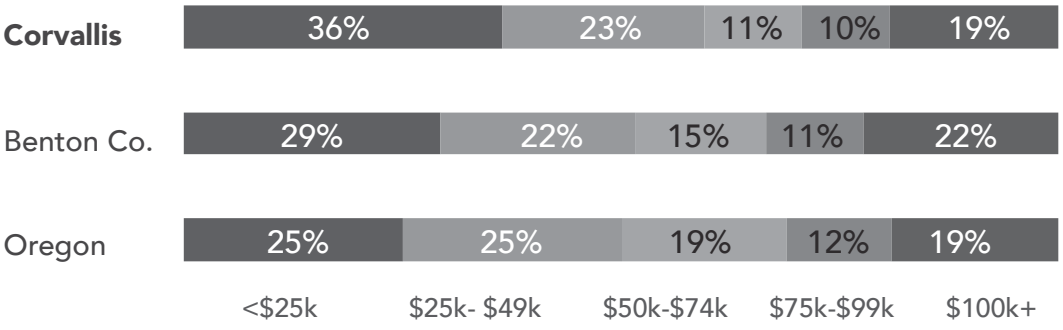
MEDIAN HOUSEHOLD INCOME, 2013

$39,500	**$47,600**	**$49,500**
Corvallis	Benton Co.	Oregon

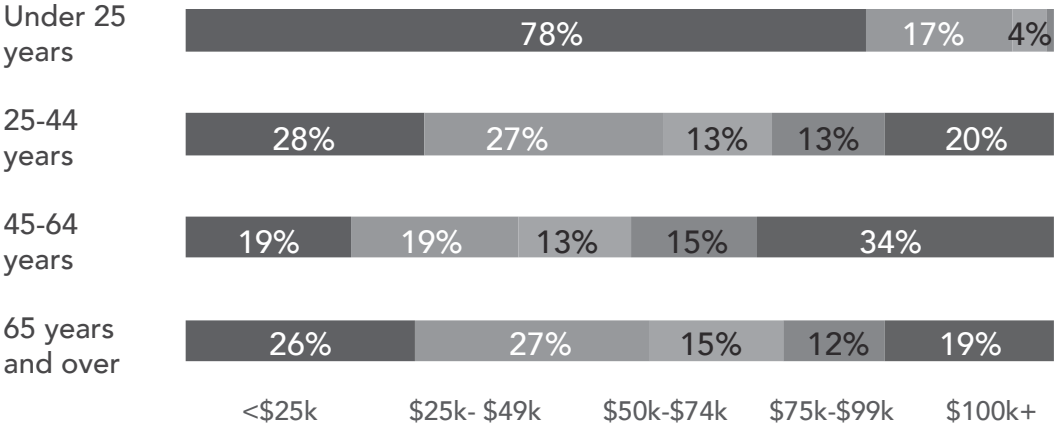
MEDIAN FAMILY INCOME, 2013

$74,600	**$74,300**	**$60,900**
Corvallis	Benton Co.	Oregon

HOUSEHOLD INCOME DISTRIBUTION, 2013



CORVALLIS HOUSEHOLD INCOME BY AGE OF HOUSEHOLDER, 2013



Corvallis' Housing Market

Analysis of historical development trends in Corvallis provides insights into how the local housing market functions in the context of Benton County. This report groups housing into the three housing types shown below.

HOUSING TYPES

Single-family detached
(includes mobile and manufactured homes)

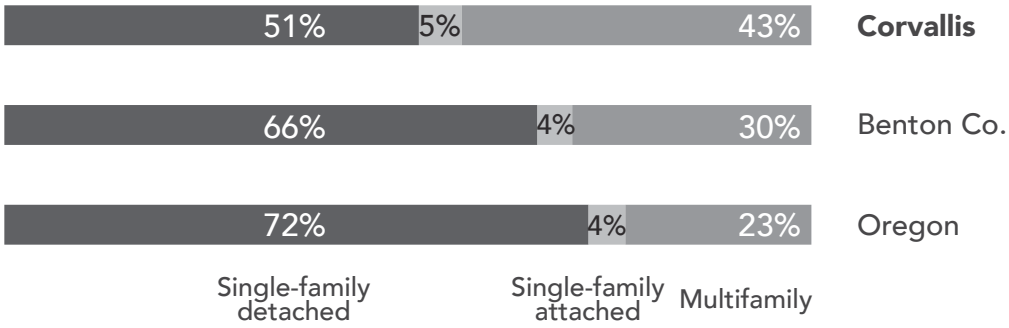
Single-family attached
(townhouses)

Multifamily
(condos, apartments, duplexes)

Corvallis has a larger percentage of multifamily housing (43%) than the State average (23%).

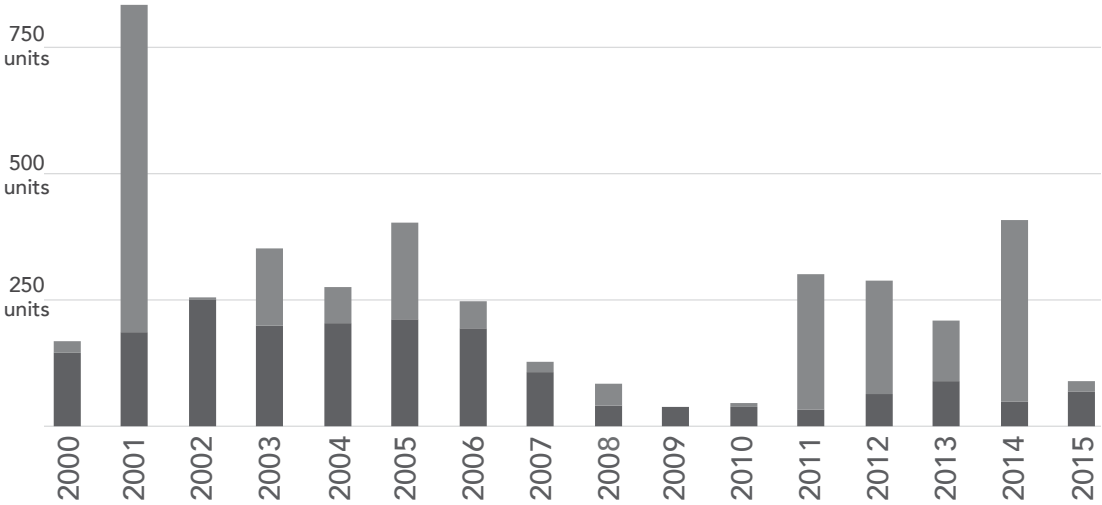
Some of this difference can be explained by the fact that cities generally have a larger percentage of multifamily housing and some can be explained by Corvallis' large college student population.

MIX OF EXISTING HOUSING TYPES, 2013



BUILDING PERMITS ISSUED, 2000-2015

Source: City of Corvallis



Over the 2000 to 2015 period, Corvallis issued permits for more than 4,100 dwelling units, with an average of 258 permits issued annually.

About 46% of dwellings permitted were single-family (including detached and attached) and 54% were multifamily (including duplexes, residential development from commercial building permits, and other multifamily).

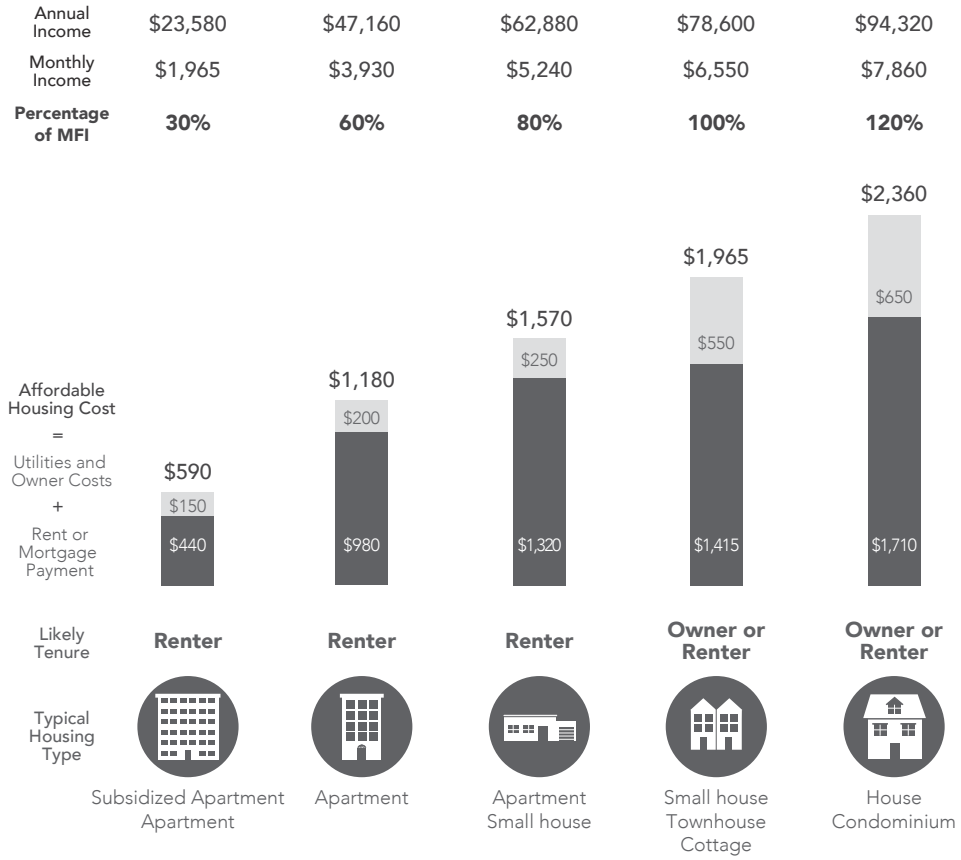
Housing Affordability

The term 'affordable housing' refers to a household's ability to find housing within its financial means. Housing affordability affects both higher- and lower-income households and is an important issue for Corvallis. Low-income households have fewer resources available to pay for housing and have the most difficulty finding affordable housing. Key points about affordability in Corvallis include:

- Corvallis will have an ongoing need for housing affordable to lower-income and moderate-income households.
- The City is planning for needed housing types for households at all income levels.
- Future housing affordability will depend on the relationship between income and housing price.
- Corvallis' large percentage of households with income below $25,000 per year is a result of the large college student population in Corvallis. While students do generally have low income, they have access to other sources of capital for rent, including family and financial aid.

HOUSING AFFORDABILITY BASED ON BENTON COUNTY MEDIAN FAMILY INCOME (MFI) OF $78,600 IN 2015

Source: US Department of Housing and Urban Development, 2015



HOUSING AFFORDABILITY

CORVALLIS HOUSEHOLD INCOME DISTRIBUTION IN COMPARISON WITH BENTON COUNTY MEDIAN FAMILY INCOME (MFI), 2013

Source: US Department of Housing and Urban Development

% of MFI	<30%	30-50%	50-80%	80-120%	>120%
Annual income	<$23,580	$23,580-$39,300	$39,300-$62,880	$62,880-$94,320	>$94,320
	34%	16%	14%	8%	28%

Percent of Corvallis' Households

About one third of Corvallis households have income below 30% of median family income.

Many of these households are under twenty-five years old and most are college students.

PERCENT OF HOUSEHOLDS THAT ARE COST BURDENED, 2013

Cost-burdened households spend more than 30% of their gross income on housing.

46% **Corvallis**

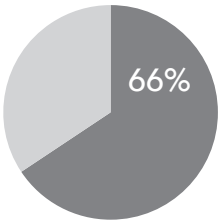
40% Benton Co.

40% Oregon

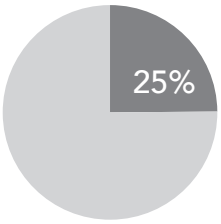
Nearly half of Corvallis' households are paying more than they can afford for housing.

Two-thirds of renter households are cost burdened in Corvallis, compared to the State average of 54%. One quarter of homeowners in Corvallis are cost burdened, compared to the State average of 31%. The higher rates of cost burden in Corvallis reflect the effects of the large college student population.

PERCENT OF CORVALLIS' HOUSEHOLDS THAT ARE COST BURDENED, BY OWNERSHIP STATUS, 2013



Renter-occupied households



Owner-occupied households

MEDIAN HOME SALES PRICES, 2015

Source: Zillow, 2015

$295,400 **Corvallis**

$289,650 Benton Co.

$267,700 Oregon

Median home sales prices have doubled in Corvallis since 2000.

Median sales price in Corvallis increased from $146,300 in 2000 to $295,400 in 2015. This is consistent with State trends.

RATIO OF MEDIAN OWNER-OCCUPIED HOUSING VALUE TO MEDIAN HOUSEHOLD INCOME, 2013

Lower ratios indicate that housing is more affordable. HUD's standard is 3.0.

6.9 **Corvallis**

5.7 Benton Co.

4.7 Oregon

Home prices grew faster than income in Corvallis and across the State since 2000.

Factors Affecting Housing Need

Studies and data analysis have shown a clear linkage between demographic characteristics and housing choice, as shown in the figure below. Key relationships include:

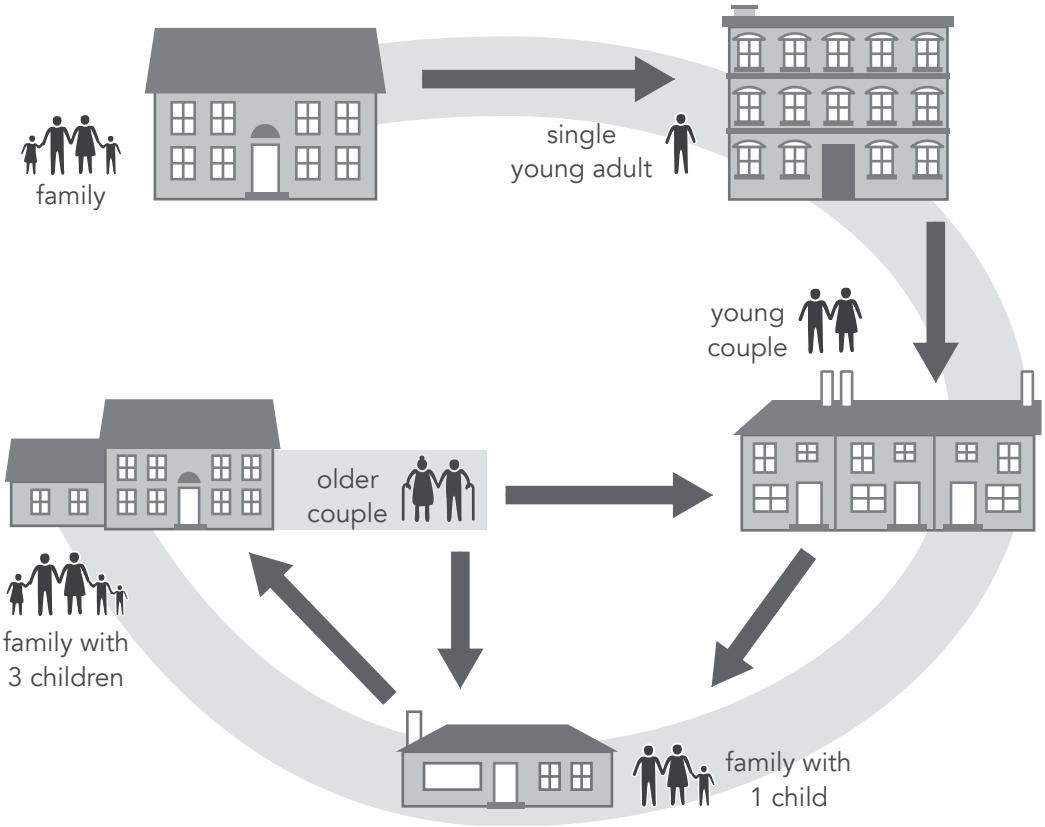
- Housing needs change over a person's lifetime.
- Homeownership rates increase as income increases.
- Homeownership rates increase as age increases.
- Choice of single-family detached housing increases as income increases.
- Renters are much more likely to choose multifamily housing than single-family housing.
- Income is a strong determinant of tenure and housing-type choice for all age categories.

Continued growth in OSU students, but at a slower rate, will affect housing need in Corvallis.

College students account for more than one-third of Corvallis' population, most of whom attend OSU. Growth in students at OSU will continue to impact housing demand in Corvallis.

Between 2000 and 2015, OSU enrollment in Corvallis grew at an average annual growth rate of 4.4%. OSU expects enrollment to continue growing in Corvallis but at a slower pace than between 2000 and 2015. OSU does not have an official forecast of enrollment but expects on-campus enrollment in Corvallis to grow to about 27,000 students by about 2023, an increase of about 3,550 students at an average annual growth rate of 1.8%.

HOUSING LIFE CYCLE



The linkages between demographics and housing need can be used to predict future housing need in Corvallis. Four demographic trends that are particularly important for Corvallis are shown below:

Growth of OSU Student Population

OSU expects the student population to grow by about 3,500 students by 2023 and has plans to build 250 to 300 new beds in student housing by about 2020.

Growth in student housing will continue to result in demand for private dormitories or housing in fraternity or sorority houses and in the Corvallis private housing market.

Aging of the Baby Boomers

Consistent with state and national trends, Corvallis' population is growing older. By 2035, 28% of the population of Benton County is forecast to be 60 and over, up from 21% in 2015.

LIKELY TRENDS AMONG BABY BOOMER HOUSEHOLDS:

- ↓ Household sizes (more 1 person households)
- ↓ Homeownership rates (especially after 75 years old)
- ↓ Income

Implications of aging trends for housing:

Need for affordable owner and renter housing, especially in walkable neighborhoods.

Millennial incomes will increase as they age. They will need opportunities for affordable, owner-occupied single-family housing, such as cottages or townhouses.

Aging of the Millennials

Corvallis' population is younger than the State averages. Corvallis' ability to attract and retain Millenials will depend on availability of affordable owner- and renter-occupied housing.

LIKELY TRENDS AMONG MILLENNIAL HOUSEHOLDS:

- ↑ Household sizes (as they form families)
- ↑ Homeownership rates
- ↑ Income

Continued growth of the Hispanic/Latino Population

Corvallis' Hispanic/Latino population grew by more than 1,500 people (2%) between 2000 and 2013. Nationwide, the Hispanic/Latino population is predicted to be the fastest growing racial/ethnic group over the next few decades.

CHARACTERISTICS OF HISPANIC HOUSEHOLDS COMPARED TO NON-HISPANIC HOUSEHOLDS:

- ↑ Household sizes
- ↑ Homeownership rates — Hispanic households have higher homeownership rates at younger ages.
- ↓ Continued lower than average income

Implication of growing ethnic diversity for housing:

Need for larger, lower- cost renting and ownership opportunities for larger households with more children and multiple generations.

Corvallis' Needed Housing

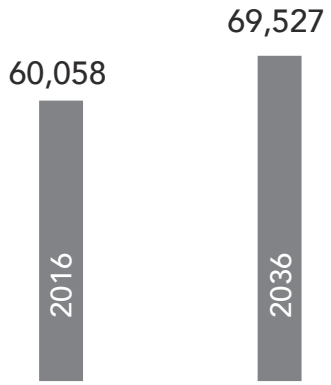
Demand for Residential Land, by Housing Type

Corvallis' population growth over the next 20 years will affect the number of new households created and the demand for residential land. Goal 10 requires that the forecast of new housing be based on an adopted coordinated population forecast. In September 2015, Corvallis' City Council adopted a population forecast for the Corvallis urban growth boundary based on Portland State University's forecast for 2014-2036. This forecast shows that Corvallis' population is estimated to grow at a rate of 0.73% per year, adding 9,469 new people between 2016 and 2036.

Growth in population will result in continued demand for housing in Corvallis.

FORECASTED TOTAL NEW POPULATION, CORVALLIS UGB, 2016-2036

(includes population outside city limits but within UGB)



Population increase: **9,469**

Corvallis will continue to have demand for multifamily housing.

The relatively high cost of housing, continued growth of students at OSU, and demographic changes suggest that more affordable housing types, such as multifamily, single-family attached, and smaller single-family detached housing will continue to be in high demand in Corvallis.

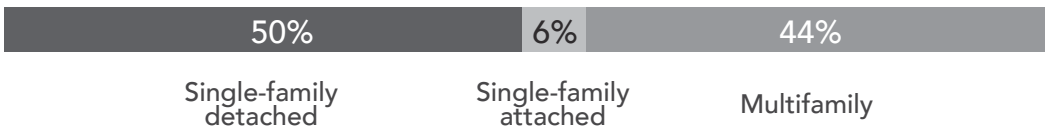
FORECASTED DEMAND FOR NEW DWELLING UNITS, CORVALLIS UGB, 2016-2036

9,469
New Corvallis Residents

create demand for

3,548
New Dwelling Units

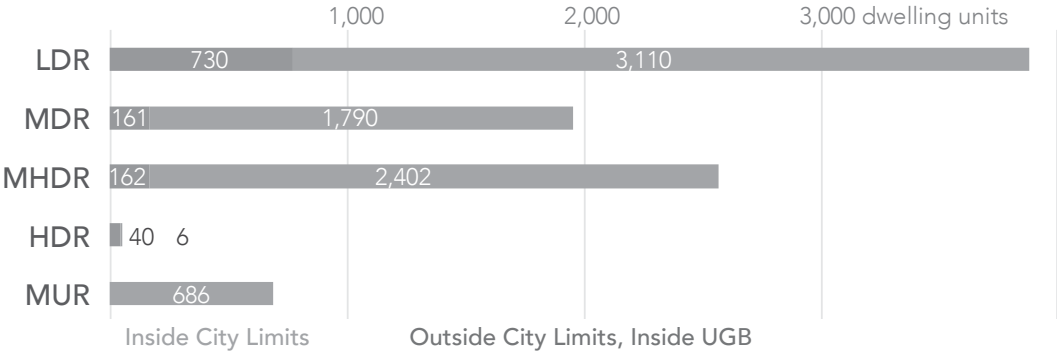
FORECAST OF NEEDED HOUSING BY HOUSING TYPE, CORVALLIS UGB, 2016-2036



Corvallis Residential Land Capacity

Corvallis has capacity for about 9,127 dwelling units on unconstrained vacant and partially vacant land without a Planned Development Overlay.

ESTIMATED CAPACITY OF UNCONSTRAINED VACANT AND PARTIALLY VACANT LAND WITHOUT A PLANNED DEVELOPMENT OVERLAY, CORVALLIS UGB, 2016



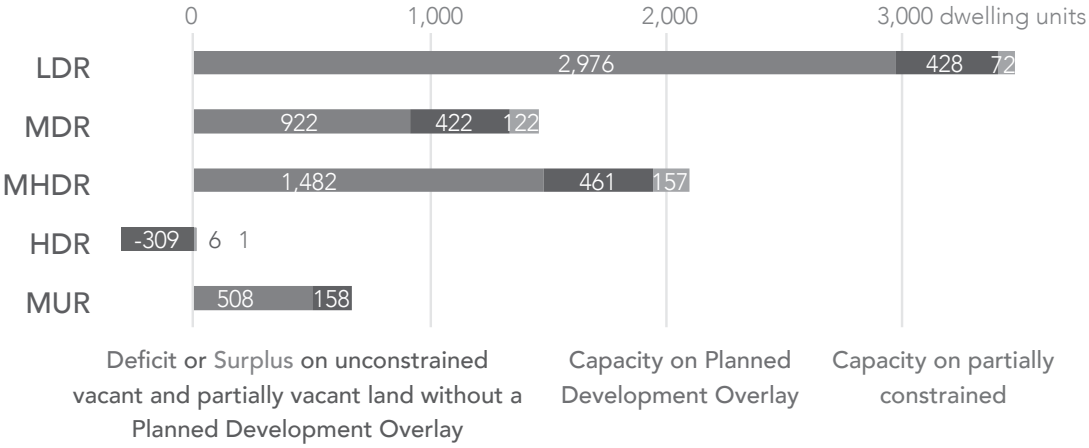
Corvallis has sufficient residential capacity in most Plan Designations to accommodate residential growth over the 2016-2036 period.

Corvallis has more than enough capacity to accommodate residential growth on unconstrained and partially vacant lands without a Planned Development Overlay in most Plan Designations. The exception is High Density Residential (HDR), where Corvallis has a deficit of capacity for 309 dwelling units.

Corvallis has a surplus of residential capacity of unconstrained vacant and partially vacant land without a Planned Development Overlay in nearly every Designation. The exception is HDR, where Corvallis has a deficit of land to accommodate 309 dwelling units.

Corvallis has additional residential capacity in all Designations (except HDR) on land with a Planned Development Overlay and on partially constrained land.

CAPACITY INCLUDING PARTIALLY CONSTRAINED VACANT LAND AND LAND WITH PLANNED DEVELOPMENT OVERLAY, CORVALLIS UGB, 2016-2036



Corvallis has additional residential capacity on unconstrained and partially vacant land with a Planned Development Overlay, and in vacant land with partial constraints.

Housing Conclusions

Conclusions from Corvallis' Housing Needs Analysis are:

- **Corvallis needs additional smaller units and more diverse housing types.** Demographic trends suggest that there will be an increase in demand for more affordable housing, such as smaller houses and lot sizes for single-family housing.

  Key demographic and economic trends that will affect Corvallis' future housing needs are: (1) the aging of the Baby Boomers, (2) aging of the Millennials, and (3) continued growth in Hispanic and Latino populations.

- **Corvallis has a deficit of housing affordable to lower-income households.** Corvallis currently has an existing deficit of about 4,760 dwelling units affordable to households with incomes below $25,000. The city will continue to have growth in low- and moderate-income households—households with income below $60,000.
  - Many of the lowest income households (with incomes below $25,000) are student households.
  - Corvallis has low- and moderate-income households who are not students. A substantial number of households who are not as likely to be students have income of $50,000 or below. These households include: more than half of Corvallis' households aged 25 to 44, nearly 40% of Corvallis' households aged 45 to 64, and more than half of Corvallis households 65 years and older.
  - Corvallis' housing need includes providing opportunities for development of housing that is affordable to low- and moderate-income households. The housing types likely to be affordable to these households include government-subsidized housing, manufactured homes on lots and in parks, low-density multifamily housing such as duplexes, townhomes, or apartments.

- **OSU students will continue to impact Corvallis' housing market.** The impact of students on Corvallis' housing market will depend, in part, on whether OSU builds enough new dormitory rooms to accommodate student growth. OSU is forecasting that the student enrollment in Corvallis will grow to 27,000 students by about 2023. OSU plans to build 250 to 300 additional beds of University housing by 2020. Plans for additional University housing are not available at this point. If that forecast holds true, then students will account for about one-third of new population and one-quarter to one-third of new housing demand in Corvallis.

  While students generally have lower income, they also have resources to pay for housing beyond income. Because many students have access to money beyond wage and salary income, some student households will compete with lower-income households in Corvallis for affordable housing.

HOUSING CONCLUSIONS

- **Residential land in Corvallis has enough housing capacity to accommodate growth in all residential plan designations on unconstrained vacant and partially vacant land without a Planned Development Overlay except for High Density Residential.** For land designated High Density Residential, Corvallis has a deficit for 309 dwelling units or about 12 gross acres. The City will need to address this deficit to meet the requirements of Goal 10 and ORS 197.296, to provide sufficient land to accommodate 20 years of growth.

- **Corvallis has relatively little residential land within the city limits that may be available for development in the short term (one to five years).** Twelve-percent of Corvallis' residential capacity without a Planned Development Overlay is on land within the city limits. At historic rates of development, that land would be developed in four to five years. Moreover, two-thirds of residential land without a Planned Development Overlay is designated Low Density Residential (LDR).

  Corvallis will need to annex and service residential land, or re-designate existing vacant lands with other designations that are considered surplus, to accommodate expected growth. The relatively small amount of unconstrained vacant and partially vacant residential land within the city limits makes getting residential land 'development-ready' urgent.

- **Corvallis housing policies are complex, creating a barrier to residential development, including development of relatively affordable housing.** In 2014, ECONorthwest produced an analysis of Corvallis' housing policies, titled *Corvallis Housing Policy Options* (December 2014). One of the key findings of that analysis was that Corvallis' development regulations and entitlement process make development in Corvallis more difficult than in other nearby communities. The complexity adds time and expense to development in Corvallis, making developing housing in Corvallis more expensive.

  Developers want greater certainty earlier in the development process about exactions and other development costs. Suggestions for increasing certainty include increasing staff time available to work with developers in the pre-application process, as well as streamlining the development regulations and development process. In the absence of greater certainty, developers may (and often do) choose to pursue development in neighboring cities, where development is easier and less costly.

- **Corvallis will need to accommodate growth of parkland and public and semi-public uses, mostly on residential land.** Corvallis' *Park and Recreation Master Plan* (October 2015) identifies areas where Corvallis needs new parks, natural areas, and trails. Most of the areas with parkland need are in undeveloped residential areas in North and South Corvallis. Corvallis will also have demand for about 43 acres of land for semi-public uses like churches, which are most likely to be accommodated in residential areas.

Housing Policy Recommendations

- **Update the Housing Element of the Comprehensive Plan. The Housing Element contains a vision statement, data from prior analyses, and residential development policies. We recommend:**
  - The Housing Element includes data that is now out of date. We recommend updating this data, based on the housing needs analysis in this report, or removing the data from the Housing Element.
  - The Housing Element's vision does not include any language about housing affordability or meeting the housing needs of Corvallis residents. It does mention "meeting the needs of a diverse population," but does so in the context of neighborhood form and livability. The vision addresses land use efficiency, which relates to housing affordability, but focuses on accessibility.
  - We recommend that the City consider adding additional policies to the Housing Element related to housing affordability. Corvallis has an existing well-developed housing program that likely addresses many potential affordable housing policies.
  - We recommend adding a Comprehensive Plan Policy to the Housing Element about maintaining a 20-year supply of residential land. The Housing policies address land supply in the urbanizable area (e.g., the unincorporated area of the UGB). The City should consider modifying that policy or adding a new one that requires a 20-year land supply that includes enough land by plan designation to accommodate needed housing types and densities. The City should also consider adding a policy to monitor short-term residential land supply to help the City maintain enough land within the city limits to accommodate growth for at least the next five years.
- **Identify opportunities for addressing the deficit of high-density multifamily land**. Corvallis can address the High Density Residential land deficit in a number of ways, including: (1) identifying opportunities to rezone surplus lower-density residential land or even industrial land (being careful to ensure compatibility of residential and surrounding uses) to High Density Residential; (2) identifying opportunities for High Density Residential redevelopment; (3) encouraging high density multifamily housing in the Mixed Use Residential designation through annexation of this land to the city limits; and (4) encouraging high density multifamily development in commercial and mixed-use areas, being careful not to substantially displace commercial uses.

  We strongly recommend that the City take action on one or more of the options above. The City's deficit of High Density Residential land is relatively modest, 12 acres, but having sufficient opportunities for high-density multifamily development is important for meeting Corvallis' housing needs.

We recommend the City carefully consider location in selecting lands for high density residential designations. Locations close to downtown, employment centers, or commercial services will be most suitable. Proximity to the OSU campus is a consideration. Locations close to campus will likely be attractive to students; not all of the need for high-density housing is for student housing.

- **Consider implementing policies to increase the production of housing affordable for low-income and moderate-income households.** We recommend that the City revisit the policy options described in ECONorthwest's 2014 report *Corvallis Housing Policy Options* and identify and implement policies to increase opportunities for development of housing that is broadly affordable to households in Corvallis, people working at businesses in Corvallis, and others who may consider locating in Corvallis over the planning period.

- **Continue monitoring residential development.** The City's Housing policies require monitoring housing development to ensure it is meeting the needs of all Corvallis households. These policies demonstrate the City's commitment to meeting housing needs. To the extent possible, the City should expand the program to monitor redevelopment activity. We recommend continuing to monitor housing development.

- **Continue to monitor student residential development and coordinate with OSU about expected student growth.** OSU expects enrollment to continue growing in Corvallis but at a slower pace than between 2000 and 2015. OSU plans to build housing to meet student needs, with the expectation that additional demand for student housing will result from upper division students. The City should continue to monitor and coordinate with OSU about changes in student growth and their housing needs, as well as monitoring the development of privately owned housing for students. Corvallis has a very limited supply of land for high-density multifamily development and demand for affordable housing from long-term (or potential long-term) residents of Corvallis.

Economic Opportunities Analysis: Introduction

The Economic Opportunities Analysis provides the City with information about Corvallis' economy.

The Economic Opportunities Analysis complies with statewide planning policies that govern planning for commercial and industrial development, including Goal 9 (economy) and OAR 660-009.

Corvallis is the regional employment center of Benton County, with 86% of the County's employment located within Corvallis. Corvallis is home to major employers such as Oregon State University, Good Samaritan Hospital, Hewlett-Packard, and a range of other businesses of all sizes. Since 1990, employment in Benton County has grown by about 6,900 employees, with the majority of employment growth in services such as health care, professional services, and accommodations and food services.

Employment growth in Corvallis is driving demand for more space for new and growing businesses. While Corvallis has a large base of industrial land, the City's supply of land for commercial uses is more limited. The Economic Opportunities Analysis provides information to support economic development planning and management of Corvallis' commercial and industrial land. It provides the City with information about Corvallis' economy and the city's role as the primary employment center in Benton County and as a major employment center within the Willamette Valley.

The Economic Opportunities Analysis provides Corvallis with a factual basis to support future planning efforts related to employment and options for addressing unmet employment needs. It focuses on three broad issues: (1) the factors affecting economic development in Corvallis, (2) Corvallis' competitive advantages for economic development, and (3) potential employment growth in Corvallis.

The Economic Opportunities Analysis complies with Statewide Planning Goal 9, which directs cities to plan for economic growth. Within the context of Goal 9, the Economic Opportunities Analysis is an analysis of the community's economic patterns, potentialities, strengths, and deficiencies as they relate to state and national trends. It focuses on the comparative advantage of the city when planning for major commercial and industrial development. The Economic Opportunities Analysis includes extensive analysis of Corvallis' commercial and industrial land base to determine how much land is vacant or partially vacant.

The result of the Economic Opportunities Analysis is an estimate of land needed to accommodate the forecast of commercial and industrial employment growth for the 2016-2036 period. The following section of the Summary report presents the results of the longer, more detailed Economic Opportunities Analysis presented in the Urbanization Study. For more details on this issues discussed in this report, please refer to the Urbanization Study.

Corvallis' Vision for Economic Development

Corvallis' vision for economic development is described in the Corvallis 2020 Vision. That report stated that Corvallis will have:

> *An economically strong and well-integrated city, fostering local businesses, regional cooperation and clean industry.*

The 2020 Vision Statement includes a section on economic vitality that includes the following statement:

> *Corvallis in 2020 is home to a vibrant economy that is anchored by key strategic industries and complemented by a wealth of diverse, environmentally friendly businesses.*

The Corvallis Economic Development Strategy–2015 Update is focused on identifying short-term implementation steps to move the city towards its economic vitality vision and identifies the following goals:

- **Support innovation and start-ups.** Provide a local business environment that supports a successful, diverse traded-sector entrepreneurial community, including a supportive services infrastructure, long-term transportation strategy, and access to markets.
- **Promote organic growth.** Identify opportunities and support the retention and growth of companies that are currently located in Benton County.
- **Leverage local assets.** Develop a program that will focus on increased tenancy in existing vacant buildings and Enterprise Zone locations by business and industry types that are consistent with the Prosperity That Fits Plan.

The document identifies the following economic development strategies:

1. Support the development and deployment of resident and next stage capital, as well as identifying the likely financing sources for clients, when needed.
2. Develop and maintain relationships with Corvallis's largest employers, to provide unprecedented advantages to Corvallis-based start-ups, including research infrastructure access, accelerator resources, services infrastructure, and innovative community networking.
3. Support business growth by providing properly zoned and serviced land, buildings, and development projects and by maintaining a timely and predictable development review process.
4. Collaborate locally, regionally, and statewide on long-term transportation plans, including access to markets, surface transit, and people travelling. In addition, the Economic Development Advisory Board has identified a number of tactical measures that will support the strategies.

Corvallis' vision for economic development is grounded in livability.

The core elements for the vision for economic vitality are:

Diverse economic base. Broad base of employment in a diverse number of fields, with a predominance of small, locally-owned businesses.

Higher education, high tech, and heath care link. Family wage jobs linked in large part to education, technology, health care, professional services, and research.

Regional transportation system. Active and convenient regional transportation system which makes it easy to walk, cycle, or ride mass transit.

Environmentally-sound industries. Business and community collaboration to maintain and improve the city's air and water quality.

Factors Affecting Economic Growth in Corvallis

Employment in Benton County grew slightly slower than the state average.

Corvallis' economy and employment will grow as a result of growth in the national and regional economy, as well as factors in the local area. The following are key trends that have implications for economic growth in Corvallis.

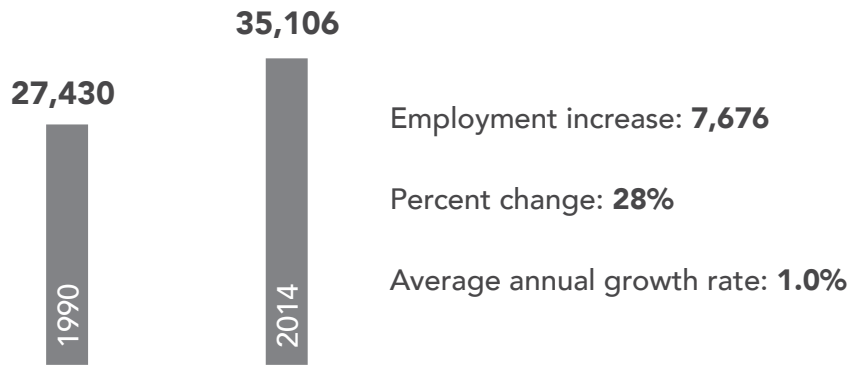
Employment in Benton County grew at an average annual growth rate of 0.9% between 1990 and 2014, adding nearly 7,000 jobs. In comparison, employment grew at 0.9% annually in the U.S. and 1.3% in Oregon over the 24 period.

Commercial Services and Government employment grew in Benton County between 1990 and 2014.

Commercial Services added nearly 9,000 jobs and Government added nearly 1,200 jobs over the 24-year period. In contrast, Retail employment lost 1,100 jobs and manufacturing lost nearly 2,100 jobs over the 24-year period.

CHANGE IN COVERED EMPLOYMENT, BENTON COUNTY, 1990 TO 2014

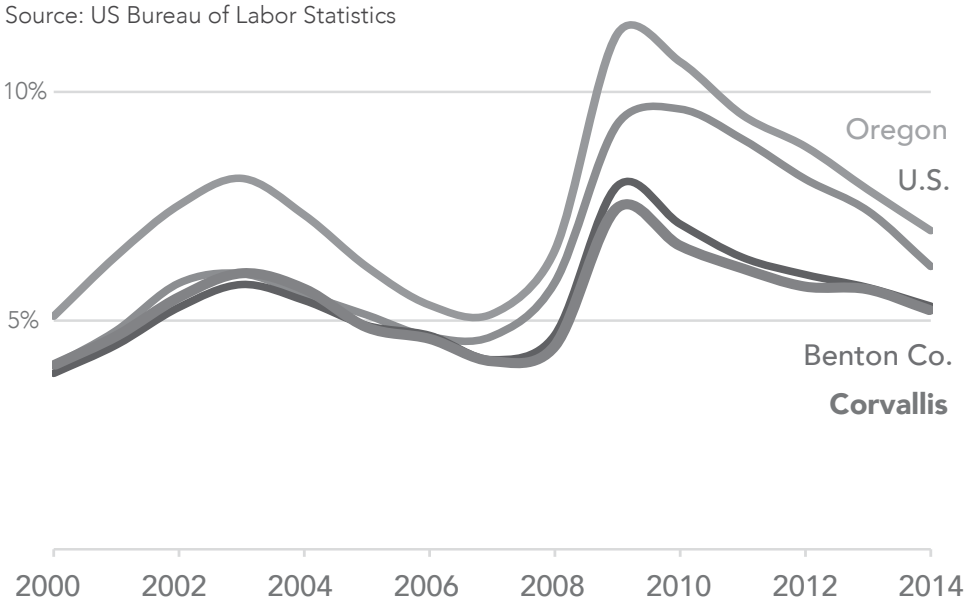
Source: US Bureau of Labor Statistics



Unemployment rates in Corvallis and Benton County are generally lower than the national and State average.

UNEMPLOYMENT RATE, 2000 - 2014

Source: US Bureau of Labor Statistics



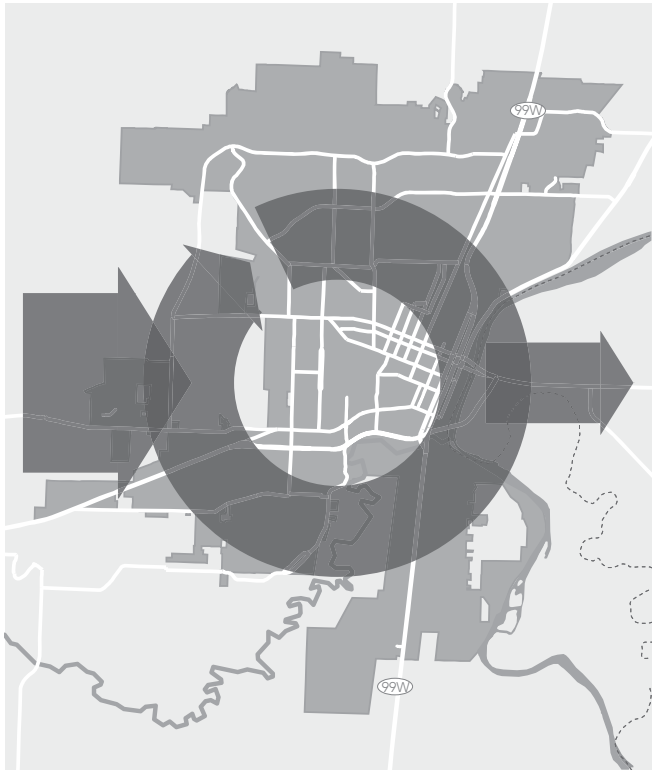
FACTORS AFFECTING ECONOMIC GROWTH IN CORVALLIS

AVERAGE ANNUAL WAGE, 2014

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

$47,900	$46,300	$46,600	$51,400
Corvallis	Benton Co.	Oregon	U.S.

COMMUTING PATTERNS IN CORVALLIS, 2013



18,810

People commute into Corvallis to work

9,990

People live and work in Corvallis

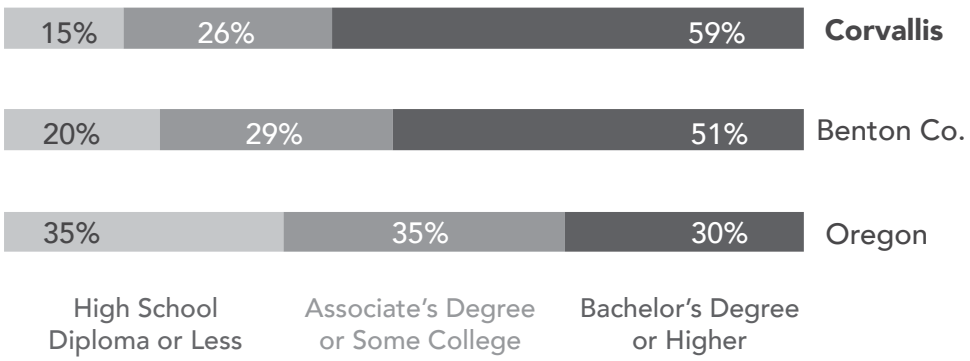
8,970

People live in Corvallis and work elsewhere

Corvallis is a regional economic center.

Sixty-five percent of Corvallis' workers commute into Corvallis. This is similar to other cities in the State.

EDUCATIONAL ATTAINMENT, PERCENT OF THE POPULATION AGE 25 AND OVER, 2013



Corvallis has a much larger than average percent of population with a Bachelor's Degree or higher education.

Employment in Corvallis

In 2014, Corvallis had more than 30,300 covered employees[1] at nearly 1,930 businesses and other employers. Corvallis' average employer size was 15 employees per employer. The majority of employees in Corvallis were in the following sectors: Government (28%), Health Care, Social Assistance, Management of Companies (19%), Retail (11%), Accommodation and Food Service (11%), and Manufacturing (8%).

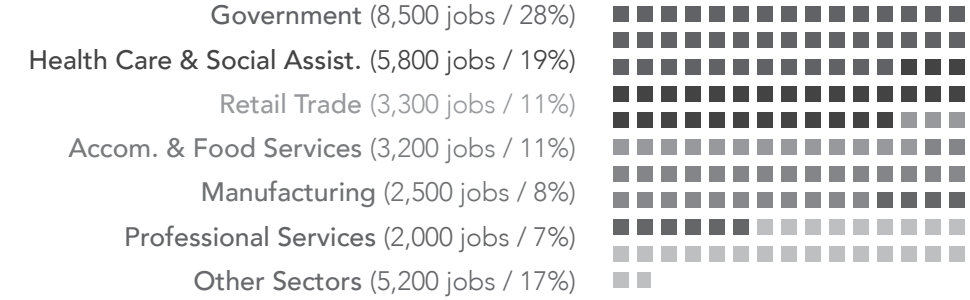
Government is the sector with the most employment in Corvallis.

Twenty-eight percent of Corvallis' jobs are in Government, with 19% of the jobs at OSU.

JOBS BY SECTOR OF FIRM, CORVALLIS, 2014

1 square represents 200 jobs.

Source: Oregon Employment Department, Quarterly Census of Employment and Wages

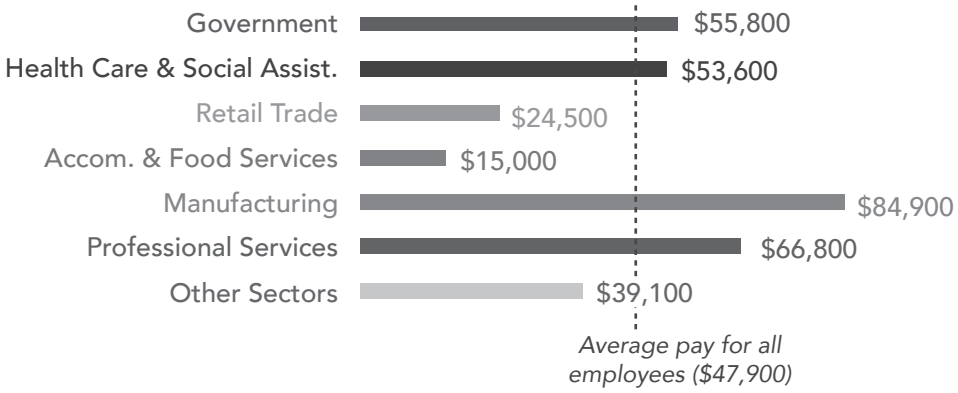


The average pay per employee in Corvallis was $47,900 in 2014. Manufacturing and Professional Services had the highest average pay. Accommodations and Food Services and Retail Trade had below-average pay.

Manufacturing and Professional Services have higher than average pay in Corvallis.

AVERAGE PAY BY SECTOR OF FIRM, CORVALLIS, 2014

Source: Oregon Employment Department, Quarterly Census of Employment and Wages



[1]Covered employment is employment covered by unemployment insurance. Covered employment does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Analysis of data shows that covered employment reported by the Oregon Employment Department for Benton County is only about 70% of total employment reported by the U.S. Department of Commerce. While this analysis includes only covered employment, the employment forecast presented later in the Summary is based on an estimate of total employment in Corvallis.

Corvallis' Competitive Advantages

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

There is little that metropolitan area jurisdictions can do to influence the national and state conditions that affect economic development, though they can influence local factors that affect economic development. Corvallis' primary competitive advantages are:

- **Location.** Corvallis is located in the central part of the Willamette Valley, about an hour and a half south of Portland by car.
- **Transportation.** Highway 34 provides a direct connection to I-5 and Highway 99W connects Corvallis to Salem and Eugene. Highway 20 provides access both to the Oregon Coast and to Albany and I-5.
- **Oregon State University (OSU).** Corvallis is home to one of the state's largest universities. OSU is a research university, employs about 12,000 people (including both full- and part-time employees), and has about 23,500 students in Corvallis.
- **Existing employment base.** Corvallis is the regional employment center of Benton County, which had over 2,400 employers with a total of more than 35,100 workers in 2014.
- **Labor market.** Businesses in Corvallis have access to workers from across the Willamette Valley, including highly educated skilled workers, nearby college students, and unskilled workers.
- **Economic development partnerships.** Corvallis works with a wide range of local and regional economic development partners.
- **Support for Entrepreneurship.** OSU provides an advantage for start-ups and entrepreneurial growth in Corvallis. In addition to Oregon's statewide RAIN nonprofit, OSU has the Advantage Accelerator, which works with entrepreneurs in the City. It assists a variety of businesses over a range of industries. ONAMI assists nanoscience and microtechnology start-ups, helping companies raise capital, market new products, and increase sales. Both nonprofits help incubate and grow smaller entrepreneurial businesses in Corvallis.
- **Quality of life.** Corvallis' high quality of life attributes include: safe and attractive neighborhoods, cultural amenities, university sporting events, educational opportunities, shopping opportunities, and access to outdoor recreation.
- **Public policy.** Can impact the amount and type of economic growth in a community. For example, businesses may choose to locate in Corvallis based on: development charges, availability of public infrastructure, and attitudes towards businesses.

Corvallis' disadvantages for economic development include:

Distance from I-5

Distance from a major airport

Location of industrial land

Lack of vacant commercial and industrial buildings

Complex and uncertain system for land use decisions

Restrictions on development at the Airport Industrial Park

Distant connections to venture capital and a pool of high technology companies

High housing costs

Corvallis' Target Industries

An analysis of growth industries in Corvallis should address two main questions: (1) Which industries are most likely to be attracted to Corvallis? and (2) Which industries best meet Corvallis' economic development vision? The selection of target industries is based on Corvallis' vision and goals for economic development, economic conditions in Corvallis and Benton County, and the city's competitive advantages.

Growth of manufacturing in Corvallis has been largely driven by growth in high technology, such as electronics components, computers, medical equipment, and software publishers. In addition, Corvallis has a long connection with forest product manufacturing, with OSU's College of Forestry. Future opportunities include the development of renewable energy production via forest products. Professional services firms are also important industries in Corvallis, such as engineering, consulting, and other professional firms.

Given the emphasis on small business growth and development in Corvallis, it is reasonable to assume that much of the city's business growth will come from small and moderate-sized businesses, either those already in Corvallis or new businesses that are founded there.

The target industries identified as having potential for growth in Corvallis are:

- **Manufacturing**, such as advanced manufacturing, computer and electronics manufacturing, biotechnology, metals manufacturing, pharmaceutical manufacturing, or recreational equipment.
- **Clean Tech and Renewable Energy**, such as 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.
- **Professional and Technical Services**, such as software development, health care, engineering, architecture and design, research, legal services, information technology services, and other professional services that are attracted to high-quality places to live.
- **Services for seniors,** such as assisted living facilities, retirement centers, and medical services.
- **Services for residents**, such as retail, medical services, and government services, especially primary education.

Growth in these industries may result from expansion of existing businesses, founding of new entrepreneurial businesses (e.g., related to research at OSU), or relocation of businesses to Corvallis.

Entrepreneurship and Small Business Opportunities

One of Corvallis' key economic development opportunities is the growth of small and mid-sized businesses. Programs that foster entrepreneurship and small business growth in Corvallis include the following:

- The Oregon Regional Accelerator and Innovation Network (RAIN). RAIN is a nonprofit dedicated to supporting and growing traded-sector businesses. RAIN does this through building and connecting existing talent, capital, and infrastructure into a network that is easy for entrepreneurs to access and navigate in every stage of business development. In Corvallis, RAIN's key partnerships are with Oregon State University, the City of Corvallis, Benton County, and other regional partners.
- OSU Advantage Accelerator-RAIN Corvallis. The OSU Advantage Accelerator operates as an accelerator incubator for start-up and early stage organizations, providing support services to entrepreneurs at critical points in emerging ventures development. The OSU Advantage Accelerator is the Corvallis-local presence of RAIN and is led by the OSU Research Office. It connects OSU with industry, entrepreneurs, and investors. The Accelerator focuses on speeding up the successful commercialization of ideas into high-growth, innovative companies.

  The OSU Advantage Accelerator works with entrepreneurs through actions such as: identifying a potential product, market and industries; testing start-up company feasibility and validating business models; and launching the start-up company, ramping up from research and development to product manufacturing and marketing.
- The Oregon Nanoscience and Microtechnologies Institute (ONAMI). ONAMI has worked with entrepreneurs from OSU and the University of Oregon to commercialize research and development in Oregon since 2003. ONAMI's three major programs are: (1) a professionally managed commercialization gap fund, (2) support and promotion of shared user facilities for industry and academic researchers, and (3) matching grants for industry sponsored research awards.

  ONAMI helps businesses connect with investors, develop and introduce new products, market themselves, increase sales, and expand into new markets. Between 2007 and 2015, ONAMI funded 45 University Start-up Companies and the companies raised $165 million in capital.

Lack of business incubator space and existing buildings for start-ups is a barrier to entrepreneurial business growth.

Corvallis does not have a space where small businesses can co-locate, with shared services (such as administrative services), business infrastructure (such as high-capacity, high-speed telecommunications), laboratory space, and light manufacturing space.

Corvallis lacks available commercial and laboratory space to support businesses as they grow from small to mid-sized businesses. Some start-up businesses leave Corvallis for these and other reasons as they grow.

Forecast of Employment Growth and Land Sufficiency

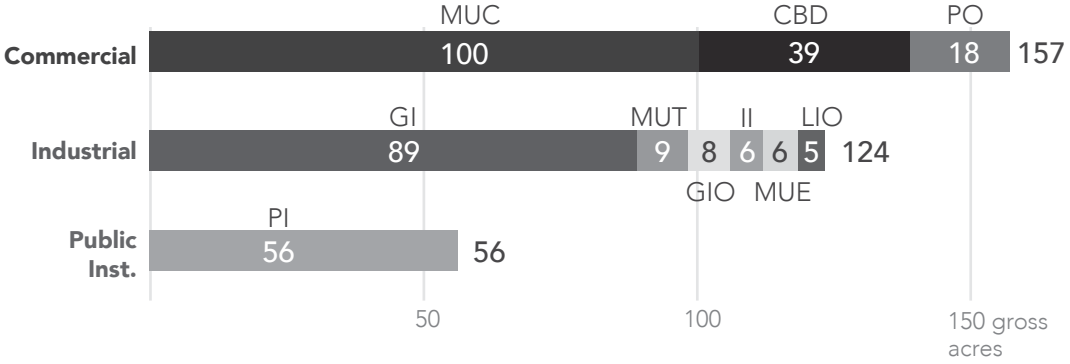
Corvallis is forecast for growth in both commercial and industrial employment sectors.

Corvallis is planning for growth of nearly 8,200 new jobs in the city over the 2016 to 2036 period. More than 6,000 of the jobs will be in office and commercial services, more than 1,000 in retail, and nearly 1,100 in industrial land uses. This pattern of job growth is consistent with Corvallis' existing employment base and with the City's vision for economic development.

The rate at which Corvallis' employment base grows over the next 20 years will affect development of new commercial and industrial buildings and demand for employment land. Corvallis' employment forecast assumes that employment will grow at the same rate as the Oregon Employment Department's forecast for employment growth of the region that Benton County is located in, at 1.1% average annual per year. This assumption is appropriate, as Corvallis is the regional employment and commerce center.

Employment growth will result in demand for about 337 gross acres of land. Corvallis will need about 157 gross acres of land to accommodate employment growth in Commercial Plan Designations, 56 acres of land in the Public Institutional Plan Designation,[2] and 124 gross acres in Industrial Plan Designations.

FORECASTED DEMAND FOR LAND TO ACCOMMODATE EMPLOYMENT, 2016-2036

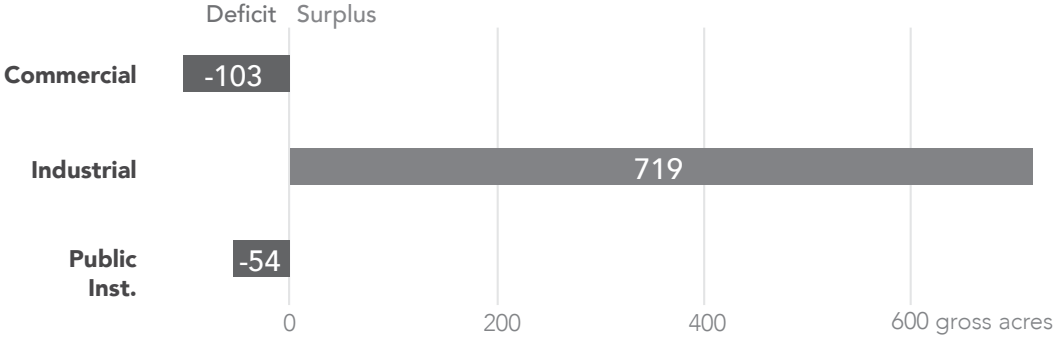


When factoring these projected land needs with the current supply, Corvallis would have a deficit of 103 gross acres of land in Commercial Plan Designations and 54 acres in the Public Institutional Plan Designation. Corvallis would have a surplus of about 719 acres of land in Industrial Plan Designations.

Corvallis has a deficit of land in Commercial and Public Institution Designations.

These are deficits for land for employment in largely commercial industries, such as professional services and health care.

COMPARISON OF BUILDABLE LAND SUPPLY AND DEMAND FOR LAND, PRESENT



[2] Public institutional land does not include land needed for government employment growth, such as city facilities or OSU's growth. It only includes demand for growth of employment at privately-owned businesses located in the Public Institutional Designation. The largest business in this Designation is Good Samaritan Hospital.

Short-Term Land Supply and Redevelopment

Short-term land supply

Goal 9 requires Corvallis to assess the short-term supply of commercial and industrial land based on the criteria that land can be ready for construction within one year. Cities must provide at least 25 percent of the total land supply within the urban growth boundary designated for industrial and other employment uses as short-term supply.

The City of Corvallis staff worked with the results of the buildable lands supply to identify commercial and industrial land that meet the definition of short-term supply of land. The City's approach was to examine all unconstrained vacant commercial and industrial land within the city limits. On these lands, the City considered access to water, sanitary sewer, and stormwater, prioritizing lands within 100 feet of an existing pipe or main. The City also considered location within the Enterprise Zone as a factor in identifying short-term land supply. The City did not consider lands outside of the city limits or partially vacant lands in this analysis because development of these lands may take longer than one year from submission of a building permit.

The results show that Corvallis has 30 acres of commercial land (on 39 sites) in the short-term supply of land and 443 acres of industrial land (on 60 sites) in the short-term supply of land. In comparison to all unconstrained vacant and partially vacant commercial and industrial land, 56% of Corvallis' commercial land is in the short-term supply and 53% of industrial land is in the short-term supply.

Redevelopment

The analysis of employment growth assumes relatively modest changes to the amount of employment that will be accommodated through redevelopment without public policy interventions to encourage redevelopment.

Redevelopment occurs when achievable rents exceed the current return on investment of the land and improvements. Corvallis' deficit of commercial land makes redevelopment of underutilized land or commercial buildings with relatively low improvement value more likely. However, Corvallis has a substantial surplus of vacant industrial land, suggesting that market pressure for industrial redevelopment will be less likely.

Corvallis should consider policies that will encourage commercial redevelopment, such as opportunities for commercial redevelopment and encouraging redevelopment for highly desirable commercial uses (e.g., growth of small and mid-sized traded-sector uses in office space, such as software development). The City may choose to consider other policies to encourage redevelopment, such as financial assistance to support redevelopment of key sites (e.g., providing low-cost loans or assistance with systems development charges) for uses that the City wants to attract and grow.

Employment Land Conclusions

The conclusions from the Urbanization Study on Commercial and Industrial land in Corvallis are:

- **Corvallis is forecast for growth in both commercial and industrial employment sectors.** Corvallis is planning for growth of nearly 8,200 new jobs in the city over the 2016 to 2036 period. More than 6,000 of the jobs will be in office and commercial services, more than 1,000 in retail, and nearly 1,100 in industrial land uses. Growth of these jobs will result in demand for about 213 gross acres of land in Commercial and Institutional Plan Designations and 124 gross acres in Industrial Plan Designations.

- **Corvallis has a projected deficit of commercial land for development.** This category of land includes growth of employment at privately-owned businesses in Commercial Plan Designations and in the Public Institutional Designations. The majority of this employment is in office or retail uses, such as office buildings, services (e.g., financial or personal care services), or retail stores.

  Corvallis has about 52 gross acres of unconstrained vacant or partially vacant land in commercial Plan Designations and two acres of public institutional land within the UGB. Corvallis' demand for this type of land (about 213 acres) exceeds the supply of this land, leaving a deficit of about 153 gross acres of land for commercial and public institutional uses.

- **Corvallis will need to identify ways to accommodate commercial growth.** Strategies to accommodate commercial growth include encouraging redevelopment of underutilized commercial lands, re-designating industrial land for commercial uses, or assisting with annexation of commercial land as landowners are willing to develop.

- **Corvallis' industrial land has constraints to development.** While Corvallis has a surplus of more than 700 acres of land in Industrial Plan Designations, the city's industrial land base has constraints that limit development. The chief constraints that limit development are distance from I-5, location in the southern part of the city (away from downtown), wetlands, and lack of urban services (e.g., water or wastewater). In addition, about 43% (380 acres) of Corvallis' buildable industrial land base is located outside of the city limits and will need to be annexed and serviced before development can occur, a process that takes a considerable amount of time and resources.

- **Corvallis' vision for economic development is based on diversifying its economic base, leveraging linkages between OSU and existing businesses in Corvallis, and attracting environmentally sound industries.** Corvallis' economic development strategy is primarily to grow existing businesses and to foster start-up businesses.

- **Corvallis has some, but not all of the inputs necessary to implement its vision for economic development.** Corvallis is home to two business incubators or accelerators with connections to OSU that have successfully assisted multiple businesses in growing. Feedback from staff at the incubators indicate that Corvallis lacks critical inputs necessary to continue growing businesses.

  One of the scarce key inputs in Corvallis is available sites for business growth, both land and existing buildings. Growing businesses in Corvallis have difficulty finding space in existing office and production buildings. The issues include the deficit of commercial land within the city limits, as well as the distance of much of Corvallis' industrial land from downtown Corvallis and OSU. Corvallis has few vacant available commercial or industrial buildings. The buildings that are vacant are either not available for leasing or do not have the facilities (e.g., wet laboratory space or production facilities) needed by businesses.

  Other key inputs that are lacking in Corvallis are more difficult for the City to address. For example, Corvallis is located relatively far from sources of capital (i.e., Silicon Valley), the Portland Airport is nearly two hours away, and the Eugene Airport has limited service. Moreover, some younger entrepreneurs prefer to live in larger urban areas, such as Portland or San Francisco. The City's ability to change these factors is limited. However, the City's economic development staff can work with business incubators and businesses to mitigate these factors where possible.

- **Corvallis' policies about development of commercial and industrial land are complex, creating delay and uncertainty for these types of development**. Discussions with stakeholders involved in commercial and industrial development indicate that, like Corvallis' residential development policies, the City's policies for commercial and industrial development create barriers to development. The development process is complex, adding time and expense to development.

Employment Policy Recommendations

The recommendations for managing Corvallis' employment land are:

- **Update the Economy Element of the Comprehensive Plan.** The Economy Element contains the 2020 Corvallis vision statement, data from prior analyses, and economic development policies. Updates would include:
  - The City could consider updating the vision, based on the ongoing Imagine Corvallis 2040 visioning project and the 2015 update to the Corvallis Economic Development Strategy.
  - We recommend updating out-of-date data, based on the economic opportunities analysis, or removing the data from the Economic Element.
  - The policies in the Economy Element are very specific and involved. The City should consider whether it wants to have this much detail in its policies that govern land for employment uses.

- **Update policies in the Economy Element to comply with newer Goal 9 requirements.** The Economy Element only partially complies with OAR 660-009. The Element does not fully address 2007 additions to this administrative rule that were implemented since the last update of the Economic Element. In particular, we recommend that the City address the following:
  - We recommend the City adopt a goal or policy stating the intent to maintain a 20-year supply of land consistent with Goal 9.
  - The EOA identifies specific "target" industries. We recommend that the City adopt a policy or goal that lists the final target industries identified in the EOA.
  - We recommend that the City adopt a policy or goal about maintaining a short-term supply of land for commercial and industrial uses.
- **Identify opportunities for addressing the deficit of commercial land.** Corvallis can address the commercial land deficit in a number of ways, including: (1) allowing and encouraging a wider range of commercial uses in appropriate industrial designations such as Limited Industrial, Office; (2) identifying opportunities to rezone surplus industrial land to commercial uses, focusing on the industrial land that is least likely to develop for industrial uses; (3) identifying opportunities for commercial redevelopment and encouraging redevelopment for highly desirable commercial uses (e.g., growth of small and mid-sized traded-sector uses in office space, such as software development); and (4) take no action and allow retail areas to redevelop as a result of market demand because land

for commercial uses is so scarce in Corvallis. Each of these approaches could be a part of the solution to addressing Corvallis' commercial land deficit. We strongly recommend that the City take action on options one through three above. If the City does not take action (option four), it risks continuing to have start-up businesses leave Corvallis because of a lack of commercial sites for development.

- **Continue to support business growth and incubation efforts.** The City should continue to support business growth and incubation efforts in a wide range of ways. Suggestions for providing this support from Corvallis stakeholders include the following, several of which are identified as strategies in the "Corvallis Economic Development Strategy:"
    - The City should continue to support businesses in finding office and other business space. The City can actively support business incubation by assisting individual businesses in finding sites for development or buildings to lease.
    - The City should continue to work with the OSU Advantage Accelerator in obtaining a building for business incubation. The City's role could include assisting in a range of ways, such as identifying buildings with the necessary characteristics or providing financial assistance to the Accelerator (e.g., low-interest loans).

    - The City could make or encourage infrastructure improvements to support businesses. Corvallis business stakeholders suggest the following additional infrastructure improvements to support businesses: increasing access to high (and higher) speed telecommunications or improving the access to transit (e.g., the hours that transit runs or the areas where transit is available.
    - The City could provide direct financial assistance to small businesses. This assistance might take the form of tax breaks for small growing businesses, increased use of the City's existing Enterprise Zone, or low-interest loans to support expansion of businesses.
    - The City could develop an action plan to support growth of small businesses. The action plan would address the issues identified in this report, as well as other issues identified through outreach to economic development stakeholders in the community.
- **Continue monitoring commercial and industrial development.** Monitoring retail and office development is a useful activity. Monitoring commercial development is particularly challenging since most building permit data systems do not collect data on built space for new or redeveloped commercial uses. The City should consider more detailed monitoring of commercial (and industrial) development if the cost is practical. The City should also consider approaches to monitor redevelopment and infill on employment lands.

City of Corvallis

Housing Needs Analysis and Economic Opportunities Analysis

June 2016

Prepared for:

City of Corvallis

***DRAFT* REPORT**

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Acknowledgements

ECONorthwest prepared this report for the City of Corvallis. ECONorthwest and the City of Corvallis thank the many people who helped to develop the Corvallis Housing Needs Analysis and Economic Opportunities Analysis.

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1. Introduction

This report presents an Housing Needs Analysis and Economic Opportunities Analysis for the City of Corvallis. The purpose of the report is to develop information as a basis for policies that capitalize on Corvallis' opportunities and help address the city's challenges. The Study includes technical analysis to address a range of questions that Corvallis faces. For example, the Study includes population and employment forecasts that describe how much growth Corvallis should plan for over the 2016 to 2036 period, and the housing needs analysis forecasts the amount and type of housing necessary to accommodate growth in Corvallis over that period. The Study also includes an inventory of land within Corvallis' urban growth boundary (UGB) to provide information about the amount of land available to accommodate new housing and employment growth in the city limits and UGB. In summary, the study has four components (1) a buildable land inventory (BLI), (2) a housing needs assessment (HNA), (3) an economic opportunities analysis (EOA), and (4) a policy analysis.

This report presents a Housing Needs Analysis (HNA) for the 2016 to 2036 period. It complies with statewide planning policies that govern planning for housing and residential development, including Goal 10 (Housing), OAR 660 Division 8, and ORS 197.296. The methods used for this study generally follow the *Planning for Residential Growth* guidebook, published by the Oregon Transportation and Growth Management Program (1996).

This report also presents an Economic Opportunities Analysis (EOA) that complies with the requirements of statewide planning Goal 9, the Goal 9 administrative rules (OAR 660 Division 9), and the court decisions that have interpreted them. Goal 9 requires cities to state objectives for economic development (OAR 660-009-0020(1)(a)) and to identify the characteristics of sites needed to accommodate industrial and other employment uses (OAR 660-009-0025(1)) over the 20-year planning period. This approach could be characterized as a *site-based* approach that projects land need based on the forecast for employment growth, the City's economic development objectives, and the specific needs of target industries.

Corvallis' economy and housing market are unique within Oregon. Corvallis is a regional employment center, with major employers such as Oregon State University, Good Samaritan Hospital, Hewlett-Packard, and a range of other businesses of all sizes. Corvallis is home to more than 56,000 people, including many of the nearly 25,000 students attending Oregon State University. Corvallis' housing market provides a mixture of housing for students and residents, resulting in pressures for growth of both markets, and for potential future residents.

Corvallis last completed a housing needs analysis and buildable lands inventory in 1998 and completed periodic review in 2000.[1] This report provides Corvallis with updated information about the supply of buildable residential and employment land, as well as information about

[1] Although Corvallis' periodic review was completed in 2000, it was not acknowledged by the Land Conservation and Development Commission (LCDC) until 2005 because the analysis underwent several appeals.

factors that will affect residential and economic growth in Corvallis over the 20-year planning period. It provides information to inform and support future planning efforts.

Purpose and Methods

The purpose of this report is to provide the technical analysis required to determine if the City has a 20-year supply of buildable lands and to discuss the policy implications of the results of the study. It includes data that the City can use to update the Goal 9, 10, and 14 factual components of the Corvallis Comprehensive Plan, including the buildable lands inventory. Specifically, this report presents a *supply* analysis (buildable and redevelopable land by type) and a *demand* analysis (population and employment growth leading to demand for more built space: residential and employment development).

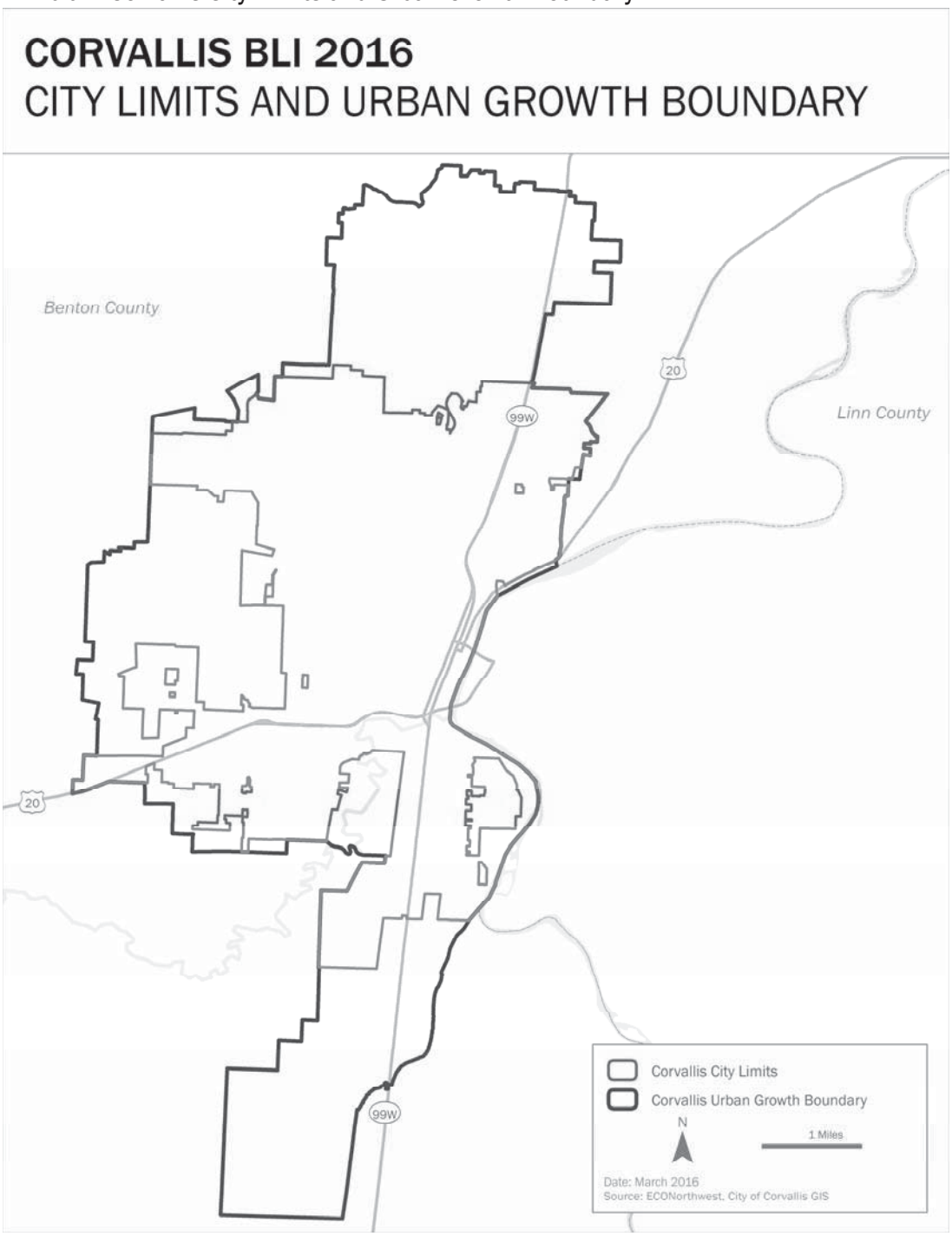
- The *supply* analysis describes the supply of buildable residential and employment (i.e., commercial and industrial) land by location within the City. It identifies vacant, unconstrained buildable land. It also describes the characteristics of employment land (e.g., parcel size and configuration, topography, proximity to key employment centers, constraints, and other factors). This analysis, called the buildable lands inventory, is consistent with Goal 9 and 10 requirements.
- The *demand* analysis describes demand for housing to accommodate population growth and commercial and industrial land to accommodate employment growth. The demand analysis is separated into two parts:
    - A housing needs analysis describes housing market trends (e.g., types of housing, housing tenure, and housing rent and sales price), population growth, demographic trends that may affect future housing demand, and housing affordability. Based on these factors and the forecast of population growth for Corvallis, the housing needs analysis determines the amount and type of housing that will be needed over the 2016-2036 period. This analysis is consistent with the requirements of Goal 10, OAR 660-008, and ORS 197.296.
    - An economic opportunities analysis describes the local, regional, statewide and national economic trends that will affect economic development in Corvallis. Based on these factors, the demand analysis forecasts employment growth for Corvallis. The demand analysis also considers the economic development goals identified in the City's existing economic development policy. It identifies the characteristics of sites (i.e., parcel size and configuration, topography, etc.) that are a necessary prerequisite for fulfilling the City's economic development vision. This analysis is consistent with Goal 9 and OAR 660-009-0015.

The specific requirements and methods used on each of these analyses are described in the chapter where each of these analyses are presented in this report. The analysis of the City's residential and economic policies are included in Appendix B.

Study area

The geographic scope of the Housing Needs Analysis and Economic Opportunities Analysis is all land inside the Corvallis UGB. Exhibit 1 shows Corvallis' city limits (in blue) and UGB (in black). Throughout the report, when discussing land in Corvallis, this report presents detail about land within the city limits, as well as land within the UGB (which includes land in the city limits).

Exhibit 1. Corvallis City Limits and Urban Growth Boundary



Source: ECONorthwest analysis of City of Corvallis GIS data

Data used in this analysis

Throughout this analysis, we use data from well-recognized and reliable data sources. One key source for data about housing and households is the U.S. Census. The housing needs analysis presented in this report primarily uses data from two Census sources:

- The **Decennial Census**, which is completed every ten years and is a survey of all households in the U.S. The Decennial Census is considered the best available data for information such as demographics (e.g., number of people, age distribution, or ethnic or racial composition), household characteristics (e.g., household size and composition), and housing occupancy characteristics. As of the 2010 Decennial Census, the Census Bureau does not collect more detailed household information, such as income, housing costs, housing characteristics, and other important household information. Decennial Census data is available for 2000 and 2010.
- The **American Community Survey (ACS)**, which is completed every year and is a sample of households in the U.S. The ACS data available for Corvallis is for a three year period, 2011-2013, because Corvallis' population is below the threshold for one-year ACS data (65,000 people). The 2011-2013 ACS sampled about 3.5 million households in 2013 or about 2.5% of the households in the nation. The ACS collects detailed information about households, such as: demographics (e.g., number of people, age distribution, ethnic or racial composition, country of origin, language spoken at home, and educational attainment), household characteristics (e.g., household size and composition), housing characteristics (e.g., type of housing unit, year unit built, or number of bedrooms), housing costs (e.g., rent, mortgage, utility, and insurance), housing value, income, and other characteristics.

In addition, the report uses information from other data sources:

- **Corvallis and Benton County Geographic Information System (GIS)** data for the buildable lands inventory includes data about tax lots, Benton County Assessor's data, data about physical constraints (e.g., rivers or wetlands), data about rights-of-way and roads, and related data about Corvallis' land base. This data is current as of July 2015.
- **Employment data** for Benton County and Corvallis from the Oregon Employment Department's Quarterly Census of Employment and Wages, the U.S. Bureau of Labor Statistics, the U.S. Bureau of Economic Analysis.
- **Corvallis Building Permit** data was provided by the City and covers development over the January 2000 to October 2015 period. This report presents data about the number and type of building permits issued annually since 2000. It also presents data about residential development density, in dwelling units per acre, developed between 2000 and 2015.
- **Zillow Real Estate Research** provides data about changes in housing sales price between 2000 and 2015.

This report presents data from different time periods, depending on the availability of the data. As a general rule, this report presents the most recently available data to describe current conditions in Corvallis.

- **Corvallis' buildable lands inventory in 2015.** The buildable lands inventory presents information about Corvallis residential and employment buildable land base in August 2015. When determining the future housing capacity of Corvallis' vacant buildable land, the analysis considers development densities that occurred over the January 2000 to October 2015 period, which provides a reasonable estimate for the types of densities that Corvallis may expect in areas within Corvallis' city limits and UGB.
- **Changes in Corvallis' housing market since 2000.** The most recently available U.S. Census data about Corvallis' housing market is the 2011-2013 period. Corvallis building permit data is available from January 2000 to October 2015. Where newer data is available, such as affordable housing, we use data from 2015. We selected these time periods for considering changes to Corvallis' housing market because it both shows changes over a relatively long period (13 or more years) and it presents data that describes the current conditions in Corvallis' housing market.
- **Demographic characteristics affecting future housing development.** Much of the demographic data about Corvallis is from the U.S. Census and is current as of the 2011-2013 period. In general, we present information about demographic changes in Corvallis over the 2000 to 2011-2013 period. There are several exceptions to this general rule. For income data, the 2000 Census presents data about income in 1999. In some cases, data is readily available over a longer period, such as population growth, and we present change in Corvallis over a longer period (e.g.,1990 to 2014).
- **Demographic forecasts.** We use the Oregon Office of Economic Analysis' forecast of population growth by age group for the 2016 to 2036 period.[2]
- **Employment base.** We used data from the Bureau of Labor Statistics and the Oregon Employment Department to compile data on covered employment at the county, city, or regional level for 2014. Additional data on total (covered and non-covered) employment came from the Bureau of Economic Analysis.
- **Forecasts of employment growth.** The forecast of employment growth considers economic changes in Benton County (as well as the state and nation) over the 2000 to 2014 period. The forecast for employment growth in Corvallis uses the base data for employment in Corvallis in 2014 and considers the State's forecast for employment growth in Benton County for the 2012-2022 period (the most recently available forecast).

[2] ECONorthwest employed methodology in compliance with the new Interim Population Forecast method adopted in 2015, consistent with OAR 660-032-0040.

Organization of this Report

The rest of this document is organized as follows:

- **Chapter 2. Buildable Lands Inventory** presents the methodology and results of Corvallis' inventory of residential and employment land.
- **Chapter 3. Housing Needs Analysis** summarizes the state, regional, and local housing market trends affecting Corvallis' housing market and estimates the number of new housing units needed to support Corvallis' future population.
- **Chapter 4. Economic Opportunities Analysis** summarizes the economic trends that affect Corvallis now and into the future.
- **Chapter 5. Land Sufficiency and Conclusions** compares the supply of land from the buildable lands inventory to demand for land for housing and for employment growth to determine if Corvallis has enough land to accommodate expected growth.

2. Buildable Lands Inventory

This chapter provides a summary of the buildable lands inventory for the Corvallis UGB. Based on data provided by the City of Corvallis, ECONorthwest performed the buildable lands inventory analysis, summarized the results, and provided key findings.

Methods, Definitions, and Assumptions

The legal requirements that govern the BLI for the City of Corvallis are defined in ORS 197.296(3) and (4), OAR 660-008-0005(2), and OAR 660-009-0005 and OAR 660-009-0015(3), and are slightly different for residential and employment land. The methods address these differences.

The buildable lands analysis was completed through several sequential steps: (1) classify land in taxlots into mutually exclusive categories by development status; (2) identify and deduct environmental constraints; and (3) summarize total buildable area by plan designation.

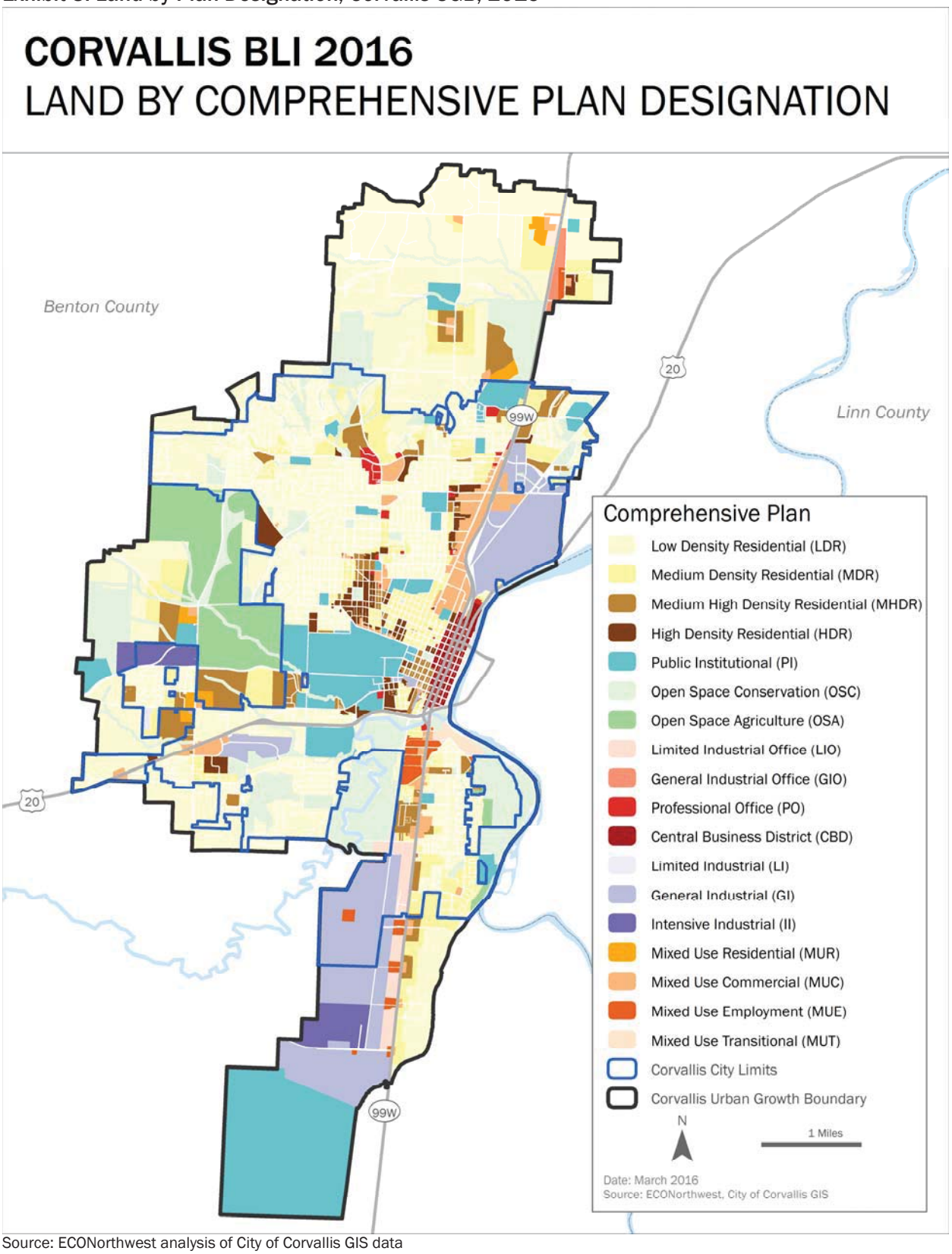
Data used for the analysis was provided by the City of Corvallis. Specific data provided included the urban growth boundary, city boundary, tax lots, comprehensive plan designations, zoning, and environmental constraints (Wetlands, streams, riparian corridors, significant vegetation, floodways, 100-year floodplain, steep slopes, and elevation – features associated with the City's adopted Natural Resources and Natural Hazards protections). The tax lot data was current as of August 2015.

The Buildable Land Inventory includes a review of lands in the Corvallis UGB grouped by comprehensive plan designation (Exhibit 2 and Exhibit 3).

Exhibit 2. Comprehensive Plan Designations by Designation Type, Corvallis, 2015

Designation Type	Designation
Residential	Low Density Residential Medium Density Residential Medium-High Density Residential High Density Residential Mixed Use Residential
Commercial	Central Business District Mixed Use Commercial Professional Office
Industrial	Limited Industrial Limited Industrial – Office Mixed Use Employment General Industrial Intensive Industrial Mixed Use Transitional General Industrial – Office
Other	Public / Institutional Open Space – Agriculture Open Space – Conservation

Exhibit 3. Land by Plan Designation, Corvallis UGB, 2016



Source: ECONorthwest analysis of City of Corvallis GIS data

Definitions

A key step in the buildable lands analysis was to classify tax lot lands into a set of mutually exclusive categories based on development status. The analysis used different definitions depending on if the land was in a residential or other non-employment comprehensive plan designation or a commercial and industrial comprehensive plan designation. The Mixed Use Residential designation used residential definitions and all other mixed use designations used the commercial and industrial definitions.

Residential Definitions

The residential buildable lands inventory used definitions that are consistent with ORS 197.296 and OAR 660-008. For the purpose of this study, all residential lands in the UGB were classified into one of the categories shown in Exhibit 4.

Exhibit 4. Residential and Other Non-employment Classification Definitions

Development Status (Classification)	Definition	Statutory Authority
Vacant land	Tax lots that have no structures or have buildings with very little improvement value. For the purpose of this inventory, lands with improvement values under $10,000 are considered vacant (not including lands that are identified as having mobile homes).	ORS 197.296(4)(a)(A) - Vacant lands planned or zoned for residential use;
Partially Vacant land	Partially vacant tax lots are those occupied by a use but which contain enough land to be further subdivided without need of rezoning.	ORS 197.296(4)(a)(B) Partially vacant lands planned or zoned for residential use;
Developed land	Land that is developed at densities consistent with zoning and improvements that make it unlikely to redevelop during the analysis period. Lands not classified as vacant, partially vacant, or undevelopable are considered developed.	No statutory definition
Public or Exempt Land	Lands in public or semi-public ownership are considered unavailable for development. This includes lands in Federal, State, County, or City ownership, as well as lands owned by churches and other semi-public organizations and properties with conservation easements. Public lands were identified using the Benton County Assessment property tax exemption codes.	OAR 660-008-0005(2) - Publicly owned land is generally not considered available for residential uses.

Commercial and Industrial Definitions

The commercial and industrial buildable lands inventory used definitions that are consistent with OAR 660-009. All commercial, industrial, other, or non-residential mixed use lands in the UGB were classified into one of the categories shown in Exhibit 5.

Exhibit 5. Commercial and Industrial Classification Definitions

Development Status	Definition	Statutory Authority
Developed Land	Non-vacant land that is unlikely to be redeveloped during the planning period.	OAR 660-009-005(1)
Vacant Land	A tax lot: (a) 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.	OAR 660-009-005(14)
Partially Vacant Land	Partially vacant tax lots are those between one and five acres occupied by a use that could still be further developed based on the zoning. This determination was based on a visual assessment and City staff verification.	Non-statutory definition.
Public or Exempt Land	Lands in public ownership are considered unavailable for commercial or industrial development. This includes lands in Federal, State, County, properties with conservation easements, or City ownership or other lands with a County Assessment property tax exemption code. This category only includes public lands that are located in commercial plan designations.	No statutory definition

Following the initial classification of the land base, we visually scanned the results using aerial photos to look for anomalies. Results were also sent to the City of Corvallis for verification.

Development constraints

Consistent with state guidance on buildable lands inventories, ECONorthwest deducted portions of tax lots that fall within certain constraints from the buildable lands inventory. The analysis used two classifications of constraints: (1) Fully constrained lands do not allow any additional development; and (2) partially constrained lands allow limited development.[3]

Residential categories used were consistent with OAR 660-008-0005(2) as shown in Exhibit 6

Exhibit 6. Residential Development Constraints

Constraint	Statutory Authority	Threshold	Full or Partial Constraint
Goal 5 Natural Resource Constraints			
Regulated Wetlands	OAR 660-008-0005(2)	Corvallis locally-protected wetland inventory and 25 foot setback	Full
Proximate Wetlands	OAR 660-008-0005(2)	High protection Partial protection	Full Partial
Streams	OAR 660-015-0000(5)	Coincident with Riparian Corridor protections (see below)	Full
Riparian Corridors	OAR 660-015-0000(5)	Highly protected corridors Partially protected corridors	Full Partial
Significant Vegetation	OAR 660-015-0000(5)	Highly protected classification Partially protected classification	Full Partial
Natural Hazard Constraints			
Floodways	OAR 660-008-0005(2)	Lands within 0.2 foot floodway	Full
100 Year Floodplain	OAR 660-008-0005(2)	High protection Partial protection	Full Partial
Slopes over 25%	OAR 660-008-0005(2)	Slopes greater than 35% Slopes 25-35%	Full Partial
Policy Constraints			
Above 3rd Level Water Service Area	NA	Lands above 560 feet in elevation	Full

[3] Chapter 4.11 of the Corvallis Land Development Code contains provisions that guarantee a minimum level of development for those properties that are affected by Natural Features constraints, regardless of whether those constraints are considered Full or Partial. This is known as a Minimum Assured Development Area (MADA). Some of the City's Natural Resources and Natural Hazards present such high risks to life and property, or are of such importance to the protection of water quality, that encroachments are not appropriate for areas containing these certain specific Natural Features. MADA will not apply in these limited circumstances. In other cases, MADA may not apply to a particular parcel of land because the unconstrained portion of the parcel is greater in area than the MADA allowance for that property. In many cases, where the MADA allowance is greater in area than the unconstrained portion of the property, MADA provisions will effectively increase the overall amount of developable area of a parcel.

The complexity of evaluating whether or not MADA applies to each of the identified vacant parcels, and of determining the resultant area of developable land, is such that a MADA analysis cannot be included in this report. In reality, the land available for development after MADA is applied is greater than what is represented by the Natural Features Constraints methodology utilized herein. Therefore, it should be clarified that the application of the development constraints as part of this Buildable Land Inventory provides an estimated reduction in buildable lands that is likely to exceed Land Development Code Natural Features protections and associated MADA provisions.

Commercial, Industrial, and Other Constraints

Commercial and Industrial categories used were consistent with OAR 660-009-0005(2) as shown in Exhibit 7.

Exhibit 7. Commercial, Industrial, and Other Development Constraints

Constraint	Statutory Authority	Threshold	Full or Partial Constraint
Goal 5 Natural Resource Constraints			
Regulated Wetlands	OAR 660-009-0005(2)	Corvallis locally-protected wetlands and 25 foot setback	Full
Proximate Wetlands	OAR 660-009-0005(2)	High protection Partial protection	Full Partial
Streams	OAR 660-015-0000(5)	Corvallis local natural features inventory	Full
Riparian Corridors	OAR 660-009--0005(2)	Highly protected corridors Partially protected corridors	Full Partial
Significant Vegetation	OAR 660-015-0000(5)	Highly protected classification Partially protected classification	Full Partial
Natural Hazard Constraints			
Floodways	OAR 660-009-0005(2)	Lands within 0.2 foot floodway	Full
100 Year Floodplain	OAR 660-009-0005(2)	High protection Partial protection	Full Partial
Slopes over 35%	OAR 660-009-0005(2)	Slopes greater than 35%	Full
Policy Constraints			
Above 3rd Level Water Service Area	NA	Lands above 560 feet in elevation	Full

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

Results of the Buildable Lands Inventory

Land Base

Exhibit 8 shows residential, commercial, industrial, and other tax lot land (excluding right-of-ways and water area) in Corvallis by development status and plan designation. The results show that Corvallis has 8,295 total acres (about 52%) in residential plan designations, 552 acres (3%) in commercial designations, 2,120 acres (13%) in industrial designations, and 4,987 acres (31%) in other designations. By classification, about 39% of the total land is developed, 33% is public or exempt, 21% is vacant, and 7% is partially vacant.

Exhibit 8. Land by Development Status and Plan Designation, Gross Acres, Corvallis UGB, 2016

Plan Designation	Vacant	Partially Vacant	Developed	Public or Exempt	Total
RESIDENTIAL TOTAL	**1,963**	**1,012**	**4,831**	**489**	**8,295**
Low Density Residential (LDR)	1,357	782	3,542	352	6,032
Medium Density Residential (MDR)	274	157	736	66	1,234
Medium High Density Residential (MHDR)	270	73	302	41	685
High Density Residential (HDR)	2	-	222	30	254
Mixed Use Residential (MUR)	60	-	30	-	90
COMMERCIAL TOTAL	**58**	**17**	**433**	**45**	**552**
Central Business District (CBD)	1	-	70	20	91
Mixed Use Commercial (MUC)	48	17	315	20	399
Professional Office (PO)	9	-	48	5	62
INDUSTRIAL TOTAL	**939**	**121**	**467**	**593**	**2,120**
Limited Industrial (LI)	11	-	-	-	11
Limited Industrial, Office (LIO)	99	23	37	4	163
Mixed Use Employment (MUE)	42	12	40	13	107
General Industrial (GI)	705	86	290	408	1,489
Intensive Industrial (II)	74	-	33	161	268
Mixed Use Transitional (MUT)	-	-	35	7	42
General Industrial, Office (GIO)	9	-	32	-	41
OTHER TOTAL	**333**	**40**	**519**	**4,095**	**4,987**
Public Institutional (PI)	2	-	86	1,978	2,066
Open Space Conservation (OSC)	330	40	416	1,311	2,097
Open Space Agriculture (OSA)	1	-	17	807	824
TOTAL	**3,294**	**1,190**	**6,250**	**5,222**	**15,955**

Source: ECONorthwest analysis of City of Corvallis GIS data

Based on the results from Exhibit 8, ECONorthwest identified the portions of parcels which were improved, fully constrained, partially constrained, or unconstrained buildable/suitable based on the following definitions:

- *Improved Acres*. For parcels classified as developed or public/exempt, parcel acreage after full constraints have been deducted. For portions of parcels classified as partially vacant, the minimum lot size for that residential zone or half of the parcel acreage for commercial and industrial designated parcels.

- *Fully Constrained Acres*. The portion of a parcel that falls within areas that are fully constrained (see Exhibit 6 and Exhibit 7).
- *Partially Constrained Acres*. For parcels classified as vacant or partially vacant, the portion of the parcel that falls within areas that are partially constrained (see Exhibit 6 and Exhibit 7). This land is considered to be buildable but at lower densities than unconstrained buildable land.
- *Unconstrained Buildable/Suitable Acres*. For parcels classified as vacant or partially vacant, parcel acreage after full and partial constraints have been deducted.

Exhibit 9 shows land by development and constraint status for all plan designations. In total, there are 15,955 gross parcel acres within the Corvallis Urban Growth Boundary. About 57% of total residential land (4,706 acres) is improved, 23% (1,946 acres) is fully or partially constrained, and 20% (1,642 acres) is unconstrained buildable. For commercial designations, about 85% of total land (469 acres) is improved, 5% (29 acres) is fully or partially constrained, and 10% (55 acres) is unconstrained buildable. In industrial designations, 50% (1,052 acres) of land is improved, 11% (226 acres) is constrained, and 40% (843 acres) is unconstrained buildable. Finally, in other designations, about 52% of total land (2,611 acres) is improved, 46% (2,304 acres) is fully or partially constrained, and 1% (73 acres) is unconstrained buildable.

Exhibit 9. Land by Plan Designation with Constraints, Gross Acres, Corvallis UGB, 2016

				Vacant and Partially Vacant Acres	
Plan Designation	Total Acres	Improved Acres	Fully Constrained Acres	Partially Constrained Acres	Unconstrained Buildable/ Suitable Acres
RESIDENTIAL TOTAL	**8,295**	**4,706**	**1,683**	**263**	**1,642**
Low Density Residential (LDR)	6,032	3,360	1,425	196	1,051
Medium Density Residential (MDR)	1,234	761	142	41	290
Medium High Density Residential (MHDR)	685	315	92	27	252
High Density Residential (HDR)	254	241	11	0	2
Mixed Use Residential (MUR)	90	30	12	0	47
COMMERCIAL TOTAL	**552**	**469**	**26**	**3**	**55**
Central Business District (CBD)	91	90	0	1	0
Mixed Use Commercial (MUC)	399	328	24	2	46
Professional Office (PO)	62	52	1	1	8
INDUSTRIAL TOTAL	**2,120**	**1,052**	**179**	**47**	**843**
Limited Industrial (LI)	11	-	11	-	0
Limited Industrial, Office (LIO)	163	53	3	-	107
Mixed Use Employment (MUE)	107	53	5	9	40
General Industrial (GI)	1,489	688	106	38	657
Intensive Industrial (II)	268	187	50	-	31
Mixed Use Transitional (MUT)	42	39	2	-	-
General Industrial, Office (GIO)	41	31	1	-	8
OTHER TOTAL	**4,987**	**2,611**	**2,289**	**15**	**73**
Public Institutional (PI)	2,066	1,767	297	0	2
Open Space Conservation (OSC)	2,097	486	1,526	14	71
Open Space Agriculture (OSA)	824	358	465	-	0
TOTAL	**15,955**	**8,837**	**4,177**	**328**	**2,613**

Source: ECONorthwest analysis of City of Corvallis GIS data

Buildable Land

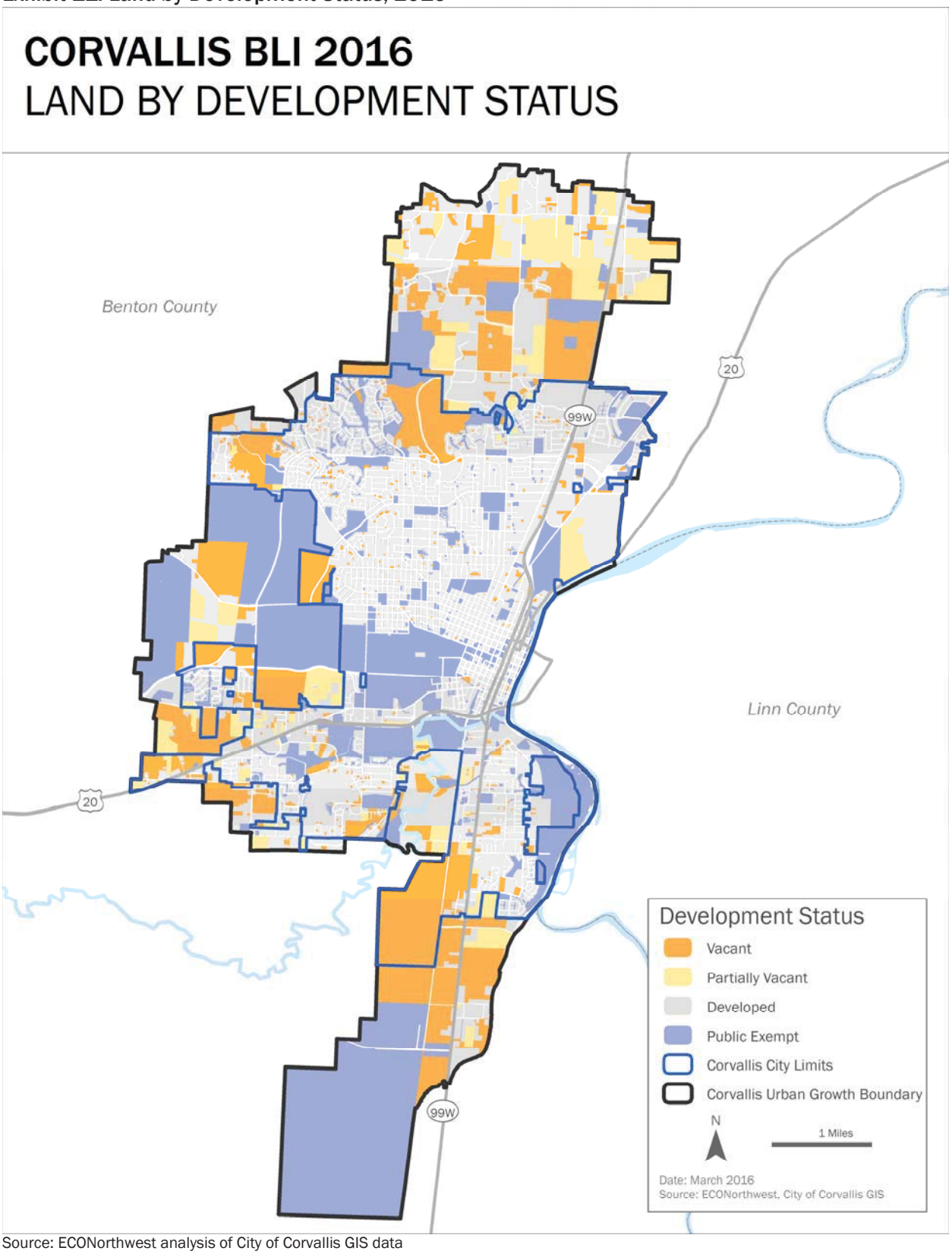
Exhibit 10 shows buildable acres (e.g., acres in tax lots after constraints are deducted) for vacant and partially vacant land by plan designation inside city limits and within the entire UGB. The results show that Corvallis has about 925 unconstrained buildable and 162 partially constrained acres within city limits and 2,613 unconstrained buildable and 328 partially constrained acres within the UGB. Notably, 63% of all buildable land within the UGB is in residential designations, with more than half of all buildable residential land in the Low Density Residential (LDR) plan designation. About 2% of buildable land within the UGB is in commercial designations, 32% is in industrial designations, and 3% is in other designations. Forty percent (1,051 acres) of buildable land within the UGB is in the low density residential (LDR) designation, 25% (657 acres) is in the general industrial (GI) designation, 11% (290 acres) is in the medium density residential (MDR) designation, and 9% (252 acres) is in the medium high density residential (MHDR) designation. All other plan designations each contain less than 5% of all buildable land.

Exhibit 10. Buildable Land in Partially Constrained, Partially Vacant, and Vacant Tax Lots by Plan Designation, Gross Acres, Corvallis UGB, 2016

	Within City Limits (Gross Acres)				Within UGB (Gross Acres)			
		Unconstrained Land				Unconstrained Land		
Plan Designation	Partially Constrained Acres	Partially Vacant Acres	Vacant Acres	Total Vacant and Partially Vacant Acres	Partially Constrained Acres	Partially Vacant Acres	Vacant Acres	Total Vacant and Partially Vacant Acres
RESIDENTIAL TOTAL	**109**	**72**	**354**	**426**	**263**	**483**	**1,159**	**1,642**
Low Density Residential (LDR)	70	58	234	292	196	324	727	1,051
Medium Density Residential (MDR)	37	10	61	71	41	107	183	290
Medium High Density Residential (MHDR)	1	4	48	52	27	52	200	252
High Density Residential (HDR)	0	-	2	2	0	-	2	2
Mixed Use Residential (MUR)	-	-	9	9	0	-	47	47
COMMERCIAL TOTAL	**3**	**1**	**31**	**32**	**3**	**6**	**48**	**55**
Central Business District (CBD)	1	-	0	0	1	-	0	0
Mixed Use Commercial (MUC)	2	1	23	24	2	6	40	46
Professional Office (PO)	1	-	8	8	1	-	8	8
INDUSTRIAL TOTAL	**47**	**16**	**445**	**462**	**47**	**25**	**818**	**843**
Limited Industrial (LI)	-	-	0	0	-	-	0	0
Limited Industrial, Office (LIO)	-	2	39	41	-	10	97	107
Mixed Use Employment (MUE)	9	-	10	10	9	1	39	40
General Industrial (GI)	38	14	370	384	38	14	643	657
Intensive Industrial (II)	-	-	26	26	-	-	31	31
Mixed Use Transitional (MUT)	-	-	-	-	-	-	-	-
General Industrial, Office (GIO)	-	-	-	-	-	-	8	8
OTHER TOTAL	**3**	**-**	**5**	**5**	**15**	**5**	**68**	**73**
Public Institutional (PI)	0	-	1	1	0	-	2	2
Open Space Conservation (OSC)	3	-	3	3	14	5	66	71
Open Space Agriculture (OSA)	-	-	0	0	-	-	0	0
TOTAL	**162**	**90**	**836**	**925**	**328**	**519**	**2,094**	**2,613**

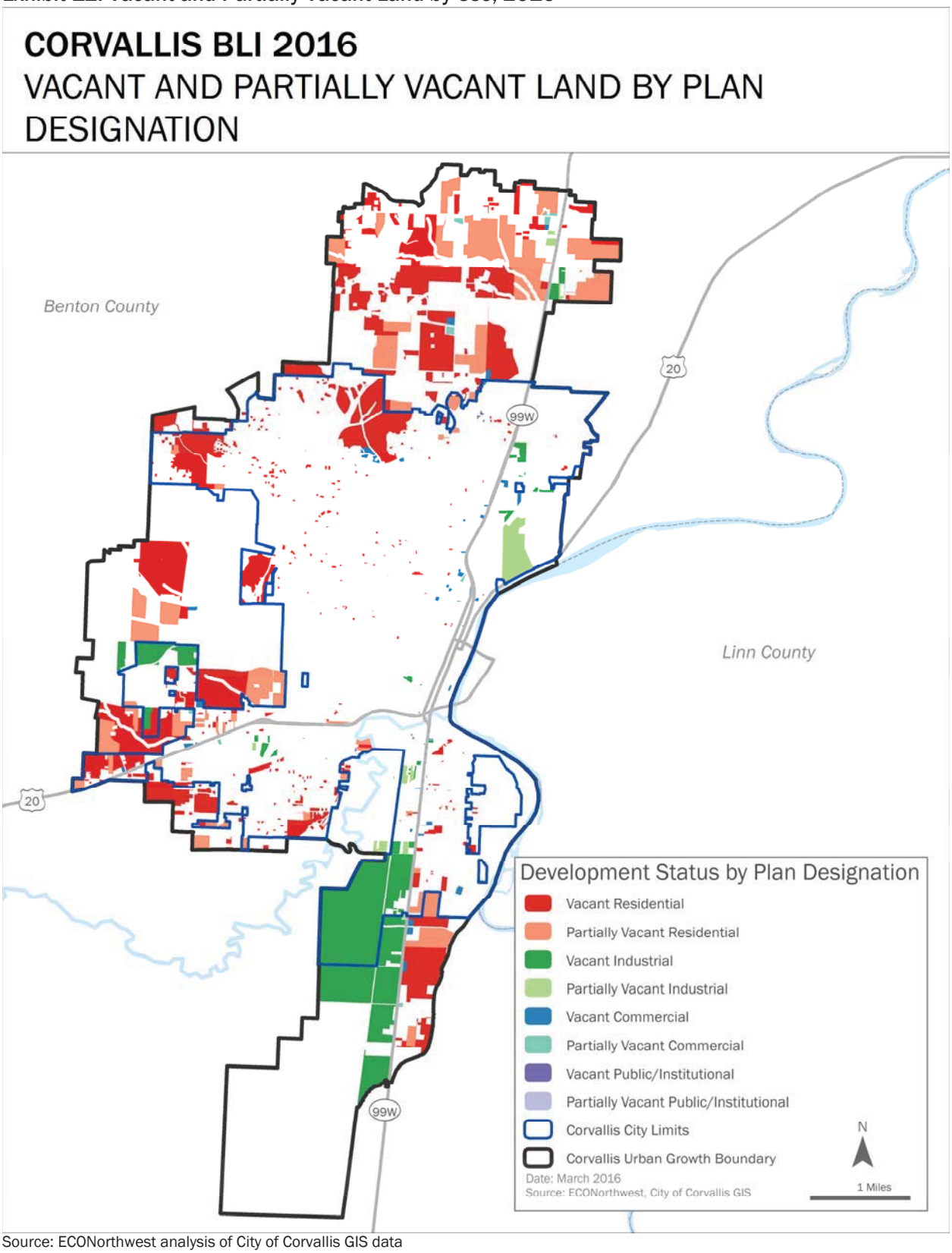
Source: ECONorthwest analysis of City of Corvallis GIS data

Exhibit 11. Land by Development Status, 2016



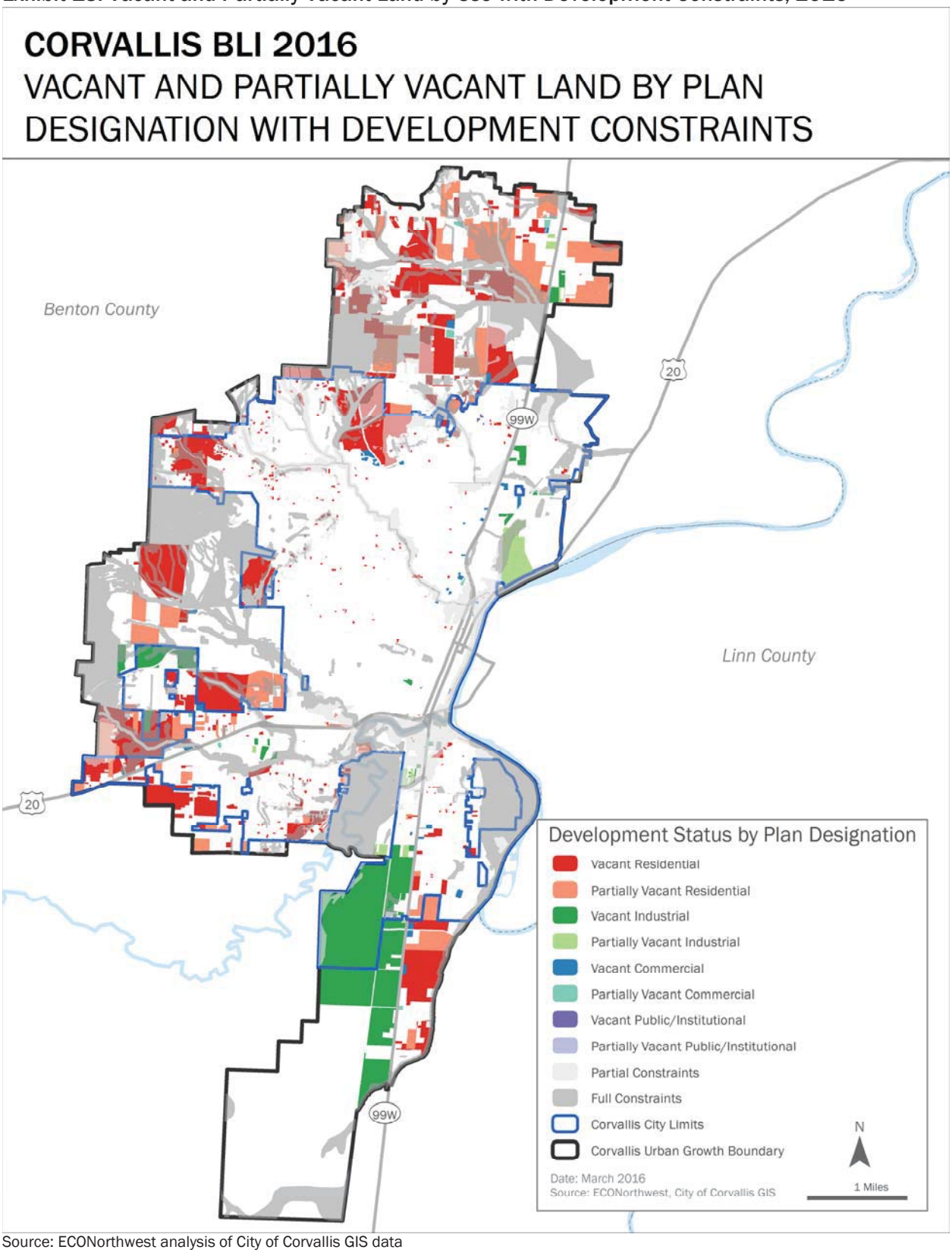
Source: ECONorthwest analysis of City of Corvallis GIS data

Exhibit 12. Vacant and Partially Vacant Land by Use, 2016



Source: ECONorthwest analysis of City of Corvallis GIS data

Exhibit 13. Vacant and Partially Vacant Land by Use with Development Constraints, 2016



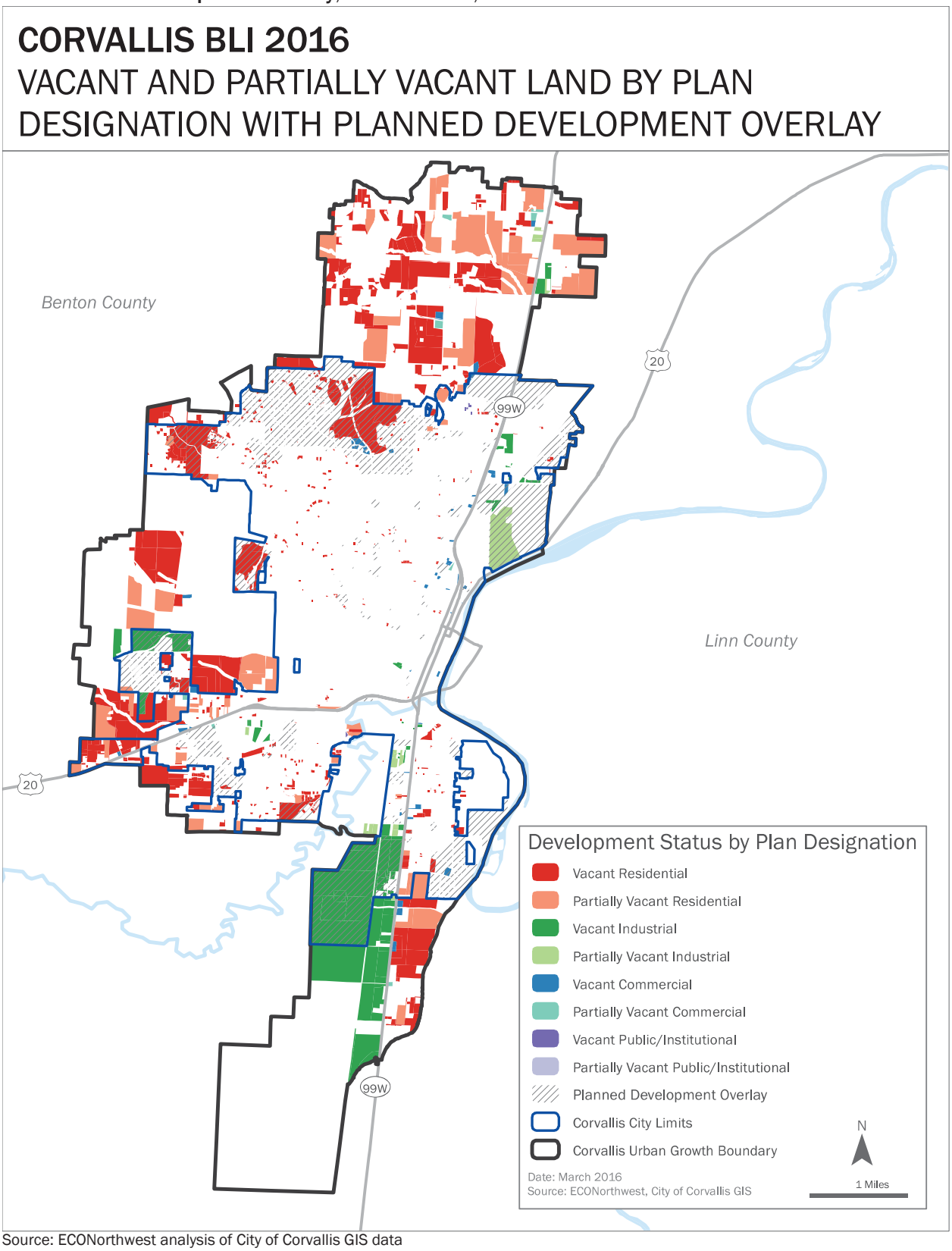
Source: ECONorthwest analysis of City of Corvallis GIS data

Exhibit 14. Partially Constrained and Unconstrained Vacant and Partially Vacant Buildable Land in Areas with Planned Development Overlay or No Planned Development Overlay, Gross Acres, Corvallis UGB, 2016

	Within City Limits		Outside City Limits, within UGB		Total within UGB	
Plan Designation	Partially Constrained Acres	Vacant and Partially Vacant	Partially Constrained Acres	Unconstrained Vacant and Partially Vacant	Partially Constrained Acres	Vacant and Partially Vacant
RESIDENTIAL TOTAL	**109**	**426**	**155**	**1,216**	**263**	**1,642**
No Planned Development Overlay	**28**	**223**	**155**	**1,216**	**183**	**1,439**
Low Density Residential (LDR)	27	188	125	759	153	946
Medium Density Residential (MDR)	0	20	4	218	5	238
Medium High Density Residential (MHDR)	0	14	25	200	26	214
High Density Residential (HDR)	0	2	-	0	0	2
Mixed Use Residential (MUR)	-	-	0	39	0	39
Planned Development Overlay	**80**	**204**	**-**	**-**	**80**	**204**
Low Density Residential (LDR)	43	105	-	-	43	105
Medium Density Residential (MDR)	37	51	-	-	37	51
Medium High Density Residential (MHDR)	1	38	-	-	1	38
High Density Residential (HDR)	-	0	-	-	-	0
Mixed Use Residential (MUR)	-	9	-	-	-	9
COMMERCIAL TOTAL	**3**	**32**	**-**	**22**	**3**	**55**
No Planned Development Overlay	**2**	**16**	**-**	**22**	**2**	**38**
Central Business District (CBD)	1	0	-	-	1	0
Mixed Use Commercial (MUC)	2	16	-	22	2	38
Professional Office (PO)	-	-	-	-	-	-
Planned Development Overlay	**1**	**17**	**-**	**-**	**1**	**17**
Central Business District (CBD)	-	-	-	-	-	-
Mixed Use Commercial (MUC)	-	8	-	-	-	8
Professional Office (PO)	1	8	-	-	1	8
INDUSTRIAL TOTAL	**47**	**462**	**0**	**381**	**47**	**843**
No Planned Development Overlay	**9**	**33**	**0**	**381**	**9**	**414**
Limited Industrial (LI)	-	0	-	-	-	0
Limited Industrial, Office (LIO)	-	10	-	66	-	75
Mixed Use Employment (MUE)	9	1	-	30	9	31
General Industrial (GI)	0	22	0	272	0	295
Intensive Industrial (II)	-	-	-	4	-	4
Mixed Use Transitional (MUT)	-	-	-	-	-	-
General Industrial, Office (GIO)	-	-	-	8	-	8
Planned Development Overlay	**38**	**429**	**-**	**-**	**38**	**429**
Limited Industrial (LI)	-	0	-	-	-	0
Limited Industrial, Office (LIO)	-	32	-	-	-	32
Mixed Use Employment (MUE)	-	9	-	-	-	9
General Industrial (GI)	38	362	-	-	38	362
Intensive Industrial (II)	-	26	-	-	-	26
Mixed Use Transitional (MUT)	-	-	-	-	-	-
General Industrial, Office (GIO)	-	-	-	-	-	-
OTHER TOTAL	**3**	**5**	**11**	**68**	**15**	**73**
No Planned Development Overlay	**0**	**2**	**11**	**68**	**12**	**70**
Public Institutional (PI)	0	1	-	0	0	2
Open Space Conservation (OSC)	0	0	11	68	11	68
Open Space Agriculture (OSA)	-	0	-	- 0	-	0
Planned Development Overlay	**3**	**3**	**-**	**-**	**3**	**3**
Public Institutional (PI)	-	-	-	-	-	-
Open Space Conservation (OSC)	3	3	-	-	3	3
Open Space Agriculture (OSA)	-	-	-	-	-	-
TOTAL	**162**	**925**	**166**	**1,687**	**328**	**2,613**

Source: ECONorthwest analysis of City of Corvallis GIS data

Exhibit 15. Partially Constrained and Unconstrained Vacant and Partially Vacant Buildable Land with Planned Development Overlay, Corvallis UGB, 2016



Source: ECONorthwest analysis of City of Corvallis GIS data

Exhibit 16 shows Commercial and Industrial by Plan Designation and site size within the Corvallis UGB. Corvallis has a range of employment land in each site size.

Exhibit 16. Unconstrained Partially Vacant and Vacant Buildable Commercial and Industrial Land by Site Size, Gross Acres and Tax Lots, Corvallis UGB, 2016

	Unconstrained Vacant and Partially Vacant Acres in Tax Lots					
Plan Designation	< 1	1-2	2-5	5-20	20 +	Total
ACRES	**29**	**40**	**74**	**133**	**622**	**898**
Commercial	**16**	**10**	**28**	**0**	**0**	**55**
Central Business District (CBD)	0	0	0	0	0	0
Mixed Use Commercial (MUC)	11	10	24	0	0	46
Professional Office (PO)	5	0	4	0	0	8
Industrial	**12**	**30**	**46**	**133**	**622**	**843**
Limited Industrial (LI)	0	0	0	0	0	0
Limited Industrial, Office (LIO)	3	15	3	62	24	107
Mixed Use Employment (MUE)	1	3	19	17	0	40
General Industrial (GI)	7	10	16	45	578	657
Intensive Industrial (II)	1	2	8	0	20	31
Mixed Use Transitional (MUT)	0	0	0	0	0	0
General Industrial, Office (GIO)	0	0	0	8	0	8
TAX LOTS	**73**	**28**	**23**	**12**	**12**	**148**
Commercial	**39**	**7**	**10**	**-**	**-**	**56**
Central Business District (CBD)	2	-	-	-	-	2
Mixed Use Commercial (MUC)	28	7	9	-	-	44
Professional Office (PO)	9	-	1	-	-	10
Industrial	**34**	**21**	**13**	**12**	**12**	**92**
Limited Industrial (LI)	2	-	-	-	-	2
Limited Industrial, Office (LIO)	7	11	1	4	1	24
Mixed Use Employment (MUE)	5	2	5	3	-	15
General Industrial (GI)	17	7	5	4	10	43
Intensive Industrial (II)	3	1	2	-	1	7
Mixed Use Transitional (MUT)	-	-	-	-	-	-
General Industrial, Office (GIO)	-	-	-	1	-	1

Source: ECONorthwest analysis of City of Corvallis GIS data

Redevelopment Potential

A key requirement of the statewide planning program is to determine how much land will redevelop.[4] Statewide Planning Goals 9 (Economy) and 10 (Housing) have slightly different standards for consideration of redevelopment, with Goal 10 having a higher standard or burden of proof. OAR 660-008-0005(7) defines redevelopable land as follows:

> "Redevelopable Land" means land zoned for residential use on which development has already occurred but on which, due to present or expected market forces, there exists the strong likelihood that existing development will be converted to more intensive residential uses during the planning period.

Goal 9 uses a different definition as stated in OAR 660-009-0005(1):

> (1) "Developed Land" means non-vacant land that is likely to be redeveloped during the planning period.

Reliable data about historical residential redevelopment is not generally available for most cities—including Corvallis. A 2015 study by the University of Oregon for DLCD concluded:

> Cities have addressed redevelopment both from the supply side (e.g., evaluating land and assessing its redevelopment potential) and the demand side (e.g., assuming that some percentage of future development will occur on land that is already considered developed). Both of these approaches have problems due to data limitations.
>
> Most cities have addressed the Goal 9 and 10 redevelopment requirements from the demand side by analyzing how much redevelopment has occurred and then making assumptions about how much will occur in the future. The problem with this approach is that most jurisdictions do not systematically monitor redevelopment. Nonetheless, cities have generally agreed that some new development will not require vacant land—e.g., that developed land will redevelop.
>
> We want to be clear about the limitations of this analysis: in our considerable experience working with Oregon cities on Goal 9 and 10 studies, redevelopment has consistently been a challenge because cities do not collect reliable information on redevelopment rates. Our survey results are consistent with our experience—few cities conduct detailed monitoring of redevelopment.[5]

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[4] In this analysis, we differentiate between "infill" and "redevelopment." Infill is development of isolated undeveloped lots, lots that are partially developed but have additional capacity (called partially vacant in the buildable lands inventory), and may include partially constrained land. Infill is addressed in the buildable lands inventory. Redevelopment often involves demolition and building a new building on a site. It may also include adaptive re-use of a building. Redevelopment assumes that the capacity of housing or employment use on the site increases, adding capacity to the city's land base.

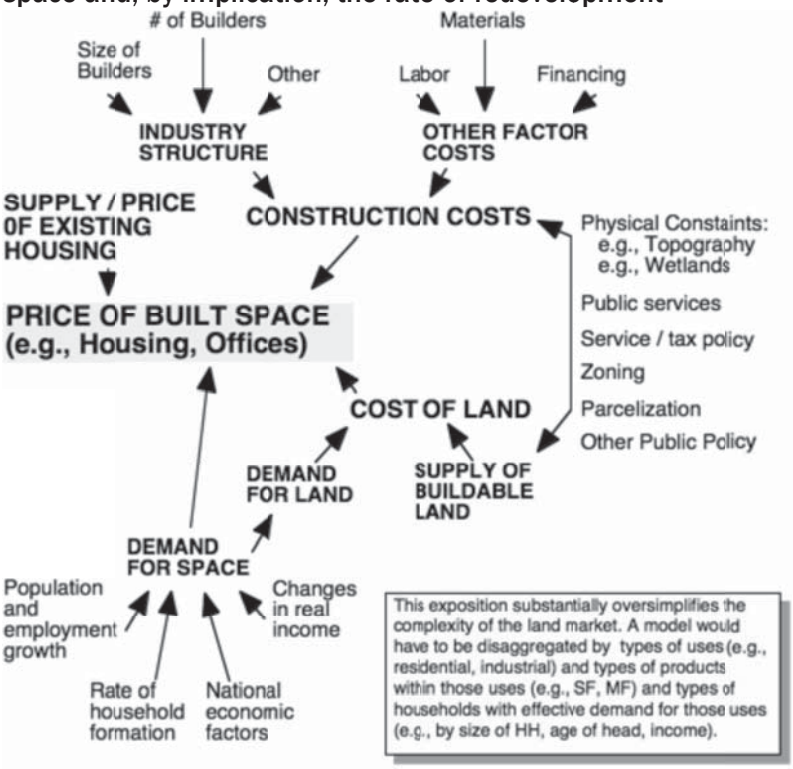
[5] *Analysis of Mixed-Use Development and Redevelopment in Oregon Cities: A Report to the HB 2254 Rules Advisory Committee*. University of Oregon Community Service Center, September 2015. http://www.oregon.gov/LCD/docs/rulemaking/UGB_RAC/UO_Report_MixedUse_Redevelopment_FINAL.pdf

Supporting the University of Oregon's conclusions, a survey of planning directors conducted by the University of Oregon as part of the HB 2254 Streamlining process found that 62% of the 100 cities that responded did not monitor redevelopment. Those that did tended to be smaller cities. None of the cities over 25,000 population reported that they monitor redevelopment.

In previous studies conducted by ECONorthwest and other organizations, redevelopment has been addressed by assuming that a certain percentage of residential growth will be addressed through redevelopment, generally from 5% to 20% of new residential development.

One commonly used method to estimate capacity for infill and redevelopment is to calculate improvement value to land value ratios. A ratio of less than 1:1 (i.e., where the improvement is worth less than the land) is a typical threshold—tax lots with ratios less than 1:1 are considered redevelopable. While that method is reasonable, convenient, and relatively inexpensive, people familiar with the process of redevelopment correctly point out that the redevelopment decision is affected by many other factors (see Exhibit 17), and that many parcels with ratios less than 1:1 will not redevelop during the 20-year forecast period, and many parcels with ratios greater than 1:1 will redevelop. The ratio is hardly a definitive measure of "strong likelihood."

Exhibit 17. Some of the factors that affect the price of built space and, by implication, the rate of redevelopment



The professional literature of planning, urban economics, real estate, and appraisal does not have much to say about redevelopment rates. A literature review conducted by the University of Oregon for the HB 2254 process found "There is very little peer-reviewed literature on mixed-use development or redevelopment rates." Conceptually, the factors likely to influence

redevelopment (broadly, the conditions of demand, supply, and price for built space and the factors that go into creating that built space) are clear enough, but the magnitude of the empirical relationships has few studies and no professional consensus. The property owner / developer decision to redevelop is not simply deterministic, but complexly probabilistic. The requirements of Oregon law withstanding, no real estate analyst would have any confidence in making a property-specific assessment for every property in an urban area of the likelihood that the property would redevelop over a 20-year period.

The factors that affect redevelopability are many, but the economics are pretty straightforward. Redevelopment occurs when achievable rents exceed the current return on investment of the land and improvements. The reality, of course, is much more complicated. One way to think about the market for land is "highest and best use" which is a function of:

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

In our many conversations with commercial realtors and developers for this and other studies, the conclusion has been consistent: it is very difficult to develop reliable models of redevelopment potential. The factors are complicated and are location and time specific. Moreover, public policy can play a significant role in facilitating redevelopment—a finding confirmed in the University of Oregon's HB 2254 research.

In summary, we think of redevelopment *potential* as a continuum—from lands that have less potential to those that have more. Given the vagaries of analyzing redevelopment potential, preparing a map of "redevelopable" land has some problems. Identifying specific tax lots based on limited data ignores landowner intent and may signal to landowners a city intent that is not supported by city policy.

For these reasons, for the Corvallis Housing Needs Analysis and Economic Opportunities Analysis redevelopment is addressed on the demand side by making deductions from the employment forecast. Those deductions effectively address employment land use need, and it can be concluded that a certain portion of that need will be satisfied by existing, developed land because at some point in the future, that land will redevelop. The assumptions for redevelopment are discussed in Chapter 5.

Short-term land supply

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

Policy context

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

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

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

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

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

> (3) Short-Term Supply of Land. Plans for cities and counties within a Metropolitan Planning Organization or cities and counties that adopt policies relating to the short-term supply of land must designate suitable land to respond to economic development opportunities as they arise. Cities and counties may maintain the short-term supply of land according to the strategies adopted pursuant to OAR 660-009-0020(2).
>
> (a) Except as provided for in subsections (b) and (c), cities and counties subject to this section must provide at least 25% of the total land supply within the urban growth boundary designated for industrial and other employment uses as short-term supply.
>
> (b) Affected cities and counties that are unable to achieve the target in subsection (a) above may set an alternative target based on their economic opportunities analysis.

> (c) A planning area with 10 percent or more of the total land supply enrolled in Oregon's industrial site certification program pursuant to ORS 284.565 satisfies the requirements of this section.

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

Analysis of short-term supply of land

The City of Corvallis staff worked with the results of the buildable lands supply to identify commercial and industrial land that meet the definition of short-term supply of land. The City's approach was to examine all unconstrained vacant commercial and industrial land within the city limits.[6] On these lands, the City considered access to water, sanitary sewer, and stormwater, prioritizing lands within 100 feet of an existing pipe or main. The City also considered location within the Enterprise Zone as a factor in identifying short-term land supply. The City did not consider lands outside of the city limits or partially vacant lands in this analysis because development of these lands may take longer than one year from submission of a building permit.[7]

The results show that Corvallis has 30 acres of commercial land (on 39 sites) in the short-term supply of land and 443 acres of industrial land (on 60 sites) in the short-term supply of land. In comparison to all unconstrained vacant and partially vacant commercial and industrial land (from Exhibit 10), 56% of Corvallis' commercial land is in the short-term supply and 53% of industrial land is in the short-term supply.

Exhibit 18 shows the short-term supply of commercial and industrial land by plan designation. Exhibit 19 shows a map of Corvallis' short-term land supply. Commercial sites are shown in blue and industrial sites in yellow.

[6] This includes the unconstrained portions of tax lots that are partially affected by constraints.

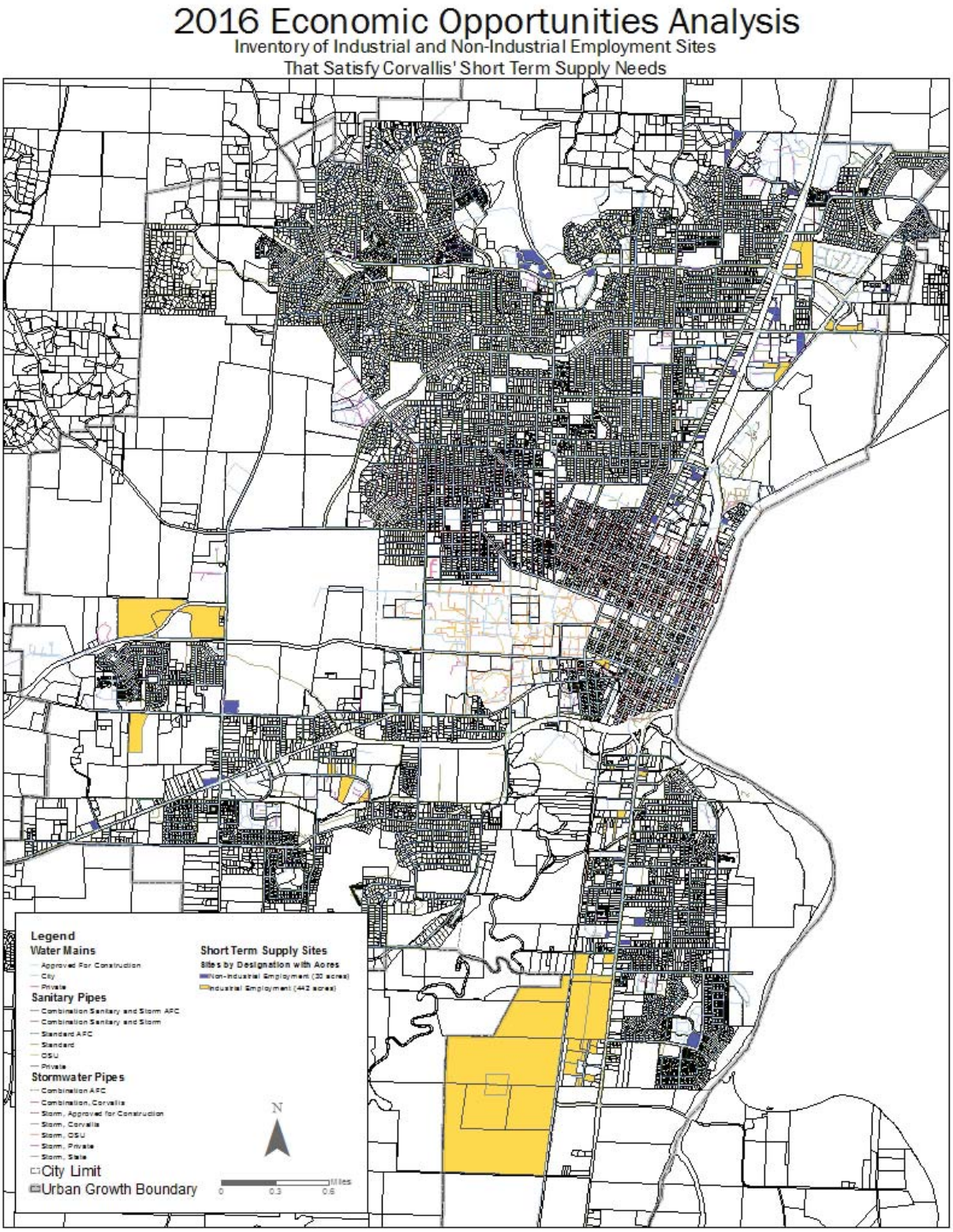
[7] Corvallis requires voter approval of annexations. Because of the amount of time it takes to hold a vote and the uncertainty in whether it will pass, the City did not consider unincoporated areas to meet the criteria to be classificed as short term supply.

Exhibit 18. Short-term Supply of Commercial and Industrial Land, Corvallis UGB, 2016

	Unconstrained Land		Short-term Land Supply		
	Acres	Sites	Acres	Sites	Percent of Unconstrained Acres
Commercial	55	56	31	39	56%
Central Business District (CBD)	0.1	2	0.1	3	100%
Mixed Use Commercial (MUC)	46	44	22	26	48%
Professional Office (PO)	8	10	8	10	100%
Industrial	834	91	443	60	53%
Limited Industrial (LI)	0.01	2	0.01	2	100%
Limited Industrial, Office (LIO)	107	24	40	12	37%
Mixed Use Employment (MUE)	40	15	10	10	25%
General Industrial (GI)	657	43	370	32	56%
Intensive Industrial (II)	31	7	23	4	74%
Total	889	147	473	99	53%

Source: ECONorthwest analysis of City of Corvallis GIS data

Exhibit 19. Short-term Supply of Commercial and Industrial Land, Corvallis UGB, 2016



Source: City of Corvallis analysis; City of Corvallis GIS data

3. Housing Needs Analysis

Introduction

Economists view housing as a bundle of services for which people are willing to pay: shelter certainly, but also proximity to other attractions (job, shopping, recreation), amenities (type and quality of fixtures and appliances, landscaping, views), prestige, and access to public services (quality of schools). Because it is impossible to maximize all of these services and simultaneously minimize costs, households must, and do, make tradeoffs. What they can get for their money is influenced both by economic forces and government policy. Moreover, different households will value what they can get differently. They will have different preferences, which in turn are a function of many factors like income, age of household head, number of people and children in the household, number of workers and job locations, number of automobiles, and so on.

Thus, housing choices of individual households are influenced in complex ways by dozens of factors; and the housing market in Corvallis and in Benton County is the result of the individual decisions of tens of thousands of households. These points help to underscore the complexity of projecting what types of housing will be built in Corvallis between 2016 and 2036.

The complex nature of the housing market was demonstrated by the unprecedented boom and bust during the past decade. This complexity does not eliminate the need for some type of forecast of future housing demand and need, with the resulting implications for land demand and consumption. Such forecasts are inherently uncertain. Their usefulness for public policy often derives more from the explanation of their underlying assumptions about the dynamics of markets and policies than from the specific estimates of future demand and need. Thus, we start our housing analysis with a framework for thinking about housing and residential markets, and how public policy affects those markets.

Goal 10 Requirements

Goal 10 addresses housing in Oregon and provides guidelines for local governments to follow in developing their local comprehensive land use plans and implementing policies. At a minimum, local housing policies must meet the requirements of Goal 10 (ORS 197.295 to 197.314, ORS 197.475 to 197.490, and OAR 600-008). Goal 10 requires incorporated cities to complete an inventory of buildable residential lands[8] and to encourage the availability of adequate numbers of housing units in price and rent ranges commensurate with the financial capabilities of its households.

Goal 10 defines needed housing types as "housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges and rent levels." ORS 197.303 defines needed housing types:

[8] The definition of vacant buildable residential land from OAR 660-008 is presented in Chapter 2.

(a) Housing that includes, but is not limited to, attached and detached single-family housing and multiple family housing for both owner and renter occupancy;

(b) Government assisted housing;[9]

(c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490; and

(d) Manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions.

DLCD provides guidance on conducting a housing needs analysis in the document "Planning for Residential Growth: A Workbook for Oregon's Urban Areas,"[10] referred to as the Workbook. The Workbook generally describes the steps in conducting a housing needs analysis:

1. Determine the number of new housing units needed in the next 20 years.
2. Identify relevant national, state, and local demographic trends that will affect the 20-year projection of structure type mix.
3. Describe the demographic characteristics of the population, and household trends that relate to demand for different types of housing.
4. Determine the types of housing that are likely to be affordable to the projected households.
5. Determine the density ranges for all plan designations and the average net density for all structure types.
6. Estimate the number of additional new units by structure type.

In addition, cities with a population of 25,000 or more (including Corvallis) are required to comply with ORS 197.296 and must conduct an analysis of housing need by housing type and density range to determine the number of needed dwelling units and amount of land needed for each needed housing type in the next 20 years (ORS 197.296(3)(b)).

In summary, Corvallis must identify needs for all of the housing types listed above as well as adopt policies that increase the likelihood that needed housing types will be developed. This housing needs analysis was developed to meet the requirements of Goal 10 and its implementing administrative rules and statutes.

[9] Government assisted housing can be any housing type listed in ORS 197.303 (a), (c), or (d).

[10] "Planning for Residential Growth: A Workbook for Oregon's Urban Areas" was prepared for the State by ECONorthwest and Lane Council of Governments in June 1997.

Historical and Recent Development Trends

Analysis of historical development trends in Corvallis provides insight into the functioning of the local housing market. The mix of housing types and densities in particular, are key variables in forecasting future land need. The specific steps are described in Task 2 of the DLCD *Planning for Residential Lands Workbook* as:

1. Determine the time period for which the data will be analyzed
2. Identify types of housing to address (all needed housing types)
3. Evaluate permit/subdivision data to calculate the actual mix, average actual gross density, and average actual net density of all housing types

ORS 197.296 requires that Corvallis determine future housing mix and density based on one of the following: (1) the mix of housing built in the past five years or since the most recent periodic review, whichever time period is greater, (2) a shorter time period if the data will provide more accurate and reliable information, or (3) a longer time period if the data will provide more accurate and reliable information. Corvallis completed periodic review in 2000.[11]

This analysis presents data about the historical mix and density of housing developed over the 2000 to October 2015 period, based on the City's building permits. This time period not only meets the requirements of State law but it provides information about Corvallis' housing market before and after the national housing market bubble's growth and deflation.

The HNA presents information about residential development by housing type. There are multiple ways that housing types can be grouped. For example, they can be grouped by:

1. Structure type (e.g., single-family detached, apartments, etc.)
2. Tenure (e.g., distinguishing unit type by owner or renter units)
3. Housing affordability (e.g., units affordable at given income levels)
4. Some combination of these categories

For the purposes of this study, we grouped housing types based on: (1) whether the structure is stand-alone or attached to another structure and (2) the number of dwelling units in each structure. The housing types used in this analysis are:

[11] While Corvallis completed and adopted most of the products of periodic review, the City was appealed on its periodic review tasks several times. LCDC acknowledged the completion of periodic review in September 2005. Corvallis' Goal 10 periodic review tasks were approved on June 21, 2000 (Order number 001223). The changes to Corvallis' Land Development Code that implemented all of the periodic review items were not effective until December 31, 2006.

Since Corvallis' Goal 10 analysis was approved in 2000 and the technical work in the housing needs analysis was focused on activity prior to 2000, this analysis is based on data from 2000 to 2015, as described above.

- **Single-family detached** includes single-family detached units and manufactured homes on lots and in mobile home parks.
- **Single-family attached** is all structures with a common wall where each dwelling unit occupies a separate lot, such as row houses or townhouses.
- **Multifamily** is all attached structures (e.g., duplexes, tri-plexes, quad-plexes, and structures with five or more units) other than single-family detached units, manufactured units, or single-family attached units.

Trends in Housing Mix

This section provides an overview of changes in the mix of housing types in Corvallis and comparison geographies. These trends demonstrate the types of housing developed in Corvallis historically. Unless otherwise noted, this chapter uses data from the 2000 and 2010 Decennial Census, and 2013 American Community Survey 3-Year Estimates.

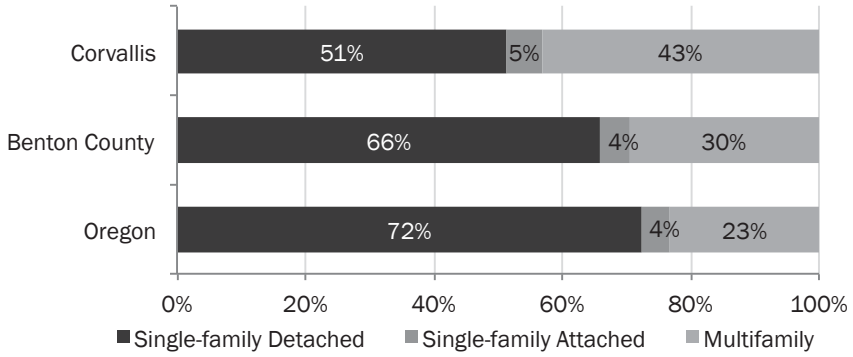
This section shows the following trends in housing mix in Corvallis:

- **Corvallis has a more diverse housing stock than Benton County and the state.** Fifty-one percent of Corvallis' housing stock is single-family detached and 49% is single-family attached (e.g., townhouses) or multifamily. In comparison, single-family attached or multifamily housing account for 34% of Benton County's housing stock, and just 27% of the state's.
- **Corvallis' overall housing mix has remained largely stable since 2000.** Corvallis' housing stock grew by 13% (more than 2,700 new units) between 2000 and the 2011-13 period. However the mix of housing types remained largely stable, with the percentage of single-family detached housing decreasing slightly from 52% in 2000 to 51% of housing in 2011-13.
- **Multifamily housing accounted for 54% of residential building permits issued between 2000 and 2015.** Forty-six percent of new units permitted were single-family detached.

The implication for the forecast of new housing in Corvallis is that Corvallis has a diverse stock of housing, with more multifamily housing than is common in similar sized cities in Oregon. It appears that the primary reason for this difference is the presence of the large number of students at Oregon State University (OSU). Based on trends described in more detail later in this chapter, we anticipate that, future demand for multifamily housing will be driven, in part, by growth of students at OSU, but primarily in the changes in demographics of people living in Corvallis and demand for affordable housing, as described throughout this chapter.

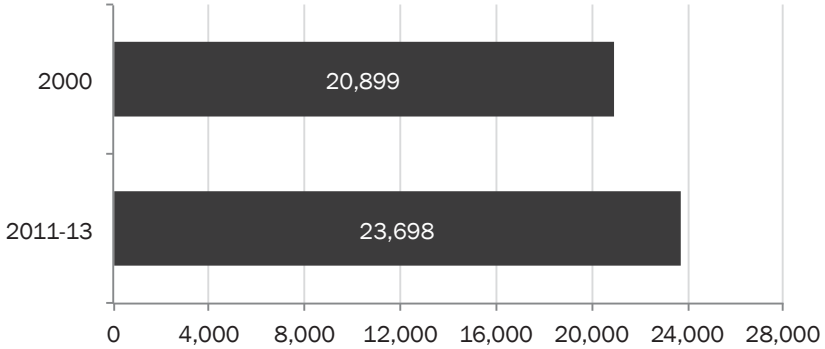
About 51% of Corvallis' housing stock is single-family detached.
In comparison, about 66% of the housing in Benton County is single-family detached housing.

Exhibit 20. Housing Mix, 2011-2013
Source: Census Bureau, 2011-13 ACS Table B25024



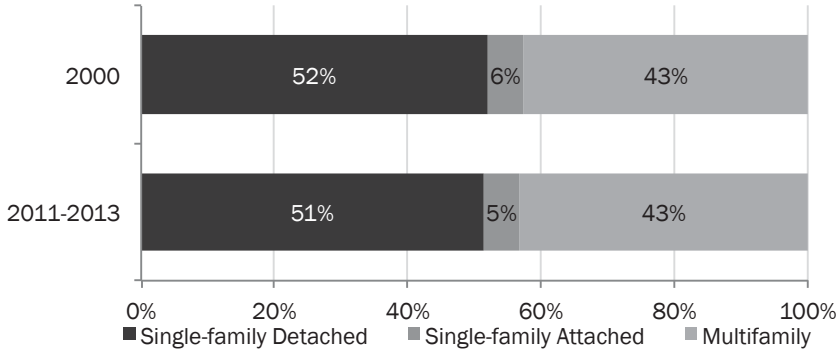
The total number of dwelling units in Corvallis increased by 2,799 from 2000 to 2011-13.
This amounted to a 13% increase over the 13-year period. Over the 2000 to 2014 period, population grew by nearly 15%.

Exhibit 21. Total Dwelling Units, Corvallis, 2000 and 2011-13
Source: 2000 Decennial Census 2000 Table H030, 2011-13 ACS B25024



The mix of housing in Corvallis was largely stable between 2000 and 2013.

Exhibit 22. Change in Housing Mix, Corvallis, 2000 and 2011-13
Source: 2000 Decennial Census Table H030, 2011-13 ACS Table B25024
Note: Values may not sum to 100% due to rounding.



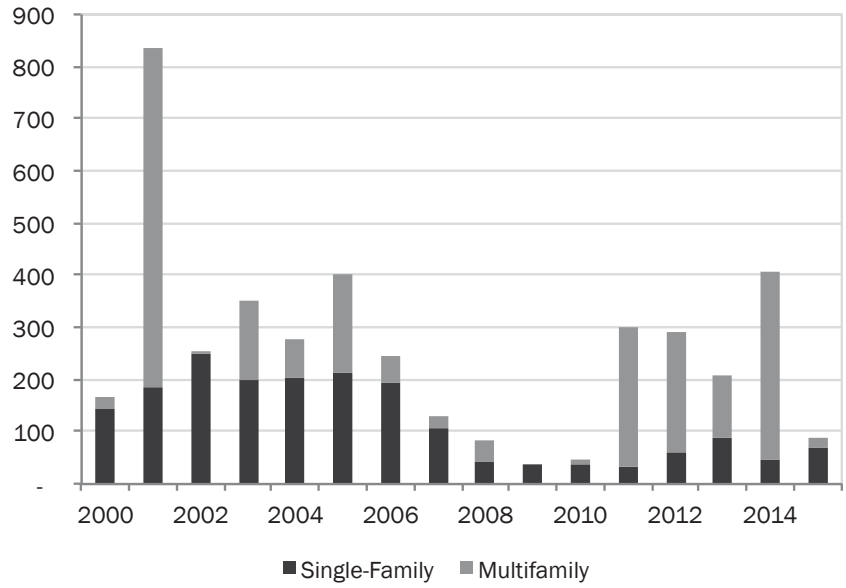
This section presents information about the mix of Corvallis' housing permitted over the 2000 to October 2015 period based on City of Corvallis building permit data. Corvallis' building permit system does not distinguish between single-family detached and single-family attached housing, so those housing types are combined in this analysis.[12]

Over the 2000 to 2015 period, Corvallis issued permits for more than 4,100 dwelling units, with an average of 258 permits issued annually.

About 46% of dwellings permitted were single-family (detached, attached, and manufactured homes) and 54% were multifamily (duplexes, residential development from commercial building permits, and other multifamily).

Exhibit 23. Building Permits by Type of Unit, Corvallis, 2000 to October 2015

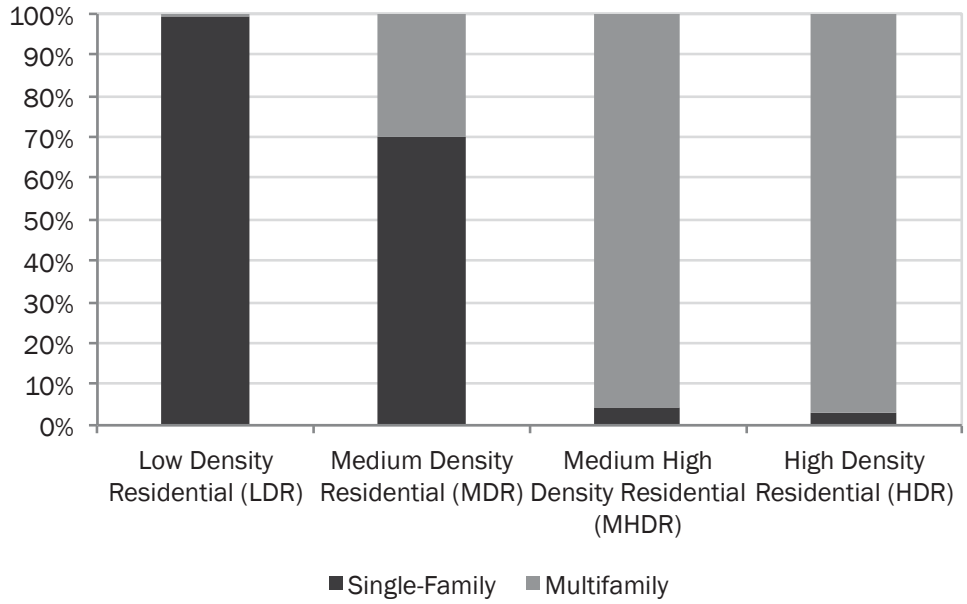
Source: City of Corvallis.



[12] The summary of building permit activity differs in some years from Table 8 in the *Land Development Information Report*. The summary of building permits issued in Exhibit 23 presents building permits issued by calendar year. The time periods used in the *Land Development Information Report* vary but are not always calendar years. In addition, there are small variations from the *Land Development Information Report* and Exhibit 23 in how manufactured homes were tracked and in categorization of commercial building permits (which are categorized as multifamily housing in Exhibit 23).

Over the 2000 to 2015 period, single-family housing development was concentrated in LDR and MDR. Multifamily development occurred primarily in MHDR and HDR.

Exhibit 24. Building Permits by Type of Unit and Plan Designation, Corvallis, 2000 to October 2015
Source: City of Corvallis.



Trends in Tenure

Housing tenure describes whether a dwelling is owner or renter-occupied. This section shows:

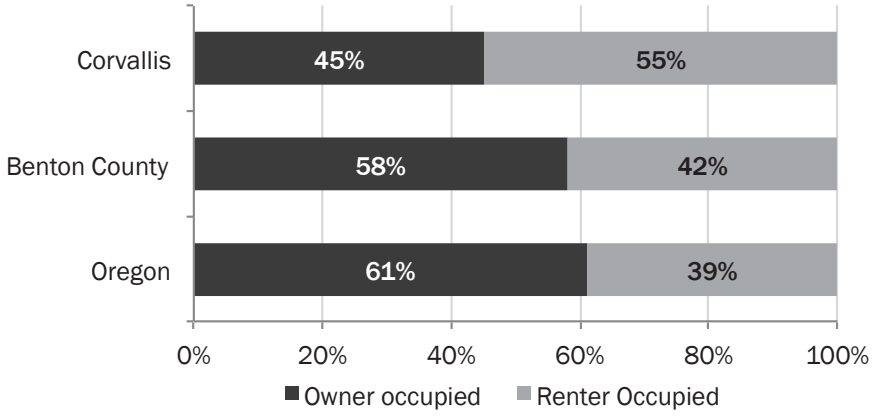
- **More than half of Corvallis households are renters (55%) and fewer than half are homeowners (45%).** In comparison, 58% of households in Benton County, and 61% in Oregon as a whole are owner-occupied.
- **Most homeowners (94%) live in single-family detached housing and most renters (71%) live in multifamily housing in Corvallis.** However, 22% of renter dwellings are single-family detached units.

Corvallis has historically had comparatively low homeownership rates, in part as a result of the number of OSU students living in Corvallis. There may be opportunities to encourage development of a wider variety of affordable housing for all types of housing for homeownership. At the same time, it is important that rental housing continue to be developed in Corvallis, to provide diverse housing opportunities for households that cannot afford or choose not to become homeowners.

Corvallis has relatively lower homeownership rates compared to the region and the state. The homeownership rate in Corvallis is about 45%, compared to 58% in Benton County, and 61% in the state as a whole.

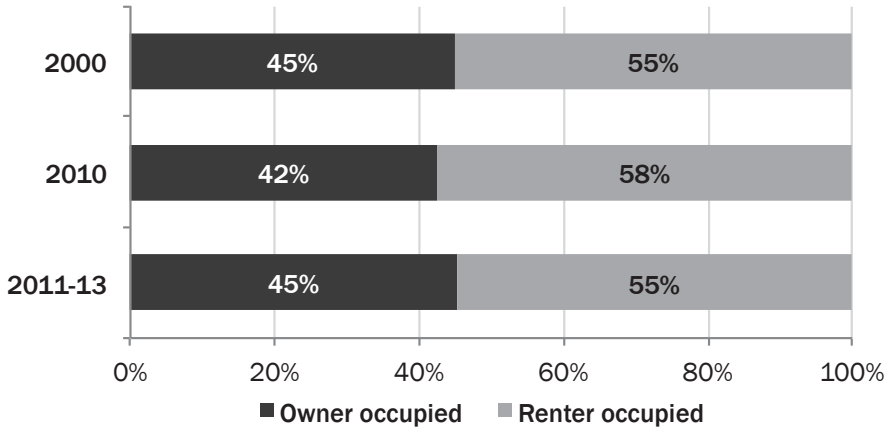
Exhibit 25. Tenure by Occupied Units, Oregon, Benton County, Corvallis, 2011-13

Source: Census Bureau, 2011-13 ACS Table B25003



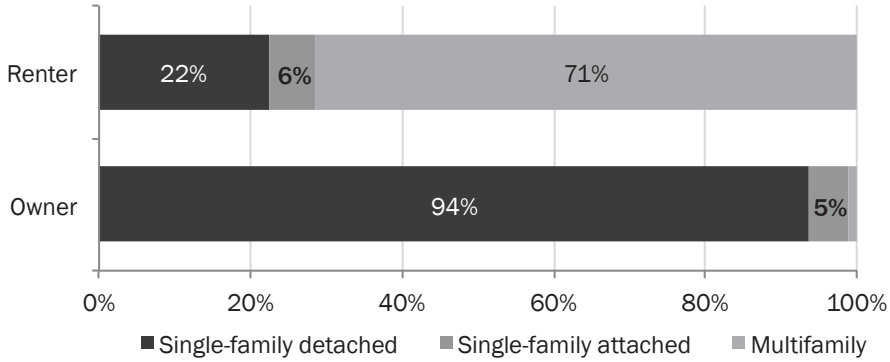
The overall homeownership rate in Corvallis remained around 45% since 2000. The homeownership rate declined slightly from 2000 to 2010, but by 2011-13 increased to percentages near-equal to those of 2000.

Exhibit 26. Tenure, Occupied Units, Corvallis, 2000-2013
Source: Census Bureau, 2000 Decennial Census SF1 Table H004, 2010 Decennial Census SF1 Table H4, 2011-13 ACS Table B25003



The majority (94%) of owner-occupied housing units are single-family detached units and nearly three-quarters of renter-occupied units are multifamily.

Exhibit 27. Housing Units by Type and Tenure, Corvallis, 2011-13
Source: 2011-13 ACS Table B25032



Vacancy Rates

The Census defines vacancy as follows: "Unoccupied housing units are considered vacant. Vacancy status is determined by the terms under which the unit may be occupied, e.g., for rent, for sale, or for seasonal use only." The 2010 Census identified vacancy through an enumeration separate from (but related to) the survey of households. The Census determines vacancy status and other characteristics of vacant units by enumerators obtaining information from property owners and managers, neighbors, rental agents, and others.

The Census data in Exhibit 28 and Exhibit 29 suggest that residential vacancy rates in Corvallis have fluctuated between 5% and 11% between 2010 and 2013. Discussions with City staff managing housing programs suggested that the actual vacancy rates in 2015 were substantially lower than the vacancy rates reported by the Census. As a result, ECONorthwest asked ten residential real estate brokers and property managers about current and recent vacancy rates. The responses indicate that vacancy rates in Corvallis' housing market was between 1% and 2% in the later part of 2015. Over the last seven years, vacancy rates ranged from about 0.5% to 4%.

In the 2011-13 period, the vacancy rate in Corvallis was slightly higher than the rates Benton County and Oregon.

Exhibit 28. Percent of Housing Units that are Vacant, 2011-13
Source: Census Bureau, 2011-13 ACS Table B25002

10.8%	9.0%	9.8%
Corvallis	Benton County	Oregon

In 2010, the vacancy rate in Corvallis was below those of Benton County and Oregon.

Exhibit 29. Percent of Housing Units that are Vacant, 2010
Source: Census Bureau, 2010, Summary File 1 Table QT-H1

4.9%	5.3%	9.3%
Corvallis	Benton County	Oregon

In 2000, the vacancy rate in Corvallis was slightly above that of Benton County, but below that of Oregon.

Exhibit 30. Percent of Housing Units that are Vacant, 2000
Source: Census Bureau, 2000, Summary File 1 Table QT-H1

6.1 %	5.7%	8.2%
Corvallis	Benton County	Oregon

Housing Density

Housing density is the density of housing by structure type, expressed in dwelling units per net or gross acre.[13] Housing needs analyses commonly include an analysis of historical residential densities to provide factual information to estimate future residential densities.

Like housing mix, State law requires determination of housing density based on analysis of data and suggests using an analysis of housing density developed over the past five years or since the most recent periodic review—whichever time period is greater, or for a shorter or longer time period. The U.S. Census does not track residential development density. This study analyzes housing density based on City of Corvallis data for development between 2000 and October 2015.

The average density for housing developed in Corvallis between January 2000 and October 2015 was 8.9 dwelling units per net acre (equivalent to Corvallis' Medium Density designation). Corvallis' development densities varied from 4.6 dwelling units per net acre in Low Density to 28.1 dwelling units per net acre in High Density, which is consistent with the expectations presented in the City's comprehensive plan.

Exhibit 31. Housing Density by Comprehensive Plan Designation, Corvallis UGB, 2000-October 2015
Source: City of Corvallis

Plan Designation	Dwelling units	Net Acres	Net Density
Low Density Residential (LDR)	982	212.0	4.63
Medium Density Residential (MDR)	1,597	173.4	9.21
Medium High Density Residential (MHDR)	1,196	88.5	13.51
High Density Residential (HDR)	620	21.2	29.20
Mixed Use Commercial (MUC)	57	7.7	7.40
Central Business (CBD)	31	1.0	30.27
General Industrial (GI)	69	3.0	22.67
Public Institutional (PI)	36	6.4	5.62
Total	4,588	513	8.94

The average density for single-family (detached and attached) housing was 6.2 dwelling units per net acre. Multifamily averaged 17.1 dwelling units per net acre.

Exhibit 32. Housing Density by Housing Type, Corvallis UGB, 2000-October 2015
Source: City of Corvallis

Housing Type	Dwelling units	Net Acres	Net Density
Single-family, detached and attached	2,377	385.3	6.2
Multifamily	2,213	129.2	17.1
Total	4,590	515	8.9

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

Manufactured Homes

Manufactured homes have provided a limited source of affordable housing in Corvallis. They provide a form of homeownership that is available to households of all income levels. Cities are required to plan for manufactured homes—both on lots and in parks (ORS 197.475-492).

Generally, manufactured homes in parks are owned by the occupants who pay rent for the space. Monthly housing costs are typically lower for a homeowner in a manufactured home park for several reasons, including the fact that property taxes levied on the value of the land are paid by the property owner rather than the manufactured homeowner. However, the value of the manufactured home generally does not appreciate in the way a conventional home would. Manufactured homeowners in parks are also subject to the mercy of the property owner in terms of rent rates and increases. It is generally not within the means of a manufactured homeowner to relocate another manufactured home to escape rent increases. Living in a park is desirable to some because it can provide a more secure community with on-site managers and amenities, such as laundry and recreation facilities.

Corvallis, and the Corvallis UGB, had 703 mobile homes in 2000 and 868 mobile or manufactured homes in the 2011-2013 period, an increase of 165 dwellings. According to Census data, 77% of the mobile or manufactured homes in Corvallis were owner-occupied in the 2011-2013 period.

OAR 197.480(4) requires cities to inventory the mobile home or manufactured dwelling parks sited in areas planned and zoned or generally used for commercial, industrial, or high-density residential development. Exhibit 33 presents the inventory of mobile and manufactured home parks within Corvallis and the Corvallis UGB in 2015. Corvallis has two manufactured home parks in mixed-use zones, and the remainder in residential zones with medium density or lower.

Corvallis has 12 manufactured home parks with a total of 1,043 spaces, 112 of which are vacant.

Exhibit 33. Inventory of Mobile/Manufactured Home Parks, Corvallis UGB, 2015

Source: Oregon Manufactured Dwelling Park Directory

Name	Type	Total Spaces	Vacant Spaces	Zone
Capri Villa	Family	82	3	MUE
Corvallis Mobile Home Park LLC	Family	102	5	UR-10
Highland View Mobile Estates	55+	133	0	RS-9
Knoll Terrace MHC	Family	212	67	UR-5
Meadow Park Mobile Estates	55+	149	2	PD (RS-9)
North Corvallis Mobile Home Park	Family	7	0	UR-10
North Star Park MHC	Family	169	26	RS-9
Summerset Village	Family	86	6	RS-9
Sunrise Mobile Residence	Family	42	0	MUCS
Twin Oak's Mobile Home Park	Family	61	3	RS-9

Government-assisted housing programs

Governmental agencies and nonprofit organizations offer a range of housing assistance to low and moderate-income households in renting or purchasing a home. The Linn-Benton Housing authority is the housing authority in Benton County.

The Linn-Benton Housing Authority administers Section 8 housing choice vouchers. The Section 8 program allows eligible low-income families to choose where they live by providing rental certificates for rent payments beyond about 40% of their income. The Housing Choice Voucher program is one of the key tools available to provide financial support to low-income households. [14]

In addition to the Section 8 program, Exhibit 34 shows an inventory of government-subsidized housing developments in Corvallis. In total, there are 389 subsidized units in the city, with 70% of units in 5 developments that have 35 or more units per development. Much of the available, government-subsidized development supports seniors, low-income families, homeless people, and disabled residents.

Corvallis has 20 affordable housing developments, providing at least 346 subsidized units in the city.

Exhibit 34. Government-Subsidized Housing Development, Corvallis, 2015

Source: Source: OHCS Affordable Rental Housing Projects, Oregon Housing and Community Services, http://www.oregon.gov/ohcs/Pages/multifamily-housing-funded-applicants.aspx. Direct communication with Kent Weiss, 1/21/16.

Development Name	Total Units	Population Served
17th Street	5	Disabled
29th Street	5	Disabled
Alexander Ct - Seavey Meadows	49	Familes, Homeless
Camas Commons	56	Families; Disabled
CoHo Group Home	3	Disabled
Fillmore Four-plex	4	Disabled
Jackson Street Transitional Living	4	Homeless
Julian Hotel Apts	35	Elderly
Lancaster Bridge	50	Families; Disabled;
Larson Commons - ARC site	4	Families; Disabled
Larson Commons - CNHS site	8	Families; Disabled
Partners Place	8	Homeless
Pickford/Leonard	10	Families
Samaritan Village	84	Elderly; Disabled
Seavey Meadows Phase 3	13	Families; Veterans
Shelter Expansion Project	20	Families
South Corvallis Townhouses	14	Families
South Corvallis Townhouses II	7	Families
Sycamore Apartments	6	Disabled
Woodstock Project	4	Disabled

[14] "Linn-Benton Housing Authority," Section 8 Programs, http://www.l-bha.org/section8.html

Step 1: Project the number of new housing units needed in the next 20 years

Step 1 in the housing needs analysis is to project the number of *new* housing units needed during the planning period. This section describes the key assumptions and presents an estimate of new housing units needed in Corvallis between 2016 and 2036. The key assumptions are based on the best available data and may rely on safe harbor provisions, when available.[15] Trends that may affect these assumptions and Corvallis' housing need are described in Step 2 of the housing needs analysis.

- **Population.** A 20-year population forecast (in this instance, 2016 to 2036) is the foundation for estimating needed new dwelling units. Exhibit 38 **shows that the Corvallis UGB will grow from 60,058 people in 2016 to 69,527 people in 2036, adding 9,469 people over the 20-year period.**
- **Persons in Group Quarters.** Persons in group quarters do not consume standard housing units: thus, any forecast of new people in group quarters is typically derived from the population forecast for the purpose of estimating housing demand. Group quarters can have a big influence on housing in cities with colleges (dorms), prisons, or a population of seniors (nursing homes). In general, any new requirements for these housing types will be met by institutions (colleges, government agencies, health-care corporations) operating outside what is typically defined as the housing market. Nonetheless, group quarters require residential land. They are typically built at densities that are comparable to that of multiple-family dwellings.

  In 2015, 11.6% of the City's population was in group quarters.[16] **For the 2016 to 2036 period, we assume that 11.6% of new population, 1,098 people, will be in group quarters.**
- **Household Size.** OAR 660-024 established a safe harbor assumption for average household size—which is the figure from the most-recent decennial Census at the time of the analysis. According to the 2011-2013 American Community Survey, the average

[15] A safe harbor is an assumption that a city can use in a housing needs analysis that the State has said will satisfy the requirements of Goal 14. OAR 660-024 defines a safe harbor as, "… an optional course of action that a local government may use to satisfy a requirement of Goal 14. Use of a safe harbor prescribed in this division will satisfy the requirement for which it is prescribed. A safe harbor is not the only way or necessarily the preferred way to comply with a requirement and it is not intended to interpret the requirement for any purpose other than applying a safe harbor within this division."

[16] This estimate is based on an inventory of group quarters that the City maintains for and reports about to Portland State University's Population Research Center. It shows that 6,563 people in Corvallis lived in group quarters in 2015. Group quarters include: the Benton County Jail, OSU dormitories, fraternities and sororities, privately owned dormitories, halfway houses, residential care facilities for seniors or the disabled, and skilled nursing or convalescent homes.

household size in Corvallis was 2.43 people. **Thus, for the 2016 to 2036 period, we assume an average household size of 2.43 persons per household.**

- **Vacancy Rate.** According to Census data, Corvallis' vacancy rates vary from 4.9% in 2010 to 10.8% in the 2011-2013 period. Corvallis' vacancy rate at the 2000 Decennial Census was 6.1%.

  Discussions with residential real estate brokers and property managers about current and recent vacancy rates suggest that vacancy rates in Corvallis in 2015 were considerably below the American Community Survey's estimate for the 2011-2013 period. Stakeholder responses indicate that vacancy rates in Corvallis' housing market was between 1% and 2% in the later part of 2015. Over the last seven years, estimates of vacancy rates ranged from about 0.5% to 4%.

  For the 2016 to 2036 period, we assume a vacancy rate of 3%. Implicit in this assumption is that Corvallis' housing market will continue to be tight, with a relatively low vacancy rate but slightly higher than the vacancy rate in 2015.

Exhibit 35 shows the forecast of demand for new dwelling units in the Corvallis UGB for the 2016 to 2036 period, based on the assumptions described above. Corvallis will have demand for 3,548 new dwelling units over the 20-year period, with an annual average of 177 dwelling units.

Exhibit 35. Forecast of demand for new dwelling units, Corvallis UGB, 2016 to 2036

Variable	New Dwelling Units (2016-2036)
Change in persons	9,469
minus Change in persons in group quarters	1,098
equals Persons in households	8,371
Average household size	2.43
New occupied DU	3,445
times Aggregate vacancy rate	3.0%
equals Vacant dwelling units	103
Total new dwelling units (2016-2036)	3,548
Annual average of new dwelling units	177

Source: Calculations by ECONorthwest

Step 2: Identify relevant national, state, and local demographic and economic trends and factors that may affect the 20-year projection of structure type mix

Demographic trends are important to thoroughly understand the dynamics of the Corvallis housing market. Corvallis exists in a regional economy; trends in the region impact the local housing market. This chapter documents national, state, and regional demographic, socioeconomic, and other trends relevant to Corvallis.

Demographic trends provide a broader context for growth in a region; factors such as age, income, migration, and other trends show how communities have grown and shape future growth. To provide context, we compare Corvallis to Benton County and the state. Characteristics such as age and ethnicity are indicators of how population has grown in the past and provide insight into factors that may affect future growth.

Demographic and socioeconomic factors affecting housing choice[17]

Analysts typically describe housing demand as the *preferences* for different housing types (i.e., single-family detached or apartment) and *the ability to pay* for that housing (the ability to exercise those preferences in a housing market by purchasing or renting housing; in other words, income or wealth).

[17] The research in this chapter is based on numerous articles and sources of information about housing, including:

Davis, Hibbits, & Midghal Research, "Metro Residential Preference Survey," May 2014. This is a survey conducted in the Portland Metro area.

The American Planning Association, "Investing in Place; Two generations' view on the future of communities." 2014

"Access to Public Transportation a Top Criterion for Millennials When Deciding Where to Live, New Survey Shows," Transportation for America.

"Survey Says: Home Trends and Buyer Preferences," National Association of Home Builders International Builders

The Case for Multi-family Housing. Urban Land Institute. 2003

E. Zietz. *Multi-family Housing: A Review of Theory and Evidence.* Journal of Real Estate Research, Volume 25, Number 2. 2003.

C. Rombouts. *Changing Demographics of Homebuyers and Renters.* Multi-family Trends. Winter 2004.

J. McIlwain. *Housing in America: The New Decade.* Urban Land Institute. 2010.

D. Myers and S. Ryu. *Aging Baby Boomers and the Generational Housing Bubble*. Journal of the American Planning Association. Winter 2008.

M. Riche. *The Implications of Changing U.S. Demographics for Housing Choice and Location in Cities.* The Brookings Institution Center on Urban and Metropolitan Policy. March 2001.

L. Lachman and D. Brett. *Generation Y: America's New Housing Wave.* Urban Land Institute. 2010.

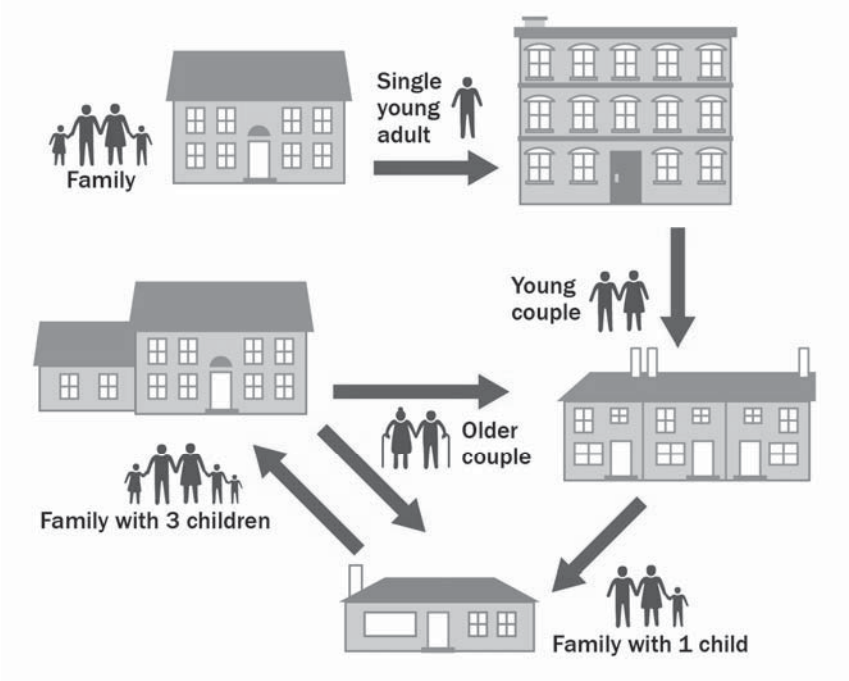
Many demographic and socioeconomic variables affect housing choice. However, the literature about housing markets find that age of the householder, size of the household, and income are most strongly correlated with housing choice.

- **Age of householder** is the age of the person identified (in the Census) as the head of household. Households make different housing choices at different stages of life. This chapter discusses generational trends, such as housing preferences of Baby Boomers, people born from about 1946 to 1964, and Millennials, people born from about 1980 to 2000.
- **Size of household** is the number of people living in the household. Younger and older people are more likely to live in single-person households. People in their middle years are more likely to live in multiple person households (often with children).
- **Income** is the household income. Income is probably the most important determinant of housing choice. Income is strongly related to the type of housing a household chooses (e.g., single-family detached, duplex, or a building with more than five units) and to household tenure (e.g., rent or own).

An individual's housing needs change throughout life, with changes in income, family composition, and age. The types of housing needed by a 20-year-old college student differ from the needs of a 40-year-old parent with children, or an 80-year-old single adult. As Corvallis' population ages, different types of housing will be needed to accommodate older residents. The housing characteristics by age data presented later in this chapter reveal this cycle in action in Corvallis.

Housing needs and preferences change in predictable ways over time, with changes in marital status and size of family.
Families of different sizes need different types of housing.

Exhibit 36. Effect of demographic changes on housing need
Source: ECONorthwest, adapted from Clark, Willam A.V. and Frans M. Dieleman. 1996. Households and Housing. New Brunswick, NJ: Center for Urban Policy Research.



This section focuses on these factors, presenting data that suggests how changes to these factors may affect housing need in Corvallis over the next 20 years.

National trends[18]

This brief summary on national housing trends builds on previous work by ECONorthwest, the Urban Land Institute (ULI) reports, and conclusions from *The State of the Nation's Housing, 2015* report from the Joint Center for Housing Studies of Harvard University. The Harvard report summarizes the national housing outlook as follows:

"The US housing recovery lost momentum in 2014 as homeownership rates continued to fall, single-family construction remained near historic lows, and existing home sales cooled. In contrast, the rental market remained a bright spot, fueled by strong growth in renter households. With rents rising and incomes well below pre-recession levels, though, the number of housing cost-burdened renters set another record, far surpassing public efforts to provide affordable housing. And despite the rebound in much of the nation, a number of minority and low-income neighborhoods remain severely distressed."

Several challenges to a strong domestic housing market remain. Demand for housing is closely tied to jobs and incomes, which are taking longer to recover than in previous cycles. While trending downward, the number of underwater homeowners, delinquent loans, and vacancies remains high. *The State of the Nation's Housing* report projects that it will take several years for market conditions to return to normal and, until then, the housing recovery will likely unfold at a moderate pace.

- **Post-recession recovery progresses slowly**. Housing growth gradually gained momentum since 2012, with residential construction continuing to increase into 2015. However, growth in the housing market is relatively slow. For example, April 2015 was the 32nd straight month that existing homes for sale held below a six-month supply, the traditional measure of a balanced market. Increases in mortgage interest rates and meager job growth contributed to the stall in the housing market. Continued economic growth in 2015 has supported growth in the housing market.
- **Continued declines in homeownership**. After 13 successive years of increases, the national homeownership rate declined each year from 2005 to 2015, and in the first quarter of 2015 registered at about 63.7 percent. The Urban Land Institute notes that homeownership rates may increase as Millennials (people born between 1980 and 2000) age and their income increases.
- **Growth in the rental market**. While homeownership has steadily declined since the burst of the housing bubble, the rental market has experienced a boom. With renter

[18] These trends are based on information from: (1) The Joint Center for Housing Studies of Harvard University's publication "The State of the Nation's Housing 2015," (2) The Joint Center for Housing Studies of Harvard University's publication "Projecting Trends in Severely Cost-Burdened Renters: 2015-2025," (3) Urban Land Institute, "2015 Emerging Trends in Real Estate," and (4) the U.S. Census.

household growth averaging 770,000 households annually since 2004, the 10-year period from 2004 to 2014 was the strongest since the late 1980s. Accordingly, vacancy rates have fallen (to 7.6 percent nationally) and rents have risen (at a rate of 3.2 percent in 2014, two times the pace of inflation).

- **Housing affordability**. In 2012, more than one-third of American households spent more than 30% of income on housing. Low-income households face an especially dire hurdle to afford housing. Among those earning less than $15,000, more than 80% paid over 30% of their income and almost 70% of households paid more than half of their income. For households earning $15,000 to $29,000, more than 60% were cost burdened, with about 30% paying more than half of their income on housing. The Joint Center for Housing Studies forecasts that the number of households paying more than half of their income for housing is likely to increase between 2015-2025.
- **Long-term growth and housing demand**. The Joint Center for Housing Studies forecasts that demand for new homes could total as many as 13.2 million units nationally between 2015 and 2025. Much of the demand will come from Baby Boomers, Millennials,[19] and immigrants. The Urban Land Institute projects continued demand for multifamily housing development, at least over the next three years or so.
- **Changes in housing preference**. Housing preference will be affected by changes in demographics, most notably the aging of the Baby Boomers, housing demand from the Millennials, and growth of foreign-born immigrants.
    - *Baby Boomers.* The housing market will be affected by continued aging of the Baby Boomers, the oldest of whom were in their late 60's in 2015 and the youngest of whom were in their early 50's in 2015. Baby Boomers' housing choices will affect housing preference and homeownership, with some boomers likely to stay in their home as long as they are able and some preferring other housing products, such as multifamily housing or age-restricted housing developments.
    - *Millennials.* As Millennials age over the next 20 years, they will be forming households and families. In 2015, the oldest Millennials were in their mid-20's and the youngest were in their mid-teens. By 2035, Millennials will be between 35 and 55 years old.

      Millennials were in the early period of household formation at the beginning of the 2007-2009 recession. Across the nation, household formation fell to around 600,000 to 800,000 in the 2007-2013 period, well below the average rate of growth in previous decades. Despite sluggish growth recently, several demographic factors indicate increases in housing growth to come. The Millennial generation is the age group most likely to form the majority of new households. While low incomes have kept current homeownership rates among young adults below their potential, Millennials may represent pent-up demand that will release when the economy fully recovers. As Millennials age, they may increase the number of households in their 30s by 2.4 to 3.0 million through 2025.

[19] Millennials are, broadly speaking, the children of Baby Boomers, born from the early 1980's through the early 2000's.

- *Immigrants.* Immigration and increased homeownership among minorities will also play a key role in accelerating household growth over the next 10 years. Current Population Survey estimates indicate the number of foreign-born households rose by nearly 400,000 annually between 2001 and 2007, and accounted for nearly 30 percent of overall household growth. Beginning in 2008, the influx of immigrants was staunched by the effects of the Great Recession. After a period of declines, however, the foreign born are again contributing to household growth. Immigration increased from about 700,000 immigrants in 2011 to 996,000 in 2014. The largest immigrant group is Asians, while Hispanic immigration, particularly from Mexico, has slowed in recent years. The Census Bureau projects immigration to increase to about 1.2 to 1.4 million immigrants per year between 2015 and 2035.

  The growing diversity of American households will have a large impact on the domestic housing markets. Over the coming decade, minorities will make up a larger share of young households, and constitute an important source of demand for both rental housing and small homes. This makes the growing gap in homeownership rates between whites and blacks and whites and Hispanics troubling. Since 2001, the difference in homeownership rates between whites and blacks rose from 25.9 to 29.5 in 2013. Similarly the gap between white and Hispanic homeownership rates increased since 2008, from below 26%, to over 27% in 2013. This growing gap between racial and ethnic groups will hamper the country's homeownership rate, as minority households constitute a larger share of the housing market.

- **Changes in housing characteristics**. The U.S Census Bureau's Characteristics of New Housing Report (2014) presents data that show trends in the characteristics of new housing for the nation, state, and local areas. Several long-term trends in the characteristics of housing are evident from the New Housing Report:[20]
  - *Larger single-family units on smaller lots.* Between 1990 and 2014 the median size of new single-family dwellings increased 29% nationally from 1,905 sq. ft. to 2,453 sq. ft., and 24% in the western region from 1,985 sq. ft. to 2,453 sq. ft. Moreover, the percentage of units fewer than 1,400 sq. ft. nationally decreased by almost half, from 15% in 1999 to 8% in 2012. The percentage of units greater than 3,000 sq. ft. increased from 17% in 1999 to 31% of new single-family homes completed in 2014. In addition to larger homes, a move towards smaller lot sizes is seen nationally. Between 1990 and 2013, the percentage of lots less than 7,000 sq. ft. increased from 26% of lots to 28% of lots.
  - *Larger multifamily units.* Between 1999 and 2014, the median size of new multiple family dwelling units increased by 3% nationally and 1% in the western region. The percentage of new multifamily units with more than 1,200 sq. ft. increased

[20] https://www.census.gov/construction/chars/highlights.html

from 28% in 1999 to 37% in 2014 nationally, and from 25% to 31% in the western region.

- *More household amenities.* Between 1990 and 2014, the percentage of single-family units built with amenities such as central air conditioning, 2 or more car garages, or 2 or more baths all increased. A similar trend in increased amenities is seen in multifamily units.

State Trends

Oregon's *2011-2015 Consolidated Plan* includes a detailed housing needs analysis as well as strategies for addressing housing needs statewide.[21] The plan concludes, "Oregon's changing population demographics are having a significant impact on its housing market." It identified the following population and demographic trends that influence housing need statewide. Oregon is:

- Facing housing affordability decreases due to higher unemployment and lower wages, as compared to the nation.
- Since 2005, is experiencing higher foreclosure rates compared with the previous two decades.
- Losing federal subsidies on about 8% of federally subsidized Section 8 housing units.
- Losing housing value throughout the State.
- Losing manufactured housing parks, with a 25% decrease in the number of manufactured home parks between 2003 and 2010.
- Increasingly older, more diverse, and has less affluent households.[22]

While the *2016-2020 Consolidated Plan* is still in development, the Oregon Office of Housing and Community Services has identified a short list of priority needs for the upcoming plan. Those priorities include:

- Affordable Housing
- Accessible Housing
- Permanent Housing with Support Services
- Rapid Rehousing with Support Services
- Rental Assistance
- Rehabilitation and Preservation of Units
- Economic Opportunity for People and Families Living in Poverty
- Improved Housing Stock

[21] http://www.ohcs.oregon.gov/OHCS/HRS_Consolidated_Plan_5yearplan.shtml

[22] State of Oregon *Consolidated Plan 2011 to 2015*. http://www.oregon.gov/ohcs/hd/hrs/consplan/2011_2015_consolidated_plan.pdf

- Emergency Shelter Beds and Homeless Services

Local Demographic Trends

Regional demographic trends largely follow the statewide trends discussed above, but provide additional insight into how demographic trends might affect housing in Corvallis. The demographic trends that most affect the key assumptions used in the baseline analysis of housing need are: (1) expected growth of students at Oregon State University, (2) the aging population, (3) changes in household size and composition, and (4) increases in diversity.

GROWING POPULATION

Corvallis' population grew by 26% between 1990 and 2014, adding nearly 12,000 new residents. The City is forecast to grow by 17% between 2014 and 2035, at an average annual growth rate of 0.7%, consistent with Benton County's growth rate.

Corvallis' population growth between 2016 and 2036 will drive future demand for housing in Corvallis over the planning period.

Since 1990, Corvallis' population added 11,778 people, growing by a total of 26%, an annual average growth rate of 1.0%.
From 1990 to 2014, Corvallis' population grew at an average annual growth rate higher than that of the county, but lower than the statewide average.

Exhibit 37. Population Growth, 1990 - 2014
Source: Decennial Census 1990, Portland State University 2014 Certified Population Estimates

	Population		Change (1990-2014)		
	1990	2014	Number	% Change	AAGR
Oregon	2,842,321	3,962,710	1,120,389	39%	1.4%
Benton County	70,811	88,740	17,929	25%	0.9%
Corvallis City limits	44,757	56,535	11,778	26%	1.0%

Corvallis' City Council adopted a population forecast for the Corvallis UGB based on Portland State University's forecast for 2014-2036.[23] The forecast showed that the Corvallis' UGB will grow to 69,527 people by 2036. Using the same average annual growth rate from the 2014-2036 forecast (0.73%), ECONorthwest extrapolated Corvallis' UGB population for 2016 (60,058 people). Exhibit 38 shows the adopted forecast for 2016-2036 for the UGB, Corvallis city limits, and the urbanizing area (area between the city limits and UGB).

Corvallis' adopted forecast shows growth of 9,469 people between 2016-2036, within the Corvallis UGB. Over about the same period, the State is expected to grow at a faster rate than Corvallis (1.1% average annual growth rate).

Exhibit 38. Adopted Forecast of Population Growth, Corvallis UGB, 2016 - 2036

Source: Corvallis Adopted Population Forecast

	Population		Change (2016-2036)		
	2016	2036	Number	% Change	AAGR
Corvallis UGB	60,058	69,527	9,469	16%	0.73%
Corvallis city limits	57,369	66,413	9,045	16%	0.73%
Corvallis urbanizing area	2,689	3,113	424	16%	0.73

[23] The forecast was documented in a memorandum to the Corvallis City Council titled: *City Council Acknowledgement of Population Forecast for Corvallis Urbanization Study/Buildable Lands Inventory*, dated September 2, 2015. The forecast was adopted on September 8, 2015.

STUDENTS LIVING IN CORVALLIS

Students of higher education constitute an important demographic in Corvallis, making up more than a third of the city's population. As shown in the data below, students tend to earn lower, if any, incomes, and are more likely to live in dormitories or rental housing. The majority of students living in Corvallis attend Oregon State University (OSU).

- **Enrollment at OSU grew at over four times the pace of population growth in Corvallis since 2000.** Between 2000 and 2015, OSU's full and part-time enrollment (at the Corvallis campus) grew from about 12,230 students to 23,450 students,[24] an average annual growth rate of 4.4%. In comparison, Corvallis' population as a whole grew at a 1.0% AAGR from 2000 to 2014.
- **OSU expects enrollment to continue growing in Corvallis but at a slower pace than between 2000 and 2015.** OSU does not have an official forecast of enrollment but expects on-campus enrollment in Corvallis to grow to about 27,000 students by about 2023, an increase of about 3,550 students at an average annual growth rate of 1.8%.[25]

  The actual amount of enrollment will vary from year-to-year and the University may reach 27,000 students somewhat before or after 2023. The uncertainty stems from a number of factors. These include the number of Oregonians applying to OSU as freshman each year, variations in applications from out-of-state students, and other factors. For example, as the State of Oregon implements the Oregon Promise program,[26] enrollment at OSU may decline for first and second year students (resulting in a decline in enrollment in 2016 and 2017) but increase for third and fourth year college students.
- **About 10% of Corvallis' population (5,623 people) live in dormitories and similar types of group housing, including OSU dormitories, privately owned dormitories, and fraternity and sorority houses**.[27]
- **OSU expects to build more housing for students, over the next several years**.[28]
  - OSU currently has capacity for between 4,700 to 5,050 students in residence halls and other University-owned housing on campus. The range in capacity results from the University's ability to add more beds to housing as demand for on-

[24] The OSU enrollment estimate is based on the University's headcount of students in Fall term. It does not include students who are enrolled in and only take classes from OSU's Ecampus (i.e., distance learning students) or students at OSU's Bend Cascades campus.

[25] The estimate of future enrollment is based on a conversation with Kate Peterson, OSU's Associate Provost for Enrollment Management, on December 14, 2015.

[26] The Oregon Promise program would encourage qualifying students to take classes at one of Oregon's community colleges for the first two years of college by paying for all or a part of community college tuition.

[27] This estimate is based on an inventory of group quarters that the City of Corvallis maintains for and reports about to Portland State University's Population Research Center.

[28] The information about student housing capacity and development is based on a conversation with Dan Larson, Executive Director of University Housing and Dining Services at OSU.

campus housing increases. In 2015, the University is operating with a capacity to house 5,015 students.

- OSU reinstated the requirement that first-year college students live in on-campus residence halls in Fall 2014. Most of these students live in traditional residence halls. Given expectations for growth in first-year students at OSU (and potential for a decline in first-year students over the next few years), as well as the fluidity of housing capacity, OSU estimates that the University has sufficient housing in residence halls for first-year students.
- Demand for additional student housing has been from upper division students, transfer students, graduate students, and students who need family housing. OSU is responding to this demand by planning to build additional apartment-style housing, in units ranging from studios to three-bedroom units. By 2020, the University expects to add 250 to 300 additional beds of apartment-style housing.
- Beyond 2020, the University will plan to build housing to meet demands, with the fiscal constraints of paying for additional student housing. The University is considering creative models for providing additional student housing, such as public-private partnerships for developing housing.

- **More than one-third of Corvallis' population is enrolled in college or graduate school.** According to American Community Survey data:
  - Corvallis had about 19,000 residents who were college students (undergraduate or graduate/professional school), which is 35% of Corvallis' population.
  - About 89% of Corvallis' residents aged 18 to 24 years old were college students (undergraduate or graduate/professional school).
  - We assume that the majority of college students attend OSU. However a small percentage may attend other colleges, such as Linn-Benton Community College or the University of Oregon.
- **Corvallis has a much larger population of people 18 to 24 years in age (32%, or 17,700 people) compared with the State average (9%).** Nearly 90% of people aged 18 to 24 years old in Corvallis are enrolled in college.
- **Corvallis' householders under 25 years old have lower incomes.**[29] About 78% of householders in this age group have incomes below $25,000. And 44% of householders under age 25 have incomes of $10,000 or less.
  - In comparison, 36% of all Corvallis households have income of $25,000 or less, compared with 25% of the State's population.
  - Household income is not as good an indicator of ability to pay for housing for college students as for the population as a whole. College students have access to

[29] The Census defines the householder as the person identified as the head-of-household in response to the Census survey. The Census reports income by the age of the householder.

funds not available to the average household, such as financial assistance from parents, college loans, and other sources of financial aid.

Given that OSU expects the student population to grow by about 3,500 students by 2023 and has plans to build 250 to 300 new beds for student housing by about 2020, growth in students will continue to result in demand for non-University group quarters (e.g., private dormitories or housing in fraternity or sorority houses) and in the Corvallis private housing market. Student growth is likely to be slower over the next 5 to 10 years than over the last 15 years. In addition, the University does not currently have plans to grow past 27,000 students at the Corvallis OSU campus.

Students will continue to seek out relatively affordable housing in Corvallis, both in the recently built multifamily student housing and in the older student housing (both multifamily and single-family housing). While students have greater access to funds than most low-income households, students will continue to compete with lower-income households for the relatively affordable housing exists in Corvallis.

AGING POPULATION

This section shows two key characteristics of Corvallis' population, with implications for future housing demand in Corvallis:

- **People aged 20 to 39 accounted for about half of the growth in Corvallis since 2000.** The majority of people in this age group in Corvallis are between the ages of 20 and 24 years old, and are likely students at OSU. The remaining, people 25 to 39 years old, are a mixture of long-term residents in Corvallis and graduate students at OSU. The housing needs of these groups over the 20-year planning period are different:
    - *Students housing needs.* New demand for student housing will depend on both student growth and OSU's plans for building dormitories. OSU forecasts growth of about 3,500 students over the next 5 to 10 years and plans to build 250 to 300 new beds for students on campus. This increase in students, beyond the University's plans for building student housing, will drive demand for housing for students, both in multifamily housing and in existing and less expensive single-family detached housing.
    - *Growth of Millennials.* Over the 20-year planning period, Millennials will age from 15 to 35 years old in 2015, to 35 to 55 years old in 2035. Millennials are the largest demographic group in Oregon and the nation. Aside from students at OSU, Corvallis has about the same share of Millennials as the state average. To the extent that Corvallis is able to provide housing opportunities for Millennials, the city can expect to continue to attract people in this age group.

      The housing research literature is divided about likely future housing preferences for Millennials. Some research hypothesizes that Millennials may make different housing choices than their parents and will prefer to rent and will prefer to live in multifamily housing, especially in large cities. Other studies suggest that the majority of Millennials' housing preference is to own a single-

family home. A recent survey of people living in the Portland region shows that Millennials prefer single-family detached housing. The survey finds that housing price is the most important factor in choosing housing for younger residents.[30]

Our conclusion based on review of recent research is that it seems unlikely that the majority of Millennials will make fundamentally different housing choices than previous generations as they age and have families, but their housing choices may be constrained by what they can afford due to student loan debt and prolonged entry into higher paying positions due to the Baby Boomers putting off retirement.

Continued growth in Millennials in Corvallis will result in increased demand for both affordable single-family detached housing, as well as increased demand for affordable townhouses and multifamily housing. Growth in this population will result in increased demand for both ownership and rental opportunities, with an emphasis on housing that is comparatively affordable.

- **Baby Boomers are Corvallis' second largest and the fastest growing age group.** Although Corvallis has a smaller share of people over 60 years old than the region, Corvallis' population is growing older, consistent with State and national trends. Demand for housing for retirees will grow over the planning period as the Baby Boomers continue to age and retire. The State forecasts Benton County's share of residents aged 60 years and older will account for about 22% of the total population in 2035, compared to around 18% in 2010.

  The impact of growth in seniors in Corvallis will depend, in part on whether seniors continue to live in Corvallis as they retire. Growth in people over 60 years old since 2000 suggests that some, and perhaps many, residents of Corvallis that retire continue to live in the city after retirement. National surveys show that in general, most retirees prefer to age in place by continuing to live in their current home and community as long as possible.[31]

  Growth in the number of seniors will result in demand for housing types specific to seniors, such as assisted living facilities or age-restricted developments. These households will make a variety of housing choices, including: remaining in their homes as long as they are able, downsizing to smaller single-family homes (detached and attached) or multifamily units, or moving into group housing (such as assisted living facilities or nursing homes) as their health declines. The challenges that aging seniors face in continuing to live in their community include: changes in healthcare needs, loss of mobility, the difficulty of home maintenance, financial concerns, and increases in property taxes.[32]

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[30] Davis, Hibbits, & Midghal Research, "Metro Residential Preference Survey," May 2014.

[31] A survey conducted by the AARP indicates that 90% of people 50 years and older want to stay in their current home and community as they age. See http://www.aarp.org/research.

[32] "Aging in Place: A toolkit for Local Governments" by M. Scott Ball.

Corvallis' median age has remained the same, 27 years old, since 2000.

Over the same period the median age increased by about two years in Benton County, and in Oregon.

Exhibit 39. Median Age, 2000 and 2011-13

Source: US Census Bureau, 2000 Decennial Census Table P013, 2011-13 ACS Table B01002.

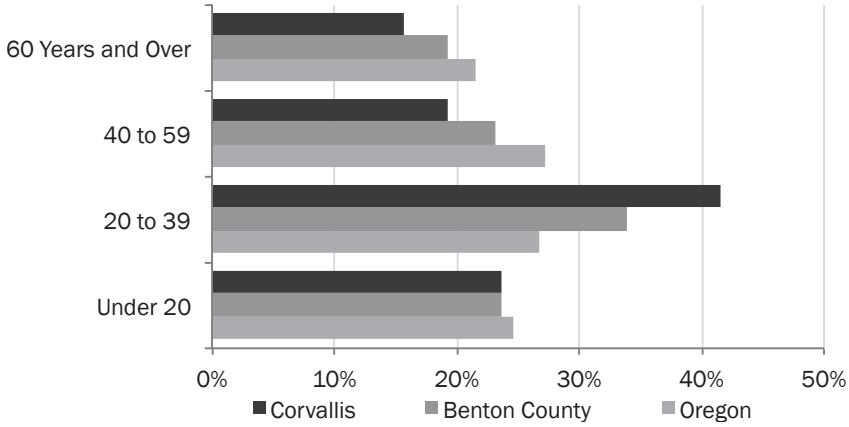
2000	27.0 Corvallis	31.1 Benton County	36.3 Oregon
2011-13	27.0 Corvallis	32.6 Benton County	38.9 Oregon

In the 2011-2013 period, about 41% of Corvallis residents were aged between 20 and 39.

About 34% of Benton County, and 27% of Oregon residents were in their 20s or 30s.

Exhibit 40. Population Distribution by Age, 2011-13

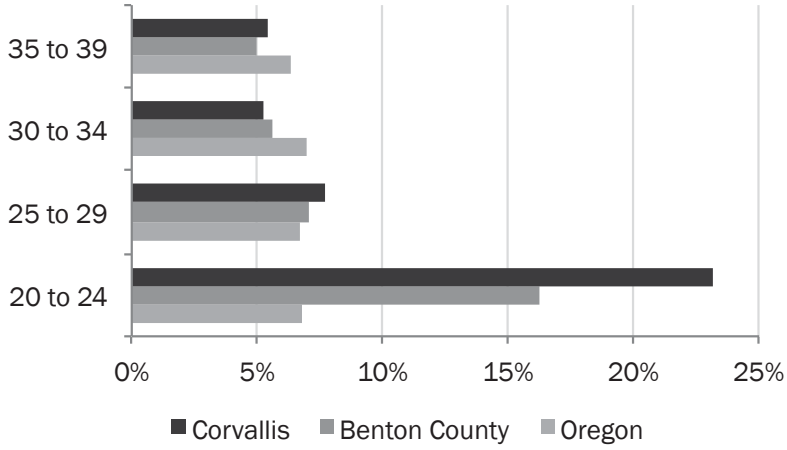
Source: 2011-2013 American Community Survey Table B10001



While Corvallis has an unusually large share of people aged 20 to 24, the city had a smaller percentage of people aged 30 to 39 years old, compared to Oregon.

Exhibit 41. Age Distribution for People Aged 20 to 39 Years Old, 2011-13

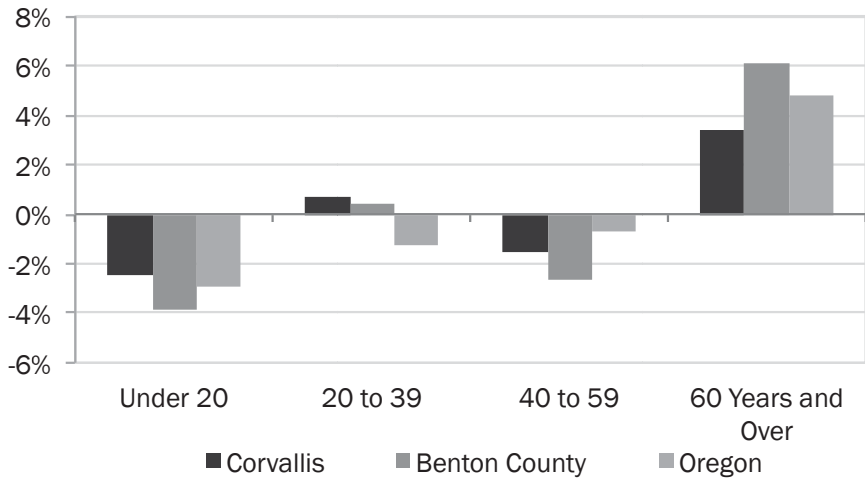
Source: 2011-2013 American Community Survey Table B10001



Between 2000 and the 2011-2013 period, the population of people aged between 20 and 39 grew the most (2,667 people), and the population of people aged 60 Years and Over grew the fastest (a 31% increase).

Exhibit 42. Population by Age, Corvallis, 2000 to the 2011-2013 period

Source: 2011-2013 American Community Survey Table B10001

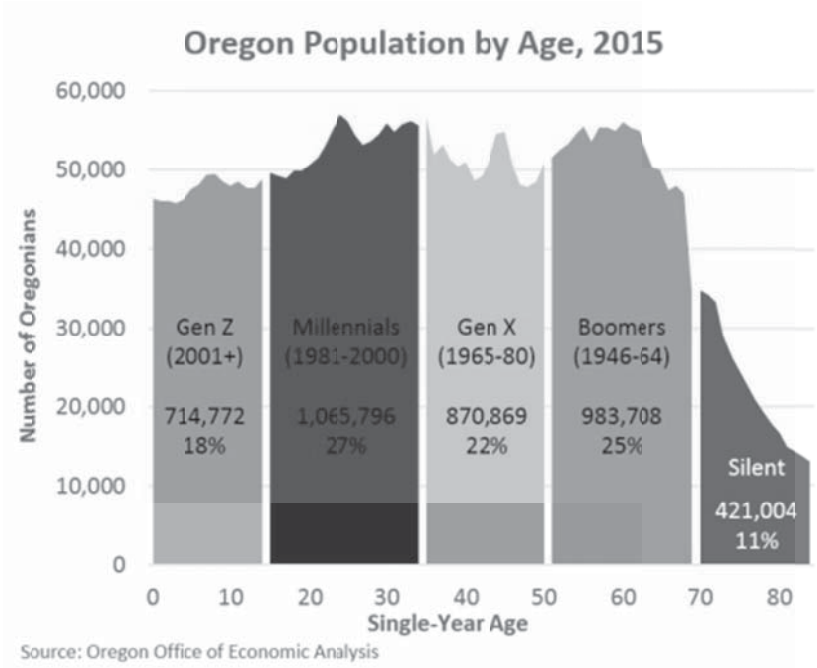


Oregon's largest age groups are the Millennials and the Baby Boomers.

By 2035, Millennials will be between 35 and 54 years old. Baby Boomers will be 71 to 89 years old.

Exhibit 43. Population Distribution by Generation and Age, Oregon, 2015

Source: Oregon Office of Economic Analysis, "Population, Demographics, and Generations" by Josh Lehner, February 5, 2015. http://oregoneconomicanalysis.com/2015/02/05/population-demographics-and-generations/



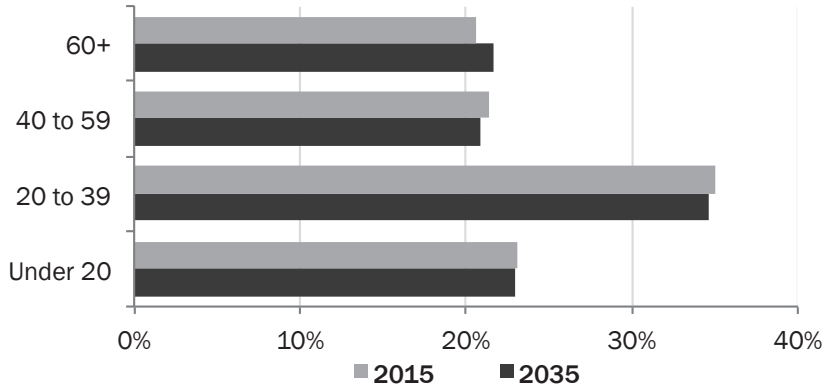
The Oregon Office of Economic Analysis forecasts population growth by age group for each County. The forecast shows that the distribution of population by age group will remain largely the same in Benton County between 2010-2023. The age groups with the largest change will be people 20-39 years old (adding more than 4,400 people) and people 60 years and older (adding more than 3,900 people).

By 2035, residents older than sixty are expected make up a larger share of the population than before 2015.

The share of residents aged 60 years and older will increase its share of the population by about 1%, rising from 21% to 22%, while the share of the population in all other age groups declines slightly.

Exhibit 44. Forecast of Population Growth by Age Group, Benton County, 2015 - 2035

Source: Oregon Office of Economic Analysis, Long-term County Forecast, 2013 Release.



From 2015 to 2035, the population of people aged between 20-39 will grow the most, increasing by over 4,400 people.

Exhibit 45. Fastest-growing Age Groups, Benton County, 2015 - 2035

Source: Oregon Office of Economic Analysis, Long-term County Forecast, 2013 Release.

20-39 Year-Olds	60+ Year-Olds	Under 20 Year Olds
4,444 More People	3,926 More People	3,099 More People
14% Increase	22% Increase	15% Increase

INCREASED ETHNIC DIVERSITY

Corvallis is becoming more ethnically diverse. The Hispanic and Latino population grew from 6% of the city's population in 2000 to 8% of the population in the 2011-2013 period, adding more than 4,339 new Hispanic and Latino residents. Corvallis has a slightly higher percentage of Hispanic and Latino residents than Benton County but lower than the State average.

The U.S. Census Bureau forecasts that at the national level, the Hispanic and Latino population will continue growing faster than non-Hispanic population between 2015 and 2035. The Census forecasts that Hispanic population will grow at about 2% per year over the planning period, compared with average annual growth of 0.4% for non-Hispanic population over the planning period.[33]

Continued growth in the Hispanic and Latino population will affect Corvallis' housing needs in a variety of ways.[34]

- Growth in first and, to a lesser extent, second and third generation Hispanic and Latino immigrants, will increase demand for larger dwelling units to accommodate the, on average, larger household sizes for these households.

  According to a Pew Research Center report on the social and demographic trends of immigrants, Hispanic immigrants have a larger-than-average household size, which decreases from generation to generation. For example, in 2012, first generation Hispanic immigrants had an average household size of 3.5 persons (compared to 3.2 persons for all Hispanics). The average fell to 3.1 persons for second generation households and 2.8 persons for third generation and higher. For comparison, in 2012, the national average household size (including Hispanics and non-Hispanics) was 2.6 persons per household.

  According to the 2010 Decennial Census, the average household size for Hispanic or Latino residents in Corvallis (3 persons per household) was larger than the average size for not Hispanic or Latino residents (2.18 persons per household).

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[33] U.S. Census Bureau, *2014 National Population Projections*. http://www.census.gov/population/projections/data/national/2014.html

[34] The following articles describe housing preferences and household income trends for Hispanic and Latino families, including differences in income levels for first, second, and third generation households. In short, Hispanic and Latino households have lower median income than the national averages. First and second generation Hispanic and Latino households have median incomes below the average for all Hispanic and Latino households. Hispanic and Latino households have a strong preference for homeownership but availability of mortgages and availability of affordable housing are key barriers to homeownership for this group.

Pew Research Center. *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*, February 7, 2013, Appendix 8, http://www.pewsocialtrends.org/2013/02/07/appendix-1-detailed-demographic-tables/.

National Association of Hispanic Real Estate Professionals. *2014 State of Hispanic Homeownership Report*, 2014.

Overall average household size from 2012 1-year American Community Survey, Table B25010.

- As Hispanic and Latino households integrate over generations, household size typically decreases and housing needs become similar to housing needs for all households.
- According to the *State of Hispanic Homeownership* report from the National Association of Hispanic Real Estate Professionals, Hispanics accounted for about 40% of the nation's household formation in 2014. However, despite the substantial growth in the number of new households, homeownership among Hispanics grew slowly, causing the rate of homeownership to fall from 46.1% to 45.4% from 2013 to 2014.

  Respondents to a survey for the report rated affordability as the second most significant barrier to homeownership. Furthermore, about 46% of Hispanic Millennials cited affordability as an impediment to purchasing a home.

  The report also found that Hispanic households are more likely to be family households, comprised of married couples with children, and contain multiple-generations in the same home, such as parents and adult children living together.

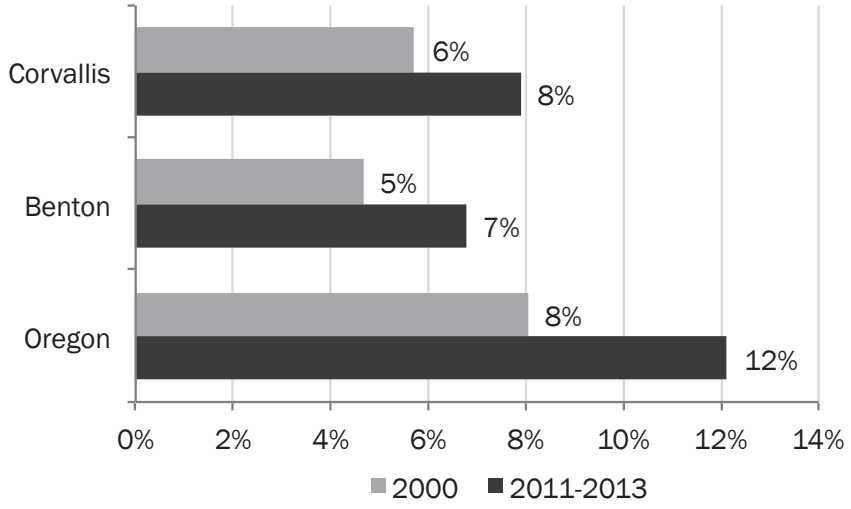
  These housing preferences—affordability and larger household size—will influence the Corvallis housing market as the Hispanic and Latino population continues to grow. [35]

Growth in Hispanic and Latino households will result in increased demand for housing of all types, both for ownership and rentals, with an emphasis on housing that is comparatively affordable.

Corvallis' Hispanic population increased. But, compared to the State as a whole, Corvallis is less ethnically diverse.

Exhibit 46. Hispanic or Latino Population as a Percent of the Total Population, 2000 to 2011-13

Source: 2000 Decennial Census Table P008, 2011-13 ACS Table B03002.



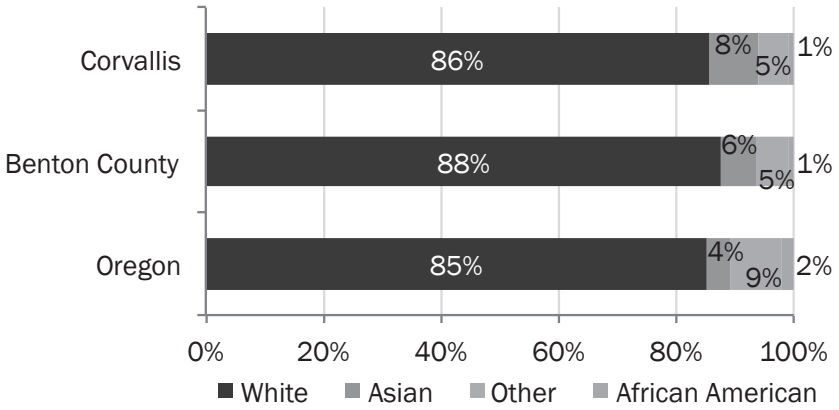
[35] National Association of Hispanic real Estate Professionals, 2014 Sate of Hispanic Homeownership Report, http://nahrep.org/downloads/2014-SHHR.pdf.

RACE

Corvallis's racial composition is similar to that of the county and the state. About 86% of Corvallis's population is White alone, compared to 85% statewide and 88% in Benton County. Asian's are the second largest population group, making up 8% of Corvallis's population.

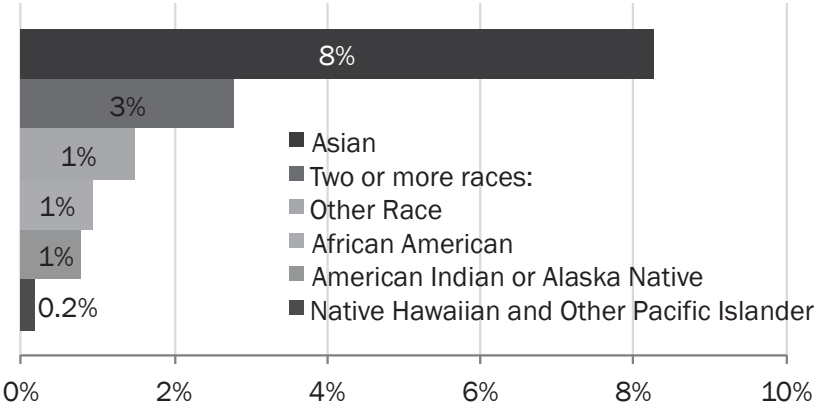
Corvallis's racial composition is similar to that of the county and the state.
Corvallis has a slightly larger white population than the state and a slightly smaller white population than Benton County.

Exhibit 47. Race, Oregon, 2011-13
Source: 2011-13 ACS Table B03002.



Asians are the largest nonwhite racial group in Corvallis with about 8% of the population.

Exhibit 48. Nonwhite Population by Race, Corvallis, 2011-13
Source: 2011-13 ACS Table B03002.



HOUSEHOLD SIZE AND COMPOSITION

Corvallis' household size and composition show that households in the city are somewhat different from the County and Regional averages. Corvallis' households are smaller and a larger percentage of households are nonfamily households.

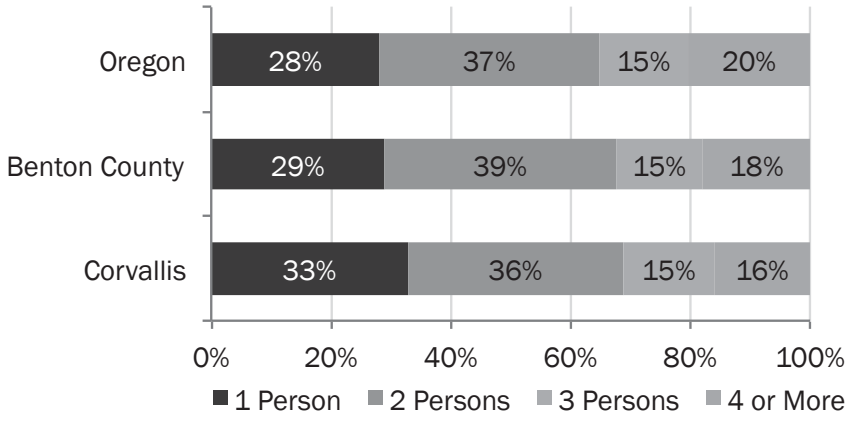
Corvallis' average household size is smaller than Benton County.

Exhibit 49. Average Household Size, Number of Persons per Household, 2011-13
Source: US Census Bureau, 2013 ACS Table B25010.

2.35	2.43	2.51
Corvallis	Benton County	Oregon

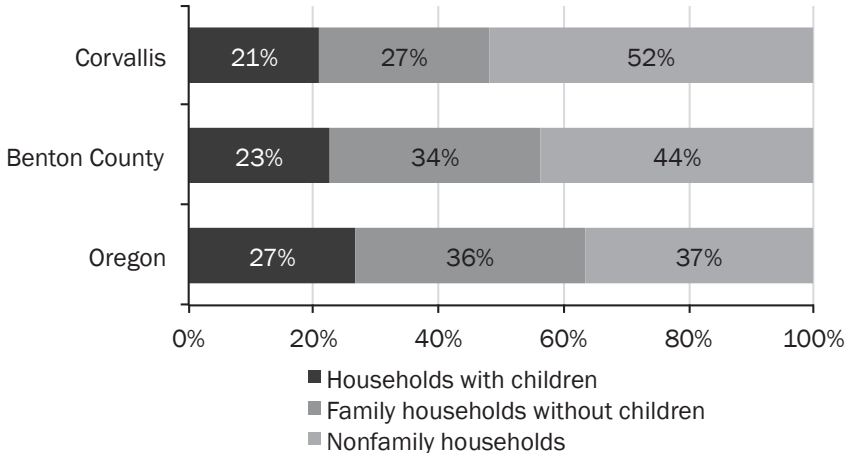
Corvallis has a higher share of one-person households than the county and the state.

Exhibit 50. Household Size, 2011-13
Source: 2011-13 ACS Table B25009.



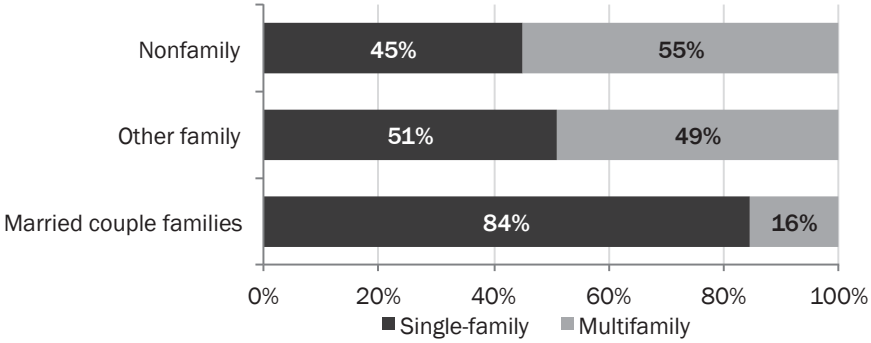
Corvallis has a larger share of nonfamily households than Benton County.

Exhibit 51. Household Composition, 2011-13
Source: 2011-13 ACS Table DP02.



About 55% of nonfamily households live in multifamily structures, while only to 16% of married-couple families do. In comparison to the averages in Oregon, all types of households are more likely to live in multifamily housing in Corvallis. This is likely a reflection of the type of housing available in Corvallis.

Exhibit 52. Units in Structure by Household Type, Corvallis, 2011-13
Source: 2011-13 ACS Table B11011.



INCOME OF CORVALLIS RESIDENTS

Income is one of the key determinants in housing choice and households' ability to afford housing. The Census presents multiple definitions of household income. We analyze household income for two different groups to account for the presence of the student population in the city. We define the two types below: [36]

- **All Households:** The Census Bureau defines all households to include, "the total number of households and families including those with no income." Median household income for this group could include the income for a household with a single 40-year-old professional, or a family of four with two income-earning parents, or a five-person student house, with no income earners. Because Corvallis has a concentration of students, many of whom earn little or no income, the city's median household income is lower than in places with less-prominent student population.
- **Family Households**: This group includes only families. The Census defines a family as "a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption." In addition to students, this group would also exclude some other types of households, such as that of a single adult professional. Neither the household of a single working adult, nor of un-related students, gets counted in this group. Because family income excludes many student households, but counts all family households, it provides insight into average incomes for the non-student population.

Corvallis' median household income was 80% of the State average but median family income was 125% of the State average. This difference in income reflects that fact that Corvallis has a large student population. The types of housing those students can afford, based on income alone, is different than the type of housing that a family in Corvallis can afford.

[36] US Census Bureau, "American Community Survey and Puerto Rico Community Survey 2013 Subject Definitions," http://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2013_ACSSubjectDefinitions.pdf

Corvallis' median household income was below that of the region and state.

Exhibit 53. Median Household Income, 2011-13
Source: US Census Bureau, 2011-13 ACS Table B25119

$39,483	$47,587	$49,519
Corvallis	Benton County	Oregon

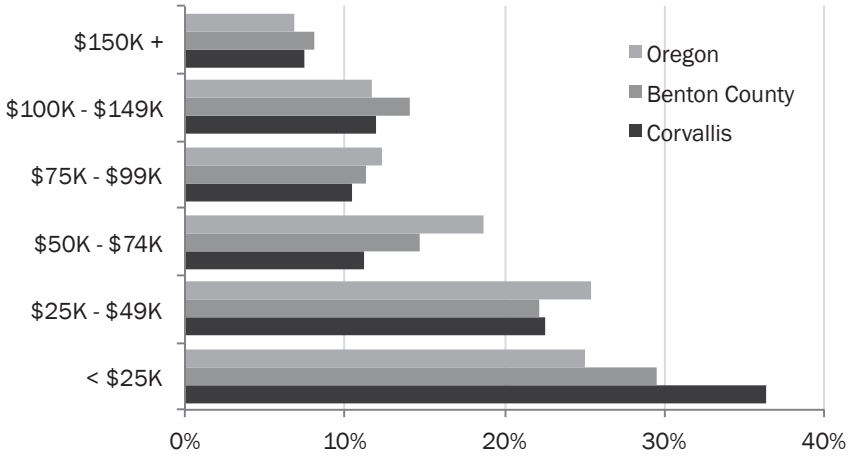
Corvallis' median family income exceeded that of the county and state.

Exhibit 54. Median Family Income, 2011-13
Source: US Census Bureau, 2011-13 ACS Table B19113

$74,596	$74,325	$60,863
Corvallis	Benton County	Oregon

More than a third of Corvallis households earn less than $25,000 per year.

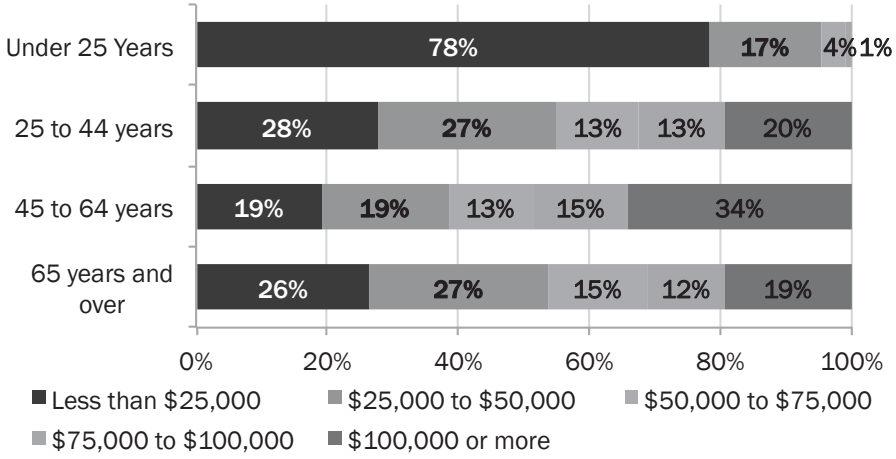
Exhibit 55. Household Income, 2011-13
Source: US Census Bureau, 2011-13 ACS Table B19001



Household income increases as people age, until they reach the age of 65. The median household income for households younger than 25 years old was $11,200 in Corvallis, compared to a State average of $22,600.

Exhibit 56. Household Income by Age of Householder, Corvallis, 2011-13

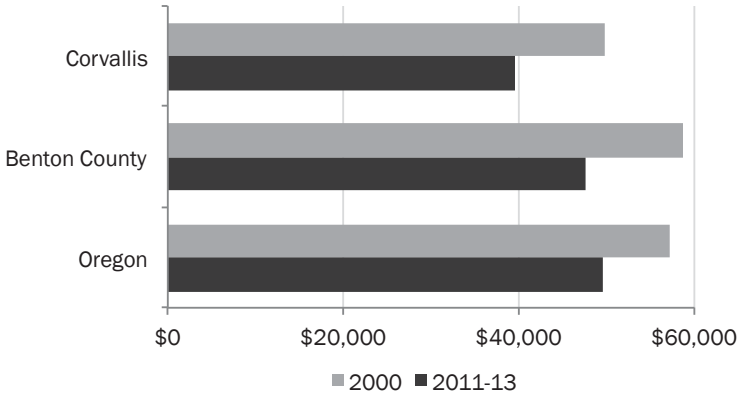
Source: 2011-13 ACS Table B19037.



Adjusting for inflation, Corvallis' median household income decreased by 21% from 2000 to the 2011-2013 period, from $49,809 to $39,483 per year. This trend is consistent with changes in household income for Oregon, where inflation adjusted household decreased by about $7,600.

Exhibit 57. Change in Median Household Income, Oregon, 1999 to 2011-2013, Adjusted for Inflation

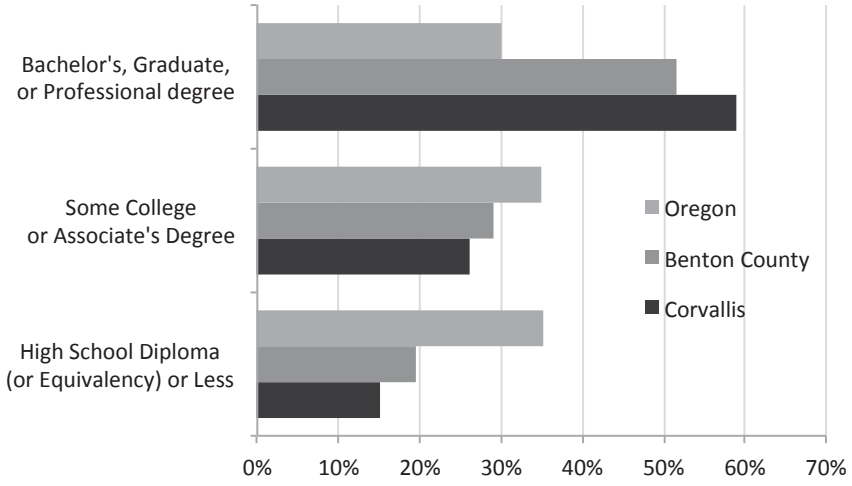
Source: US Census Bureau, 2000 Decennial Census, Table HCT012, 2011-13 ACS Table B25119



EDUCATIONAL ATTAINMENT

Corvallis has a larger share of college-educated residents (59%) than Benton County (51%), and the state (30%).

Exhibit 58. Educational Attainment, 2011-13
Source: US Census Bureau, 2013 ACS Table B15003



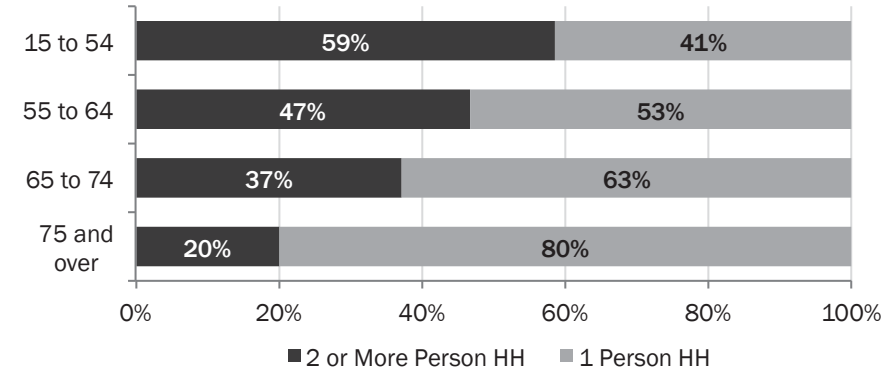
RELATIONSHIP BETWEEN AGE AND HOUSEHOLD CHARACTERISTICS

This section shows the relationships between householder age and household characteristics. The American Community Survey provides more age detail for some of these characteristics (e.g., tenure) than other characteristics (e.g., household size or structure type).

Broadly speaking, household size decreases with age, especially after 65 years old, homeownership increases (with the increases in income shown in Exhibit 56), and older households are more likely to live in single-family housing.

Household size in Corvallis changes with age, consistent with statewide trends.

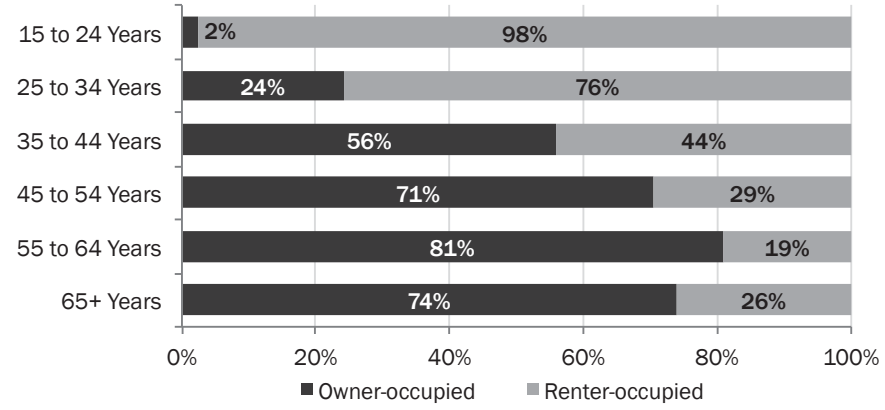
Exhibit 59. Households by Size and Age of Householder, Corvallis, 2011-13
Source: 2011-13 ACS Table B25116.



Housing tenure in Corvallis changes with age, consistent with statewide trends. Most householders younger than 25 live in renter-occupied housing, while most householders older than 35 live in owner-occupied housing.

Exhibit 60. Households by Tenure and Age of Householder, Corvallis, 2011-13

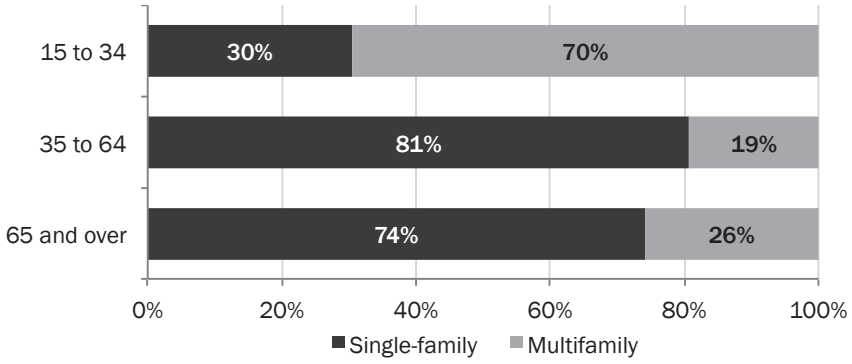
Source: US Census Bureau, 2011-13 ACS Table H17.



Householders younger than 35 are more than three times as likely to live in multifamily housing than householders aged between 35 and 64. About 70% of householders aged 15 to 34 live in multifamily housing, compared to just 19% of 35 to 64 year olds.

Exhibit 61. Units in Structure by Age, Corvallis, 2011-13

Source: 2011-13 ACS Table B25125.

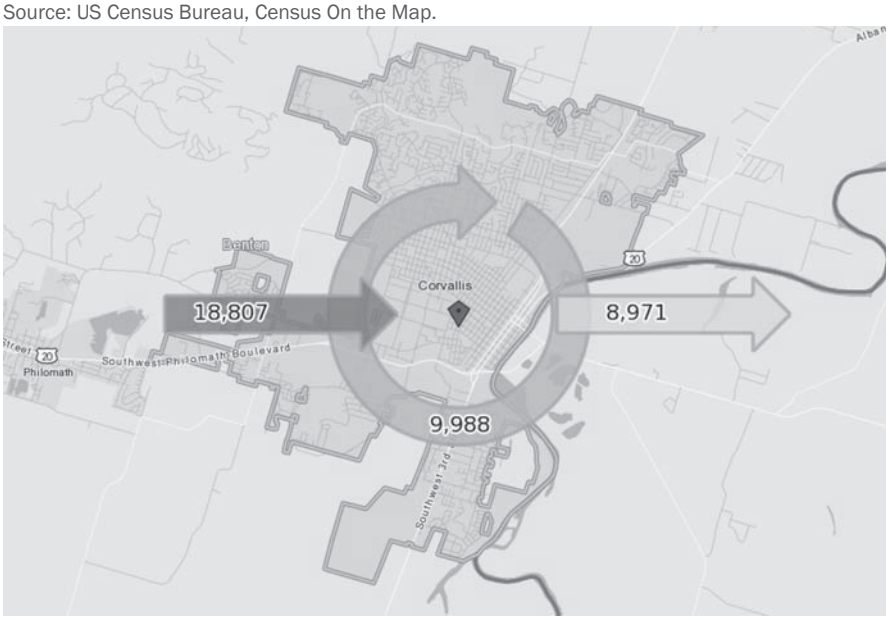


Commuting Patterns

Commuting plays an important role in Corvallis' economy because employers in Corvallis are able to access workers from people living in the city, as well as the broader Willamette Valley. In the 2011-2013 period, about 52% percent of Corvallis residents have a commute of less than 15 minutes compared to 44% of Benton County residents and 33% of Oregon residents.

Corvallis is part of an interconnected regional economy.
Fewer people both live and work in Corvallis than combined commute into or out of the city.

Exhibit 62. Commuting Flows, Corvallis, 2013
Source: US Census Bureau, Census On the Map.



About 35% of all people who work in Corvallis, also live in Corvallis.
About 70% of Corvallis workers live in either Benton or Linn County (52% in Benton and 18% in Linn).

Exhibit 63. Places Where Corvallis Workers Lived, 2013
Source: US Census Bureau, Census On the Map.

35%	12%	3%	2%	52%	18%
Corvallis	Albany	Philomath	Portland	Benton County	Linn County

About 53% of Corvallis residents also work in Corvallis.
About 69% of Corvallis residents work in either Benton or Linn County (59% in Benton and 10% in Linn).

Exhibit 64. Places Where Corvallis Residents were Employed, 2013
Source: US Census Bureau, Census On the Map.

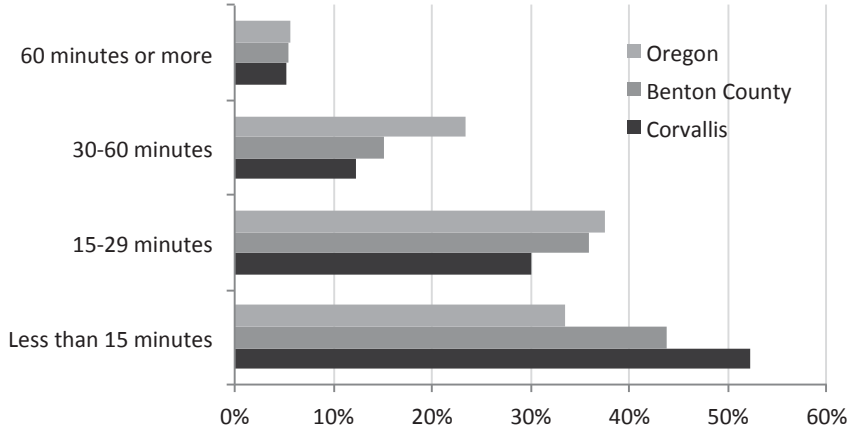
53%	7%	4%	4%	59%	10%
Corvallis	Albany	Portland	Salem	Benton County	Linn County

A larger percentage of Corvallis residents have a commute time of less than 15 minutes than in the state and region as a whole.

About 52% of Corvallis residents have a commute of less than 15 minutes, compared to 44% in Benton County, and just 33% in Oregon.

Exhibit 65. Commute Times, Oregon, Benton County, and Corvallis, 2011-13

Source: US Census Bureau, 2011-2013 ACS B08303



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

Step 3: Describe the demographic characteristics of the population and, if possible, housing trends that relate to demand for different types of housing

The purpose of the analysis thus far has been to provide background on the kinds of factors that influence housing choice, and in doing so, to convey why the number and interrelationships among those factors ensure that generalizations about housing choice are difficult to make and prone to inaccuracies.

There is no question that age affects housing type and tenure. Mobility is substantially higher for people aged 20 to 34. People in this age group will also have, on average, less income than people who are older. They are less likely to have children. All of these factors mean that younger households are much more likely to be renters, and renters are more likely to be in multifamily housing.

The data illustrate what more detailed research has shown and what most people understand intuitively: life cycle and housing choice interact in ways that are predictable in the aggregate; age of the household head is correlated with household size and income; household size and age of household head affect housing preferences; income affects the ability of a household to afford a preferred housing type. The connection between socioeconomic and demographic factors and housing choice is often described informally by giving names to households with certain combinations of characteristics: the "traditional family," the "never-marrieds," the "dinks" (dual-income, no kids), the "empty nesters."[37] Thus, simply looking at the long wave of demographic trends can provide good information for estimating future housing demand.

One is ultimately left with the need to make a qualitative assessment of the future housing market. The following is a discussion of how demographic and housing trends are likely to affect housing in Corvallis over the next 20 years:

- **Growth in housing will be driven by growth in population.** Between 2000 and 2014 Corvallis' population (within its city limits) grew by more than 7,200 people (15%). The population within Corvallis UGB is expected to grow by 9,469 people (16%) between 2016 and 2036, with 9,045 of the population growth within the city limits and 424 person growth in the area between the city limits and UGB.
- **On average, future housing will look a lot like past housing.** That is the assumption that underlies any trend forecast, and one that allows some quantification of the composition of demand for new housing.
- **OSU students will continue to impact Corvallis' housing market.** The impact of students on Corvallis' housing market will depend, in part, on whether OSU builds enough new dormitory rooms to accommodate student growth. OSU is forecasting that

[37] See *Planning for Residential Growth: A Workbook for Oregon's Urban Areas* (June 1997).

the student enrollment in Corvallis will grow to 27,000 students by about 2023. OSU plans to build 250 to 300 additional beds of University housing by 2020. Plans for additional University housing are not available at this point. If that forecast holds true, then students will account for about one-third of new population and one-quarter to one-third of new housing demand in Corvallis. Most households under 25 years old have income of $25,000 or less. The majority of households under 25 years old are OSU students. Although students have access to money beyond income, student households are likely to compete with lower-income households in Corvallis for affordable housing.

- **Corvallis will have demand for additional smaller units and more diverse housing types.** The demographic trends suggest that there will be an increase in demand for more affordable housing, such as smaller average house and lot sizes for single-family housing.

  Key demographic and economic trends that will affect Corvallis' future housing needs are: (1) the aging of the Baby Boomers, (2) aging of the Millennials, (3) continued growth in Hispanic and Latino population, and (4) accommodating student housing.

  - *The Baby Boomer's population is continuing to age.* By 2035, people 60 years and older will account for 22% of the population in Benton County (up from 21% in 2015). The changes that affect Corvallis' housing demand as the population ages are that household sizes decrease and homeownership rates decrease.
  - *Millennials will continue to age.* By 2035, Millennials will be roughly between 35 and 55 years old. As they age, generally speaking, their household sizes will increase and homeownership rates will peak by about age 55. Between 2016 and 2036, Millennials will be a key driver in demand for housing for families with children. Ensuring that there are opportunities for developing housing that is affordable to Millennials will be important for workforce development in Corvallis, with the community's emphasis on entrepreneurship and growing local companies. Start-up companies often have younger employees.
  - *Student housing demand will continue to grow.* Over the last few years, students have shown the willingness (and ability to pay) for housing costing $650 to $800 or more per person, per month. This has driven growth in privately-owned multifamily (and townhouse) student housing growth in Corvallis. In addition, some students continue to choose to live in privately-owned housing, such as several students living together in a single-family house or in multifamily housing. Continued growth in students (although slower than growth since 2000) will result in continued demand for student housing for the relatively more affordable housing in Corvallis.
  - *Hispanic and Latino population will continue to grow.* The U.S. Census projects that by about 2040, Hispanic and Latino populations will account for one-quarter of the nation's population. The share of Hispanic and Latino populations in the western U.S. is likely to be higher. Hispanic and Latino populations already account for about 8% of Corvallis' population. In addition, Hispanic and Latino

populations are generally younger than the U.S. average, with many Hispanic and Latino people belonging to the Millennial generation.

Hispanic and Latino population growth will be an important driver in growth of housing demand, both for owner and renter-occupied housing. Growth in Hispanic and Latino populations will drive demand for housing for families with children. Given the lower median income for Hispanic and Latino households, especially first generation immigrants, growth in this group will also drive demand for affordable housing, both for ownership and renting.[38]

In summary, an aging population, increasing housing costs, housing affordability concerns for Millennials and the Hispanic and Latino populations, and other variables are factors that support the conclusion of need for smaller and less expensive units and a broader array of housing choices. Millennials and immigrants will drive demand for affordable housing types, including demand for small, affordable single-family units (many of which may be ownership units) and for affordable multifamily units (many of which may be rental units).

- **No amount of analysis is likely to make the distant future completely certain: the purpose of the housing forecasting in this study is to get an approximate idea about the future so policy choices can be made today.** Economic forecasters regard any economic forecast more than three (or at most five) years out as highly speculative. At one year, one is protected from being disastrously wrong by the sheer inertia of the economic machine. But a variety of factors or events could cause growth forecasts to be substantially different.

[38] The following Pew articles describe national housing preferences and household income trends for Hispanic and Latino families and immigrants, including differences in income levels for first, second, and third generation households. In short, Hispanic and Latino households have a lower median income than the national average. First and second generation Hispanic and Latino households have median incomes below the average for all Hispanic and Latino households. Hispanic and Latino households have a strong preference for homeownership but availability of mortgages and availability of affordable housing are key barriers to homeownership for this group. These demographic characteristics apply to Corvallis as well as the nation.

Pew Research Center. *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*, February 7, 2013, Appendix 8, http://www.pewsocialtrends.org/2013/02/07/appendix-1-detailed-demographic-tables/.

National Association of Hispanic Real Estate Professionals. *2014 State of Hispanic Homeownership Report*, 2014.

Step 4: Determine the types of housing that are likely to be affordable to the projected households based on household income

This section describes changes in sales prices, rents, and housing affordability in Corvallis and across the region since 2000. The key findings in this section are:

- **Homeownership is increasingly expensive in Corvallis.** Sales prices for housing in Corvallis increased substantially over the 2000 to 2015 period, consistent with national trends. Corvallis' housing price doubled over the 15-year period, compared with a 75% increase in Eugene and 67% increase in Albany.

  Corvallis' housing prices plateaued between 2007 and 2012, remaining fairly stable during the 2007-2009 Recession. In contrast, housing prices in other cities in the Region decreased by 14% to 23% during the Recession.

  Homeownership costs grew faster than incomes since 2000. The median value of a house in Corvallis increased from 4.4 times the median household income in 2000 to 6.9 times the median household income in 2011-2013. In comparison, the median value of a house in Oregon increased from 3.6 to 4.6 times the median household income between 2000 and 2011-2013.

  The sharp increase in housing costs contrasts with the decrease in median household income (adjusted for inflation), making homeownership in Corvallis housing less affordable in 2015 than it was in 2000. While some of this change can be attributed to the rapid growth in student population (which likely decreased the median household income), most of this change is attributable to increases in housing price.

  One of the key findings of the *Corvallis Housing Survey*[39] was that some of the people who work at businesses in Corvallis but do not live in Corvallis do so because housing is more expensive in Corvallis. This finding about change in housing price in Corvallis is consistent with the reasons that survey respondents gave for not purchasing homes in Corvallis.

- **Rent costs grew faster than income in Corvallis, from 20% of median household income in 2000 to 25% in the 2011-2013 period.** This trend is consistent with increases in rent costs, relative to income, across Oregon. Although increases in rent outpaced increase in income, rental costs grew at a slower rate than housing sales prices.

[39] In 2014, ECONorthwest conducted a survey of workers at businesses in Corvallis who live outside of Corvallis. One purpose of the survey was to understand why some people chose to not to live in Corvallis. This survey is summarized in the report: *Corvallis Housing Survey: Attitudes of Individuals Who Work in Corvallis and Live outside the City Limits,* November 2014.

The very low vacancy rate in rentals (around 1 to 2% vacancy) and the relatively large share of multifamily housing that was permitted between 2000 and 2015 suggest that Corvallis' rental market is very competitive and that Corvallis has more demand for rentals than supply of rentals. Students account for a large share of Corvallis renters and the growth in student population drove demand for rentals since 2000.

- **Nearly half of Corvallis' households have affordability problems (cost burdened).** More than half of renters and one-fifth of homeowners have affordability problems, consistent with State trends. While 40% of Oregon's households have affordability problems, 46% of Corvallis' households and 47% of Eugene's households were cost burdened. Both cities had higher rates of cost burden, probably as a result of the large number of college students living in the cities.

  A household in Benton County must earn at least $15.83 per hour ($33,000 per year) to afford a two-bedroom dwelling at Fair Market Rents ($823 per month in 2015). Nearly 45% of Corvallis' households earn less than $15.83 per hour.

  Future housing affordability will depend on the relationship between income and housing price. The key question, which is difficult to answer based on historical data, is whether housing prices will continue to outpace income growth.

Changes in housing costs

Corvallis' housing sales prices are relatively high, with a median sales price of $295,411 in August 2015, compared to prices in Benton County and other cities in the Willamette Valley below Portland. Corvallis' housing prices tended to stay above housing prices in cities like Salem, Eugene, and Albany, and were notably less affected by the recession.

Corvallis' median home sales price was above the average in Benton County and other cities in the Mid and Southern Willamette Valley.

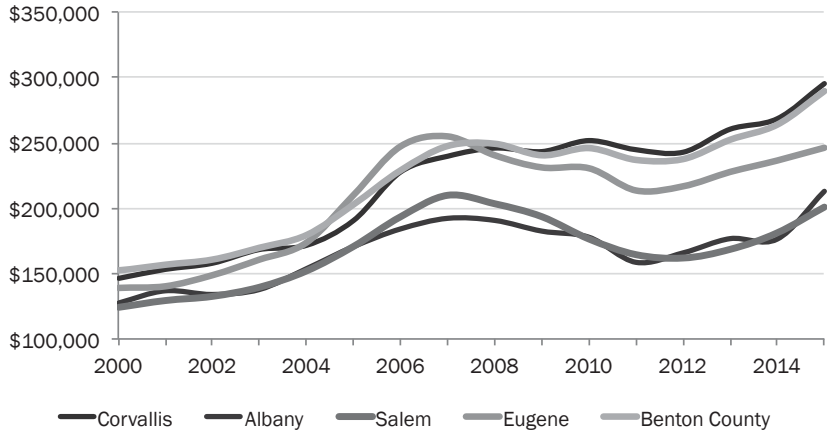
While home sale prices in Corvallis fell slightly and growth slowed somewhat after the recession, prices in the city bore less of a shock than in other cities in the Willamette Valley such as Eugene, Salem and Albany.

Median sales prices in Corvallis were above the 2010 peak by 2013, in contrast to other cities in the region.

Exhibit 66. Median Home Sale Price, August 2015
Source: Zillow Real Estate Research

$295K	$290K	$246K	$213K	$201K
Corvallis	Benton County	Eugene	Albany	Salem

Exhibit 67. Median Sales Price, 2000-August 2015
Source: Zillow Real Estate Research



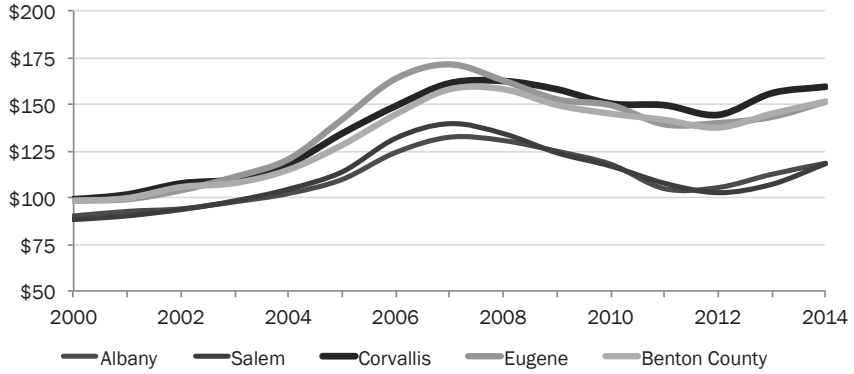
Corvallis' median home sales price per square foot was also above regional averages. This shows that housing in Corvallis is more expensive than in other parts of the Mid and Southern-Willamette Valley regardless of the size of the house.

Exhibit 68. Median Home Sale Price per Square Foot, August 2015
Source: Zillow Real Estate Research

$173	$163	$162	$130	$132
Corvallis	Benton County	Eugene	Albany	Salem

Corvallis' median sales price per square foot has grown since the recession, and in 2015 passed the pre-recession peak. In August 2015, Corvallis' median home sale price per square foot was $173.

Exhibit 69. Median Sales Price per Square Foot, 2000-2014
Source: RMLS



Housing costs have increased faster than income since 2000. The median value of a house in Corvallis was 4.35 times the median household income in 2000, growing to 6.86 by the 2011-2013 period. The change in housing value compared to income was larger in the city of Corvallis than in the region.

Exhibit 70. Ratio of Housing Value to Income (Median to Median), 2000 to 2011-13[40]
Source: 2000 Decennial Census Tables HCT012 and H085, and 2013 ACS Tables B19013 and B25077

2000	4.35 Corvallis	3.98 Benton County	3.57 Oregon
2011-13	6.86 Corvallis	5.69 Benton County	4.62 Oregon

[40] This ratio compared the median value of housing in Corvallis to the overall median household income. Inflation-adjusted median owner values in Corvallis increased from $216,317 in 2000 to $270,800 in 2011-13. Over the same period, median income decreased from $49,749 to $39,483.

Rental Costs

American Community Survey data shows that rent costs in Corvallis are slightly above those of the county, but below the state median.

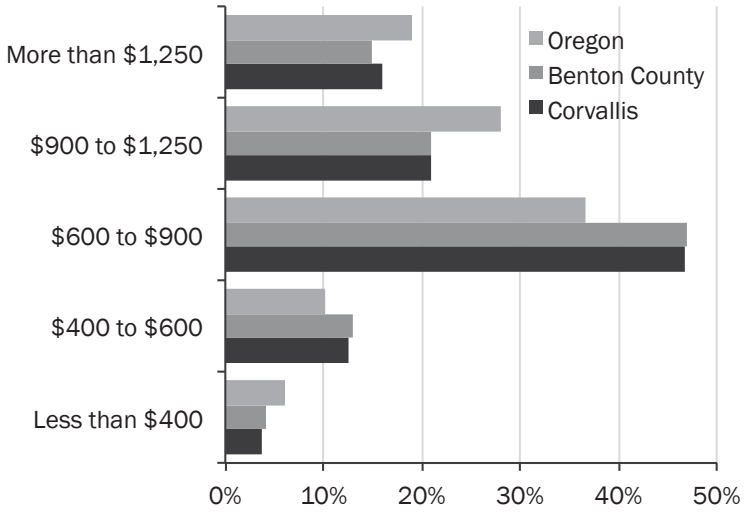
Median gross rent in Corvallis was $825 in the 2011-13 period.

Exhibit 71. Median Gross Rent, 2011-2013
Source: US Census Bureau, 2011-13 ACS Table B25064

$825	$818	$877
Corvallis	Benton County	Oregon

About 47% of Corvallis renters pay between $600 and $900.
Compared to the state, Corvallis has a smaller share of residents that pay more than $900 for rent—37% in Corvallis, compared to 47% in the state.

Exhibit 72. Gross Rent, 2011-13
Source: 2011-13 ACS Table B25063.
Note: This analysis includes renter-occupied housing units with cash rent i.e. those with no cash rent were excluded from this analysis.



Rental costs have increased faster than income since 2000.
The median gross rent for housing was 20% of the median household income in 2000 and 25% by the 2011-2013 period. The change in rent costs compared to income was larger in Corvallis than in the region.

Exhibit 73. Gross Rent Costs to as a Percentage of Income (Median to Median), 2000 to 2011-13[41]
Source: 2000 Decennial Census Tables H063 and H085, and 2013 ACS Tables B19013 and B25064

2000	20% Corvallis	17% Benton County	18% Oregon
2011-13	25% Corvallis	21% Benton County	21% Oregon

[41] This ratio compared the median value of housing in Corvallis to the median household income. Inflation-adjusted median owner values in Corvallis increased from $216,317 in 2000 to $270,800 in 2011-13. Over the same period, median income decreased from $87,057 to $78,830.

A rent survey conducted by the OSU School of Public Policy for Willamette Neighborhood Housing Services in 2012 showed:[42]

- The mean rent in Corvallis was $1,043.
- Most rentals were two-bedroom units (mean rent of $777) or three-bedroom units (mean rent of $1,162). The mean rent for a one-bedroom unit was $566.
- Mean rent increased with the number of bedrooms, from $1,579 for four-bedrooms to $1,973 for five-bedroom units.
- Rent prices are generally higher near OSU but some areas further from the University had moderately high rental costs.
- Rent was lower in surrounding cities, with rent generally decreasing with greater distance from Corvallis.

[42] *Corvallis Area Rental Market Analysis*, OSU School of Public Policy, June 2012

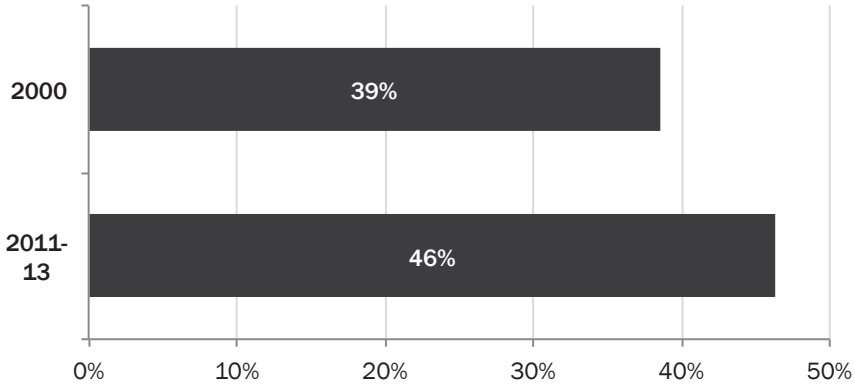
Housing Affordability

A typical standard used to determine housing affordability is that a household should pay no more than a certain percentage of household income for housing, including payments and interest or rent, utilities, and insurance. HUD guidelines indicate that households paying more than 30% of their income on housing experience "cost burden," and households paying more than 50% of their income on housing experience "severe cost burden." Using cost burden as an indicator is consistent with the Goal 10 requirement to provide housing that is affordable to all households in a community.

More than 45% of Corvallis households are cost burdened. Two thirds of renter households are cost burdened, compared with about 25% of homeowners. Cost burden rates in Corvallis are higher than in Benton County, and the statewide average.

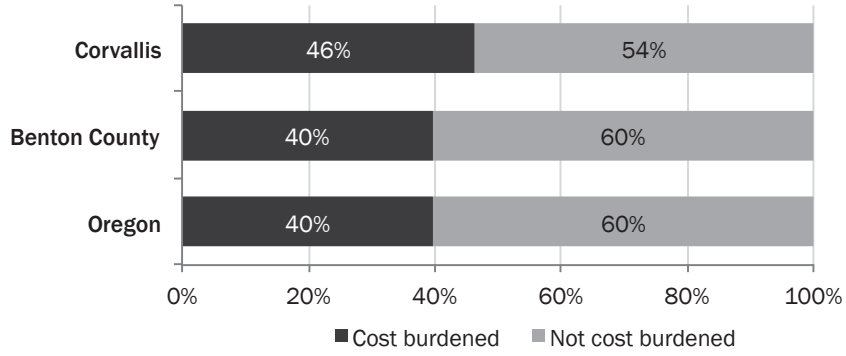
The percentage of cost burdened households in Corvallis increased from 39% (6,999 households) in 2000 to 46% (9,288 households) in the 2011-13 period.
The 8% increase was higher than the 6% increase in Benton County.

Exhibit 74. Housing Cost Burden, Corvallis, 2000 to 2011-13
Source: US Census Bureau, 2000 Decennial Census Tables H069 and H094, 2013 ACS Tables B25091 and B25070.



More than 45% of all households in Corvallis are cost burdened.
The percentage of cost burdened households in Corvallis is 6% higher than in Benton County and Oregon.

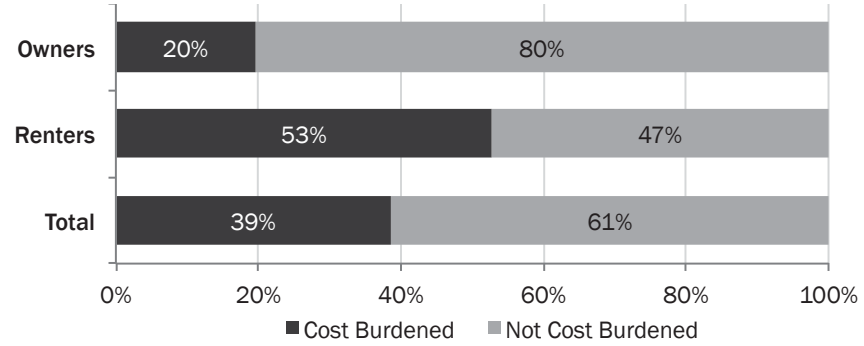
Exhibit 75. Housing Cost Burden, Corvallis, Benton County, Oregon 2011-13
Source: US Census Bureau, 2013 ACS Tables B25091 and B25070.



Cost burden varies by tenure, with renters cost burdened more frequently than homeowners. One reason for higher cost burden rates among renters is that renters are more likely to have lower incomes on average, compared to homeowners. Renters generally have less income available to spend on housing than homeowners.

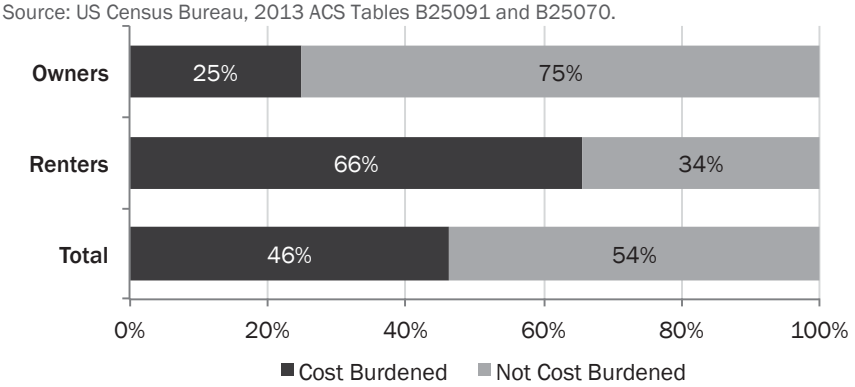
In 2000, 20% of homeowners were cost burdened, compared to 53% of renters, and 39% of all households.

Exhibit 76. Housing Cost Burden by Tenure, Corvallis, 2000
Source: US Census Bureau, 2000 Decennial Census, Tables H069 and H094.



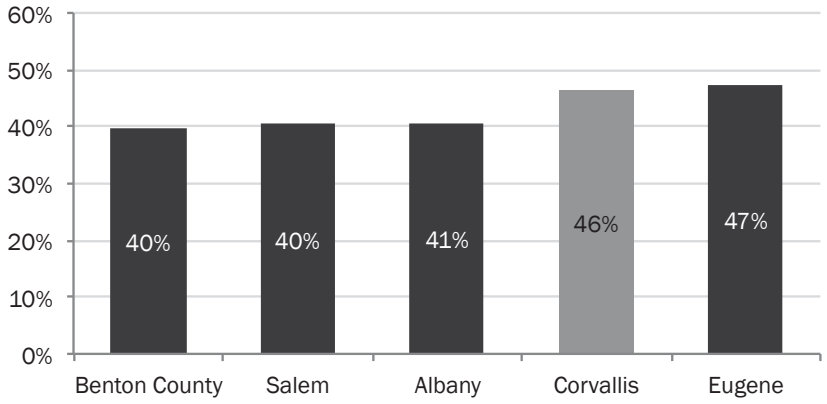
In 2013, about 25% of owners were cost burdened while about two thirds of renters cost burdened.

Exhibit 77. Housing Cost Burden by Tenure, Corvallis, 2011-13
Source: US Census Bureau, 2013 ACS Tables B25091 and B25070.



Corvallis has a higher percentage of cost burdened homes than the county, Salem, and Albany, but a lower share than Eugene.

Exhibit 78. Housing Cost Burden, Willamette Valley Geographies, 2011-13
Source: 2011-13 ACS Tables B25091 and B25070.



While cost burden is a common measure of housing affordability, it does have some limitations. Two important limitations are:

- A household is defined as cost burdened if the housing costs exceed 30% of their income, regardless of actual income. The remaining 70% of income is expected to be spent on non-discretionary expenses, such as food or medical care, and on discretionary expenses. Households with higher income may be able to pay more than 30% of their income on housing without impacting the household's ability to pay for necessary non-discretionary expenses.
- Cost burden compares income to housing costs and does not account for accumulated wealth. As a result, the estimate of how much a household can afford to pay for housing does not include the impact of accumulated wealth on a household's ability to pay for housing. For example, a household with retired people may have relatively low income but may have accumulated assets (such as profits from selling another house) that allow them to purchase a house that would be considered unaffordable to them based on the cost burden indicator.

Cost burden is only one indicator of housing affordability. Another way of exploring the issue of financial need is to review housing affordability at varying levels of household income.

Fair Market Rent[43] for a 2-bedroom in Benton County apartment is $823.

Exhibit 79. HUD Fair Market Rent (FMR) by Unit Type, Benton County, 2015
Source: U.S. Department of Housing and Urban Development

$490	$628	$823	$1,213	$1,458
Studio	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom

A household must earn at least $15.83 per hour to afford a two-bedroom unit in Benton County.

Exhibit 80. Affordable Housing Wage, Benton County, 2015
Source: U.S. Department of Housing and Urban Development; Oregon Bureau of Labor and Industries

$15.83/hour
Affordable Housing Wage for two-bedroom Unit in Benton County

[43] Fair Market Rent is determined by the U.S. Department of Housing and Urban Services (HUD). It is the 40th percentile of gross rents for typical, non-substandard rental units occupied by recent movers in a local housing market.

One way to evaluate housing affordability is to consider the types of housing affordable at different levels of income. The median family income (MFI)[44] in the Benton County Region was $78,600 in 2015.

More than one third of Corvallis households have income of less than $23,580 and cannot afford a two-bedroom apartment at Benton County Fair Market Rent (FMR) of $823.

About half of Corvallis' households with income of less than $25,000 are under 25 years old and most are likely students at OSU.

Exhibit 81. Financially Attainable Housing, by Median Family Income (MFI) for Benton County ($78,600), Corvallis, 2015

Source: U.S. Department of Housing and Urban Development
US Census Bureau, 2013 ACS Table B19001

% of Ben Co. MFI	<30%	30%-50%	50%-80%	80%-120%	>120%
Annual Income	<$23,580	$23,580-$39,300	$39,300 - $62,880	$62,880-$78,600	>$94,320
Monthly Affordable Housing Cost	<$590	$590-$983	$983-$1,572	$1,572-$2,358	>$2,358
Percent of Corvallis House-holds	34%	16%	14%	8%	28%
Attainable Owner Housing Types	None	Mfg. in parks	Townhome Duplex Mfg on lot	Townhome Single-family house	All housing types
Attainable Renter Housing Types	Subsidized Apartment	Apartment Mfg. in parks Duplex	Apartment Townhome Single-family house	Most Single-family houses	All housing types

[44] HUD determines the median family income (MFI) in each county or urban areas of the nation.

The following table compares the income of households in Corvallis with housing available and affordable in each income range, based on Census data.

Corvallis currently has a deficit of housing affordable to households earning less than $25K and for households earning more than $50K to $75K.

About half of the deficit of housing for households with income of less than $25,000 is associated with renter households. That means the deficit of housing for households with income of less than $25,000 who are year-round residents of Corvallis is closer to 2,000 to 2,500 households.

Exhibit 82. Rough Estimate of Housing Affordability, Corvallis, 2015

Source: US Census Bureau, 2011-2013 ACS Tables 19001, 25075, 25063

Annual Income	<$25K	<$25K-$50K	<$50K-$75K	<$75K-$100K	>$100k
HH in Corvallis[45]	7,684 36%	4,766 23%	2,369 11%	2,214 10%	4,115 19%
Est. of Number of Owner Units in Corvallis[46]	696	316	916	1,965	5,662
Est. of Number of Renter Units in Corvallis[47]	2,227	7,512	1,321	433	100
Does Corvallis Have Enough Units?	**No Deficit: 4,761 units**	Yes Surplus: 3,062 units	**No Deficit: 132 units**	Yes Surplus: 184 units	Yes Surplus: 1,647 units

[45] The number of households in Corvallis was determined using American Community Survey data (Table B19001) and grouping households into the income ranges shown in the table. For example, Corvallis has 4,766 households with income between $50,000 and $74,999.

[46] The estimated number of owner households who can afford (assuming that households pay no more than 30%of their income on owner costs) housing in this price range is based on American Community Survey data (Table B25075). For example, a household with income between $50,000 and $74,999 can afford a dwelling with a value between $125,000 and $187,500. The American Community Survey data shows that approximately 316 owner-occupied dwelling units have a value in this range.

[47] [47] The estimated number of renter households who can afford (assuming that households pay no more than 30%of their income on rent) housing in this price range is based on American Community Survey data (Table 25063). For example, a household with income between $50,000 and $74,999 can afford monthly rent of between $1,250 and $1,875. The American Community Survey data shows that approximately 7,512 renter-occupied dwelling units have a value in this range.

Step 5: Determine the needed housing mix and density ranges for each plan designation and the average needed net density for all structure types

Exhibit 83 presents a forecast of new housing in Corvallis' UGB for the 2016-2036 period, consistent with the requirement for a projection of needed housing in OAR 660-008-0005(4). This section determines the needed mix and density for new housing developed over this 20-year period in Corvallis.

Exhibit 83 shows that in the future the need for new housing developed in Corvallis will continue to include a wide range of housing, including housing types that are more affordable, with some housing located in walkable areas with access to services.

- Demographic changes suggest continued demand for multifamily and single-family attached housing. The key demographic trends that will affect Corvallis' future housing needs are: (1) the aging of the Baby Boomers, (2) aging of the Millennials, (3) growth of OSU student population, and (4) continued growth in the Hispanic and Latino population. The prior sections describe the impacts of these changes on Corvallis' housing need. In short, Corvallis will continue to need a range of housing types, at a range of densities, to meet the needs of the changing demographics in Corvallis.
- In the 2011-13 period, about 46% of Corvallis' households have affordability problems, suggesting a need for more affordable housing types. More than 46% of Corvallis' households could not afford a two-bedroom apartment at HUD's fair market rent level of $823. While many of Corvallis' lower-income households are students, some are also lower-income year-round households.

  For example, a household earning median family income ($78,600) could afford a home valued up to about $235,000, which is below the median sales price for single-family housing of about $295,000 in Corvallis. To the extent that denser housing types are more affordable than larger housing types, continued increases in housing costs will increase demand for denser housing.
- Some people who work in Corvallis but live outside of the city would choose to move to Corvallis if housing was available and affordable. These households are more likely to need smaller, more affordable housing types, such as townhouses or multifamily housing. The Corvallis Housing Survey showed that about half of the people surveyed who work at businesses in Corvallis but do not live in Corvallis, would consider moving into Corvallis. The primary reason these respondents do not live in Corvallis is housing cost: They have a difficult time finding both rental and ownership housing that is affordable for low and moderate-income households. In addition, some moderate-income households choose to live outside of Corvallis because they can purchase a larger dwelling (often with a larger yard) for the same cost as smaller-scale

housing in Corvallis.[48] This suggests that Corvallis needs more rental housing and a wider range of ownership opportunities. The need for rental housing is more likely to be addressed through development of multifamily and townhouses.

The analysis in this report (summarized above) shows that in Corvallis, the city needs to grow housing of all types but particularly needs an increase in housing that is relatively affordable, both market-rate affordable housing and government-subsidized affordable housing. The types of housing that will be more affordable over time are smaller-scale single-family detached, townhouses, and multifamily housing. The mix in Exhibit 83 is consistent with continued development of a range of housing types over the 20-year period.

Exhibit 83 presents the forecast of new needed housing in Corvallis by type of housing. The basis for the determination of needed housing mix in Corvallis is:

- Historical mix of housing in Corvallis, which is 51% single-family detached, 6% single-family attached, and 44% multifamily housing.[49]
- Demographic

Exhibit 83. Forecast of needed housing by housing type, Corvallis UGB, 2016 to 2036

Variable	Mix of New Housing Units (2016-2036)
Total new dwelling units (2015-2035)	3,548
Dwelling units by structure type	
Single-family detached	
Percent single-family detached DU	50%
equals Total new single-family detached DU	1,774
Single-family attached	
Percent single-family attached DU	6%
equals Total new single-family attached DU	213
Multifamily	
Percent multifamily detached DU	44%
Total new multifamily DU	1,561
equals Total new dwelling units (2016-2036)	3,548

Source: ECONorthwest
Note: DU is dwelling unit.

Exhibit 84 allocates needed housing to plan designations in Corvallis. The allocation is based, in part, on the types of housing allowed in the zoning designations in each plan designation and the growth of housing types by plan designation over the 2000 to 2015 period. Exhibit 84 shows:

[48] ECONorthwest, *Corvallis Housing Survey: Attitudes of Individuals Who Work in Corvallis and Live outside the City Limits*, November 2014.

[49] 2011-2013 American Community Survey, U.S. Census

- **Residential Low Density (LDR)** will primarily accommodate new single-family detached housing, with some opportunities for single-family attached, and low-density multifamily units (i.e., duplexes or triplexes).
- **Residential Medium Density (MDR)** will accommodate a mixture of new single-family detached housing, single-family attached, and low-density multifamily units (i.e., duplexes to fourplexes).
- **Residential Medium High Density (MHDR)** will primarily accommodate multifamily housing, with some single-family detached and single-family attached units.
- **Residential High Density (HDR)** will primarily accommodate multifamily housing, with some single-family detached and single-family attached units.
- **Mixed Use Residential (MUR)** areas will primarily accommodate moderate- and higher-density multifamily housing, either in mixed-use buildings or in stand-alone residential buildings.

Exhibit 84. Allocation of needed housing by housing type and plan designation, Corvallis UGB, 2016 to 2036

	Residential Plan Designation					
	Low Density Residential (LDR)	Medium Density Residential (MDR)	Medium High Density Residential (MHDR)	High Density Residential (HDR)	Mixed Use Residential (MUR)	Total
Dwelling Units						
Single-family detached	851	816	89	18	-	1,774
Single-family attached	35	71	71	18	18	213
Multifamily	18	142	922	319	160	1,561
Total	904	1,029	1,082	355	178	3,548
Percent of Units						0
Single-family detached	24.0%	23.0%	2.5%	0.5%	0.0%	50%
Single-family attached	1.0%	2.0%	2.0%	0.5%	0.5%	6%
Multifamily	0.5%	4.0%	26.0%	9.0%	4.5%	44%
Total	25%	29%	30%	10%	5%	100%

Source: ECONorthwest
Note: DU is dwelling unit.

Exhibit 85 presents the assessment of needed density for housing built in Corvallis over the 2016 to 2036 period. The assessment of needed density is based on a number of factors: (1) the types of housing and development densities allowed in each Plan Designation, (2) historical densities achieved in each Plan Designation since 2000, and (3) the range of housing need by income identified in Exhibit 86 which includes need for housing for high income households to low- and very-low-income households.

Exhibit 85 shows the following needed densities:

- **Net-to-gross conversion, for rights-of-way:** The analysis of historical densities (Exhibit 31) presents density in net acres.[50] When developing a new area, such as a subdivision, it is necessary to account for land needed for rights-of-way, which requires a gross density estimate. The conversion from net acres to gross acres in this analysis is 11%, based on the average amount of land in rights-of-way throughout the Corvallis UGB, based on the buildable lands inventory presented in Chapter 2 (2015 Buildable Lands Inventory).[51]
- **Residential Low Density (LDR):** 4.6 dwelling units per acre, with 11% of land used for rights-of-way, resulting in a density of 4.1 dwelling units per gross acre. The zoning designations in LD generally allow a density of 2 to 6 dwelling units per acre.
- **Residential Medium Density (MDR):** 9.2 dwelling units per acre, with 11% of land used for rights-of-way, resulting in a density of 8.2 dwelling units per gross acre. The zoning designations in MD generally allow a density of 6 to 12 dwelling units per acre.
- **Residential Medium High Density (MHDR):** 13.5 dwelling units per acre, with 11% of land used for rights-of-way, resulting in a density of 12.0 dwelling units per gross acre. The zoning designations in MHD generally allow a density of 12 to 20 dwelling units per acre.
- **Residential High Density (HDR):** 29.2 dwelling units per acre, with 11% of land used for rights-of-way, resulting in a density of 26.0 dwelling units per gross acre. The zoning designations in HD generally allow a minimum density of 20 dwelling units per acre and no maximum density.
- **Mixed Use Residential (MUR):** 20.0 dwelling units per acre, with 11% of land used for rights-of-way, resulting in a density of 17.8 dwelling units per gross acre. The zoning designations in Commercial and Mixed-Use areas generally allow a minimum density of 20 dwelling units per acre for stand-alone residential buildings, with some zones allowing development as low as 12 dwelling units per acre for housing built as part of a mixed-use building.

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

[51] The assumptions about land needed for rights-of-way is based on the historical percentages of land needed for rights-of-way, from empirical analysis of the 2015 Corvallis Buildable Lands Inventory.

Exhibit 85. Needed density for housing built in the Corvallis UGB, 2016 to 2036

Plan Designation	Historical Densities (Dwelling Unit per Net Acres)	Net-to-gross factor	Gross Density (Dwelling Unit per Gross Acre)
Low Density Residential (LDR)	4.6	11%	4.1
Medium Density Residential (MDR)	9.2	11%	8.2
Medium High Density Residential (MHDR)	13.5	11%	12.0
High Density Residential (HDR)	29.2	11%	26.0
Mixed Use Residential (MUR)	20.0	11%	17.8

Source: ECONorthwest
Note: DU is dwelling unit.

Need for government assisted and manufactured housing

ORS 197.303 requires cities to plan for government-assisted housing, manufactured housing on lots, and manufactured housing in parks.

- **Government-subsidized housing.** Government-subsidies can apply to all housing types (e.g., single family detached, apartments, etc.). Corvallis allows development of government-assisted housing in all residential plan designations, with the same development standards for market-rate housing. This analysis assumes that Corvallis will continue to allow government housing in all of its residential plan designations. Because government assisted housing is similar in character to other housing (with the exception being the subsidies), it is not necessary to develop separate forecasts for government-subsidized housing.
- **Manufactured housing on lots.** Corvallis allows manufactured homes on lots in the same zones where it allows single-family detached housing. Corvallis does not have special siting requirements for manufactured homes. Since manufactured homes are subject to the same siting requirements as site-built homes, it is not necessary to develop separate forecasts for manufactured housing on lots.
- **Manufactured housing in parks.** OAR 197.480(4) requires cities to inventory the mobile home or manufactured dwelling parks sited in areas planned and zoned or generally used for commercial, industrial or high density residential development. According to the Oregon Housing and Community Services' Manufactured Dwelling Park Directory,[52] in 2015 Corvallis had ten manufactured home parks within the UGB, with 1,043 spaces and 112 vacant spaces. The manufactured home parks are located in the RS-9, GI, MUE, and MUCS zones.

  ORS 197.480(2) requires Corvallis to project need for mobile home or manufactured dwelling parks based on: (1) population projections, (2) household income levels, (3) housing market trends, and (4) an inventory of manufactured dwelling parks sited in areas planned and zoned or generally used for commercial, industrial or high density residential.

  - Exhibit 83 shows that Corvallis will grow by 3,548 dwelling units over the 2016 to 2036 period.
  - Analysis of housing affordability (in Exhibit 86 shows that about half of Corvallis' new households will be low income, earning 50% or less of the region's median family income. One type of housing affordable to these households is manufactured

[52] Oregon Housing and Community Services, Oregon Manufactured Dwelling Park Directory, http://o.hcs.state.or.us/MDPCRParks/ParkDirQuery.jsp

housing. However, many of Corvallis' households are student households, who would be unlikely to live in a manufactured home in a manufactured home park.[53]

- Manufactured housing in parks accounts for about 4% of Corvallis' current housing stock.
- National, state, and regional trends during the 2000 to 2015 period showed that manufactured housing parks were closing, rather than being created. For example, between 2003 and 2010, Oregon had a statewide decrease of 25% in the number of manufactured home parks.
- The long-term trend that will lead to the closure of manufactured home parks is the result of manufactured home park landowners selling or redeveloping their land for uses with higher rates of return, rather than lack of demand for spaces in manufactured home parks. Manufactured home parks contribute to the supply of low-cost affordable housing options, especially for affordable homeownership. The trend in the closure of manufactured home parks increases the shortage of manufactured home park spaces. Without some form of public investment to encourage continued operation of existing manufactured home parks and construction of new manufactured home parks, this shortage will continue.

Exhibit 86 shows that the households most likely to live in manufactured homes in parks are those with incomes between $23,000 and $39,000 (30% to 50% of median family income), although households in other income categories may live in manufactured homes in parks. Assuming that about 4% of Corvallis' new single-family detached households choose to live in manufactured housing parks, the city may need about 140 new manufactured home spaces. At an average of 8 dwelling units per net acre, this results in demand for about 18 acres of land. This estimate of potential demand, however, almost certainly overstates actual demand for manufactured housing in parks, as it includes a substantial portion of Corvallis' student population.

Manufactured home park development is an allowed use in all residential zones in Corvallis' UGB. However, development of a new manufactured home parks in Corvallis over the planning period is unlikely, given rising housing and land prices in Corvallis, as well as the relatively small supply of vacant residential land. The land needed for development of a manufactured housing park is part of the forecast in Exhibit 84.

[53] The American Community Survey shows that 23% of manufactured and mobile homes (in parks or on single-lots) are renter-occupied. Fourteen percent are occupied by householders under 35 years old and 6% are occupied by renters under 35 years old. This suggests that relatively few students live in manufactured homes in parks.

Step 6: Estimate the number of additional needed units by structure type

The next step in the housing needs analysis is the estimation of units by structure type and evaluating income as it relates to housing affordability. Exhibit 86 shows an estimate of needed dwelling units by income level for the 2016 to 2036 period. Although income will change over the 20-year planning period, Exhibit 86 assumes that the percentage of households in each market segment will remain relatively stable. The analysis uses market segments consistent with HUD income level categories and Benton County's Median Family Income (MFI) estimate of $78,600 in 2015.

The analysis shows that about 22% of households in Corvallis have incomes considered relatively high (above 120% of Median Family Income) and that about 22% of the housing need in the 2016 to 2036 period will derive from households in these categories. The analysis also shows that 50% of Corvallis' households could be considered low or very low income and that about 50% of the housing need in the 2016 to 2036 period will derive from households in these categories. Half or more of households with Very Low income are likely to be students, resulting from OSU student growth.

Exhibit 86. Estimate of needed dwelling units by income level, Corvallis UGB, 2016 to 2036

		New Households 2016-2026		Financially Attainable Products		
Market Segment by Income	Income range	Number of Households	Percent of Households	Owner-occupied	Renter-occupied	
High (120% or more of MFI)	$94,320 or more	781	22%	All housing types; higher prices	All housing types; higher prices	↑
Upper Middle (80%-120% of MFI)	$62,880 to $94,320	532	15%	All housing types; lower values	All housing types; lower values	Primarily New Housing
Lower Middle (50%-80% of MFI	$39,300 to $62,880	461	13%	Manufactured on lots; single-family attached; duplexes	Single-family attached; detached; manufactured on lots; apartments	Primarily Existing Housing
Low (30%-50% or less of MFI)	$23,580 to $39,300	568	16%	Manufactured in parks	Apartments; manufactured in parks; duplexes	↓
Very Low (Less than 30% of MFI)	Less than $23,580	1,206	34%	None	Apartments; new and used government assisted housing	

Source: Analysis by ECONorthwest;
Number of households by income range from the 2011-2013 American Community Survey, Table B19001
Income range based on HUD's 2015 Median Family Income of $78,600

Residential Land Capacity

This section presents a summary of the analysis used to estimate Corvallis' residential development capacity.

Framework for the capacity analysis

The BLI provides a *supply* analysis (buildable land by type) and the preceding section provides a *demand* analysis (population and growth leading to demand for more residential development). The comparison of supply and demand allows the determination of land sufficiency.

There are two ways to get estimates of supply and demand into common units of measurement so that they can be compared: (1) housing demand can be converted into acres, or (2) residential land supply can be converted into dwelling units. A complication of either approach is that not all land has the same characteristics. Factors such as zone, slope, parcel size and shape, can all affect the ability of land to accommodate housing. Methods that recognize this fact are more robust and produce more realistic results. This analysis uses the second approach: **it estimates the ability of vacant residential lands within the UGB to accommodate new housing.** This analysis, sometimes called a "capacity analysis,"[54] can be used to evaluate different ways that vacant residential land may build out by applying different assumptions.

[54] There is ambiguity in the term *capacity analysis*. It would not be unreasonable for one to say that the "capacity" of vacant land is the maximum number of dwellings that could be built based on density limits defined legally by plan designation or zoning, and that development usually occurs—for physical and market reasons—at something less than full capacity. For that reason, we have used the longer phrase to describe our analysis: "estimating how many new dwelling units the vacant residential land in the UGB is likely to accommodate." That phrase is, however, cumbersome, and it is common in Oregon and elsewhere to refer to that type of analysis as "capacity analysis," so we use that shorthand occasionally in this report.

Capacity analysis results

The capacity analysis estimates the development potential of vacant residential land to accommodate new housing. It uses the buildable lands inventory's estimate of vacant and partially vacant land in residential plan designations, shown in Exhibit 14. This table distinguishes between land that is in a Planned Development Overlay[55] and land that is not in a Planned Development Overlay, as well as between land within the Corvallis city limits and land in the urban fringe (outside the city limits but within the Corvallis UGB).

The capacity analysis converts the residential land supply into dwelling units based on Corvallis' needed densities, presented in Exhibit 85. The needed densities are highlighted in green in Exhibit 87. We applied the needed densities from Exhibit 85 to the vacant and the vacant portions of partially vacant land (after deducting constraints) to estimate capacity.

Exhibit 87 shows the following estimate of capacity for vacant and partially vacant lands:

- **Total Capacity.** Corvallis has capacity for a total of 10,602 dwelling units within the UGB, 86% of which (9,127 dwelling units) is in areas without a Planned Development Overlay.
- **Areas with No Planned Development Overlay.** Corvallis has capacity for 1,133 dwelling units within the city limits and an additional 7,994 dwelling units in areas with no Planned Development Overlay.
- **Areas with a Planned Development Overlay.** Corvallis has capacity for 1,475 dwelling units within the city limits in areas with no Planned Development Overlay.

[55] Section 3.33 of Corvallis' Land Development Code describes the Residential Planned Development Overlay, which can be applied to all residential zones. The development process for land in a Residential Planned Development Overlay is described in Chapter 2.5 of Corvallis' Land Development Code. The process requires a Conceptual Development Plan (or a Detailed Development Plan) as part of the application for development. The process requires a public hearing with the Planning Commission. Areas with a Planned Development Overlay may require local government to use discretion in interpreting the development requirements.

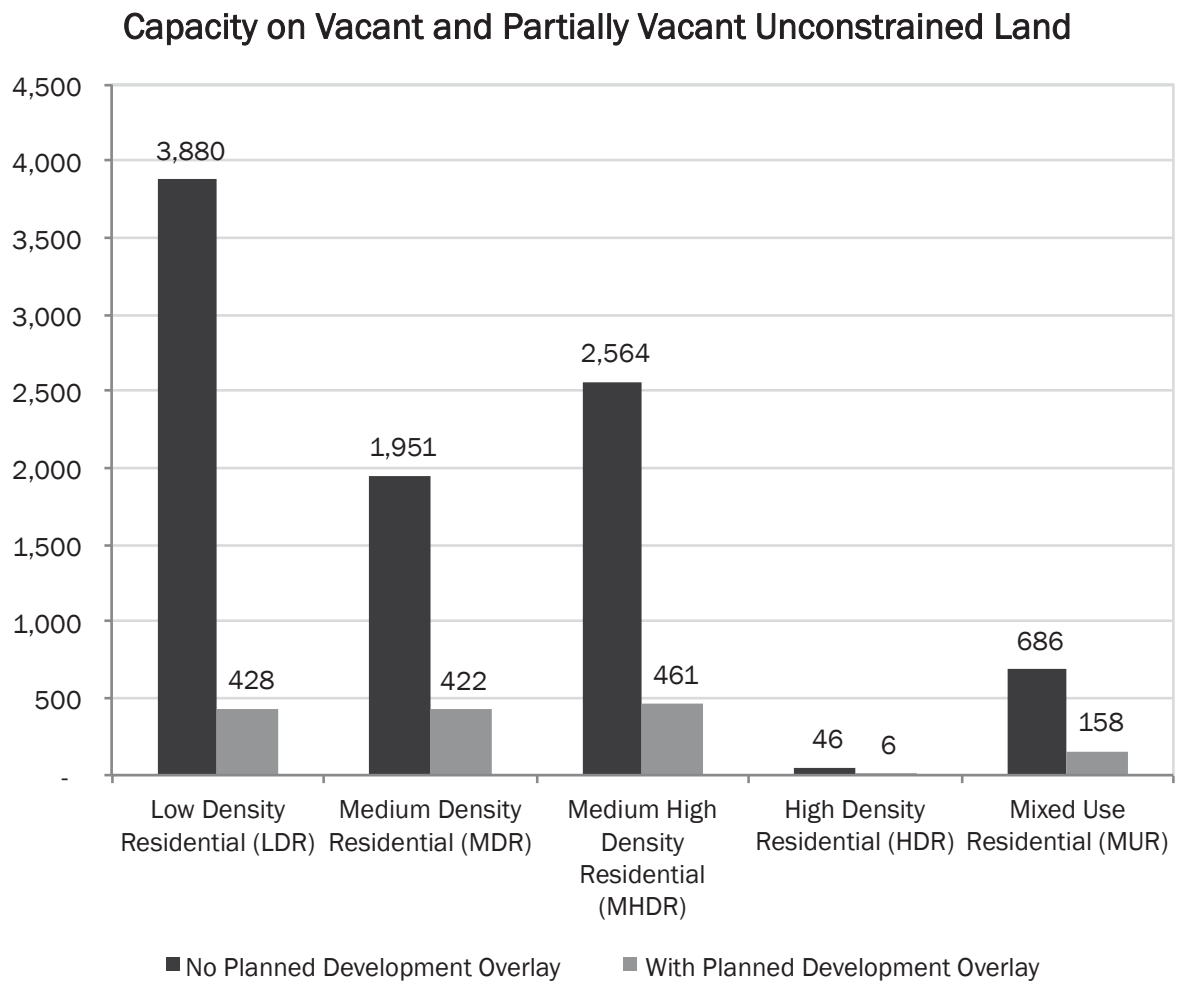
Exhibit 87. Estimated capacity of unconstrained vacant and partially vacant land plan designation, dwelling units, Corvallis UGB, 2016

	Within City Limits			Outside City Limits, within UGB			Total within UGB		
Plan Designation	Vacant Land (Gross Acres)	Density (Gross Acres)	New Dwelling Units	Vacant Land (Gross Acres)	Density (Gross Acres)	New Dwelling Units	Vacant Land (Gross Acres)	Density (Gross Acres)	New Dwelling Units
No Planned Development Overlay	**223**	**5.1**	**1,133**	**1,216**	**6.6**	**7,994**	**1,439**	**6.3**	**9,127**
LDR	188	4.1	770	759	4.1	3,110	946	4.1	3,880
MDR	20	8.2	161	218	8.2	1,790	238	8.2	1,951
MHDR	14	12.0	162	200	12.0	2,402	214	12.0	2,564
HDR	2	26.0	40	0	26.0	6	2	25.9	46
MUR	-	17.8	-	39	17.8	686	39	17.8	686
Planned Development Overlay	**204**	**7.2**	**1,475**	**-**	**-**	**-**	**204**	**7.2**	**1,475**
LDR	105	4.1	428	-	4.1	-	105	4.1	428
MDR	51	8.2	422	-	8.2	-	51	8.2	422
MHDR	38	12.0	461	-	12.0	-	38	12.0	461
HDR	0	26.0	6	-	26.0	-	0	22.3	6
MUR	9	17.8	158	-	17.8	-	9	17.7	158
Total Residential Housing Capacity	**426**	**6.1**	**2,608**	**1,216**	**6.6**	**7,994**	**1,642**	**6.5**	**10,602**
No PD	**223**	**5.1**	**1,133**	**1,216**	**6.6**	**7,994**	**1,439**	**6.3**	**9,127**
PD	**204**	**7.2**	**1,475**	**-**	**-**	**-**	**204**	**7.2**	**1,475**

Source: ECONorthwest analysis of City of Corvallis GIS data
Note: Green shading denotes an assumption, as described above.

Exhibit 88 shows that the majority of Corvallis' residential land is in areas without a Planned Development Overlay in LDR, MDR, and MHDR.

Exhibit 88.Capacity of unconstrained vacant and partially vacant land by plan designation, dwelling units, Corvallis UGB, 2016



Source: ECONorthwest analysis of City of Corvallis GIS data

Exhibit 89 allocates Corvallis' residential capacity into two housing types: single-family and multifamily. This allocation is based on the analysis of building permits issued between 2000-2015 in Exhibit 24. For example, 99% of housing developed in Corvallis between 2000-2015 on land zoned Low Density Residential (LDR) was single-family and 1% was multifamily. Of the 770 dwelling units of capacity in LDR in areas without Planned Development Overlay in Exhibit 87, we assume that 765 (99%) are capacity for single-family housing and 5 (1%) are capacity for multifamily housing.

Exhibit 89 shows that 58% of Corvallis's residential capacity is for single-family housing and 42% is for multifamily housing. The capacity for single-family housing includes capacity for single-family detached housing and for single-family attached housing because Corvallis' historical building permit data does not distinguish between these two types of single-family housing.

Exhibit 89. Estimated capacity of unconstrained vacant and partially vacant land by housing type and plan designation, dwelling units, Corvallis UGB, 2016

	Within City Limits			Outside City Limits, within UGB			Total within UGB		
Plan Designation	Single-Family	Multifamily	Total	Single-Family	Multifamily	Total	Single-Family	Multifamily	Total
No Planned Development Overlay	**886**	**247**	**1,133**	**4,485**	**3,509**	**7,994**	**5,371**	**3,756**	**9,127**
LDR	765	5	770	3,091	19	3,110	3,856	24	3,880
MDR	113	48	161	1,260	530	1,790	1,373	578	1,951
MHDR	7	155	162	100	2,302	2,402	107	2,457	2,564
HDR	1	39	40	-	6	6	1	45	46
MUR	-	-	-	34	652	686	34	652	686
Planned Development Overlay	**749**	**726**	**1,475**	**-**	**-**	**-**	**749**	**726**	**1,475**
LDR	425	3	428	-	-	-	425	3	428
MDR	297	125	422	-	-	-	297	125	422
MHDR	19	442	461	-	-	-	19	442	461
HDR	-	6	6	-	-	-	-	6	6
MUR	8	150	158	-	-	-	8	150	158
Total Residential Housing Capacity	**1,635**	**973**	**2,608**	**4,485**	**3,509**	**7,994**	**6,120**	**4,482**	**10,602**
Percent of total	**63%**	**37%**	**100%**	**56%**	**44%**	**100%**	**58%**	**42%**	**100%**

Source: ECONorthwest analysis of City of Corvallis GIS data

Corvallis also has about 263 acres of land that is partially constrained, as shown in Exhibit 14. The development capacity of this land is decreased as a result of the partial constraints. Exhibit 90 shows a low and high estimate of capacity on Corvallis' partially constrained land for the entire UGB.

The development densities on lands with partial constraints will be based on a site-by-site evaluation of the impact of the constraints to the site. This analysis does not include doing such a site-by-site analysis of potential capacity. Instead, the low and high density estimates in Exhibit 90 are based on the Minimum Assured Development Area (MADA) in Section 4.11 of Corvallis' Land Development Code.

Exhibit 90 shows that Corvallis' partially constrained lands have between 352 and 664 dwelling units of capacity. That capacity is nearly evenly divided by areas with and without Planned Development Overlay.

Exhibit 90. Estimated capacity of partially constrained land plan designation, dwelling units, Corvallis UGB, 2016, dwelling units, Corvallis UGB, 2016

	Low Estimate			High Estimate		
Plan Designation	Partially Constrained (Gross Acres)	Density (Gross Acres)	New Dwelling Units	Partially Constrained (Gross Acres)	Density (Gross Acres)	New Dwelling Units
No Planned Development Overlay	**182**	**1.1**	**195**	**182**	**1.9**	**347**
Low Density Residential (LDR)	152	0.2	28	152	0.4	64
RS-3.5	19	1.0	19	19	2.4	46
RS-5	9	1.0	9	9	2.0	18
RS-6	0	-	-	0	-	-
Urban Residential - 5	123	1.2	146	-	-	-
Medium Density Residential (MDR)	5	2.9	13	5	5.7	26
Medium High Density Residential (MHDR)	26	6.0	153	26	10.0	256
High Density Residential (HDR)	0	11.0	1	0	11.0	1
Planned Development Overlay	**80**	**2.0**	**157**	**80**	**3.9**	**317**
Low Density Residential (LDR)	43	1.0	44	43	2.1	90
RS-3.5	4	0.8	3	4	2.4	9
RS-5	39	1.0	40	39	2.1	80
RS-6	1	1.3	1	1	1.3	1
Medium Density Residential (MDR)	37	3.0	109	37	6.0	219
Medium High Density Residential (MHDR)	1	4.8	4	1	9.7	8
Total Residential Housing Capacity	263	1	352	263	3	664
No Planned Development Overlay	182	1	195	182	2	347
Planned Development Overlay	80	2	157	80	4	317

Source: ECONorthwest analysis of City of Corvallis GIS data
Note: Green shading denotes an assumption about density, based on Corvallis' Minimum Assured Development Area (MADA) in Section 4.11 of Corvallis' Land Development Code.

4. Economic Opportunities Analysis

Introduction

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

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

This chapter provides Corvallis with a factual basis to support future planning efforts related to employment and options for addressing unmet employment needs in Corvallis. This chapter focuses on three broad issues: (1) the factors affecting economic development in Corvallis, (2) Corvallis' competitive advantages for economic development, and (3) potential employment growth in Corvallis.

Framework for an economic opportunities analysis

The content of this report is designed to meet the requirements of Oregon Statewide Planning Goal 9 and the administrative rule that implements Goal 9 (OAR 660-009). The analysis in this report is designed to conform to the requirements for an Economic Opportunities Analysis in OAR 660-009 as amended.

1. *Economic Opportunities Analysis (OAR 660-009-0015)*. The Economic Opportunities Analysis (EOA) requires communities to identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on information about national, state, regional, county or local trends; identify the number of sites by type reasonably expected to be needed to accommodate projected employment growth based on the site characteristics typical of expected uses; include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use; and estimate the types and amounts of industrial and other employment uses likely to occur in the planning area. Local governments are also encouraged to assess community economic development potential through a visioning or some other public input based process in conjunction with state agencies.

2. *Industrial and commercial development policies (OAR 660-009-0020)*. Cities with a population over 2,500 are required to develop commercial and industrial development policies based on the EOA. Local comprehensive plans must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community. Local comprehensive plans must also include policies that commit the city or county to designate an adequate number of employment sites of suitable sizes, types and locations. The plan must also include policies to provide necessary public facilities and transportation facilities for the planning area. Finally, cities within a Metropolitan Planning Organization (which includes Corvallis) must adopt policies that identify a competitive short-term supply of land for desired industrial and other employment uses as an economic development objective.

3. *Designation of lands for industrial and commercial uses (OAR 660-009-0025.* Cities and counties must adopt measures to implement policies adopted pursuant to OAR 660-009-0020. Appropriate implementation measures include amendments to plan and zone map designations, land use regulations, public facility plans, and transportation system plans. More specifically, plans must identify the approximate number, acreage and characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies, and must designate serviceable land suitable to meet identified site needs.

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

Factors Affecting Future Economic Growth in Corvallis

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

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."[56]

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. From the municipal point of view, investment and resulting increases in property tax, are important outcomes of economic development.
- 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 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.

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[56] *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.

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.[57]

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 the most important factor of production. Other things equal, firms look at productivity—labor output per dollar. Productivity can decrease if certain types of labor are in short supply, which increases the costs by requiring either more pay to acquire the labor that is available, the recruiting of labor from other areas, or the use of the less productive labor that is available locally.
- **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.
- **Materials.** Firms producing goods, and even firms producing services, need various materials to develop products that they can sell. Some firms need natural resources (i.e., raw lumber) and others may need intermediate materials (i.e., dimensioned lumber).

[57] 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.

- **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.

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 Benton County, the provision of buildable land has the potential to strongly influence the level and type of economic development in Corvallis. The provision of buildable land is one of the most direct ways that the City of Corvallis can affect the level and type of economic development in the community.

Summary of National, State and Regional Trends on Economic Development in Corvallis

This section presents a summary and analysis of the implications of national, state, and regional economic trends on economic growth in Corvallis. The trends are presented in the sections following this summary.

National, State, and Regional Economic Trends	Implications for economic growth in Corvallis
Moderate growth rates and recovery from the national recession After the end of the recession in 2009, economic growth returned to the US economy, with persistent increases in GDP, (2.1% in the third quarter of 2015) steady job growth (averaging about 237,000 per month over 2015), and decline in the unemployment rate (currently at about 5.1% compared to the recessionary peak of 10%). [58] Unemployment at the national level has gradually declined since the height of the recession. Unemployment rates in Oregon are typically higher than those of the nation as a whole. The federal government's economic forecast predicts a moderate pace of economic growth, with gradual increases in employment and real GDP (roughly 3% through the end of 2016). IHS Economic projects that Oregon's economy will be the fifth-fastest growing among all state's in the US, averaging annual growth of about 3.5% through 2020. Though the Oregon Office of Economic Analysis expects a slightly slower rate, it still expects Oregon to exceed the national average. [59]	Economic growth in Benton County, when measured through employment growth, unemployment rates, and wage growth, has improved since the recession. For example, from July 2009 to September 2015, the county's unemployment fell 8.9%% to 4.8%. As Corvallis accounts for more than 85% of employment in Benton County, Corvallis' economy has grown as the County's economy has improved. The rate of employment growth in Corvallis will depend, in part, on the rate of employment growth in Oregon and the nation. The Oregon Office of Economic Analysis forecasts that employment in the Northwest Oregon Region (which includes Benton County) will grow by about by about 12% from 2012 levels. Education and Health, Leisure and Hospitality, and Professional and Business Services will make up the majority of the region's growth. Corvallis' comparative advantages, especially the city's location, and access to research and educational opportunities at OSU make Corvallis attractive to companies who want to grow, expand, or locate in the Willamette Valley.

[58] "Job Growth Steady in July, Possibly Easing Path for Fed Action," *The New York Times*, August 7, 2015; "US Economy at a Glance,' US Bureau of Economic Analysis, accessed December 14, 2015; "Employment Situation Summary," Economic News Release, Bureau of Labor Statistics, December 4, 2015.

[59] IHS Economics in "Oregon Economic and Revenue Forecast," Oregon Office of Economic Analysis, Dec 2015. http://www.oregon.gov/DAS/OEA/docs/economic/forecast1215.pdf

National, State, and Regional Economic Trends	Implications for economic growth in Corvallis
Growth of service-oriented sectors Increased worker productivity and the international outsourcing of routine tasks led to declines in employment in the major goods-producing industries. Projections from the Bureau of Labor Statistics indicate that U.S. employment growth will continue to be strongest in healthcare and social assistance, professional and business services, and other service industries. Construction employment will grow with the economy, but manufacturing employment will decline. These trends are also expected to affect the composition of Oregon's economy, although manufacturing in Oregon will grow.	The changes in employment in Benton 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 in Services. The Oregon Employment Department forecasts that the sectors likely to have the most employment growth in the Northwest Oregon Region—the region that includes Benton County—over the 2012 to 2022 period are: Educational and Health Services, Leisure and Hospitality, Professional and Business Services, Government, and Retail Trade. These sectors represent employment opportunities for Corvallis.
Importance of small businesses in Oregon's economy Small business, with 100 or fewer employees, account for 41% of private-sector employment in Oregon. Workers of small businesses typically have had lower wages than the state average.	The average size for a private business in Benton County is 10.7 employees per business. Businesses with 100 or fewer employees account for roughly 49% of private employment in Benton County (businesses with 19 or fewer employees account for 27% of private employment). The average size of privately owned businesses in Corvallis is 11.8 employees per business. Corvallis has more than 1,800 privately owned businesses with fewer than 100 employees, with an average size of 8 employees. Businesses with 100 or fewer employees account for roughly 67% of private employment in Corvallis (businesses with 19 or fewer employees account for 32% of private employment). Growth of small businesses presents opportunities for economic growth in Corvallis.

National, State, and Regional Economic Trends	Implications for economic growth in Corvallis
Importance of innovative capacity Many businesses in the U.S. are growing as a result of innovation and entrepreneurship. Innovation is particularly important in industries that require an educated workforce, such as high-tech companies.	Oregon State University is a research university, with about 23,450 students enrolled at its Corvallis campus. The research at OSU and pool of highly educated students, staff, and faculty provide opportunities for development and support of innovative businesses in Corvallis. Support for entrepreneurship has long been important in Corvallis' economy. The Oregon Nanoscience and Microtechnologies Institute (ONAMI) has worked with entrepreneurs from OSU and the University of Oregon to commercialize research and development related to nanoscience or microtechnology in Oregon since 2003. More recently, the Oregon Regional Accelerator and Innovation Network (RAIN) and OSU Advantage Accelerator have worked together in Corvallis to build and connect local talent, capital, infrastructure, and resources at OSU to a network that is easy for entrepreneurs to access to advance the formation and growth of tech-based startup companies. The access to educated workers, research resources at OSU, business incubation activities by ONAMI and the OSU Advantage Accelerator provide economic development opportunities for entrepreneurs in Corvallis.
Aging of the population The number of Oregonians aged 65 and older will nearly double between 2015 and 2050, while the number of people under age 65 will grow by only about 29%. 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. Furthermore, people are retiring later than previous generations and continuing to work past 65 years old. This trend is seen both at the national and State levels. Even given this trend, the need for workers to replace retiring baby boomers will outpace job growth. Management occupations and teachers will have the greatest need for replacement workers because these occupations have older-than-average workforces.	The changes in Benton County's age structure are similar to that of the State, although with a smaller amount of growth observed in people 60 years and older. The State projects that the share of the population over the age of 60 in the Benton County will increase from 21% to 22% from 2015 and 2035. This shift is smaller than the overall shift in the State's workforce. Firms in Corvallis will need to replace workers as they retire. Demand for replacement workers is likely to outpace job growth in Corvallis, consistent with State trends. Given the CBO's forecast of relatively low unemployment rates (about 5.5% through 2025), businesses in Corvallis (and throughout the State) may have difficulties finding replacement workers.

National, State, and Regional Economic Trends	Implications for economic growth in Corvallis
Millennials entering the workforce The state of Oregon's Office of Economic Analysis defines Millennials as the generation born between 1981 and 2000, currently the group of people aged 16 to 36 years old. This group will make up much of the work force as they age into their 40's and 50's over the planning period. In 2015, Millennials were the largest age group in Oregon, with 1,065,796 people, making up 27% of the state's population. By 2035, Millennials will age to between 36 and 56 years.	Corvallis has a large share of 20-to-24-year-olds. This cohort makes up 23% of Corvallis's population, and just 7% of the state's. However, the city has a relatively small share of people aged between 25 and 39. This group makes up 18% of the city's population and 20% of the state's. By 2035, Millennials will age to between 36 and 56 years. The Oregon Office of Economic Analysis forecasts that 40-to-59-year-olds's share of the population will decline slightly in Benton County from 21.3% to 20.8%, as the baby boomers age. Millennials are likely to be entrepreneurs. According to research from the US Chamber of Commerce, more than one-quarter of Millennials were entrepreneurs in 2011, with two-thirds of Millennials interested in becoming an entrepreneur. Growth of small start-up businesses, especially businesses related to activities at OSU, may be able to tap into Corvallis' large share of Millennials as they attend and graduate from OSU.
Increases in energy prices Although energy prices are currently low by historical standards, over the long-term, energy prices are forecast to return to relatively high levels, as the economy and the population grow. As energy prices increase over the planning period, energy consumption for transportation may decrease. Increasing energy prices may decrease willingness to commute long distances. However the impact on transportation costs from energy prices may be partly offset by increased energy efficiency of vehicles and stricter emissions standards.	In 2015, low energy prices have decreased the costs of commuting. Over the long-term, if energy prices increase, these higher prices will likely 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 bus, or carpool. Very large increases in energy prices may affect workers' willingness to commute, especially workers living the furthest from Corvallis or workers with lower paying jobs. In addition, very large increases in energy prices may make shipping freight long distances less economically feasible, resulting in a slow-down or reversal of off-shore manufacturing, especially of large, bulky goods.

National, State, and Regional Economic Trends	Implications for economic growth in Corvallis
Comparatively low wages The income of a region affects the workforce and the types of businesses attracted to the region. Average income affects workers and businesses in different ways. Workers may be attracted to a region with higher average wage or high wage jobs. Businesses, however, may prefer to locate in regions with lower wages, where the cost of doing business may be lower. Since the early 1980's, Oregon's per capita personal income has been consistently lower than the U.S. average. In 2014, Oregon's per capita wage was 91% of the national average. From 2001 to 2014 nominal wages in the nation grew by 42% from $36,200 to $51,400, while wages in Oregon increased by only 40% from $33,200 to $46,500.	Since around 1995 per capita personal income in Benton County has stayed above that of the state and at times slightly above that of the nation. While the county's average wages followed a similar trend as personal income, they fell below that of the state in 2014. In 2014, Benton County's average wage of about $46,300 was below that of the state ($46,529). The student population lowers the measures of average wages in Benton County and Corvallis. However, when accounting for students in measures of Corvallis's incomes, wages in the city are competitive with other urban areas in Oregon. As people age, their incomes increase. Corvallis has a disproportionately large share of non-working residents younger than 25, driving down the city's overall average wage. Corvallis's median household income by age, for residents younger than 25 is more than $11,000 less than the state's average for the same age cohort ($11,200 to $22,500). However, Corvallis's median household income for householders between 45 and 64 exceeds that of the state by more than $14,000 ($73,300 to $59,100) The measurement of median *family* income excludes much of the effect of the student population by counting only family households (rather than all households). In this category, Corvallis surpasses the state, with a median family income of about $75,000, compared to the state's $61,000.

National, State, and Regional Economic Trends	Implications for economic growth in Corvallis
Availability of trained and skilled labor Businesses in Oregon are generally able to fill jobs, either from available workers living within the State or by attracting skilled workers from outside of the State. Availability of labor depends, in part, on population growth and in-migration. Oregon added more than 1,120,000 new residents and about 465,000 new jobs between 1990 and 2014. The population-employment ratio for the State was about 2.2 residents per job over the 24-year period. Availability of labor also depends on workers' willingness to commute. Workers in Oregon typically have a commute that is 30 minutes or shorter. More than half of people who work at businesses located in cities in the Willamette Valley commute into the city for work, from a residence outside of the city (e.g., 58% of workers commuted into Portland for work in 2011, from their place of residence outside of Portland). Availability of skilled workers depends, in part, on educational attainment. About 30% of Oregon's workers have a Bachelor's degree or higher.	Employment in Benton County grew at about 0.1% annually over the 2001 to 2013 period, while population grew at about 0.9% over the same period. About 52% of workers at businesses located in Corvallis lived in Benton County, and 35% lived within Corvallis city limits. Firms in Corvallis attracted workers from all over the Willamette Valley. About 65% of workers in Corvallis commuted into the city from elsewhere, many from Albany (12% of Corvallis workers), Philomath (3%), and Portland (2%). These commuting patterns are similar to commuting in other cities in the Willamette Valley. Corvallis' residents were much more likely to have a Bachelor's degree or higher (59%) than the State average (30%). The presence of OSU largely accounts for this difference. Access to a highly educated workforce makes Corvallis attractive to businesses that depend on highly educated workers, such as Professional Services, High Tech, Health Care, and other similar businesses.

National, State, and Regional Economic Trends	Implications for economic growth in Corvallis
Education as a determinant of wages The majority of the fastest growing occupations will require an academic degree, and on average they will yield higher incomes than occupations that do not require an academic degree. The fastest growing occupations requiring an academic degree will be: industrial-organizational psychologists, interpreters and translators, diagnostic medical sonographers, occupational therapy assistants, genetic counselors, physical therapist assistants, and physician assistants. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for almost two-thirds of all new jobs by 2022. These occupations typically have lower pay than occupations requiring an academic degree. The national median income for people over the age of 25 in 2014 was about $43,628. Workers without a high school diploma earned $18,252 less than the median income, and workers with a high school diploma earned $8,892 less than median income. Workers with some college earned $5,096 less than median income, and workers with a bachelor's degree earned $13,624 more than median. Workers in Oregon experience the same patterns as the nation, but pay is generally lower in Oregon than the national average.	Corvallis' residents were almost twice as likely to have a Bachelor's degree, compared to the Oregon residents as a whole (59% versus 30%). While average educational attainment in Corvallis is high, average wages in Corvallis are relatively low. For example, the median household income in Corvallis in the 2011-2013 period was about $39,000, compared to $50,000 in the state. This difference may be due to the large (and increasing) student population that is more likely to either not work or only work part time. A large and educated student population that is looking for part-time work during school or looking for jobs after graduation poses opportunities for Corvallis businesses. Businesses that want to locate in Corvallis have access to a pool of highly educated people in Corvallis and can draw from the labor pool of the Mid- and Southern Willamette Valley.

National Economic Trends

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

- **Economic growth will continue at a moderate pace.** Analysis from the Congressional Budget Office (CBO) predicts moderate growth: 3.1% GDP growth in 2016, 3.7% in 2017, and 2.2% in 2018-2019. Increases in consumer spending, business investment, and residential investment are expected to drive this growth.

  The unemployment rate is expected to decrease to 5.0% by the fourth quarter of 2017, and remain relatively steady after that. Growth in hourly compensation will increase labor force participation, slowing its longer-term decline.

  Beyond 2019, CBO projects that output will increase by 2.1% per year, higher than 2008-2014 growth, but lower than growth in the 1980's, 1990's, and early 2000's., mainly due to slower labor force growth. Unemployment is expected to be 5.25% from 2020-2025.[60]

- **The aging of the baby boom generation, accompanied by increases in life expectancy.** As the baby boomer generation continues to retire, the number of Social Security recipients is expected to increase from 59 million in 2014 to over 90 million in 2035, a 53% increase. However, due to lower-birth rate replacement generations, the number of covered workers is only expected to increase 14.7% over the same time period, from 165 million to almost 190 million in 2035. Currently, there are 36 Social Security beneficiaries per 100 covered workers in 2014 but by 2035 there will be 58 beneficiaries per 100 covered workers. This will increase the percent of the federal budget dedicated to Social Security and Medicare.[61]

  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.[62] 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%.[63]

- **Need for replacement workers.** The need for workers to replace retiring baby boomers will outpace job growth. According to the Bureau of Labor Statistics, there will be 50.6

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[60] Congressional Budget Office. An Update to the Budget and Economic Outlook: 2015-2025. August 2015. https://www.cbo.gov/publication/50724

[61] The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2015, *The 2015 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, May 13, 2011.

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

[63] 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

million total job openings over the 2012-2022 period, over two-thirds from replacement needs. Almost two thirds of job openings are in occupations that do not require postsecondary education.[64]

- **The importance of education as a determinant of wages and household income.** According to the Bureau of Labor Statistics, a majority of the fastest growing occupations will require an academic degree, and on average, they will yield higher incomes than occupations that do not require an academic degree. The fastest growing occupations requiring an academic degree will be: industrial-organizational psychologists, interpreters and translators, diagnostic medical sonographers, occupational therapy assistants, genetic counselors, physical therapist assistants, and physician assistants. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for almost two-thirds of all new jobs by 2022. These occupations typically have lower pay than occupations requiring an academic degree.[65]

  The national median income for people over the age of 25 in 2014 was about $43,628. Workers without a high school diploma earned $18,252 less than the median income, and workers with a high school diploma earned $8,892 less than median income. Workers with some college earned $5,096 less than median income, and workers with a bachelor's degree earned $13,624 more than median. Workers in Oregon experience the same patterns as the nation, but pay is generally lower in Oregon than the national average.[66]

- **Increases in labor productivity.** Productivity, as measured by output per hour of labor input, increased in most sectors between 2000 and 2010, peaking in 2007. However, productivity increases were interrupted by the recession. After productivity decreases from 2007 to 2009, many industries saw large productivity increases from 2009 to 2010. Industries with the fastest productivity growth were Information Technology-related industries. These include wireless telecommunications carriers, computer and peripheral equipment manufacturing, electronics and appliance stores, and commercial equipment manufacturing wholesalers.[67]

- **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.

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[64] "Occupational Employment Projections to 2012-2022," Bureau of Labor Statistics, December 2013.

[65] "Occupational Employment Projections to 2012-2022," Bureau of Labor Statistics, December 2013.

[66] Bureau of Labor Statistics, Employment Projections, April 2015. http://www.bls.gov/emp/ep_chart_001.htm

[67] Brill, Michael R. and Samuel T. Rowe, "Industry Labor Productivity Trends from 2000 to 2010." Bureau of Labor Statistics, *Spotlight on Statistics,* March 2013.

Such amenities contribute to a region's quality of life and play an important role in attracting both households and firms.[68]

- **Continued increase in demand for energy.** Energy prices are forecasted to increase over the planning period. While energy use per capita is expected to decrease to 2040, total energy consumption will increase with rising population. Energy consumption is expected to grow primarily from industrial and (to a lesser extent) commercial users, and slightly decrease in the residential sector. Energy consumption for transportation is expected to decrease, due to increased federal standards and increased technology for energy efficiency in vehicles.

  Energy consumption by type of fuel is expected to change over the planning period. By 2040, the U.S. will continue to shift from crude oil towards natural gas and renewables. For example from 2013 to 2040, the Energy Information Administration projects that US overall energy consumption will average a 0.3% annual growth rate, while consumption of renewable sources grows at 1.4% per year. 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.[69]

- **Impact of rising energy prices on commuting patterns.** As energy prices increase over the planning period, energy consumption for transportation will decrease. Increasing energy prices may decrease willingness to commute long distances.[70] The increases in energy prices, may impact willingness to commute long distances, but may be partly offset by increased energy efficiency of vehicles and stricter emissions standards. Vehicle miles traveled (VMT) are expected to increase through 2040.

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

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

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[68] 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.

[69] Energy Information Administration, 2015, *Annual Energy Outlook 2015 with Projections to 2040*, U.S. Department of Energy, April 2015. http://www.eia.gov/forecasts/aeo/pdf/0383(2015).pdf . Note, the cited growth rates are shown in the Executive Summary and in Table A2.

[70] Energy Information Administration, 2015, *Annual Energy Outlook 2015 with Projections to 2040 Early Release Overview*, U.S. Department of Energy, April 2015.

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.

- **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.[71] 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.[72]

  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.[73]

  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

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[71] 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.*

[72] 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

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

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:[74]

- *Potential impact on agriculture and forestry.* Climate change may impact Oregon's agriculture through changes in: growing season, temperature ranges, and water availability.[75] 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.[76]
- *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,[77] (3) negative impacts on availability of water summer river recreation (e.g., river rafting or sports fishing) as a result of lower summer river flows, and (4) negative impacts on the availability of water for domestic and business uses.

- **Potential 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.[78]

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[74] 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.

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

[76] "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.

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

[78] 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/

- *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.[79]
- *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.[80]
  - 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.
  - 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. [81]

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 was decreases in employment related to the housing market, such as construction and real estate. As these industries recover, they will continue to play a significant role in the national, state, and local economy over the long run. This report takes a long-run perspective on economic conditions (as the Goal 9 requirements intend) and does not attempt to predict the impacts of short-run national business cycles on employment or economic activity.

State, Regional, and Local Trends

Short-term Trends

Oregon is on its way to recovery from the recent recession. According to the Oregon Office of Economic Analysis (OEA), the Oregon Economy is currently "at full throttle growth." Wages are increasing at almost 8% per year, although wages are still lower than in many other states. Over the past year, Oregon added over 50,000 jobs, a 3.4%growth rate. The professional and business services, health services, and leisure and hospitality industries have accounted for almost half of total growth in the State. Oregon continues to have an advantage in job growth compared to other states, due to its industrial sector and in-migration flows. However, Oregon has not completely healed from the recession, highlighted by Oregon's large participation gap

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

[80] *See,* for example, some of the state-level initiatives in Oregon at http://www.oregon.gov/ENERGY/GBLWRM/index.shtml

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

(the difference between the percent of the population either employed or looking for work now and the same percentage when "operating at full strength").[82] Economic growth in Oregon is expected to remain at the current pace through 2017, but slow as the Baby Boomers continue to retire.[83]

The housing market is continuing to recover. Oregon is seeing high household formation rates, which is good for the housing market. However, supply (both rental and ownership) of housing has not kept pace with housing demand, causing home prices and rents to rise. If construction cannot keep pace with household growth, housing affordability will become a greater issue. The OEA expects construction to increase over the next three years, relieving some of this pressure.[84]

The Oregon Index of Leading Indicators has grown since 2012. The leading indicators showing improvement are: volume of air freight, initial claims for unemployment, withholdings out of wages and salaries, and new incorporations of companies. However, negative indicators include flat housing permits, decreasing industrial production, and the appreciating Oregon Dollar Index.[85]

Oregon's economic health is dependent on the export market. The value of Oregon exports in 2014 was $21 billion. The countries that Oregon has the most exports to are China (20% of total Oregon exports), Canada (15%), Malaysia (12%), Japan (8%), South Korea (6%), and Taiwan (5%).[86] With the appreciation of Oregon's dollar, Oregon's exports have slowed.[87] The economic slowdown across many parts of Asia will continue to affect the Oregon economy. However, the Trans-Pacific Partnership, a trade agreement that would reduce trade barriers if approved, is expected to increase Oregon exports to participating countries (such as Malaysia, Japan, and Canada).

Long-term Trends

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

- **Continued in-migration from other states.** Oregon will continue to experience in-migration (more people moving *to* Oregon than *from* Oregon) from other states, especially California and Washington. From 1990 to 2013, Oregon's population increased by almost 1.1 million, 65% of which was from people moving into Oregon

[82] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2015. Vol. XXXV, No. 3. , page 8 http://www.oregon.gov/DAS/OEA/docs/economic/forecast0915.pdf

[83] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2015. Vol. XXXV, No. 3.

[84] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2015. Vol. XXXV, No. 3, page 18.

[85] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2015. Vol. XXXV, No. 3, page 15.

[86] United States Census. State Exports from Oregon, 2011-2014. https://www.census.gov/foreign-trade/statistics/state/data/or.html

[87] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2015. Vol. XXXV, No. 3, page 7

(net migration). The average annual increase in population from net migration over the same time period was just over 29,000. During the early- to mid-1990's, Oregon's net migration was highest, reaching over 60,000 in 1991, with another smaller peak in the mid 2000's. Oregon hasn't seen negative net migration since a period of negative net migration in the early- to mid-1980's.[88]

- **Forecast of job growth.** Total nonfarm employment is expected to increase from 1.7 million in 2013 to just over 2 million in 2022, an increase of 340,000 jobs. The industries with the largest growth will be Professional and Business Services, Leisure and Hospitality, Health Services, and Retail Trade, accounting for 61% of the forecasted growth.[89]
- **Continued importance of manufacturing to Oregon's economy.** Oregon's exports totaled $19.4 billion in 2008, nearly doubling since 2000, and reached $21 billion in 2014. In 2015, exports are on track to meet 2014's exports. The majority of Oregon exports go to countries along the Pacific Rim, with Canada, China, Japan, Korea, and Malaysia as top destinations. Oregon's largest exports are tied to high-tech and mining, as well as agricultural products.[90] Manufacturing employment is concentrated in five counties in the Willamette Valley or Portland area: Washington, Multnomah, Lane, Clackamas, and Marion Counties.[91]
- **Shift in manufacturing from natural resource-based to high-tech and other manufacturing industries.** Since 1970, Oregon started to transition away from reliance on traditional resource-extraction industries. A significant indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry and concurrent growth of employment in other manufacturing industries, such as high-technology manufacturing (Industrial Machinery, Electronic Equipment, and Instruments), Transportation Equipment manufacturing, and Printing and Publishing.[92]
- **Income.** Oregon's income and wages are below that of a typical state. However, mainly due to the wage growth over the last two to three years, Oregon wages are at their highest point relative to other states since the recession in the early 1980's. In 2014, the average annual wage was $46,515, and median household income was $51,075 (compared to national average wages of $51,364, and national household income of

[88] Portland State University Population Research Center. 2013 Annual Population Report. April 2014. http://www.pdx.edu/prc/annual-oregon-population-report

[89] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2015. Vol. XXXV, No. 3, page 48.

[90] Oregon Office of Economic Analysis. Oregon Exports 2015: Destination Countries. August 2015. http://oregoneconomicanalysis.com/2015/08/13/oregon-exports-2015-destination-countries/

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

[92] Although Oregon's economy has diversified since the 1970's, natural resource-based manufacturing accounts for nearly 40% of employment in manufacturing in Oregon in 2014, with the most employment in Wood Product and Food manufacturing (QCEW).

$53,657).[93] Total personal income (all classes of income, minus Social Security contributions, adjusted for inflation) in Oregon is expected to increase by 63%, from $157 billion in 2013 to $256 billion in 2022. Per capita income is expected to increase by 47% over the same time period, from $40,000 in 2013 to $59,000 in 2022 (in nominal dollars).[94]

- **Small businesses continue to account for a large share of employment in Oregon**. While small firms played a large part in Oregon's expansion between 2003 and 2007, they also suffered disproportionately in the recession and its aftermath (64% of the net jobs lost between 2008 and 2010 were from small businesses).

  In 2012, small businesses (those with 100 or fewer employees) accounted for 96% of all businesses and 41% of all private-sector employment in Oregon. Said differently, most businesses in Oregon are small (in fact, 77% of all businesses have fewer than 10 employees), but the largest share of Oregon's workers work for large businesses.

  The average annualized payroll per employee at small businesses was $34,248 in 2012, which is considerably less than that at large businesses ($48,938) and the statewide average for all businesses ($46,669).[95]

  Younger workers are important to continued growth of small businesses across the nation. More than one-third of Millennials (those born between 1980 - 1999) are self-employed, with approximately half to two-thirds interested in becoming an entrepreneur. Furthermore, in 2011, about 160,000 start-up companies were created each month; 29% of these companies were founded by people between 20 to 34 years of age.[96]

- **Fuel Prices.** Though fewer Corvallis residents rely on cars to get to work than residents nationwide or statewide, still more than half of the city's commuters use cars to get to work. About 67% of Corvallis residents commute to work by driving or carpooling, compared to 86% nationally and 82% statewide. National trends in energy prices and fuel economy discussed in this report's section on national trends will directly affect this share of Corvallis's population.

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[93] Average annual wages are for "Total, all industries," which includes private and public employers. Oregon Quarterly Census of Employment and Wages, 2014. https://www.qualityinfo.org; Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2014, Total,US Census American Community Survey 1-Year Estimates, 2014, Table B19013.

[94] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2015. Vol. XXXV, No. 3, page 47.

[95] U.S Census Bureau, 2012 Statistics of U.S. Businesses, Annual Data, Enterprise Employment Size, U.S and States. http://www.census.gov/econ/susb/

[96] Cooper, Rich, Michael Hendrix, Andrea Bitely. (2012). "The Millennial Generation Research Review." Washington, DC: The National Chamber Foundation. Retrieved from: https://www.uschamberfoundation.org/sites/default/files/article/foundation/MillennialGeneration.pdf.

Regional and Local Trends

Availability of Labor

The availability of trained workers in Corvallis will impact development of its economy over the planning period. A skilled and educated populace can attract well-paying businesses and employers and spur the benefits that follow from a growing economy. Key trends that will affect the workforce in Corvallis over the next 20 years include its growth in its overall population, growth in the student and senior populations specifically, housing growth and associated housing costs, 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.

Exhibit 37 shows that Corvallis grew from about 44,800 people in 1990 to 56,500 people in 2014, an increase of 26% (11,700 people) at an average annual growth rate of 1.0%. In comparison, Oregon grew at an average annual growth rate of 1.4% annually over the 24-year period.

Exhibit 38 shows that Corvallis' population within the UGB is forecast to grow by 9,469 people between 2016 to 2036, at an average annual growth rate of 0.7%.

AGE DISTRIBUTION

This report presented data on the aging population in the Housing Needs Analysis (Chapter 3) with respect to their impact on housing. These age-related demographic trends have other impacts on the economy. A large and young student population benefits the city by providing a skilled job-seeking workforce. Also, growth in the population of seniors will fuel demand for services in the health care industry. Important age trends, and their potential impact on the economy is summarized below.

Exhibit 40 and Exhibit 41 show Corvallis' population by age group. The age groups with the biggest impact on Corvallis' economy are: students and Baby Boomers.

- **Students and young working age people.** Corvallis has a larger than average share of people 20 to 24 years and a relatively small share of people 25 to 39 and over 40. About 32% of Corvallis' population is in the traditional college-age (18-24), compared to 8% for the state. Roughly 89% (or about 15,700) of 18-to-24-year-olds were enrolled in school in the 2011-13 period. Students and recent graduates will seek to enter into well-paying career paths. Their concentration in Corvallis offers a large pool of young workers for businesses in Corvallis.

  The number of Corvallis residents aged 25 to 39 is considerably smaller than those aged 18 to 24 years old. This suggests that many young people leave Corvallis after graduating college. However 25-to-39 year-olds still accounts for 18% of the city's population, showing that many young people either stay in or move to Corvallis. Nationally, 18-to-25-year-olds account for 10% of the population, compared to 32% in Corvallis. However, 25-to-29-year-olds account for 20% of the nation's population and 18% of Corvallis's population.

- **Baby Boomers and retirees.** Although Corvallis' population is relatively young, it will nonetheless follow broader state and national trends as its Baby Boomer population grows older. The State forecasts share of residents aged 60 years and older will account for about 22% of Benton County's population in 2035, compared to around 18% in 2010.

  This forecast matches national trends, which forecast that 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.[97]

[97] 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.

The aging of the Baby Boomers has important implications for businesses in Corvallis. The most common impact will be the need for replacement workers as Baby Boomers retire. Given the CBO's forecast of relatively low unemployment rates (about 5.5% through 2025), businesses in Corvallis (and throughout the State) may have difficulties finding replacement workers.

Depending on whether retirees continue to live in Corvallis after retirement, growth in seniors may result in growth in demand for health care and other services needed by seniors. This may manifest in increased demand for health care provider jobs in hospitals, assisted-living facilities, and in-home care.

INCOME

Income and wages affect business decisions for locating in a city. Areas with higher wages may be less attractive for industries that rely on low-wage workers.

Per capita income[98] grew most years during the 31-year period, with the exception of a decrease during the recession. Since 1980, Oregon's per capita personal income was consistently lower than the U.S. average. In 1980, Oregon's per capita personal income was equal to the national average. By 2012, Oregon's per capita income was 89% of the national average. Oregon's relatively low wages make the state attractive to businesses seeking to locate in areas with lower-than-average wages.

Benton County's per capita income was somewhat higher than State averages but followed similar growth trends as State income. In 2013, Benton County's per capita income was 102% of the state average. Since 2000, per capita income has increased in the nation but remained relatively flat in Oregon and Benton County.

[98] Personal income includes wages, dividends and interest from investments, rent from investments, pension play payments and transfer payments (e.g., social security payments). Per capita personal income is the personal income of the area divided by the total number of people in the area.

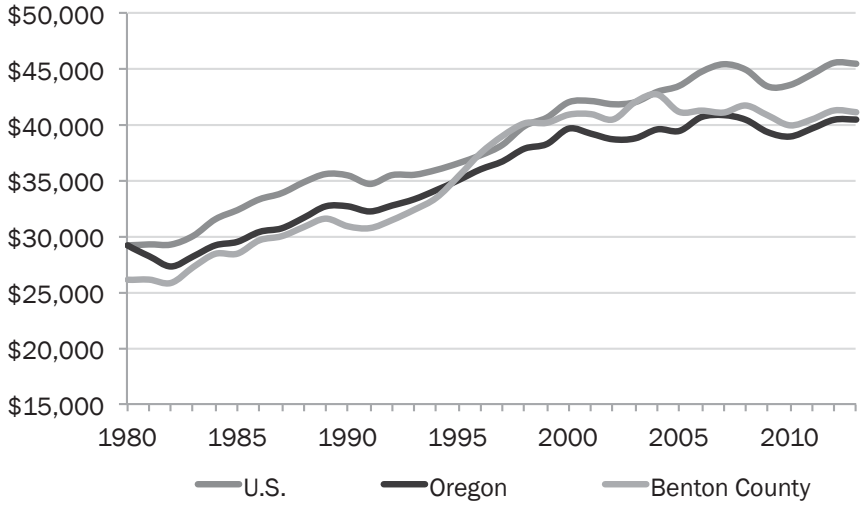
Per capita income (adjusted for inflation) in the nation, Oregon, and Benton County has grown since 1980.

However, the rate of growth in income slowed since 2000. From 2000 to 2013, per capita personal incomes grew by only 8% in the nation, 2% throughout the state, and 1% in Benton County.

In 2013 per capita personal income was about $45,500 in the nation, $40,500 in Oregon, and $41,200 in Benton County.

Exhibit 91. Per Capita Personal Income, US, Oregon, Benton County, 1980 to 2013, Inflation-adjusted 2014 Dollars

Source: Bureau of Economic Analysis, Per Capita Personal Income, Table CA-1



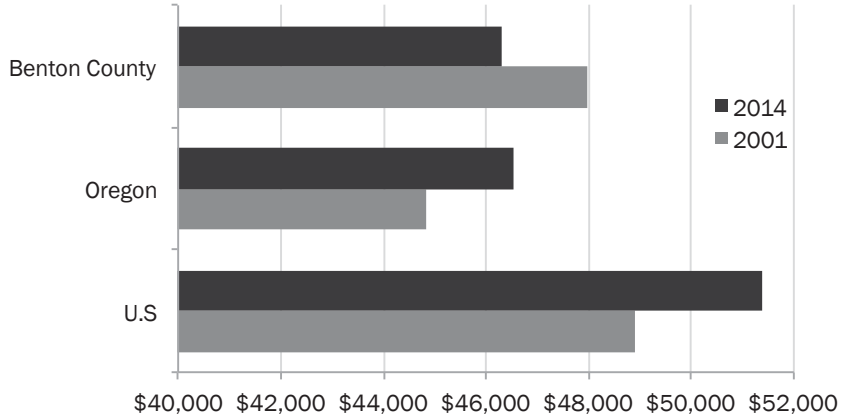
While per capita income has grown (although remained relatively flat) since 2000 in Benton County, average wages decreased between 2001 and 2014. Over the same period, average wages increased in Oregon and the U.S. The decrease in average wages in Benton County has many causes but one cause is the change in mix of jobs in Benton County since 2001. Employment in Manufacturing decreased by 3,400 jobs over the 2001 to 2014 period, while employment in Health Care and State Government increased. While Heath Care and State Government jobs have above-average pay, they pay less than Manufacturing.

From 2001 to 2014, average annual wages fell in Benton County but rose in Oregon and the nation.

In 2014, average annual wages were about $46,300 in Benton County, $46,500 in Oregon, and $51,400 in the nation.

Exhibit 92. Average Annual Wage, Covered Employment, US, Oregon, and Benton County, 2001 to 2014, Inflation-adjusted 2014 Dollars

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages



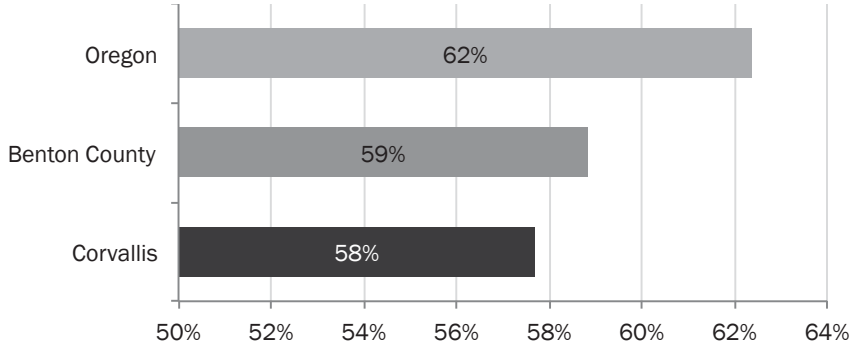
LABOR FORCE PARTICIPATION AND UNEMPLOYMENT

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 2011-2013 American Community Survey, Corvallis has over 27,600 people in its labor force. About 58% of Corvallis' working age population is in the labor force, compared to 62% of the state's working-age population.

In 2015, the Oregon Office of Economic Analysis observed that about 32% of all job vacancies in the state were attributable to a lack of qualified applicants—people who don't have the education, certification, or experience to fill the job posting. This indicates a mismatch between the types of jobs that employers are demanding and the skills that potential employees can provide. This gap in the state creates a competitive advantage for cities such as Corvallis that are home to a large share of educated job-seekers, including university graduates; businesses that locate in Corvallis have the option to take advantage of educated graduates seeking work.[99]

Corvallis has a lower labor force participation rate (58%) than Benton County (59%) and Oregon (62%). The likely reason for the lower labor force participation rate is that many students at OSU are not employed.

Exhibit 93. Labor Force Participation, Corvallis, Benton County, Oregon, 2011-2013
Source: US Census Bureau, 2011-2013 ACS Table B23001



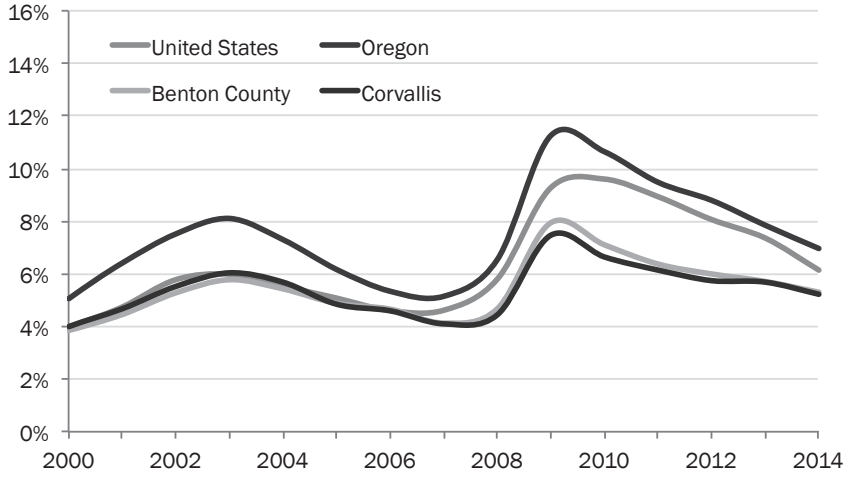
[99] "Job Vacancies and Shadow Unemployment," Josh Lehner, Oregon Office of Economic Analysis, September 3, 2015, http://oregoneconomicanalysis.com/2015/09/03/job-vacancies-and-shadow-unemployment/.

The unemployment rate in Oregon, as throughout the US, has declined since the recession.

In July 2015, the unemployment rate in Corvallis was about 4.9%, compared, 4.8% in Benton County, 5.8% in Oregon, and 5.3% in the nation.

Exhibit 94. Unemployment Rate, US, Oregon, Benton County, and Corvallis, 2000-2015

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics and Labor Force Statistics



COMMUTING PATTERNS

Commuting plays an important role in Corvallis' economy because employers in Corvallis are able to access workers from people living in the city, as well as the broader Willamette Valley. In the 2011-2013 period, about 52% percent of Corvallis residents have a commute of less than 15 minutes compared to 44% of Benton County residents and 33% of Oregon residents.

Corvallis is part of an interconnected regional economy.
Fewer people both live and work in Corvallis than combined commute into or out of the city.

Exhibit 95. Commuting Flows, Corvallis, 2013
Source: US Census Bureau, Census On the Map.

About 35% of all people who work in Corvallis, also live in Corvallis.
About 70% of Corvallis workers live in either Benton or Linn County (52% in Benton and 18% in Linn).

Exhibit 96. Places Where Corvallis Workers Lived, 2013
Source: US Census Bureau, Census On the Map.

35% Corvallis	12% Albany	3% Philomath	2% Portland
52% Benton County	18% Linn County		

About 53% of Corvallis residents also work in Corvallis.
About 69% of Corvallis residents work in either Benton or Linn County (59% in Benton and 10% in Linn).

Exhibit 97. Places Where Corvallis Residents were Employed, 2013
Source: US Census Bureau, Census On the Map.

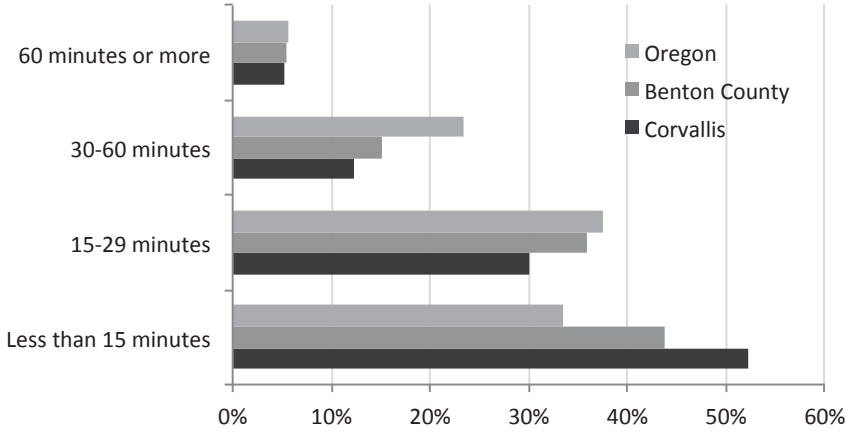
53% Corvallis	7% Albany	4% Portland	4% Salem
59% Benton County	10% Linn County		

A larger percentage of Corvallis residents have a commute time of less than 15 minutes than in the state and region as a whole.

About 52% of Corvallis residents have a commute of less than 15 minutes, compared to 44% in Benton County, and just 33% in Oregon.

Exhibit 98. Commute Times, Oregon, Benton County, and Corvallis, 2011-13

Source: US Census Bureau, 2011-2013 ACS B08303



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

Changes in Employment

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

EMPLOYMENT TRENDS IN CORVALLIS

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

In the 1970s, Oregon started to transition away from reliance on traditional resource-extraction industries. An important indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry[100] and concurrent growth of employment in high-technology manufacturing industries (Industrial Machinery, Electronic Equipment, and Instruments).[101]

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 sectors and industries are shown in two tables: (1) between 1980 and 2000 and (2) between 2001 and 2013. The analysis is divided in this way because of changes in 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.

Exhibit 99 shows changes in covered employment by sector in the Benton County MSA between 1980 and 2000. Over that period total employment in Benton County increased by 44% from about 23,300 to 33,600 employees. Between 1980 and 2000 employment in services as a share of total employment rose from 17% to 27%.

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

[101] SIC 35, 36, 38

Exhibit 99. Covered Employment by SIC Industries, Benton County, 1980-2000

Sector	1980	1990	2000	Change 1980 to 2000			
				Difference	Percent	AAGR	Share
Agriculture, Forestry & Fishing	303	541	1,176	873	288%	7.0%	2%
Mining	41	12	ND	ND	ND	ND	ND
Construction	569	559	962	393	69%	2.7%	0%
Manufacturing	4,063	5,244	7,010	2,947	73%	2.8%	3%
Trans., Comm., & Utilities	815	729	787	-28	-3%	-0.2%	-1%
Wholesale Trade	546	828	695	149	27%	1.2%	0%
Retail Trade	4,014	4,552	5,562	1,548	39%	1.6%	-1%
Finance, Insurance & Real Estate	787	698	1,037	250	32%	1.4%	0%
Services	3,974	6,147	8,843	4,869	123%	4.1%	9%
Nonclassifiable	0	10	ND	ND	ND	ND	ND
Local Government	2,305	2,571	2,718	413	18%	0.8%	-2%
State Government	5,221	4,768	4,138	-1,083	-21%	-1.2%	-10%
Federal Government	737	770	682	-55	-7%	-0.4%	-1%
Total	**23,375**	**27,430**	**33,637**	**10,262**	**44%**	**1.8%**	

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages; Year 2000 State Government covered employment comes from direct email and phone communication between Zeph Schafer and Erik Knoder at the Oregon Employment Department
Note: "ND" stands for "Not disclosed" and indicates that the data has been suppressed by the BLS due to confidentiality constraints. In most years, the non-disclosure is negligible. However, as the table shows, in 2000 a total of 27 jobs in Mining and/or Nonclassifiable categories were not disclosed—the total value shown for 2000 (33,637) includes the 27 jobs mentioned.

Exhibit 100 shows employment in NAICS-categorized industries in Benton County for 2001 and 2014. Employment increased by 557 jobs, or 2%, during this period. The private sectors with the largest increases in numbers of employees were Educational Services, Health Care and Social Assistance, and Professional and Technical Services.

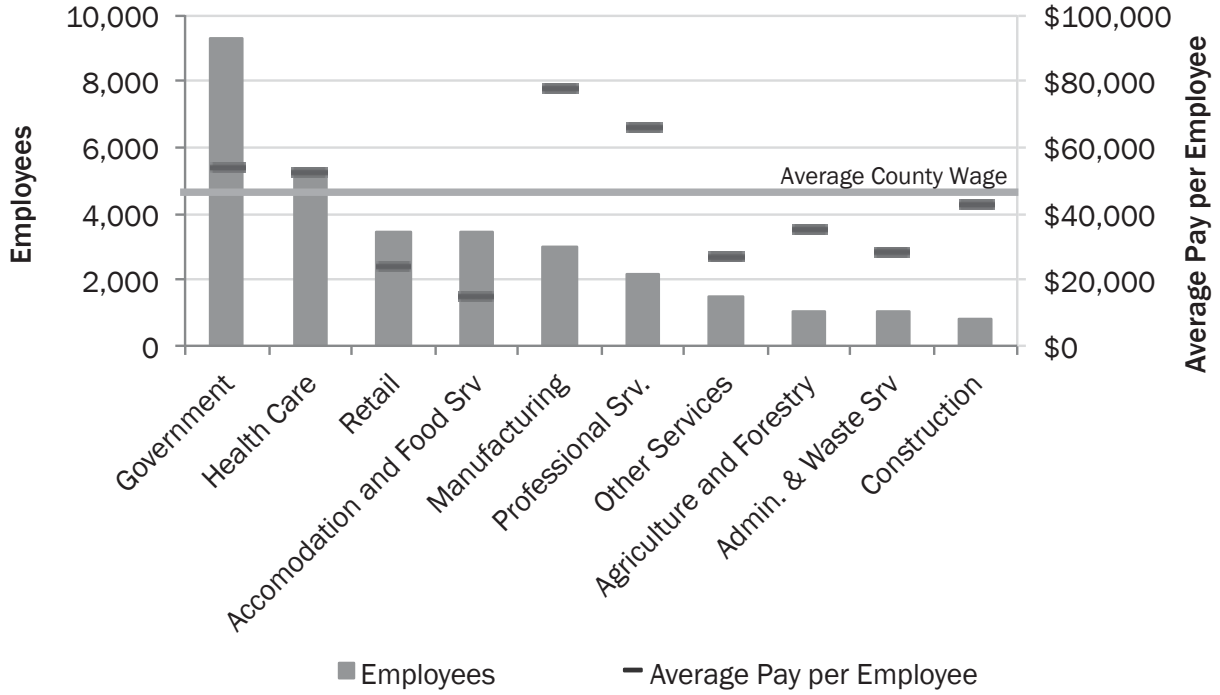
Exhibit 100. Covered Employment by Industry, Benton County, 2001-2014

Sector	2001	2014	Change 2001 to 2014			
			Difference	Percent	AAGR	Share
Agriculture, Forestry, Fishing, and Hunting	1,148	1,047	-101	-9%	-16%	0%
Mining	(c)	25	NA	NA	NA	NA
Construction	1,020	849	-171	-17%	-24%	-1%
Manufacturing	6,442	3,015	-3,427	-53%	-61%	-10%
Wholesale Trade	527	407	-120	-23%	-30%	0%
Retail	3,232	3,431	199	6%	-2%	0%
Transportation, Warehousing, & Utilities	422	478	56	13%	6%	0%
Information	964	612	-352	-37%	-44%	-1%
Finance and Insurance	569	576	7	1%	-6%	0%
Real Estate and Rental and Leasing	459	398	-61	-13%	-21%	0%
Professional and Technical Services	1,605	2,197	592	37%	29%	2%
Management of Companies and Enterprises	69	(c)	NA	NA	NA	NA
Administrative and Waste Services	1,195	1,003	-192	-16%	-24%	-1%
Educational Services	256	463	207	81%	73%	1%
Health Care and Social Assistance	3,886	5,239	1,353	35%	27%	4%
Arts, Entertainment, and Recreation	419	408	-11	-3%	-10%	0%
Accomodation and Food Services	2,573	3,412	839	33%	25%	2%
Other Services and Unclassified	1,237	1,500	263	21%	14%	1%
Total Government	8,492	9,290	798	9%	2%	2%
Non-Disclosed	35	757				
Total	**34,549**	**35,106**	**557**	**2%**	**-6%**	**0%**

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2001-2014
Note: "ND" stands for "Not Disclosed" and indicates that the data has been suppressed by the BLS due to confidentiality constraints. The total amount of not-disclosed employment is shown in the table.

Exhibit 101 shows covered employment and average wage for the 10 largest industries in Benton County. Jobs in Government, which account for about 26% of the county's covered employment pay more per year than the county average ($53,794 compared to $46,281). Jobs in Health Care, Manufacturing, and Professional Services all pay above the average, while those in Retail, Accommodation and Food Services, Agriculture and Forestry, Administrative and Waste Services, Construction, and Other Services pay less than the average.

Exhibit 101. Covered Employment and Average Pay by Industry, 10 Largest Industries Benton County, 2014



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2001-2014

EMPLOYMENT IN CORVALLIS

Exhibit 102 shows a summary of confidential employment data for the city of Corvallis in 2014. Corvallis had 30,366 jobs at 1,927 establishments in 2014, with an average firm size of 15 employees. The sectors with the greatest number of employees were: Government (28%), Health Care, Social Assistance, and Management of Companies (19%), Retail (11%), Accommodation and Food Service (11%), and Manufacturing (8%). These sectors accounted for 23,193 jobs or 76% of Corvallis' employment.

Exhibit 102. Covered Employment, Corvallis, 2014

Sector/Industry	Establish-ments	Employees		Payroll	
		Number	% of Total Emp.	Total	Average Pay per Employee
Agriculture, Forestry, Fishing and Hunting	**12**	**110**	**0%**	**$3,617,069**	**$32,882**
Construction	**91**	**547**	**2%**	**$25,196,034**	**$46,062**
Manufacturing	**61**	**2,453**	**8%**	**$208,218,525**	**$84,883**
Wholesale Trade	**57**	**280**	**1%**	**$24,016,561**	**$85,773**
Retail Trade	**222**	**3,259**	**11%**	**$79,688,159**	**$24,452**
Food and Beverage Stores	29	959	3%	$21,807,414	$22,740
General Merchandise Stores	9	465	2%	$10,364,451	$22,289
Motor Vehicle and Parts Dealers	23	363	1%	$15,904,587	$43,814
Sporting Goods, Hobby, Book, and Music Stores	26	303	1%	$4,485,105	$14,802
Other Retail Trade	135	1,169	4%	$27,126,602	$23,205
Transportation, Warehousing, and Utilities	**25**	**202**	**1%**	**$5,726,996**	**$28,351**
Information	**42**	**536**	**2%**	**$35,940,036**	**$67,052**
Finance and Insurance	**79**	**535**	**2%**	**$32,115,347**	**$60,029**
Real Estate and Rental and Leasing	**100**	**361**	**1%**	**$9,433,578**	**$26,132**
Professional, Scientific, and Technical Servcs.	**262**	**1,984**	**7%**	**$132,529,702**	**$66,799**
Admin. & Support & Waste Management Srvcs.	**64**	**724**	**2%**	**$18,994,103**	**$26,235**
Private Education	**32**	**259**	**1%**	**$6,441,621**	**$24,871**
Health Care, Social Assistance & Mngmt. of Companies	**270**	**5,790**	**19%**	**$310,602,655**	**$53,645**
Ambulatory Health Care Services	151	1,596	5%	$95,226,529	$59,666
Nursing and Residential Care Facilities	56	872	3%	$19,797,273	$22,703
Social Assistance	47	656	2%	$11,361,224	$17,319
Hospitals and Management of Companies	16	2,666	9%	$184,217,629	$69,099
Arts, Entertainment, and Recreation	**24**	**311**	**1%**	**$4,622,657**	**$14,864**
Accommodation and Food Services	**199**	**3,221**	**11%**	**$48,329,837**	**$15,005**
Other Services	**321**	**1,324**	**4%**	**$36,802,060**	**$27,796**
Government	**66**	**8,470**	**28%**	**$472,237,922**	**$55,754**
Federal Government	8	471	2%	$33,448,199	$71,015
State Government	11	5,987	20%	$351,992,812	$58,793
Educational Services	1	5,818	19%	$343,785,657	$59,090
Other State Government	10	169	1%	$8,207,155	$48,563
Local Government	47	2,012	7%	$86,796,911	$43,140
Educational Services	15	813	3%	$30,041,225	$36,951
Justice, Public Order, and Safety Activities	10	295	1%	$19,403,254	$65,774
Other Local Government	22	904	3%	$37,352,432	$41,319
Total	**1,927**	**30,366**	**100%**	**$1,454,512,862**	**$47,899**

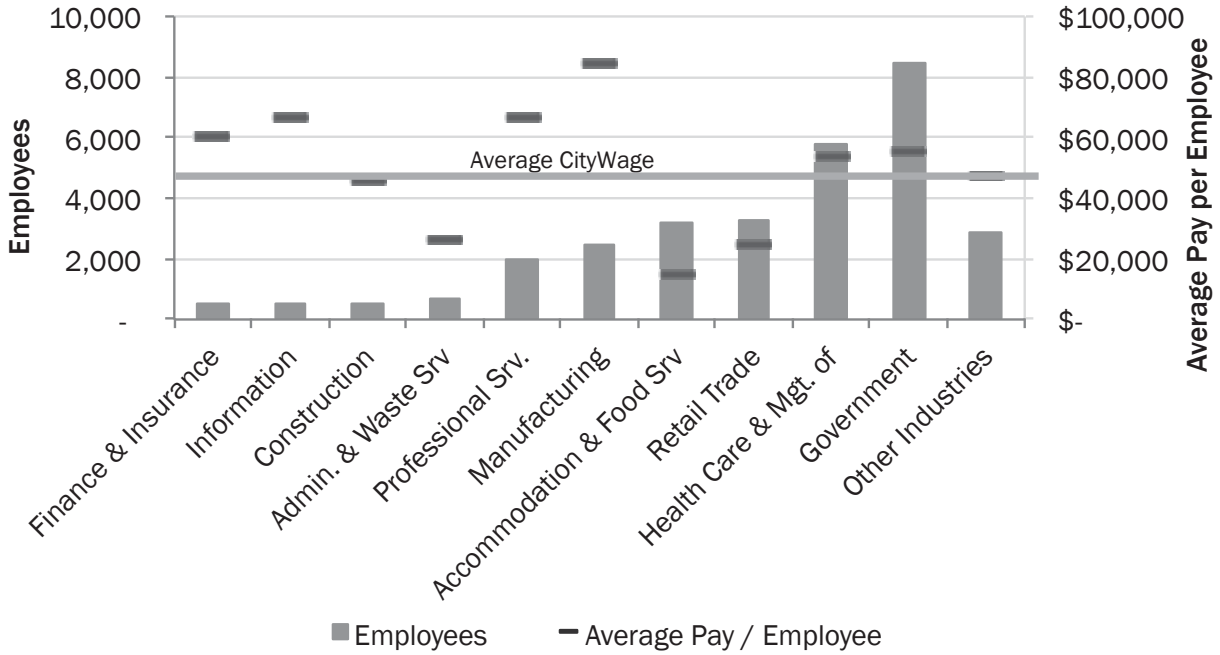
Source: Oregon Employment Department Quarterly Census of Employment and Wages (QCEW). Summary by industry and percentages calculated by ECONorthwest

Exhibit 103 shows the employment and average pay per employee for selected industrial sectors in Corvallis. Average pay for all employees ($47,899) is shown as a light brown line across the graph and average pay for individual sectors as short red lines. The figure shows:

- Government and Health Care and Social Assistance are the largest sectors that pay above average wage. Together these two sectors account for 14,260, or nearly half of all employment in the city (47%). Government jobs in Corvallis average about $55,754, while Health Care and Social Assistance jobs pay around $53,645 on average. These well paying jobs provide substantial income for Corvallis residents and hence the economy. Other sectors that pay above-average wages, but employ fewer people include Manufacturing ($84,883), Information ($67,052), Professional Services ($66,799), and Finance and Insurance ($60,029).

- Other sectors provide employment, but pay relatively low wages. These sectors include Retail (11% of employment, but wages of $24,452), and Accommodation and Food Services (11% and $15,005), among the others shown in the chart.

Exhibit 103. Employment and Average Wage by Industry for Selected Sectors, Corvallis, 2014



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

While the majority of Corvallis' businesses are small, with three-quarters of businesses having fewer than 10 employees, large employers play an important role in Corvallis' economy. Corvallis' largest employers are in public education, health care, high technology, and municipal government.

Corvallis' five largest private employers employ about 5,449.
The companies shown here represent health care, technology engineering and civil engineering companies.

Exhibit 104. Corvallis' Largest Private Employers
Source: Corvallis Chamber of Commerce, http://www.corvallischamber.com/industry.html

Samaritan Health Services
Health Care
2,632 Employees

Hewlett-Packard Company
Technology Engineering and Design
1,550 Employees

Corvallis Clinic
Health Care
620 Employees

CH2M Hill
Civil Engineering
400 Employees

Fiserv
Financial Services Technology
247 Employees

Corvallis' largest public employers account for about 11,788 jobs, of which Oregon State University accounts for about 88%.

Exhibit 105. Corvallis' Largest Public Employers
Source: Corvallis Chamber of Commerce, http://www.corvallischamber.com/industry.html

Oregon State University
4,990 Full Time Employees
7,300 Part-Time Employees[102]

Corvallis School District
550 Employees

City of Corvallis
427 Employees

Benton County
381 Employees

[102] OSU Employment is based on the OSU Employment Summary from October 2015. Part-time employment includes graduate students, students, and temporary employees. For more details see: http://oregonstate.edu/admin/aa/ir/faculty-and-staff-reports

REGIONAL BUSINESS CLUSTERS

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

The US Cluster Mapper is a database created by the Harvard Business School and the US Economic Development Administration. It provides a snapshot of the business clusters in the Corvallis Metropolitan Area (Benton County). The business clusters it identified were:

- **Business Services.** This cluster includes businesses such as consulting services, employment placement services, engineers, architects, and others. In the Corvallis MSA, this cluster employs about 2,696 people.
- **Information Technology.** This cluster includes producers of electronics components, computers, medical equipment, and software publishers. In the Corvallis MSA, the cluster employs about 2,100 people.
- **Distribution and Electronic Commerce.** This cluster consists of firms providing wholesale of electronic goods, sporting and recreational goods, and professional equipment supplies, among other services. In the Corvallis MSA, this sector employs 542 people.
- **Forest Products.** Production of forest products, wood, and paper continue to a significant employment cluster in Oregon. Oregon is the dominant producer of softwood plywood, softwood veneer, engineered wood products, and lumber. Emerging forest products include generation of renewable electric energy and producing transportation bio-fuels from woody biomass. In the Corvallis MSA, this cluster employs about 423 people in the Corvallis MSA, and it is the metro area's highest-ranked cluster—ranked the 20th-largest such cluster in the US. Corvallis is also home to the Oregon State University College of Forestry, which can provide education to potential employees in this industry.

IMPORTANCE IN SMALL BUSINESS GROWTH AND ENTREPRENEURSHIP

Small business growth presents key opportunities for economic growth in Corvallis. About two-thirds of Corvallis's privately owned businesses are have fewer than 100 employees (more than 1,800 businesses), with an average size of 8 employees per business, accounting for about half of private employment in Corvallis. Businesses with 19 or fewer employees account for 32% of private employment.

One of Corvallis' key economic development opportunities is the growth of small and mid-sized businesses. Programs that foster entrepreneurship and small business growth in Corvallis include the following:

- **The Oregon Regional Accelerator and Innovation Network (RAIN).** RAIN is a nonprofit dedicated to supporting and growing traded-sector businesses. RAIN does this through building and connecting existing talent, capital and infrastructure into a network that is easy for entrepreneurs to access and navigate no matter what stage of business development. In Corvallis, RAIN's key partnerships are with Oregon State University (primarily through the OSU Advantage Accelerator), the City of Corvallis, Benton County, and other regional partners.
- **OSU Advantage Accelerator-RAIN Corvallis.** The OSU Advantage Accelerator operates as an accelerator incubator for startup and early stage organizations, important support services to entrepreneurs at critical points in emerging ventures development. The OSU Advantage Accelerator is the Corvallis-local presence of RAIN. The OSU Advantage Accelerator is lead through the OSU Research Office and connects OSU with industry, entrepreneurs, and investors. The Accelerator focuses on speeding up the successful commercialization of ideas into high-growth, innovative companies.

  The OSU Advantage Accelerator works with entrepreneurs through a range of programs, including: (1) identifying a potential product, market and industries, (2) testing startup company feasibility and validating the business model, and (3) launching the startup company, ramping up from research and development to product manufacturing and marketing.

  The OSU Advantage Accelerator works with a wide range of businesses. Examples of businesses that have worked with the OSU Advantage Accelerator are:

  - *KW Associates, LLC*. Formed in 2014 by inventors of Arc Position Sensing technology. They bring forth a patented and award winning technology, which revolutionizes specialty metal manufacturing. They were awarded an OregonBEST Commercialization Grant to support further technology development.
  - *Benny's Donuts.* Scheduled to open their first shop April 2016, founder Benny Augeri will create an online delivery-based system using GIS technology. They plan to open another store location within a year.
  - *Holmwell Software LLC.* A technology company which aims to create productivity software for marginalized populations. They developed Circle Blvd., project management software for small teams.
- **The Oregon Nanoscience and Microtechnologies Institute (ONAMI).** ONAMI has worked with entrepreneurs from OSU and the University of Oregon to commercialize research and development in Oregon since 2003. ONAMI's three major pro- grams are: (1) a professionally managed commercialization gap fund, (2) support and promotion of

shared user facilities for industry and academic researchers, and (3) matching grants for industry sponsored research awards.

ONAMI helps businesses connect with investors, develop and introduce new products, market themselves, increase sales, and expand into new markets. Between 2007 and 2015, ONAMI funded 45 University Startup Companies and the companies raised $165 million in capital. Between 2005 and 2015, ONAMI Member Researchers received 88 patents in nanoscience or microtechnology. Examples of businesses that ONAMI worked with in Corvallis include:

- *Inpria.* Worked on a project titled "Inorganic Printed and Spin-On Materials for High-Performance, Low-Cost Printed Electronics" with ONAMI. In 2011, they received the Small Business Innovation Research (SBIR) award from the National Science Foundation.
- *CSD Nano.* Focusing in the quickly growing solar cell cover glass industry, they are a solution deposition company addressing anti-reflective coating (ARC). In August 2012, they were awarded five hundred thousand dollars to demonstrate the scale-up of ARC technology. This was to meet the specifications placed by solar energy customers.
- *Valliscor.* Teamed with OSU to develop a process for manufacturing bromoflourinated hydrocarbons. They specifically focused in the pharmaceutical and agrochemical industries and their process used environmentally friendly reagents to reduce chemical waste. Their aim is to produce brominated flourohydrocarbons on a commercial scale.

OUTLOOK FOR GROWTH IN BENTON COUNTY

Exhibit 106 shows the Oregon Employment Department's forecast for employment growth by industry for the Northwest Oregon Region (Benton, Clatsop, Columbia, and Lincoln Counties) over the 2012 to 2022 period. The department forecasts that employment in the region will grow at an average annual growth rate of 1.1%. From 2015 to 2025, Benton County's population is forecast to grow at an average annual growth rate of 0.8%, slower than the forecast growth rate of employment in the Northwest Oregon Region. [103]

The sectors that will lead employment growth in the region for the 10-year period are Educational and Health Services (adding 1,910 jobs), Leisure and Hospitality (1,750), Professional and Business Services (1,630), Government (1,590), and Trade, Transportation, and Utilities, (1,250). Together, these sectors are expected to add 8,100 new jobs or 76% of employment growth in the Region.

[103] Benton County Population Forecast from Oregon Office of Economic Analysis, Demographic Forecast, Long-term County Forecast, 2013 Release, accessed 10/2/13.

Exhibit 106. Regional Employment Projections, 2012-2022, Northwest Oregon Region (Benton, Clatsop, Columbia, Lincoln Counties)

Source: Oregon Employment Department. Employment Projections by Industry 2012-2022.

			Change 2012-2022		
Industry Sector	2012	2022	Number	Percent	AAGR
Total private	67,800	76,840	9,040	13%	1.3%
Natural resources and mining	3,260	3,750	490	15%	1.4%
Mining and logging	1,000	1,130	130	13%	1.2%
Construction	2,920	3,680	760	26%	2.3%
Manufacturing	8,860	9,330	470	5%	0.5%
Durable goods	4,750	5,090	340	7%	0.7%
Wood product manufacturing	1,050	1,170	120	11%	1.1%
Nondurable goods	4,110	4,240	130	3%	0.3%
Food manufacturing	1,830	1,970	140	8%	0.7%
Paper manufacturing	1,530	1,410	-120	-8%	-0.8%
Trade, transportation, and utilities	13,560	14,810	1,250	9%	0.9%
Wholesale trade	990	1,080	90	9%	0.9%
Retail trade	10,690	11,620	930	9%	0.8%
Transportation, warehousing, and utilit	1,880	2,110	230	12%	1.2%
Information	1,190	1,200	10	1%	0.1%
Financial activities	3,440	3,900	460	13%	1.3%
Professional and business services	6,660	8,290	1,630	24%	2.2%
Professional and technical services	2,980	3,850	870	29%	2.6%
Educational and health services	11,270	13,180	1,910	17%	1.6%
Hospitals	3,900	4,360	460	12%	1.1%
Leisure and hospitality	13,570	15,320	1,750	13%	1.2%
Accommodation and food services	12,450	14,070	1,620	13%	1.2%
Accommodation	3,530	3,790	260	7%	0.7%
Food services and drinking places	8,920	10,280	1,360	15%	1.4%
Other services	3,070	3,380	310	10%	1.0%
Government	24,150	25,740	1,590	7%	0.6%
Federal government	1,220	1,160	-60	-5%	-0.5%
State government	12,600	13,710	1,110	9%	0.8%
Local government	10,330	10,870	540	5%	0.5%
Local education	4,440	4,660	220	5%	0.5%
Total payroll employment	**91,950**	**102,580**	**10,630**	**12%**	**1.1%**

Corvallis' Competitive Advantages

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

Corvallis' primary competitive advantages are: quality of life, access to highly educated and skilled labor from within the University, and connection to the Willamette Valley economy. These factors make Corvallis attractive to residents and businesses that want a high quality of life where they live and work.

The local factors that form Corvallis' competitive advantage are summarized below, with additional details in the sections following this summary. The details of some of Corvallis' competitive advantages were described in the prior section, such as access to labor.

- **Location.** Corvallis is located in Benton County about an hour and a half south of Portland by car (about 80 miles), an hour east of the Oregon Coast (about 50 miles), and about 50 minutes north of Eugene (about 45 miles). Businesses in Corvallis have access to the labor force in the Mid- and Southern Willamette Valley, as well as the natural resources from surrounding rural areas, such as agricultural products, lumber, and other resources.
- **Transportation.** Highway 34 also provides a direct connection to I-5 (roughly a 20-minute drive). Highway 99W provides routes to Salem and Eugene. Highway 20 provides access both to the Oregon Coast and to Albany and I-5. Other transportation options include: bus (Greyhound and Amtrak); air (the Corvallis Municipal Airport); and transit (Corvallis Transit System).

  Firms needing passenger air transportation, such as regional corporations or professional service firms, have access to the Portland International Airport, which is about an hour and forty-five minutes from Corvallis by car.
- **Oregon State University.** Corvallis is home to one of the state's largest universities. Oregon State employs about 5,800 people [104] and offers a range of employment opportunities, from jobs requiring highly skilled and educated employees—such as those in research or teaching—in addition to jobs requiring little formal education—such as administrative support. In addition, OSU has about 23,500 students in Corvallis.

[104] This estimate of employment is based on Oregon Employment Department Quarterly Census of Employment and Wages (QCEW) data for 2014, which includes covered employment and averages the number of employees across the year into full-time employee equivalents. The University's employment reports shows that in October 2015, the University employed 4,990 full-time employees and 7,300 part-time employees (including graduate assistances and students).

The presence of OSU's employees and students results in demand for goods and services, ranging from groceries and other retail goods to restaurants and financial services to demand for transportation services and housing.

The university's concentration of educated people (students, faculty, and researchers) provides a capable workforce to attract businesses needing skilled educated employees. The RAIN network is designed to help spin research at OSU into entrepreneurial businesses located in Corvallis to support economic growth in Corvallis, as well as around the State.

- **Existing employment base.** Benton County had over 2,400 employers with a total of more than 35,100 workers in 2014. The county's largest employment sectors are Government (9,300 jobs), Health Care (5,200 jobs), Retail Trade (3,400 jobs), Accommodation and Food Service (3,400 jobs), and Manufacturing (3,000 jobs).[105] Corvallis is the regional employment center; about 86% of employment in Benton County is in Corvallis.[106] The existing businesses and other employers in Corvallis create opportunities for expansion of existing businesses and growth of new related businesses.
- **Labor market.** The availability of labor is critical for economic development. Availability of labor depends not only on the number of workers available, but the quality, skills, wages, and experience of available workers as well. Businesses in Corvallis have access to highly educated skilled workers, nearby college students, and unskilled workers. Commuting is common in Corvallis, with about 65% of Corvallis workers living outside of the city. The commuting patterns show that businesses in Corvallis are able to attract skilled and unskilled workers living around the region.
- **Economic development partnerships.** Corvallis partners in economic development include Corvallis Chamber of Commerce, Corvallis Benton County Economic Development Office (YesCorvallis), Business Oregon, RAIN, Willamette Innovators Network, Visit Corvallis, the Downtown Corvallis Association, the Community Independent Business Alliance and others. Corvallis is able to work with these and other regional partners to provide infrastructure and services needed to retain and attract businesses to Corvallis.
- **Support for Entrepreneurship**. Oregon State University provides an advantage for start-ups and entrepreneurial growth in Corvallis. In addition to Oregon's statewide RAIN nonprofit, OSU has the Advantage Accelerator, which works with entrepreneurs in the City. It assists a variety of businesses over a range of industries. ONAMI assists nanoscience and microtechnology start-ups, through help such as raising capital, marketing new products, increasing sales. Both nonprofits help incubate and grow smaller entrepreneurial businesses in Corvallis.

[105] These job totals refer specifically to covered employment.

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

- **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 Corvallis (rather than in a different part of the Willamette Valley) based on: development charges (i.e., systems development charges), availability of public infrastructure (i.e., transportation or sanitary sewer), and attitudes towards businesses.
- **Enterprise Zone.** Corvallis has three areas within an Enterprise Zone. They are: 180 acres at Hewlett Packard's campus, 78 acres at the Sunset Research and Technology Park, and 1,322 acres in south Corvallis along Highway 99. Eligible job-creating businesses that locate in an Enterprise Zone may receive an exemption from property taxes for new buildings and equipment for three to five years. Businesses that are eligible for enterprise zone benefits are generally manufacturing or other industrially-oriented businesses.
- **Quality of life.** Corvallis' high quality of life and urban amenities are a competitive advantage for attracting businesses to the city. The community's quality of life attributes include: safe and attractive neighborhoods, cultural amenities, university sporting events, educational opportunities, shopping opportunities, and access to outdoor recreation. Corvallis' high quality of life is likely to attract businesses and entrepreneurs that want to locate in a high-amenity area.

Corvallis' disadvantages for economic development include:

- **Distance from I-5.** Corvallis is located about 10 miles from Interstate 5. The distance from I-5 and connections to Highway 34 from Corvallis, via a bridge over the Willamette or the Corvallis-Newport Highway, may make Corvallis less attractive to businesses that ship large amounts of freight.
- **Distance from a major airport.** The drive time to get to the Portland International Airport from Corvallis is about an hour and forty-five minutes, with a longer drive time in heavy traffic. While Corvallis is located about half an hour north of the Eugene Airport, Eugene has fewer flights than Portland and flights are often more expensive from Eugene than from Portland. The lack of proximity to a major airport makes Corvallis less attractive to businesses that depend heavily on air travel, such as businesses with many employees who frequently travel.
- **Availability and location of industrial land.** Corvallis has about 1,060 acres of vacant and partially vacant industrial land. Much of this land is constrained, primarily by wetlands, leaving about 843 acres of vacant buildable suitable industrial land and 47 acres of partially constrained vacant industrial land. Corvallis' industrial land has characteristics that make it less desirable for industrial users, such as:
    - *Outside of the city limits.* About 55% (462 acres) of Corvallis' vacant buildable suitable industrial land is inside the city limits and 45% (381 acres) is between the city limits and UGB. Land that is outside of the city limits will need to be

annexed and serviced before development can occur, a process that takes a considerable amount of time and resources.

- *Location and wetland constraints.* More than two thirds of Corvallis' industrial land is located in the southern part of the city, along Highway 99, approximately four miles from downtown Corvallis. About 30 acres has wetlands that are not locally protected but are regulated by the State. The distance from I-5 and from downtown makes this area less desirable for businesses that need freight access or prefer to be nearer to other businesses. The presence of wetlands, even those not locally protected, increases development costs as a result of complying with State regulations, making the land less desirable for industrial development.

- **Lack of business incubator space.** Corvallis does not have a space that small businesses can co-locate, with shared services (such as administrative services), business infrastructure (such as high capacity high speed telecommunications), laboratory space, and light manufacturing space. The OSU Accelerator is actively searching for one or more buildings to house a business incubator, to foster growth of new small companies.

- **Availability of vacant commercial and industrial buildings.** Discussions with economic development stakeholders indicate that Corvallis has relatively few vacant commercial and industrial buildings that are available for use by businesses growing in Corvallis or those that want to locate in Corvallis. Businesses need a wide range of flexible space, such as office space, wet laboratory space, and light manufacturing space.

  The lack of vacant buildings available for use by growing businesses in Corvallis is a disadvantage because businesses are having a difficult time finding space. Some small start-up businesses have chosen to leave Corvallis as they continued to grow into mid-sized companies, in part because of lack of available space in existing buildings.

- **Land-use policies.** Discussions with economic development stakeholders indicate that Corvallis' land-use policies are a substantial barrier to development. The City's land-use policies, most notably the Land Development Code, are complex. Some policies have subjective decision criteria. Annexation of land into the city limits, from the UGB, is done through a voter-approved annexation process.[107] Taken together, developing commercial and industrial land in Corvallis can be is costly and time consuming.

- **Restrictions on development at the Airport Industrial Park.** The Airport Industrial Park is a City-owned industrial area where industrial businesses could locate. Land at the Airport Industrial Park is only available for lease, not ownership. This restriction is a disadvantage for attracting businesses who want to own their own building and land.

[107] In March 2016, the Oregon Legislature passed Senate Bill 1573, which requires cities with voter annexation (like Corvallis) to annex lands without a vote when the landowner submits a petition for annexation, provided that the land is with the city's UGB, is (or will be) subject to the city's comprehensive plan, and at least one parcel in the area to be annexed is contiguous to the city limits. It remains to be seen how the new law will affect land availability and price in Corvallis.

- **Connections to venture capital and a pool of high technology companies.** Corvallis does not have direct connections to the venture capital and pool of high technology companies concentrated in the San Francisco Bay Area. As a result, raising venture capital is more difficult for start-up companies. And businesses in Corvallis do not have the deep pool of labor accessible to business in the Bay Area, such as experienced executive officers and people with some types of technical specialties.

- **Housing costs.** The cost of housing is relatively high in Corvallis, compared with housing in surrounding cities and unincorporated areas. There are fewer opportunities for housing that is affordable to people with average or below average income. This affects people in low-and moderate-paying jobs, in start-up companies and workers at established companies.

Location

Corvallis is the tenth largest city in Oregon with a population of approximately 56,500 people in 2014. Highway 34 and Highway 20 connects Corvallis to I-5. Highway 99W provides access to Salem and Eugene, and Highway 20 provides a connection to Newport and Albany. Corvallis' location will impact the area's future economic development:

- As home to Oregon's largest universities, Oregon State University, Corvallis provides an opportunity for businesses to locate near a university. Doing so can benefit businesses by making it easier to recruit young educated employees or collaborating with members of the university on research and innovation.
- Corvallis is located at the central portion of the Willamette Valley, about 45 minutes from the state capitol of Salem, about an hour from Eugene, and 1.5 hours from Portland.
- Corvallis is less than an hour from Newport and the Oregon Coast and provides some services not available at the Coast.
- Residents of Corvallis have easy access to shopping, cultural activities, indoor and outdoor recreational activities, and other amenities in the city and rural Benton County. The easy access contributes to the area's overall quality of life.
- Residents of Corvallis have nearby opportunities for post-secondary education including Oregon State University and Linn-Benton Community College.
- Businesses in Corvallis have access to natural resources, such as wood products or agricultural products, from resource lands in western Oregon.

Corvallis' location, access to Willamette Valley resources, urban amenities, the presence of Oregon State University, and access to natural resources are primary comparative advantages for economic development in the city.

Availability of Transportation

All firms are heavily dependent upon surface transportation for efficient movement of goods, customers, and workers. Access to an adequate highway and arterial roadway network is needed for all industries. Close proximity to a highway or arterial roadway is critical for firms

that generate a large volume of truck or auto trips as well as firms that rely on visibility from passing traffic to help generate business.

Businesses and residents in Corvallis have access to a variety of modes of transportation: automotive (Highways 99, 34, and 20); and free public transit (Corvallis Transit System). While not located along I-5, Corvallis is connected to the freeway by Highways 34 and 20. Corvallis is about 20 minutes away from I-5 via Highway 34. Additionally, Highway 99W connects Corvallis with other Willamette Valley economic centers such as Salem and Eugene.

Other transportation systems in Corvallis are:

- **Transit**. The Corvallis Transit System (CTS) provides *free* transit service within the city. CTS serves Corvallis with multiple weekday-and-Saturday-operating bus lines. In addition, Greyhound and Amtrak offer bus service that connects Corvallis residents to other cities, such as Portland.
- **Air**. Proximity to air transportation is important for some firms engaged in manufacturing, finance, or business services. The Corvallis municipal airport provides private and corporate service for businesses and some area residents. In addition, the Eugene Airport is 35 miles south, and the Portland International Airport is about 1.75-hour drive from Corvallis, providing wider access to passenger and freight air service.
- **Bicycle**. Corvallis maintains 60 miles of bike lanes that connect residents to the University, the downtown core, and the surrounding neighborhoods. The City sweeps the lanes at least once per month, with increased sweeping during the autumn, and maintains street painting. Corvallis's bike facilities are well used: according to the City, Corvallis had the highest percentage of commuters who bike in 2011 in the nation, for a city of its size.[108]

Public Facilities and Services

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

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

[108] American Community Survey in City of Corvallis, Bike and Pedestrian Programs, http://www.corvallisoregon.gov/index.aspx?page=162, accesed Feb 9, 2016.

Water

The City of Corvallis' sources of potable water include both the Rock Creek Watershed and the Willamette River. These two watersheds supply the Rock Creek and Taylor Water treatment plants. Between these two treatment plants the city can supply about 24 million gallons per day at peak production. In 2012, the two plants treated about 2.62 billion gallons. [109] According to the City's 2012 Water Management and Conservation Plan, the City projects that it will need to provide water to about 64,000 people through 2022 and about 73,000 through 2032. In order to do so, the City plans to request the expansion of its water rights from the state. The City's plans for water services will accommodate about 4,000 more people than the current population forecast for the UGB in 2036 (Exhibit 38).

Following the completion of a 1998 water distribution facility plan update, the city has completed additional pump stations and the installation of emergency generators to help supply water in the event of power outages. The city currently spends about $500,000 per year upgrading water mains and ensuring the quality of water service.[110]

Wastewater

The City of Corvallis provides over 200 miles of pipes to treat the city's wastewater. Corvallis has one wastewater treatment plant, which treats over 4 billion gallons of wastewater per year.[111] The city's most recent wastewater master plan was published in 1998, that document laid out system facility upgrades using a planning horizon that assumed that the city would reach a population of 60,000 within 2007 to 2027, and 80,000 within 2027 to 2047. [112]

[109] http://www.corvallisoregon.gov/modules/showdocument.aspx?documentid=4527

[110] http://www.corvallisoregon.gov/index.aspx?page=997

[111] http://www.corvallisoregon.gov/index.aspx?page=1019

[112] Corvallis Water Distribution Facility Plan, 1998, Page ES-2 http://www.corvallisoregon.gov/index.aspx?page=116.

Employment Growth and Target Industries

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

Forecast of Employment Growth and Commercial and Industrial Land Demand

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

The employment projections in this section build off of Corvallis' existing employment base, assuming future growth similar to Benton 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 (or relocation) of one or more large employers in the community during the planning period. Such a major change in the community's employment would exceed the growth anticipated by the City's employment forecast and its implied land needs (for employment, but also for housing, parks, and other uses). Major economic events, such as the successful recruitment of a very large employer, are difficult to include in a study of this nature. The type of implications, however, are relatively predictable: more demand for land (of all types) and public services.

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

1. **Establish base employment for the projection.** We start with the estimate of covered employment in Corvallis presented in Exhibit 102. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in Corvallis.
2. **Project total employment.** The projection of total employment considers forecasts and factors that may affect employment growth in Corvallis over the 20-year planning period.
3. **Allocate employment.** This step involves allocating types of employment to different land-use types.
4. **Estimate land demand.** This step estimates general employment land demand based on employment growth and assumptions about future employment densities.

The remainder of this section follows this outline to estimate employment growth and commercial and industrial land demand for Corvallis.

Employment base for projection

The purpose of the employment projection is to model future employment land need for general employment growth. The forecast of employment growth in Corvallis starts with a base of employment growth on which to build the forecast. Exhibit 107 shows ECO's estimate of total employment in the Corvallis UGB in 2014.

To develop the figures, ECO started with estimated covered employment in the Corvallis UGB from confidential QCEW (Quarterly Census of Employment and Wages) data provided by the Oregon Employment Department. Based on this information, Corvallis had about 30,366 covered employees in 2014, accounting for 86% of covered employment in Benton County.

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 Benton County is only about 68% of *total* employment reported by the U.S. Department of Commerce.[113] We evaluated this ratio for each industrial sector for Benton County and used the resulting ratios to determine the number of non-covered employees. This allowed us to determine the total employment in Corvallis. Exhibit 107 shows Corvallis had an estimated 43,295 *total* employees within its UGB in 2014.

[113] **Covered** employment includes employees covered by unemployment insurance. Examples of workers not included in covered employment are sole proprietors, some types of contractors (often referred to as "1099 employees"), or some railroad workers. Covered employment data is from the Oregon Employment Department.

Total employment includes all workers based on date from the U.S. Department of Commerce. Total employment includes all covered employees, plus sole proprietors and other non-covered workers.

Exhibit 107. Estimated total employment by sector, Corvallis UGB, 2014

Sector	Covered Employment	Total Employment	Covered % of Total
Natural Resources and Mining	110	139	79%
Construction	547	1,014	54%
Manufacturing	2,453	3,010	81%
Wholesale	280	413	68%
Retail	3,259	4,359	75%
Transportation, Warehousing, & Utilities	202	298	68%
Information	536	767	70%
Finance & Insurance	535	1,243	43%
Real Estate Rental & Leasing	361	1,996	18%
Professional, Scientific, and Technical Servi	1,984	3,872	51%
Admin. & Support & Waste Mgt. & Remediat	724	1,185	61%
Private Educational Services	259	695	37%
Health Care & Social Assistance and Manag	5,790	7,071	82%
Arts, Entertainment, & Recreation	311	1,111	28%
Accommodation & Food Services	3,221	3,464	93%
Other Services (except Public Administratior	1,324	2,316	57%
Government	8,470	10,342	82%
Total	**30,366**	**43,295**	**70%**

Source: 2014 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 Benton County employment from the U.S. Department of Commerce, Bureau of Economic Analysis (total), and the Oregon Employment Department (covered).
Note: The Bureau of Economic Analysis did not disclose the number of total employees in Wholesale Trade and Transportation and Warehousing in Benton County because of confidentiality issues. Exhibit 107 uses the ratio of covered to total employment for all employment in Benton County (68%) to estimate total employment in those sectors in Corvallis.

Employment projection

The employment forecast covers the 2016 to 2036 period, requiring an estimate of total employment for Corvallis in 2016.

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

Corvallis is relying on the safe harbor described in OAR 660-024-0040(9)(a)(A), which allows Corvallis to assume that the current number of jobs in the Corvallis 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."

Exhibit 106 shows that employment in the Northwest Oregon Region, which includes Benton County, will grow at an average annual growth rate of 1.1%.

Exhibit 108 shows employment growth in Corvallis between 2016 and 2036, based on the assumption that Corvallis will grow at an average annual growth rate of 1.10%. Corvallis will have 55,077 employees within the UGB by 2036, an increase of 10,824 employees (24%) between 2016 and 2036.

Exhibit 108. Employment growth in Corvallis UGB, 2016–2036

Year	Total Employment
2016	44,253
2036	55,077
Change 2016 to 2036	
Employees	10,824
Percent	24%
AAGR	1.1%

Source: ECONorthwest

Allocate employment to different land use types

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

Exhibit 109 shows the expected share of employment by land use type in 2016 and the forecast of employment growth by land use type in 2036 in Corvallis' UGB. The forecast shows growth in all categories of employment. **The forecast assumes that all sectors will grow at the same rate over the 20-year period, maintaining the existing distribution of employment by land use type.**

Exhibit 109. Forecast of employment growth by land use type, Corvallis UGB, 2016–2036

	2016		2036		Change 2016 to 2036
Land Use Type	Employment	% of Total	Employment	% of Total	
Industrial	4,982	11%	6,058	11%	1,076
Retail Commercial	4,455	10%	5,508	10%	1,053
Office & Commercial Services	24,245	55%	30,292	55%	6,047
Government	10,571	24%	13,218	24%	2,647
Total	**44,253**	**100%**	**55,077**	**100%**	**10,823**

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

Need for government land in Corvallis is driven, primarily, by growth in local government employment and by OSU employment. We assume that the majority of employment growth at OSU will occur on the OSU campus. **The remainder of the employment forecast does not include land needed to accommodate government uses. The analysis of land needed for government uses is presented in Chapter 5.**

Estimate of commercial and industrial land demand

Some employment growth in Corvallis will not require vacant employment land over the 20-year period. Exhibit 110 shows two types of employment growth that will not require vacant commercial or industrial land:

- **Employment locating in residential plan designations.** According to QCEW data, some employment in Corvallis in 2014 is located on land designated for residential uses. The following amounts of employment located in residential plan designations are: (1) 10% of industrial employment, such as home offices for construction companies; (2) 2.5% of retail employment, such as corner stores or other retail in neighborhoods, and (3) 19% of office and commercial services, such as medical offices or small personal service businesses such as banks or hair stylists.

  This analysis assumes that the percentage of new employment locating in residential land designations will remain the same over the 20-year period: 10% of industrial, 2.5% of retail, and 19% of office and commercial service employment.

- **Employment accommodated through redevelopment.** Corvallis does not track redevelopment of commercial or industrial land. Research by the University of Oregon, as part of development of the rules for OAR 660-038, showed that few cities monitor redevelopment activity and only 8% of cities reported redevelopment on employment lands in the past five years.[114]

  OAR 660-038 provides guidance to cities on assumptions about redevelopment to increase the long-term efficiency of employment land. For cities with a population greater than 10,000 people, OAR 660-038 recommends assuming between 3% to 5% of commercial employment and 1% of industrial employment will be accommodated through redevelopment.

  There is good reason to assume that a larger percentage of Corvallis' commercial employment will be accommodated through redevelopment because of the relatively small amount of buildable vacant and partially vacant commercial land in Corvallis. However, Corvallis has a much larger share of vacant industrial land, suggesting that market pressure for industrial redevelopment will be lower. As a result this analysis assumes a nominal rate of 10% redevelopment for Retail Commercial and Office & Commercial Services and 1% for Industrial land.

[114] University of Oregon Community Service Center and Department of Planning, Public Policy and Management report: "Analysis of Mixed-Use Development and Redevelopment in Oregon Cities: A Report to the HB 2254 Rulemaking Committee," 2015.

Exhibit 110. Forecast of employment growth by land use type, Corvallis UGB, 2016–2036

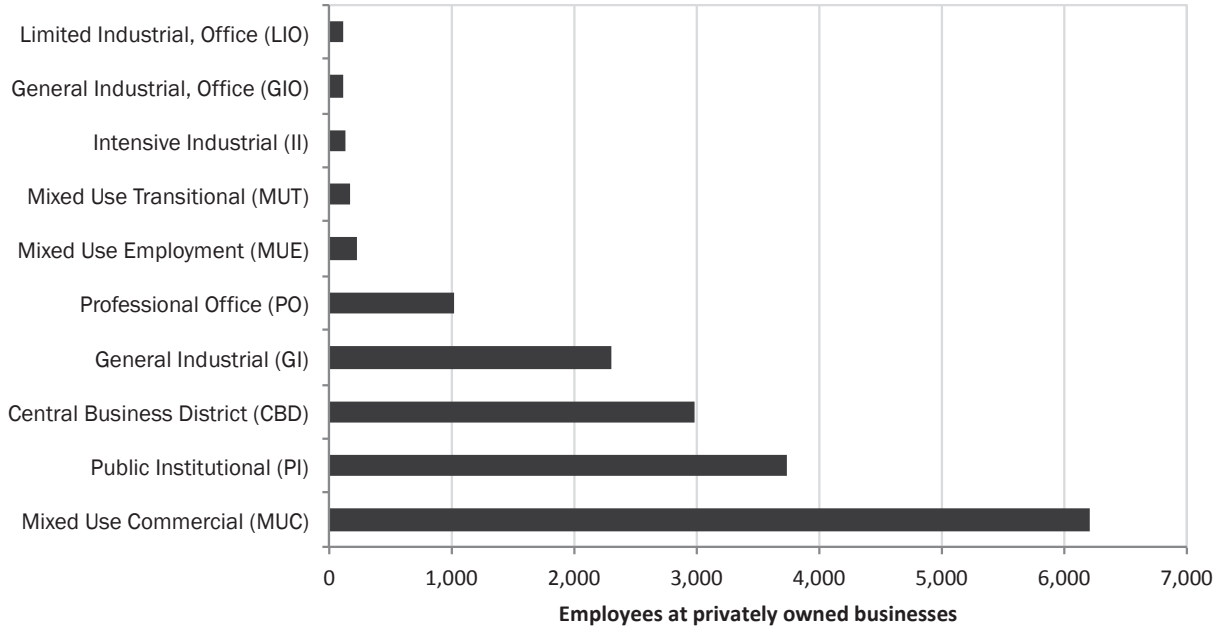
Land Use Type	New Employment Growth	Emp. In Res. Designations	Emp. Accomodated through Redevelopment	% of New Emp. on Dev. Land	New Emp. on Vacant Land
Industrial	1,076	108	11	11%	1,065
Retail Commercial	1,053	26	105	12%	948
Office & Commercial Services	6,047	1,149	605	29%	5,442
Total	**8,176**	**1,283**	**721**	**29%**	**7,455**

Source: ECONorthwest

The next step in the process is allocating employment to Corvallis' commercial and industrial Plan Designations. This allocation is based on the existing location of employment in Corvallis by land use type and Plan Designations. Exhibit 111 and Exhibit 112 present information about existing employment at privately-owned businesses (excluding employment by local, state, or federal agencies) by Plan Designation in Corvallis in 2014, based on covered employment data.

Exhibit 111 shows that the Plan Designations with 1,000 or more employees of privately-owned businesses are: MUC, PI, CBD, GI, and PO. Employment in these Plan Designations accounts for 95% of private employment in commercial and industrial Plan Designations in Corvallis. More than one-third of total private employment is located in MUC.

Exhibit 111. Number of private (non-governmental) employees by commercial and industrial Plan Designations, Corvallis UGB, 2014

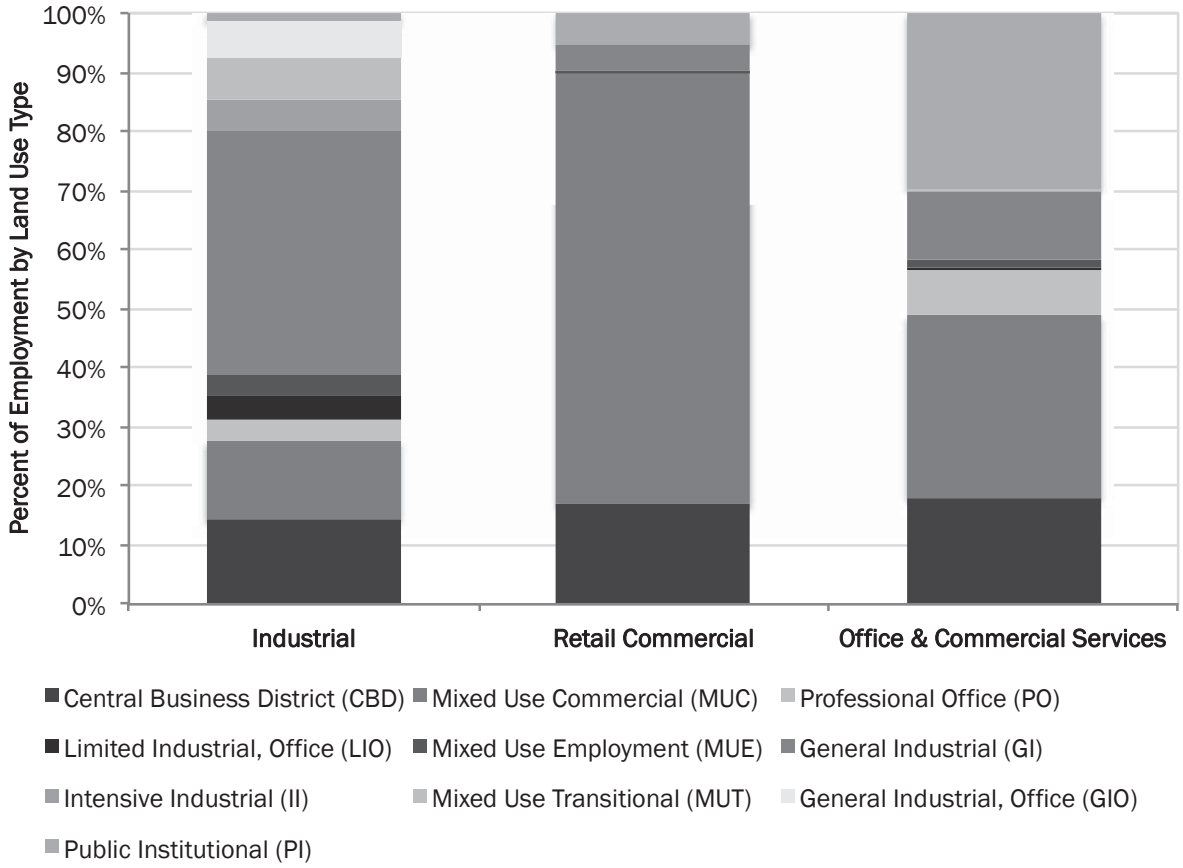


Source: 2014 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department

Exhibit 112 shows the percentage of employment from privately-owned businesses in each land use type (i.e., industrial, retail commercial, and office & commercial services).[115] The colors in the graph correspond to the general types of Plan Designation, with commercial plan designations in blue, industrial in gray, and institutional in tan.

Each land use type has employment located in multiple Plan Designations. For example, Retail Commercial employment is located in CBD, MUC, LIO, GI, and PI. The results suggest a fair amount of mixing of industries by land use type. This isn't surprising—the Corvallis development code supports, and in some instances, encourages mixing of industries.

Exhibit 112. Percent of private (non-governmental) employees by land use types and commercial and industrial Plan Designations, Corvallis UGB, 2014



Source: 2014 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department

[115] Throughout this document, the land use types group employment by broad category using the North American Industrial Classification System (NAICS). For example, industrial employment includes: natural resources and mining, construction, manufacturing, wholesale trade, and transportation, warehousing, and utilities.

Exhibit 113 allocates the forecast of employment growth in Exhibit 110 by the percentages shown in Exhibit 112. The exception to this allocation is the assumption of industrial development in the Central Business District. Currently, 14% of industrial employment is located in the Central Business District. Given that there is no vacant land in the Central Business District, we assume that this industrial employment (which would be about 155 employees) will locate in the General Industrial Designation instead.

Exhibit 113. Allocation of the forecast of employment use by land use type and plan designation, Corvallis UGB, 2016–2036

Plan Designation	Industrial	Retail Commercial	Office & Commercial Services	Total	Percent of Total
Central Business District (CBD)	-	160	987	1,147	15%
Mixed Use Commercial (MUC)	140	689	1,673	2,502	34%
Professional Office (PO)	39	-	427	466	6%
Limited Industrial, Office (LIO)	43	4	10	57	1%
Mixed Use Employment (MUE)	37	3	67	107	1%
General Industrial (GI)	596	40	631	1,267	17%
Intensive Industrial (II)	52	-	17	69	1%
Mixed Use Transitional (MUT)	77	-	21	98	1%
General Industrial, Office (GIO)	68	-	-	68	1%
Public Institutional (PI)	13	52	1,609	1,674	22%
Total	1,065	948	5,442	7,455	100%

Source: ECONorthwest

The next step in estimating employment land demand for the 20-year period is to estimate the employment land need based on employment density. Exhibit 114 shows employment land need based on average existing employment densities in Corvallis, based on empirical analysis of densities in Corvallis and reasonable rules of thumb.

Employees per acre (EPA) is a measure of employment density, based on the ratio of the number of employees per acre of employment land that is developed for employment uses. ECONorthwest developed an empirical analysis of employment densities in Corvallis in 2014 by Plan Designation.

- **Industrial density.** Exhibit 114 assumes that employment densities will be similar to historical densities, with small increases in employment density. The density for industrial employment will be 10 EPA, which is higher than the density on some industrial lands in 2014, such as General Industrial (which averages 7.2 EPA).
- **Retail and Commercial densities.** Exhibit 114 assumes that retail and office employment will have densities of 25 and 35 EPA respectively. For context, employment density in the Central Business District zone (where more than ten percent of the City's employment is located) is 47.6 EPA but employment density in Mixed-Use Commercial (where more than 20% of the City's employment is located) 20.6 EPA.

Exhibit 114. Estimate of employment land demand by land use type and plan designation, net acres, Corvallis UGB, 2016–2036

	Industrial			Retail Commercial			Office & Commercial Services		
Plan Designation	Employees	EPA	Land Demand (Net Acres)	Employees	EPA	Land Demand (Net Acres)	Employees	EPA	Land Demand (Net Acres)
Central Business District (CBD)	-	10	-	160	25	6.4	987	35	28.2
Mixed Use Commercial (MUC)	140	10	14.0	689	25	27.6	1,673	35	47.8
Professional Office (PO)	39	10	3.9	-	25	-	427	35	12.2
Limited Industrial, Office (LIO)	43	10	4.3	4	25	0.2	10	35	0.3
Mixed Use Employment (MUE)	37	10	3.7	3	25	0.1	67	35	1.9
General Industrial (GI)	596	10	59.6	40	25	1.6	631	35	18.0
Intensive Industrial (II)	52	10	5.2	-	25	-	17	35	0.5
Mixed Use Transitional (MUT)	77	10	7.7	-	25	-	21	35	0.6
General Industrial, Office (GIO)	68	10	6.8	-	25	-	-	35	-
Public Institutional (PI)	13	10	1.3	52	25	2.1	1,609	35	46.0
Total	**1,065**		**106.5**	**948**		**38.0**	**5,442**		**155.5**

Source: ECONorthwest
Note: EPA is Employees per Acre.
Note: Green shading denotes assumptions about future employment densities, based on empirical analysis of employment density in Corvallis in 2014.

The density assumptions in Exhibit 114 are employees per *net* acre (e.g., acres that are in tax lots). As land is divided and developed, some of the land goes for right-of-way and other public uses. One way to estimate the amount of land needed for employment including public right-of-way is to convert from *net* to *gross* acres based on assumptions about the amount of land needed for right-of-way.

Empirical analysis of land needed for rights-of-way shows that 11% of developed land in Corvallis is in rights-of-way. **The analysis in Exhibit 115 assumes that, in areas with new commercial and industrial development, 11% of land will be used for rights-of-way.**

Exhibit 115 shows that Corvallis will need 300 net acres of land for employment uses and 337 gross acres of land for employment uses. The majority of this land will be in MUC, GI, CBD, and PI.

Exhibit 115. Estimate of employment land demand in net and gross acres by land use type and plan designation, Corvallis UGB, 2016–2036

	Industrial		Retail Commercial		Office & Commercial Services		Total	
Plan Designation	Land Demand (Net Acres)	Land Demand (Gross Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Central Business District (CBD)	-	-	6.4	7.2	28.2	31.7	34.6	**38.9**
Mixed Use Commercial (MUC)	14.0	15.7	27.6	31.0	47.8	53.7	89.4	**100.4**
Professional Office (PO)	3.9	4.4	-	-	12.2	13.7	16.1	**18.1**
Limited Industrial, Office (LIO)	4.3	4.8	0.2	0.2	0.3	0.3	4.8	**5.4**
Mixed Use Employment (MUE)	3.7	4.2	0.1	0.1	1.9	2.1	5.7	**6.4**
General Industrial (GI)	59.6	67.0	1.6	1.8	18.0	20.2	79.2	**89.0**
Intensive Industrial (II)	5.2	5.8	-	-	0.5	0.6	5.7	**6.4**
Mixed Use Transitional (MUT)	7.7	8.7	-	-	0.6	0.7	8.3	**9.3**
General Industrial, Office (GIO)	6.8	7.6	-	-	-	-	6.8	**7.6**
Public Institutional (PI)	1.3	1.5	2.1	2.4	46.0	51.7	49.4	**55.5**
Total	**106.5**	**119.7**	**38.0**	**42.7**	**155.5**	**174.7**	**300.0**	**337.1**

Source: ECONorthwest
Note: Gross acres calculated using a net-to-gross factor of 11% for all employment. For example, gross acres of industrial land needed in the CBD was calculated using the following formula: 15.6/(1-.11) = 17.5.

Corvallis' Vision for Economic Development

Corvallis' vision for economic development is described in the *Corvallis 2020 Vision*. That report stated that Corvallis will have:

> *An economically strong and well-integrated city, fostering local businesses, regional cooperation and clean industry.*

The 2020 Vision Statement includes a section on economic vitality that includes the following statement:

> *Corvallis in 2020 is home to a vibrant economy that is anchored by key strategic industries and complemented by a wealth of diverse, environmentally friendly businesses.*

The vision is grounded in livability; the core elements of the vision for economic vitality are:

- Diverse economic base. Broad base of employment in a diverse number of fields, with a predominance of small, locally-owned businesses.
- Higher education, high tech, and heath care link. Family wage jobs linked in large part to education, technology, health care, professional services, and research.
- Regional transportation system. Active and convenient regional transportation system which makes it easy to walk, cycle, or ride mass transit.
- Environmentally-sound industries. Business and community collaboration to maintain and improve the city's air and water quality.

The *Corvallis Economic Development Strategy – 2015 Update* is focused on identifying short-term implementation steps to move the city towards its economic vitality vision. The 2015 update identifies three economic development goals:

- Support innovation and startups – Provide a local business environment that supports a successful, diverse traded-sector entrepreneurial community, including a supportive services infrastructure, long-term transportation strategy, and access to markets.
- Promote organic growth – Identify opportunities and support the retention and growth of companies that are currently located in Benton County.
- Leverage local assets – Develop a program that will focus on increased tenancy in existing vacant buildings and Enterprise Zone locations by business and industry types that are consistent with the Prosperity That Fits Plan.

The document identifies the following economic development strategies:

1. Support the development and deployment of resident and next stage capital, as well as identifying the likely financing sources for clients, when needed.

2. Develop and maintain relationships with Corvallis's largest employers, including OSU, HP, CH2M HILL, and Samaritan Health Services, to provide unprecedented advantages to Corvallis-based startups, including research infrastructure access, accelerator resources, services infrastructure, and innovative community networking.
3. Support business growth by providing properly zoned and serviced land, buildings, and development projects and by maintaining a timely and predictable development review process.
4. Collaborate locally, regionally, and statewide on long-term transportation plans, including access to markets, surface transit, and people travelling. In addition, the EDAB has identified a number of tactical measures that will support the strategies.

Potential Growth Industries

The characteristics of Corvallis will affect the types of businesses most likely to locate in the city. Corvallis' attributes that may attract firms are: the presence of OSU, the existing employment base, the access to highly educated labor force in Corvallis and from the surrounding region, access to state highways and I-5, location within the Mid-Willamette Valley and proximity to the Portland region, high quality of life, and proximity to indoor and outdoor recreational opportunities.

Growth of manufacturing in Corvallis has been largely driven by growth in high technology, such as electronics components, computers, medical equipment, and software publishers. In addition, Corvallis has a long connection with forest product manufacturing, with OSU's College of Forestry. Future opportunities include development of renewable energy production via forest products. Professional services are also important industries in Corvallis, such as engineers, consultants, and other professionals.

An analysis of growth industries in Corvallis should address two main questions: (1) Which industries are most likely to be attracted to Corvallis? and (2) Which industries best meet Corvallis' economic development vision? The selection of target industries is based on Corvallis' vision and goals for economic development, economic conditions in Corvallis and Benton County, and the City's competitive advantages. Given the emphasis on small business growth and development in Corvallis, it is reasonable to assume that much of the city's business growth will come from small and moderate-sized businesses, either those already in Corvallis or new businesses that start there.

The target industries identified as having potential for growth in Corvallis are:

- **Manufacturing.** Corvallis' attributes may attract manufacturing firms. The type and size of manufacturing firm may depend on land availability and the community's preferences for clean industries. Larger manufacturers may require large, flat sites, but smaller manufacturers (i.e., firms with fewer than 50 employees) may have greater flexibility in where to locate. Examples of manufacturing industries that may locate in Corvallis include advanced manufacturing, computer and electronics manufacturing, biotechnology, metals manufacturing, pharmaceutical manufacturing, or recreational equipment.

- **Clean Tech and Renewable Energy.** The positive attitude about environmentally sustainable industries among residents of Corvallis and researchers at OSU may make Corvallis more attractive to firms involved in clean tech and renewable energy production. The types of businesses that may choose to locate or expand in Corvallis 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.
- **Professional and Technical Services.** Corvallis' 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 places to live. Some specific examples are:
    - **Software Development.** Corvallis' access to highly educated labor, existing base of technology firms, and high quality of life may make the City attractive to software development firms.
    - **Health Care.** The growing population in and around Corvallis, including the aging of the population, and the presence of Good Samaritan Hospital and the Corvallis Clinic in Corvallis make Corvallis attractive to health care businesses. Corvallis may attract health care professionals, alternative health care providers, and care and assistance for seniors and the disabled population.
- **Services for seniors.** Corvallis' 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 primary education, in Corvallis.

Site Needs for Potential Growth Industries

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

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

Based on the forecasts of employment growth in Exhibit 113 and the average business size in Corvallis in 2014 (using analysis of Quarterly Census of Employment and Wage data), employment growth in Corvallis will require:

- **Industrial** employment will grow by 1,065 employees. The average site of industrial employers in Corvallis in 2014 was 7.9 employees per business. At that average size, Corvallis will need 135 industrial sites.
- **Retail Commercial** employment will grow by 948 employees. The average site of industrial employers in Corvallis in 2014 was 14.3 employees per business. At that average size, Corvallis will need 66 retail sites.
- **Office & Commercial Services** employment will grow by 5,442 employees. The average site of industrial employers in Corvallis in 2014 was 8.8 employees per business. At that average size, Corvallis will need 621 office and commercial sites.

The potential growth industries described in the prior section are predominantly small businesses, with an emphasis on start-up and mid-sized businesses that have outgrown their existing sites. Most of these businesses in Corvallis will need relatively small sites, such as a space in an existing building or a site smaller than an acre for development of a new retail store or an office building. Corvallis may attract or grow businesses that require sites as large as five acres, or larger.

Exhibit 16 shows the inventory of unconstrained vacant and partially vacant commercial and industrial land in Corvallis' UGB. It shows:

- **Industrial land.** Corvallis has 843 acres of industrial land in 92 tax lots. Corvallis has 34 sites smaller than one acre, 21 sites of one to two acres each, 13 sites on two-to-five acre lots, 12 sites on 5-to-20-acre lots, and 12 sites larger than 20 acres each.

  Given the small size of industrial businesses and the types of potential growth industries in Corvallis, we conclude that Corvallis has enough industrial land to accommodate the site needs of the potential growth industries in Corvallis. As businesses grow, it is reasonable to expect that most businesses will need relatively small sites, such as sites smaller than five acres, and that larger sites will be parcelized into smaller sites to accommodate business needs. Corvallis may attract or grow a few businesses that need sites larger than five acres. The City has the industrial land base to accommodate these businesses.

- **Commercial land.** Corvallis has 55 acres of commercial land in 56 lots. Corvallis has 39 commercial sites smaller than one acre, 7 sites in one-to-two acre lots, and 10 sites in two-to-five acre lots.

  Given the small size of retail, office, and service businesses and the types of potential growth industries in Corvallis, we conclude that these businesses will generally need small sites, such as sites two acres or smaller. Corvallis, however, does not have enough land to accommodate commercial growth, as discussed in Chapter 5. The City will need to take steps to ensure that there are enough commercial sites to accommodate growth.

Most commercial businesses will need small spaces, such as offices in existing buildings, with some businesses requiring individual small sites, such as new retail stores or a new office building.

5. Land Sufficiency and Conclusions

This chapter presents an analysis of land needed for public and semi-public uses. It also provides conclusions about Corvallis' residential and employment land sufficiency for the 2016-2036 period. It finishes with a discussion of conclusions about Corvallis' land base and its ability to accommodate growth over the next 20 years, as well as recommendations for the City to consider, ensuring it meets its housing and economic growth needs throughout the planning period .

Land Needed for Public and Semi-Public Uses

Cities need to provide land for uses other than housing and employment. Public facilities such as schools, governments, churches, parks, and other non-profit organizations will expand as population increases. Many communities have specific standards for parks. School districts typically develop population projections to forecast attendance and need for additional facilities. All of these uses will potentially require additional land as a city grows.

Previous chapters estimated land demand for housing and employment; this section considers other uses that consume land and must be included in land demand estimates. Demand for these lands largely occurs independent of market forces. In general, these land use needs can be directly correlated to population growth.

Public Land Needs (except parkland)

Discussions with stakeholders at public agencies, including the City of Corvallis, Benton County, Oregon State University, and the Corvallis 509J School District indicate that these organizations do not have plans for expansions that will require new land (beyond land that the agencies currently own). An inventory of buildable public / exempt lands is included in Chapter 2 – Buildable Lands Inventory.

Land Needed for Parks, Natural Areas, and Trails

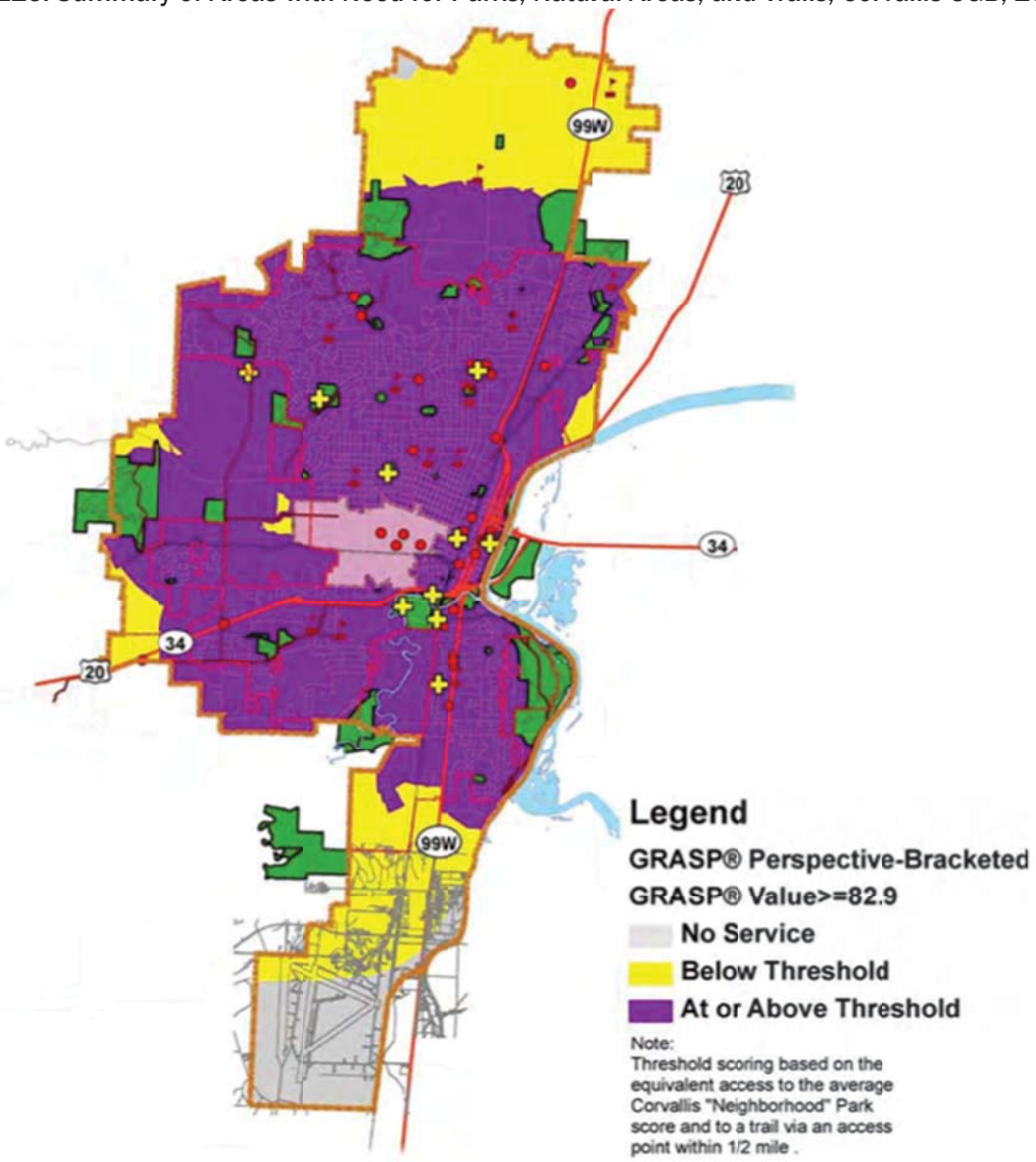
While the City of Corvallis does not have plans for new public facilities that will require new land, the City's adopted parks plan describes future needs for parks, natural areas, and trails. The *Park and Recreation Master Plan* (October 2015) identifies areas where Corvallis needs new parks, natural areas, and trails. Exhibit 116 shows that North Corvallis and South Corvallis are the largest areas with parkland deficits (shown in yellow). There are areas on the east and western sides of Corvallis with parkland deficits (shown in yellow).

The *Park and Recreation Master Plan* does not identify the amount of parkland that Corvallis will need over the 2016-2036 period, beyond identifying the areas with parkland needs. The largest areas with parkland deficits correspond to the areas with the largest amounts of vacant buildable land (Exhibit 12). The City may be able to satisfy the needs for parks, natural areas, and trails in these areas on vacant land within the UGB, if land is available for purchase at a price that the City can afford for parkland. The City may meet some needs for natural areas in

areas with constraints, such as wetlands. Development of parks infrastructure, such as trails or playgrounds, in these constrained areas is subject to similar restrictions as other types of development (e.g., residential development).

In cases where the City cannot afford to purchase parkland within the UBG, the City may develop parks, natural areas, and trails outside of the UGB. These areas may remain outside of the UGB and serve the community's recreational needs. However, some improvements (e.g., restrooms) cannot be made on parkland outside of the UGB. If the City needs to make such improvements in a park located outside of the UGB, the City could seek to bring all or a portion of the park into the UGB. The City has no immediate plans for such actions.

Exhibit 116. Summary of Areas with Need for Parks, Natural Areas, and Trails, Corvallis UGB, 2015



Source: *Park and Recreation Master Plan* (October 2015), exhibit PA-1, page 161.
Note: Areas in yellow have the parkland deficits.

Semi-Public Land Needs

Land needed for semi-public uses includes land for churches, non-profit organizations, and related semi-public uses. The analysis includes land need assumptions using acres per 1,000 persons for all lands of these types. Exhibit 117 shows that Corvallis has 259 acres of land used for semi-public uses, with 4.5 acres per 1,000 residents in Corvallis.

Assuming that Corvallis will continue to need 4.5 acres of land per 1,000 people for semi-public uses in the future, Corvallis will need 43 acres of land to accommodate growth of the 9,469 new population forecast for Corvallis in Exhibit 38. Land needed for these users can typically be provided within existing plan designations, including all residential designations, based on the uses that are permitted in the associated Zone.

Exhibit 117. Semi-Public Land Demand, Corvallis UGB, 2016–2036

	Existing Semi-Public Land in 2015		
Category	Acres	Acres per 1,000 people	Land Needed 2016-2036
Church	126	2.2	21
Other	134	2.3	22
Total Semi-Public	259	4.5	43

Source: ECONorthwest

Land Sufficiency

This section presents an analysis of the sufficiency of land for accommodating growth in Corvallis over the 2016-2036 period, based on the results of the buildable lands inventory (Chapter 2), housing needs analysis (Chapter 3), and economic opportunities analysis (Chapter 4).

Residential Land Sufficiency

The analysis of the sufficiency of Corvallis' land to accommodate growth over the 2016-2036 period starts with residential land sufficiency. It separates land sufficiency into two groupings: (1) land within the UGB with no Planned Development Overlay and (2) land within the UGB with a Planned Development Overlay or with Partial Constraints. The process for developing unconstrained land without a Planned Development Overlay is simpler. The process of developing unconstrained land with a Planned Development Overlay or land with Partial Constraints is more complex and requires a different review process.

Land within the UGB, No Planned Development Overlay

Exhibit 118 estimates residential land sufficiency within the Corvallis UGB starting with land without the Planned Development Overlay. It shows:

- **Capacity in Dwelling Units (DU) for Unconstrained Vacant and Partially vacant Land with No Planned Development Overlay** from Exhibit 88. Exhibit 118 shows that Corvallis has capacity for 9,127 dwelling units.
- **Housing Demand in Dwelling Units (DU)** from Exhibit 84. Exhibit 118 shows that Corvallis' overall housing need is for 3,548 dwelling units over the 2016-2036 period.

Exhibit 118 shows that Corvallis has a surplus of land for housing in all Plan Designations except for High Density Residential, where the city has a deficit of 309 dwelling units. **The conclusion from this analysis is that Corvallis can meet the need for housing within the UGB in all Plan Designations, except for High Density Residential.**

Exhibit 118. Comparison of the Capacity of Unconstrained Vacant and Partially Vacant Land without a Planned Development Overlay with Housing Demand by Plan Designation, Corvallis UGB, 2016–2036

Plan Designation	Capacity (DU) Unconstrained Vacant and Partially Vacant Land with No Planned Development Overlay	Housing Demand (DU)	DU Surplus or (Deficit)
Low Density Residential (LDR)	3,880	904	2,976
Medium Density Residential (MDR)	1,951	1,029	922
Medium High Density Residential (MHDR)	2,564	1,082	1,482
High Density Residential (HDR)	46	355	-309
Mixed Use Residential (MUR)	686	178	508
Total	9,127	3,548	

Source: ECONorthwest

Exhibit 119 shows the same estimate as Exhibit 118 but by housing type, rather than by Plan Designation. It shows that Corvallis can meet demand for all types of needed housing within the UGB, with surpluses of capacity for all types of housing.

The implication of Exhibit 119 is that, while **Corvallis has enough capacity for multifamily housing, the city has a deficit of capacity for high density multifamily housing, such as multistory apartment buildings.**

Exhibit 119. Comparison of the Capacity of Unconstrained Vacant and Partially Vacant Land without a Planned Development Overlay with Housing Demand by Housing Type, Corvallis UGB, 2016–2036

Plan Designation	Capacity (DU) Unconstrained Vacant and Partially Vacant Land with No Planned Development Overlay	Housing Demand (DU)	DU Surplus or (Deficit)
Single-family detached	5,076	1,774	3,302
Single-family attached	295	213	82
Multifamily	3,756	1,561	2,195

Source: ECONorthwest

While Corvallis has enough residential land to accommodate expected population growth in most plan designations, Exhibit 88 shows that only 12% of Corvallis' residential land capacity is within the city limits. In order to accommodate expected growth, **the City will need to work with landowners to ensure that residential land is annexed into the city limits in a timely manner, to ensure opportunities for housing development**.

Land within the UGB, with Planned Development Overlay or Land with Partial Constraints

Exhibit 120 shows residential land sufficiency within the Corvallis UGB for all residential land within the UGB. It shows:

- **Low Estimate of Partially Constrained Land** from Exhibit 90. Exhibit 120 uses the Low Estimate of Capacity on Partially Constrained land, rather than the High Estimate (which is only 312 dwelling units higher than the Low Estimate).
- **Capacity in Dwelling Units (DU) for Unconstrained Vacant and Partially vacant Land with Planned Development Overlay** from Exhibit 88. Exhibit 120 shows that Corvallis has capacity for 1,475 dwelling units on land with a Planned Development Overlay.
- **DU Surplus or Deficit on Unconstrained Vacant and Partially Vacant Land** from Exhibit 118, which shows a surplus of capacity in all Plan Designations except for High Density Residential.

Exhibit 120 shows that, including all potential residential capacity, Corvallis has a surplus of land for housing in all Plan Designations except for High Density Residential.

Exhibit 120. Capacity of Partially Constrained Vacant Land and Land with Planned Development Overlay, Corvallis UGB, 2016–2036

	Additional Capacity (DU)			
Plan Designation	Low Estimate of Parially Constrained Vacant Land	Unconstrained Vacant and Partially Vacant Land with Planned Development Overlay	DU Surplus or Deficit on Unconstrained Vac. & P.V. Land	Total DU Surplus or (Deficit)
Low Density Residential (LDR)	72	428	2,976	3,476
Medium Density Residential (MDR)	122	422	922	1,466
Medium High Density Residential (MHDR)	157	461	1,482	2,100
High Density Residential (HDR)	1	6	-309	-302
Mixed Use Residential (MUR)	0	158	508	666
Total	352	1,475		

Source: ECONorthwest

The conclusion of this analysis is that Corvallis has enough land to accommodate residential growth with the exception of high-density multifamily housing capacity in High Density Residential. There are multiple ways that the City can accommodate the need for development opportunities for high-density multifamily housing. For example:

- Corvallis may be able to accommodate need for high-density multifamily in the Mixed Use Residential designation. However, most of the vacant land in this designation is located outside of the City limits and must be annexed before it can be developed.
- Corvallis could re-designate land to High Density Residential to address the land deficit. It would take approximately 12 gross acres of land to meet the High Density Residential land deficit, assuming a density of 26 dwelling units per gross acre. The location of new High Density Residential land should be carefully considered.

- Corvallis could foster development of high-density multifamily housing in commercial areas, as part of mixed-use development, such as in or near downtown. However, as the next section describes, Corvallis has a deficit of land for commercial uses. As a result, the City will need to ensure that high-density multifamily development in commercial areas does not displace a substantial amount of commercial uses by incorporating the two uses into mixed-use buildings.

Commercial and Industrial Land Sufficiency

Exhibit 121 shows commercial and industrial land sufficiency within the Corvallis UGB. It shows:

- **Vacant and Partially Vacant Unconstrained Land** from Exhibit 10 for land within the city limits and total land within the UGB. Exhibit 121 shows that Corvallis has 495 gross acres of commercial and industrial land within the city limits and 899 gross acres within the UGB.
- **Demand for Commercial and Industrial Land** from Exhibit 115. Exhibit 121 shows Corvallis will need a total of 337 gross acres for employment uses over the 2016-2036 period.

Exhibit 121 shows that Corvallis has:

- A deficit of 103 gross acres of land in Commercial Plan Designations, including in MUC (mixed-use commercial) and PO (professional office). Sixty percent of Corvallis' commercial land is located within the city limits.
- A surplus of 719 gross acres of land in Industrial Designations. Fifty-five percent of Corvallis' industrial land is located within the city limits.
- A deficit of 54 gross acres of land in Public Institutional. This designation is where Good Samaritan Hospital is located. The majority of employment allocated to this Plan Designation is Office and Commercial Services.

The implications of the analysis in Exhibit 121 are:

- **Corvallis will need to identify ways to accommodate commercial growth over the 20-year planning period.** Corvallis has less than one-third of the commercial land needed to accommodate employment growth through 2036. Forty percent of the city's commercial land is outside of the city limits. Some deficits cannot be addressed through adding more land to the city limits, such as the deficit of land in the Central Business District. This deficit will either be addressed through redevelopment in the CBD or employment locating in other plan designations, possibly near to Downtown.

  The City will need to identify strategies to address the commercial land deficit. They may include: encouraging redevelopment of commercial lands, re-designating industrial land for commercial uses, or assisting with annexation of commercial land as landowners are willing to develop it.

- **Corvallis' deficit of Public Institutional land is an extension of the deficit of commercial land.** The allocation of employment growth to plan designations in Exhibit 113 was based on existing location of employment. Most of the employment in the PI (public institutional) designation is in Office and Commercial Service industries, such as Good Samaritan Hospital, with some Retail Commercial and a small amount of Industrial employment. Most of the 54 acre deficit in PI could be accommodated in commercial areas.
- **Corvallis has a surplus of Industrial land.** Exhibit 121 shows a surplus of more than 700 acres of industrial land. The small deficit of MUT may be addressed through redesignating industrial land to MUT. Alternatively, if the City makes a policy choice not to designate other land for MUT, then employment that would locate on MUT land may locate in another plan designation.

Exhibit 121. Comparison of the Capacity of Unconstrained Vacant and Partially Vacant Land with Employment Land Demand by Plan Designation, Corvallis UGB, 2016–2036

Plan Designation	Vacant and Parially Vacant Unconstrained Land (Gross Acres)		Demand for Com. & Ind. Land (Gross Acres)	Land Surplus or Deficit on Unconstrained Land (Gross Acres)	
	Within City Limits	Total Within UGB		Within City Limits	Total Within UGB
Commercial Designations					**-103**
Central Business District (CBD)	0	0	39	-39	-39
Mixed Use Commercial (MUC)	24	46	100	-77	-54
Professional Office (PO)	8	8	18	-10	-10
Industrial Designations					**719**
Limited Industrial, Office (LIO)	41	107	5	36	102
Mixed Use Employment (MUE)	10	40	6	3	34
General Industrial (GI)	384	657	89	295	568
Intensive Industrial (II)	26	31	6	20	24
Mixed Use Transitional (MUT)	-	-	9	-9	-9
General Industrial, Office (GIO)	-	8	8	-8	1
Other Designations					**-54**
Public Institutional (PI)	1	2	56	-54	-54
Total	495	899	337		

Source: ECONorthwest
Note: Limited Industrial (LI) is not included in Exhibit 121 because there is less than one-tenth of acre of land vacant in that Designation.

Public and Semi-Public Land Sufficiency

Over the 2016-2036 period Corvallis will need about 43 acres of land for semi-public uses such as churches or other semi-public uses. The City will need land for parks, natural areas, and trails, especially in northern and southern Corvallis.

These types of uses typically occur in lands designated for residential uses. Based on the analysis in Exhibit 118 and the density assumptions in Exhibit 88, Corvallis has a surplus about 960 gross acres of land combined in the LDR, MDR, and MHDR designations on unconstrained vacant and partially vacant lands without a Planned Development Overlay. Including partially constrained and unconstrained vacant and partially vacant lands with a Planned Development Overlay, Corvallis has an additional 240 acre surplus in these plan designations.

Corvallis will be able to accommodate the demand for public and semi-public land on the surplus land in LDR (low-density residential), MDR (medium-density residential), and MHDR (medium/high density residential).[116]

[116] While the City has sufficient land to meet needs for parks, natural areas, and trails within the UGB, the cost of land may be prohibitive for parkland development. As a result, the City may seek to meet parkland needs outside of the UGB, where necessary. The City can have parkland outside of the UGB and does in several of its existing parks.

Conclusions and Recommendation

The following section presents conclusions about housing and employment land need and sufficiency in Corvallis.

Conclusions about Housing Need

- **Corvallis is planning for needed housing types consistent with ORS 197.303.** Corvallis is planning for the following housing types: single-family detached (which includes manufactured homes on lots and in manufactured home parks), single-family attached (e.g., townhouses), and multifamily (e.g., duplexes, tri-plexes, apartments, and other types of attached housing). Corvallis is planning for government assisted housing and manufactured home parks (consistent with the requirements of ORS 197.475 to 197.490). Corvallis is planning for both owner and renter occupancy in any of these housing types.
- **Corvallis is anticipating a need for 3,548 new dwelling units by 2036.** Corvallis's forecast of housing growth is based on the forecast that population in Corvallis' UGB will grow from 60,058 people in 2016 to 69,527 people in 2036, adding 9,469 people over the 2016 to 2036 period.
- **Corvallis' needed housing mix is similar to its historical mix.** The 2011-2013 American Community Survey shows that Corvallis' historical housing mix was 51% single-family detached, 5% single-family attached, and 43% multifamily. The housing needs projection (as defined in OAR 660-008-0005(4)) is that fifty percent of new housing will be single-family detached (1,774 units), 6% will be single-family attached (213 units), and 44% will be multifamily (1,561 units).
- **Corvallis' needed housing densities are similar to historical densities.** Over the 2000 to 2015 period, Corvallis' housing developed at an average of 8.9 dwelling units per net acre. In residential plan designations, the City's historical densities were: 4.6 dwelling units per net acre in Low Density Residential (LDR), 9.2 dwelling units per net acre in Medium Density Residential (MDR), 13.5 dwelling units per net acre in Medium High Density Residential (MHDR), and 29.2 dwelling units per net acre in High Density Residential (HDR).
  - **Corvallis needs additional smaller units and more diverse housing types.** Demographic trends suggest that there will be an increase in demand for more affordable housing, such as smaller houses and lot sizes for single-family housing.

    Key demographic and economic trends that will affect Corvallis' future housing needs are: (1) the aging of the Baby Boomers, (2) aging of the Millennials, and (3) continued growth in Hispanic and Latino population.

    - *The Baby Boomer's population accounts for an increasing share of the total population.* By 2035, people 60 years and older will account for 22% of the population in

Benton County (up from 21% in 2015). The changes that affect Corvallis' housing demand as the population ages are that household sizes decrease and homeownership rates decrease. Older residents will also need access to services, particularly health care services as well as additional assisted living facilities.

- *Millennials will account for most increases in household growth, especially family households, over the planning period.* As Millennials age, generally speaking, their household sizes will increase and homeownership rates will rise until peaking at about age 55. Between 2016 and 2036, Millennials will be a key driver in demand for housing for families with children. Ensuring that there are opportunities for developing housing that is affordable to Millennials will be important for workforce development in Corvallis, with the community's emphasis on entrepreneurship and growing local companies. Start-up companies often have younger employees.
- *Hispanic and Latino population will continue to grow.* The U.S. Census projects that by about 2040, Hispanic and Latino populations will account for one-quarter of the nation's population, likely higher in the western U.S. In addition, Hispanic and Latino populations are generally younger than the U.S. average, with many Hispanic and Latino people belonging to the Millennial generation.

  Hispanic and Latino population growth will be an important driver in growth of housing demand, both for owner and renter-occupied housing. Growth in Hispanic and Latino populations will drive demand for housing for families with children. Given the lower median income for Hispanic and Latino households, especially first generation immigrants, growth in this group will also drive demand for affordable housing, both for ownership and renting.

- **OSU students will continue to impact Corvallis' housing market.** The impact of students on Corvallis' housing market will depend, in part, on whether OSU builds enough new dormitory rooms to accommodate student growth. OSU is forecasting that the student enrollment in Corvallis will grow to 27,000 students by about 2023. OSU plans to build 250 to 300 additional beds of University housing by 2020. Plans for additional University housing are not available at this point. If that forecast holds true, then students will account for about one-third of new population and one-quarter to one-third of new housing demand in Corvallis.
  - *Students generally have lower income.* Most households under 25 years old have income of $25,000 or less. The majority of households under 25 years old are students at OSU.
  - *Students have access to resources to help them pay for housing beyond income.* Over the last few years, students have shown the willingness (and ability to pay) for housing costing $650 to $800 or more per person, per month. This has driven growth in privately-owned (not affiliated with OSU) multifamily (and townhouse) student housing growth in Corvallis.

- *Students compete with non-student Corvallis residents for affordable housing.* Some students continue to choose to live in privately-owned housing, such as several students living together in a single-family house or an apartment. Because many students have access to money beyond wage and salary income, some student households will compete with lower-income households in Corvallis for affordable housing. Continued growth in the number of students (although slower than growth since 2000) will result in continued demand for student housing for the relatively more affordable housing in Corvallis.

- **Corvallis has a deficit of housing affordable to lower-income households.** Corvallis currently has a deficit of about 4,760 dwelling units affordable to households with incomes below $25,000. The City will continue to have growth in low- and moderate-income households—households with income below $60,000.
  - *Most of the lowest income households (with incomes below $25,000) are student households.* Three-quarters of households under 25 years old had an income below $25,000, with a median income of $11,200. Income increases with age, reaching a median household income of about $73,000 by 45 to 64 years old.
  - *Corvallis has low- and moderate-income households who are not students.* A substantial number of households who are not as likely to be students have income of $50,000 or below (at well less than 80% of Benton County's Median Family Income of $78,600). These households include: more than half of Corvallis' households aged 25 to 44, nearly 40% of Corvallis' households aged 45 to 64, and more than half of Corvallis households 65 years and older.
  - *Corvallis' housing need includes providing opportunities for development of housing that is affordable to low- and moderate-income households.* The housing types likely to be affordable to these households include government-subsidized housing, manufactured homes on lots and in parks, low-density multifamily housing such as duplexes, townhomes, or apartments.

- **Residential land in Corvallis has enough housing capacity to accommodate growth in all residential plan designations except for High Density Residential.** Corvallis has a surplus of capacity for residential development within the UGB in Low Density, Medium Density, and Medium High Density, and Mixed Use Residential designations. For land designated High Density Residential, Corvallis has a deficit for 309 dwelling units or about 12 gross acres. The City will need to address this deficit to meet the requirements of Goal 10 and ORS 197.296 to provide sufficient land to accommodate 20 years of growth.

- **Corvallis has enough housing capacity to accommodate growth on lands without a Planned Development Overlay in all residential Plan Designations except for High Density Residential.** Corvallis has a surplus of capacity to accommodate growth over the 20-year planning period in all residential designations, except for High Density Residential, within the UGB in areas without a Planned Development Overlay. Even including land *with* a Planned Development Overlay, Corvallis has a deficit of High Density Residential land.

- **Corvallis has relatively little residential land within the city limits that may be available for development in the short term (one to five years).** Twelve-percent of Corvallis' residential capacity without a Planned Development Overlay is on land within the city limits. At historic rates of development, that land would be developed in four to five years. Moreover, two-thirds of residential land without a Planned Development Overlay is designated Low Density Residential (LDR).

  While the primary focus of studies like this one is on the long-term (20 years), part of the role of planning is to ensure a steady supply of land at all stages of development readiness. Even if the city has enough land to accommodate 20 years of forecast growth, the lack of development ready land (e.g., land that is serviced and can be developed within one to two years) can have significant impacts on the supply of housing available, and also the cost of housing.

  Corvallis will need to annex and service residential land, or re-designate existing vacant lands with other designations that are considered surplus, to accommodate expected growth. In March 2016, the Oregon Legislature passed Senate Bill 1573, which requires cities with voter annexation (like Corvallis) to annex lands without a vote when the landowner submits a petition for annexation, provided that the land is with the city's UGB, is (or will be) subject to the city's comprehensive plan, and at least one parcel in the area to be annexed is contiguous to the city limits. It remains to be seen how the new law will affect land availability and price in Corvallis.

  The relatively small amount of unconstrained vacant and partially vacant residential land within the city limits makes getting residential land development-ready urgent.

- **Corvallis may see relatively little residential redevelopment over the 20-year planning period.** Given the fact that Corvallis historically has not monitored or collected data on residential redevelopment, we did not attempt to estimate residential redevelopment potential. Corvallis has a surplus of capacity in all residential designations, except for High Density Residential. Given this large surplus of land, there may be little market pressure to redevelop existing residential areas, except in areas that allow high-density multifamily housing.

  Research conducted by the University of Oregon for the HB 2254 UGB Streamlining process concluded that policy intent is one of the most important indicators of redevelopment. Residential redevelopment is most likely to happen in Corvallis in response to policy changes that encourage residential redevelopment, such as financial and other incentives to develop multifamily housing in areas that the City would like to see redevelop.

- **Corvallis' housing policies generally comply with Goal 10.** Our review of the Housing Element of the Corvallis Comprehensive Plan did not identify goal compliance issues for housing, as documented in Appendix B. Our recommendations in the next section include suggestions to updates and modifications to the Housing Element.

- **Corvallis housing policies are complex, creating a barrier to residential development, including development of relatively affordable housing.** In 2014, ECONorthwest

produced an analysis of Corvallis' housing policies, titled "Corvallis Housing Policy Options" (December 2014). One of the key findings of that analysis was that Corvallis' development regulations and entitlement process make development in Corvallis more difficult than in other nearby communities. The complexity adds time and expense to development in Corvallis, making developing housing in Corvallis more expensive.

In addition, the process for determining development exactions and other fees for development has considerable uncertainty. The information conveyed to developers about development costs during the pre-application process may be significantly different than the final costs identified in the application process.

Developers want greater certainty earlier in the development process about exactions and other development costs. Suggestions for increasing certainty include increasing staff time available to work with developers in the pre-application process, as well as streamlining the development regulations and development process. In the absence of greater certainty, developers may (and often do) choose to pursue development in neighboring cities, where development is easier and less costly.

Conclusions about Commercial and Industrial Land Sufficiency

- **Corvallis is forecast for growth in both commercial and industrial employment sectors.** Corvallis is planning for growth of nearly 8,200 new jobs in the city over the 2016 to 2036 period. More than 6,000 of the jobs will be in office and commercial services, more than 1,000 in retail, and nearly 1,100 in industrial land uses. Growth of these jobs will result in demand for about 213 gross acres of land in commercial and institutional Plan Designations and 124 gross acres in industrial Plan Designations.

- **Corvallis has a deficit of commercial land for development.** This category of land includes growth of employment at privately owned businesses in commercial Plan Designations and in the Public Institutional Designations.[117] The majority of this employment is in office or retail uses, such as office buildings, services (e.g., financial or personal care services), or retail stores.

  Corvallis has about 52 gross acres of unconstrained vacant or partially vacant land in commercial Plan Designations and two acres of public institutional land within the UGB. Corvallis' demand for this type of land (about 213 acres) exceeds the supply of this land, leaving a deficit of about 153 gross acres of land for commercial and public institutional uses.

- **Corvallis' industrial land has constraints to development.** While Corvallis has a surplus of more than 700 acres of land in industrial Plan Designations, the city's industrial land base has constraints that limit development. The chief constraints that limit development are distance from I-5, location in the southern part of the city (away from downtown), wetlands, and lack of urban services (e.g., water or wastewater). In

[117] Public institutional land does not include land needed for government employment growth, such as city facilities or OSU's growth. It only includes demand for growth of employment at privately owned businesses located in the Public Institutional Designation. The largest business in this Designation is Good Samaritan Hospital.

addition, about 43% (380 acres) of Corvallis' buildable industrial land base is located outside of the city limits and will need to be annexed and serviced before development can occur, a process that takes a considerable amount of time and resources.

- **Corvallis' vision for economic development is based on diversifying its economic base, leveraging linkages between OSU and existing businesses in Corvallis, and attracting environmentally sound industries.** Corvallis' economic development strategy is primarily to grow existing businesses and to foster startup businesses.
- **Corvallis has some but not all of the inputs necessary to implement its vision for economic development.** Corvallis is home to two business incubators or accelerators with connections to OSU that have successfully assisted multiple businesses in growing. Feedback from staff at the incubators indicate that Corvallis lacks critical inputs necessary to continue growing businesses.

  One of the scarce key inputs in Corvallis is available sites for business growth, both land and existing buildings. Growing businesses in Corvallis have difficulty finding space in existing office and production buildings. The issues include the deficit of commercial land within the city limits, as well as the distance of much of Corvallis' industrial land from downtown Corvallis and OSU. Corvallis has few vacant available commercial or industrial buildings. The buildings that are vacant are either not available for leasing or do not have the facilities (e.g., wet laboratory space or production facilities) needed by businesses.

  Other key inputs that are lacking in Corvallis are more difficult for the City to address. For example, Corvallis is located relatively far from sources of capital (i.e., Silicon Valley), the Portland Airport is nearly two hours away and the Eugene Airport has limited service. Moreover, some younger entrepreneurs prefer to live in a larger urban area, such as Portland or San Francisco. The City's ability to change these factors is limited. However, the City's economic development staff can work with business incubators and businesses to mitigate these factors where possible.
- **Corvallis policies about development of commercial and industrial land are complex, creating a barrier to these types of development.** Discussions with stakeholders involved in commercial and industrial development indicate that, like Corvallis' residential development policies, the City's policies for commercial and industrial development create barriers to development. The development process is complex, adding time and expense to development.

Recommendations

Following are ECONorthwest's recommendations to Corvallis based on the findings and conclusions in this report.

Recommendations for Managing Residential Land

- **Update the Housing Element of the Comprehensive Plan.** The Housing Element contains a vision statement, data from prior analyses, and residential development policies. We recommend:
    - The City should consider adding language into the housing vision that addresses affordability. The Housing Element's vision does not include any language about housing affordability or meeting the housing needs of Corvallis residents. It does mention "meeting the needs of a diverse population," but does so in the context of neighborhood form and livability. The vision addresses land use efficiency, which relates to housing affordability, but focuses on accessibility.
    - The Housing Element includes data that is now out of date. We recommend updating this data, based on the housing needs analysis in this report, or removing the data from the Housing Element. We generally suggest that cities adopt the housing needs analysis as an appendix to their Comprehensive Plan so that when the analysis is next updated, it is easier to replace the outdated housing needs analysis with the newer one.
    - The Housing Element includes a number of policies, most of which continue to be applicable. In Appendix B, we make recommendations for changes to the Housing Element policies. Most importantly, we recommend that the City consider adding additional policies related to housing affordability. Corvallis has a well-developed housing program that likely addresses many potential affordable housing policies.
- **Add a policy about maintaining a 20-year supply of residential land.** The Housing policies address land supply in the urbanizable area (e.g., the unincorporated area of the UGB). The City should consider modifying that policy or adding a new one that requires a 20-year land supply that includes enough land by plan designation to accommodate needed housing types and densities. The City should also consider adding a policy to monitor short-term residential land supply to help the City maintain enough land within the city limits to accommodate growth for at least the next five years.
- **Identify opportunities for addressing the deficit of high-density multifamily land.** Corvallis can address the High Density Residential land deficit in a number of ways, including: (1) identifying opportunities to rezone surplus lower-density residential land or even industrial land (being careful to ensure compatibility of residential and surrounding uses) to High Density Residential; (2) identifying opportunities for High Density Residential redevelopment; (3) encouraging high-density multifamily housing in the Mixed Use Residential designation through annexation of this land to the city

limits; and (4) encouraging high-density multifamily development in commercial and mixed-use areas, being careful not to substantially displace commercial uses. We strongly recommend that the City take action on one or more of the options above. The City's deficit of High Density Residential land is relatively modest, 12 acres, but having sufficient opportunities for high-density multifamily development is important for meeting Corvallis' housing needs. We recommend the City carefully consider location in selecting lands for high-density residential designations. Locations close to downtown, employment centers, or commercial services will be most suitable. Proximity to the OSU campus is a consideration. Locations close to campus will likely be attractive to students; not all of the need for high-density housing is for student housing.

- **Consider implementing policies to increase the production of housing affordable for low-income and moderate-income households**. In 2014, ECONorthwest developed a report about policy options to encourage development of housing affordable to both low- and moderate-income households, in the report "Corvallis Housing Policy Options" (December 2014). We recommend that the City revisit the policy options described in that report and identify and implement policies to increase opportunities for development of housing that is broadly affordable to households in Corvallis, people working at businesses in Corvallis, and others who may consider locating in Corvallis over the planning period.
- **Continue monitoring residential development.** The City's Housing policies requires monitoring housing development to ensure it is meeting the needs of all Corvallis households. These policies demonstrate the City's commitment to meeting housing needs. To the extent possible, the City should expand the program to monitor redevelopment activity. We recommend continuing to monitor housing development.
- **Continue to monitor student residential development and coordinate with OSU about expected student growth.** OSU expects enrollment to continue growing in Corvallis but at a slower pace than between 2000 and 2015. OSU plans to build housing to meet student needs, with the expectation that additional demand for student housing will result from upper division students. The City should continue to monitor and coordinate with OSU about changes in student growth and their housing needs, as well as monitoring the development of privately owned housing for students. Corvallis has a very limited supply of land for high-density multifamily development and demand for affordable housing from long-term (or potential long-term) residents of Corvallis.

Recommendations for Managing Commercial and Industrial Land

- **Update the Economy Element of the Comprehensive Plan.** The Economy Element contains the 2020 Corvallis vision statement, data from prior analyses, and economic development policies. We recommend:
    - The language from the 2020 Vision is applicable in 2015. The City could consider updating the vision, based on the on-going Imagine Corvallis 2040 visioning project and the 2015 update to the Corvallis Economic Development Strategy.
    - The Economy Element includes data that is now out of date. We recommend updating this data, based on the economic opportunities analysis, or removing the data from the Economic Element. We generally suggest that cities adopt the economic opportunities analysis as an appendix to their Comprehensive Plan so that when the analysis is next updated, it is easier to replace the outdated economic opportunities analysis with the newer one.
    - The Economy Element includes a number of policies, most of which continue to be applicable. In Appendix B, we make recommendations for changes to the Economy Element policies. The policies are very specific and involved; the City should consider whether it wants to have this much detail in its policies that govern lands for employment uses.
- **Update policies in the Economy Element to comply with newer Goal 9 requirements.** The Economy Element only partially complies with OAR 660-009. The Element does not fully address 2007 additions to this administrative rule that were implemented since the last update of the Economic Element. In particular, we recommend that the City address the following:
    - The intent of OAR 660-009 is that cities "…provide an adequate land supply for economic development and employment growth." We recommend the City adopt a goal or policy stating the intent to maintain a 20-year supply of land consistent with Goal 9.
    - OAR 660-009-0020 requires that the Comprehensive Plan "state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community." The Economy Element only partially complies with this policy. The 2020 Vision Statement outlines some specific industries, as do the policies. However, we did not find language that identified the "categories or particular types of industrial and other employment uses desired by the community." The EOA identifies specific "target" industries. We recommend that that City adopt a policy or goal that lists the final target industries identified in the EOA.
    - OAR 660-009-0020 requires that cities within a Metropolitan Planning Organization (MPO) maintain 25% of their employment lands as short-term land supply. It says: "Cities and counties are strongly encouraged to select a

competitive short-term supply of land as a policy objective." In the memorandum "Corvallis Urbanization Study: Comprehensive Plan Policy Review" (December 15, 2015), we make recommendations for addressing this requirement.

- **Identify opportunities for addressing the deficit of commercial land.** Corvallis can address the commercial land deficit in a number of ways, including: (1) allowing and encouraging a wider range of commercial uses in appropriate industrial designations such as Limited Industrial, Office; (2) identifying opportunities to rezone surplus industrial land to commercial uses, focusing on the industrial land that is least likely to develop for industrial uses; (3) identifying opportunities for commercial redevelopment and encouraging redevelopment for highly desirable commercial uses (e.g., growth of small and mid-sized traded-sector uses in office space, such as software development); and (4) take no action and allow retail areas to redevelop as a result of market demand because land for commercial uses is so scarce in Corvallis. Each of these approaches could be a part of the solution to addressing Corvallis' commercial land deficit. We strongly recommend that the City take action on options one through three above. If the City does not take action, option 4 above, it risks continuing to have start-up businesses leave Corvallis because of a lack of commercial sites for development.
- **Continue to support business growth and incubation efforts.** The City should continue to support business growth and incubation efforts in a wide range of ways. Suggestions for providing this support from Corvallis stakeholders include the following, several of which are identified as strategies in the "Corvallis Economic Development Strategy" report:
    - *The City should continue to support businesses in finding office and other business space.* As described in the "Corvallis Economic Development Strategy," the City can actively support business incubation by assisting individual businesses in finding sites for development or buildings to lease. The City may be able to assist businesses through connecting businesses with building owners or leasing agents.
    - *The City should continue to work with the OSU Advantage Accelerator in obtaining a building for business incubation.* The ideal building (or buildings) would include shared office space, production space, and wet laboratory space. The City's role could include assisting in a range of ways, such as identifying buildings with the necessary characteristics or providing financial assistance to the Accelerator (e.g., low-interest loans).
    - *The City could make or encourage infrastructure improvements to support businesses.* The "Corvallis Economic Development Strategy" describes infrastructure improvements that the City has a role in implementing, such as transportation plans, access to markets, and transit. Corvallis business stakeholders suggest the following additional infrastructure improvements to support businesses: increasing access to high (and higher) speed telecommunications, improving the access to transit (e.g., the hours that transit runs or the areas where transit is

available), or supporting development of urban amenities that improve quality of life in Corvallis.

- *The City could provide direct financial assistance to small businesses.* This assistance might take the form of tax breaks for small growing businesses or low-interest loans to support expansion of businesses.
- *The City could develop an action plan to support growth of small businesses.* The action plan would address the issues identified in this report, as well as other issues identified through outreach to economic development stakeholders in the community.

- **Continue monitoring commercial and industrial development.** Monitoring retail and office development is a useful activity. In a recent survey conducted by the University of Oregon, only about 10% of responding Oregon cities reported they monitor any type of development. Commercial development is particularly challenging since most building permit data systems do not collect data on built space for new or redeveloped commercial uses. We note that the most recent Land Development Information Report reports the location and value of commercial development, but does not include information on the amount of built space, whether that space is new or a remodel of existing space, and how much land it consumed. The City should consider more detailed monitoring of commercial (and industrial) development if it is practical given cost. The City should also consider approaches to monitor redevelopment and infill on employment lands. This should include "traditional" redevelopment—sites where buildings are demolished and redeveloped, as well as upgrades on employment sites such as tenant improvements that require building permits.

Appendix A: Alternative Population Estimates

As part of development in the Corvallis Housing Needs Analysis (HNA), the City of Corvallis asked ECONorthwest to develop alternative forecasts for the City of Corvallis based on different growth rates in the Corvallis UGB. This appendix presents alternative forecasts of population growth and their implications for land sufficiency in Corvallis.

Exhibit 122 shows three forecasts for population growth and household growth in Corvallis for the 2016 to 2036 period. The estimate of population in 2014 is for the Corvallis UGB is based on the official population estimate from Portland State University's Population Research Center. The forecasts for household growth all use the same assumptions shown in Exhibit 35 for: percent of population in group quarters, average household side, and vacancy rate. The only difference between the three forecasts is the number of population growth in Corvallis over the 20-year period based on different average annual growth rates (AAGR). The alternative forecasts are:

- **The official forecast (0.73% average annual growth).** This forecast is the official forecast used throughout the HNA. It assumes that Corvallis will grow at 0.73% per year. At this growth rate, the City would add 9,469 people over the 20-year period. Using the assumptions in Exhibit 35, Corvallis will add 3,548 new dwellings over the 20-year period or 177 dwellings per year.
- **Moderately Fast Growth (1.25% average annual growth).** This forecast assumes that Corvallis will grow at 1.25% per year.[118] At this growth rate, the City would add 17,112 people over the 20-year period. Using the assumptions in Exhibit 35, Corvallis will add 6,412 new dwellings over the 20-year period or 321 dwellings per year.
- **Faster Growth (1.75% average annual growth).** This forecast assumes that Corvallis will grow at 1.75% per year. At this growth rate, the City would add 25,415 people over the 20-year period. Using the assumptions in Exhibit 35, Corvallis will add 9,523 new dwellings over the 20-year period or 476 dwellings per year.

Exhibit 122. Alternatives for population and new housing growth, Corvallis UGB, 2016–2036

	Official Forecast 0.73% AAGR	Moderately Fast Growth 1.25% AAGR	Faster Growth 1.75% AAGR
Housing Demand			
Total population growth	9,469	17,112	25,415
Growth per year	473	856	1,271
Total new dwellings	3,548	6,412	9,523
New dwellings per year	177	321	476

Source: ECONorthwest
Note: AAGR is average annual growth rate.

[118] In comparison, over the 1990 to 2014 period, Corvallis grew at 1.0%, Benton County at 0.9%, and Oregon at 1.4%.

Exhibit 123 shows an allocation of the new dwelling units to Corvallis' residential Plan Designations. Each forecast uses the same assumptions about where future housing will locate as Exhibit 84.

Exhibit 123. Allocation of new housing to plan designations, Corvallis UGB, 2016–2036

	Official Forecast 0.73% AAGR	Moderately Fast Growth 1.25% AAGR	Faster Growth 1.75% AAGR
Low Density Residential (LDR)	904	1,633	2,427
Medium Density Residential (MDR)	1,029	1,859	2,762
Medium High Density Residential (MHDR)	1,082	1,955	2,904
High Density Residential (HDR)	355	641	953
Mixed Use Residential (MUR)	178	321	477

Source: ECONorthwest
Note: AAGR is average annual growth rate.

Exhibit 124 shows the capacity of unconstrained vacant and partially vacant land with no Planned Development Overlay in Corvallis' residential Plan Designations. Each forecast uses the same assumptions about future residential capacity, from Exhibit 118. This does not include the capacity of land with Planned Development Overlay or Partially Constrained land, shown in Exhibit 120.

Exhibit 124. Unconstrained vacant and partially vacant land with no Planned Development Overlay, residential plan designations, Corvallis UGB, 2016–2036

	Official Forecast 0.73% AAGR	Moderately Fast Growth 1.25% AAGR	Faster Growth 1.75% AAGR
Low Density Residential (LDR)	3,880	3,880	3,880
Medium Density Residential (MDR)	1,951	1,951	1,951
Medium High Density Residential (MHDR)	2,564	2,564	2,564
High Density Residential (HDR)	46	46	46
Mixed Use Residential (MUR)	686	686	686

Source: ECONorthwest
Note: AAGR is average annual growth rate.

Exhibit 125 shows a comparison of housing capacity (Exhibit 124) to housing growth (Exhibit 123) fore each forecast of growth. Exhibit 125 shows:

- **The official forecast (0.73% average annual growth).** Corvallis has sufficient residential capacity to accommodate residential growth over the 2016-2036 period, except in High Density Residential. At the average annual growth rate for this forecast, Corvallis will exceed development capacity in High Density Residential by about 2019.
- **Moderately Fast Growth (1.25% average annual growth).** Corvallis has sufficient residential capacity to accommodate residential growth over the 2016-2036 period, except in High Density Residential. At the average annual growth rate for this forecast, Corvallis will exceed development capacity in High Density Residential by about 2017.

- **Faster Growth (1.75% average annual growth).** Corvallis has sufficient residential capacity to accommodate residential growth over the 2016-2036 period in Low Density Residential and Mixed-Use Residential. Corvallis will exceed development capacity in High Density Residential in about 2017, in Medium Density Residential by about 2030, and in Medium High Density Residential by about 2034.

Exhibit 125. Unconstrained vacant and partially vacant land with no Planned Development Overlay, residential plan designations, Corvallis UGB, 2016–2036

	Official Forecast 0.73% AAGR	Moderately Fast Growth 1.25% AAGR	Faster Growth 1.75% AAGR
Low Density Residential (LDR)	2,976	2,247	1,453
Medium Density Residential (MDR)	922	92	-811
Medium High Density Residential (MHDR)	1,482	609	-340
High Density Residential (HDR)	-309	-595	-907
Mixed Use Residential (MUR)	508	365	209

Source: ECONorthwest
Note: AAGR is average annual growth rate.

The estimates of when Corvallis will exceed development capacity assume: (1) a linear growth pattern, (2) do not include capacity for land with Planned Development Overlay or Partially Constrained land, and (3) assume that the allocation of housing will follow the same pattern from Exhibit 118.

It is highly probable that Corvallis' growth will not occur consistent with these assumptions. For example, multifamily housing development is highly cyclical (not linear), with substantial development one year and little development in other years. In addition, some land with Planned Development Overlay or Partially Constrained land will develop over the 20-year period but it is not clear how much of this land will develop and when it will develop. Finally, in the absence of housing capacity in one Plan Designation, development is more likely in other plan designations. For example, given that Corvallis has little capacity in High Density Residential areas, more development may occur in Medium High Density Residential or in Mixed Use Residential.

Despite these issues, the analysis in Exhibit 125 allows us to draw the following conclusions:

- **Corvallis has sufficient land in Low Density Residential to accommodate any reasonable assumption of growth over the next 20 years.** As discussed in Chapter 5, much of this capacity is not within city limits. Annexing Low Density Residential land into the city limits will be important to ensuring that Corvallis can accommodate residential growth over the next 20-years.
- **Corvallis has a deficit of High Density Residential Land.** Corvallis' High Density Residential land is very small, 46 units, and will be consumed in the next few years. As discussed in Chapter 5, the City will need to address the deficit of High Density Residential land. In the absence of enough High Density Residential land, high density

multifamily housing may locate in Commercial designations, in Mixed Use Residential, or (in a less dense development type) in Medium High Density Residential.

- **Corvallis has sufficient development capacity in Medium Density Residential and Medium High Density Residential to accommodate likely growth.** Exhibit 125 shows that Corvallis has sufficient capacity to accommodate growth in these designations under the Moderately Fast Growth rate (1.25%). It seems unlikely that Corvallis will grow at the Faster Growth rate (1.75%), unless there is an external reason for much faster than normal population growth.
- **Corvallis may have enough Mixed Use Residential land.** Corvallis has seen relatively little residential development in Mixed Use Residential land. If Corvallis continues to have insufficient High Density Residential land, high density multifamily development may locate in Mixed Use Residential land, if the land is located in appropriate places and if infrastructure (e.g., transportation, water, and sewer services) are available to support development of the land.

In conclusion, this analysis supports the overall finding of the Housing Needs Analysis. The City should ensure that there is sufficient land within the city limits to accommodate growth in all plan designations. In addition, the city has a deficit of High Density Residential land to accommodate growth.

Appendix B: Comprehensive Plan Policy Review

This appendix presents ECONorthwest's review of Corvallis's Comprehensive Plan Economy and Housing elements. The appendix presents a technical memorandum to City staff, with the policy review.

DATE: December 15, 2015

TO: Jason Yaich

FROM: Bob Parker and Beth Goodman

SUBJECT: CORVALLIS HOUSING NEEDS ANALYSIS AND ECONOMIC OPPORTUNITIES ANALYSIS: COMPREHENSIVE PLAN POLICY REVIEW

Summary

The City of Corvallis is conducting a review of the sufficiency of buildable land within its Urban Growth Boundary (UGB) to determine if the city has enough land designated to accommodate 20 years of housing and employment growth. Tasks 3 and 4 of our work program include a sub-task to review existing economic development and housing policies:

This memorandum summarizes ECO's review of policies related to employment and economic development and residential development in the Corvallis Comprehensive Plan. The focus of our review was to determine whether the policies and implementation measures in Corvallis Comprehensive Plan are compliant with applicable statutes and administrative rules and identify policy changes that can lower barriers (where appropriate) to employment and housing growth in Corvallis and to increase the likelihood of growth that meets the City's economic development and housing objectives.

Findings

- We did not conduct a detailed review of the findings in the Comprehensive Plan, but we note the obvious—the findings are out of date and reflect conditions in the late 1990s.
- The plan has a lot of policies. We do not necessarily see this as negative or as a problem, in part because we do not have perspective on whether any of the policies have proven problematic in local land use review processes.
- While the vision 2020 was adopted in 1998, the core of the vision is still relevant in 2015.
- The Plan only partially complies with the requirements of OAR 660-009-0020(1)(a). The plan does not identify the "categories or particular types of industrial and other employment uses desired by the community." Moreover, the City does not have required policies around maintenance of short-term land supply.
- The Economy Element includes a number of policies that address services not provided by the City. The policies effectively direct staff to coordinate with other organizations to

achieve desired outcomes. We recommend the City review these policies and consider whether they continue to be of value.

- We did not identify any goal compliance issues with the housing policies. We note that the Housing Vision does not address affordability and suggest the City consider amending it.
- The housing elements includes a number of specific policies about housing needs, affordability and land use. These policies should be maintained.

Introduction

The City of Corvallis is conducting a review of the sufficiency of buildable land within its Urban Growth Boundary (UGB) to determine if the city has enough land designated to accommodate 20 years of housing and employment growth. Tasks 3 and 4 of our work program include a sub-task to review existing economic development and housing policies:

This memorandum summarizes ECO's review of policies related to employment and economic development and residential development in the Corvallis Comprehensive Plan. The focus of our review was to determine whether the policies and implementation measures in Corvallis Comprehensive Plan are compliant with applicable statutes and administrative rules and identify policy changes that can lower barriers (where appropriate) to employment and housing growth in Corvallis and to increase the likelihood of growth that meets the City's economic development and housing objectives.

General observations

The comprehensive plan also includes findings for each section. We do not comment on the findings, other than to point out the obvious—the findings are out of date and reflect conditions in the late 1990s. Staff should consider using data from the Housing Needs Analysis and Economic Opportunities Analysis Report to update the factual base of the comprehensive plan, or simply repeal those sections. We note that if the City adopts the Housing Needs Analysis and Economic Opportunities Analysis Report as a supporting document to the comprehensive plan, that action will create inconsistencies in the factual base.

The second observation we make is that the plan has a lot of policies relative to other plans we have reviewed. We do not necessarily see this as negative or as a problem, in part because we are not involved in the local land use review process and do not know enough about how the plan policies are applied to land use decisions. Corollary to that, we do not have perspective on whether any of the policies have proven problematic in local land use review processes.

Comprehensive plan: Economy

The legal basis for comprehensive plan policies related to economy or economic development is found in OAR 660-009-0020. At the highest level, our evaluation addresses the extent to which Corvallis is compliant with these requirements.

Consistent with many comprehensive plans, the Corvallis comprehensive plan economy chapter includes a factual base, and employment and economic development policies. The factual base is somewhat out of date, which is to be expected given that the plan is dated 1998 and reflects conditions from the late 1990s.

Related documents

Two documents relate to, and should support, the economic policies in the comprehensive plan:

- The Corvallis 2020 Vision Statement (1998)
- The Corvallis Economic Development Strategy – 2015 Update (2015)

Both these documents include discussion of the City's vision and strategies related to employment and economic development. Due to the different purposes of the documents and their creation dates, we address them separately here.

The Corvallis 2020 Vision Statement

The Corvallis 2020 Vision statement includes one element directly related to economic development:

> *An economically strong and well-integrated city, fostering local businesses, regional cooperation and clean industry.*

The vision includes a section on economic vitality which includes the following vision statement:

> *Corvallis in 2020 is home to a vibrant economy that is anchored by key strategic industries and complemented by a wealth of diverse, environmentally friendly businesses.*

The vision is grounded in livability; the core elements of the vision for economic vitality are:

- Diverse economic base. Broad base of employment in a diverse number of fields, with a predominance of small, locally-owned businesses.
- Higher education, high tech, and heath care link. Family wage jobs linked in large part to education, technology, health care, professional services, and research.
- Regional transportation system. Active and convenient regional transportation system which makes it easy to walk, cycle, or ride mass transit.
- Environmentally-sound industries. Business and community collaboration to maintain and improve the city's air and water quality.

COMMENTS:

While the vision 2020 was adopted in 1998, the core of the vision is still relevant in 2015. Moreover, analysis ECO conducted for the Economic Opportunities Analysis (EOA) suggest

that the City has made progress towards the vision. Updating the vision at this time is not necessary—in our view, the City would derive more benefit from focusing on tactical issues related to implementation.

The Corvallis Economic Development Strategy – 2015 Update

This strategy appears to be focused on identifying short-term implementation steps to move the city towards its economic vitality vision. Moreover, it appears that the City coordinates with Benton County on economic development through an intergovernmental agreement. The 2015 update identifies three economic development goals:

- Support innovation and startups – Provide a local business environment that supports a successful, diverse traded-sector entrepreneurial community, including a supportive services infrastructure, long-term transportation strategy, and access to markets.
- Promote organic growth – Identify opportunities and support the retention and growth of companies that are currently located in Benton County.
- Leverage local assets – Develop a program that will focus on increased tenancy in existing vacant buildings and Enterprise Zone locations by business and industry types that are consistent with the Prosperity That Fits Plan.

The document identifies the following economic development strategies:

5. Support the development and deployment of resident and next stage capital, as well as identifying the likely financing sources for clients, when needed.
6. Develop and maintain relationships with Corvallis's largest employers, including OSU, HP, CH2M HILL, and Samaritan Health Services, to provide unprecedented advantages to Corvallis-based startups, including research infrastructure access, accelerator resources, services infrastructure, and innovative community networking.
7. Support business growth by providing properly zoned and serviced land, buildings, and development projects and by maintaining a timely and predictable development review process.
8. Collaborate locally, regionally, and statewide on long-term transportation plans, including access to markets, surface transit, and people travelling. In addition, the EDAB has identified a number of tactical measures that will support the strategies.

COMMENTS:

The purpose of this project and policy review is not to critique the city's economic development strategy, although our evaluation is that it is sound. Our focus is on how the strategy links to the comprehensive plan policies, with a specific focus on land use and infrastructure. Strategies 3 and 4 of the 2015 update relate directly to land use and transportation infrastructure. Our review of the plan policies that follows considers how the policies support these two strategies.

As a general comment, strategy 3 is the city's land use strategy. Parsing out strategy 3 shows two components: (1) ensuring and adequate supply of buildings and land, and (2) providing a predictable development process. As a general comment, the number of policies the City has in the economy element may be counter to the desire to provide simple, predictable development review pathway. Another consideration is the extent to which the City's industrial land base is affected by regulated wetlands—a fact that increases complexity of any development review.

Economy Element – Corvallis Comprehensive Plan

The Economy Element is divided into several sections and includes the following policies. As a general comment, it is difficult for us to understand the extent to which the policies have been implemented. Some of the policies direct staff to monitor conditions, others pertain to desired community and economic development outcomes.

As a broad comment, the extensive set of policies included in the Economy Element is consistent with the intent of OAR 660-009-0020, specifically subsection (1)(a):

> Community Economic Development Objectives. The plan must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community.

We think the plan only partially complies with this policy. The vision outlines some specific industries, as do the policies. However, we did not find language that identified the "categories or particular types of industrial and other employment uses desired by the community." The EOA identifies specific "target" industries. We recommend that that City adopt a policy or goal that lists the final target industries identified in the EOA.

One area the City will need to address to comply with OAR 660-009-0020 is policies that pertain to short-term land supply. Subsection (1)(a) articulations the desired policies "Cities and counties are strongly encouraged to select a competitive short-term supply of land as a policy objective." We make specific recommendations in Section 8.9 for addressing this requirement.

We recommend that the City consider grouping policies that require monitoring into a single section, or making an internal list of the requirements to ensure that staff are conducting the analyses required by policy. We identify those policies in our review.

8.1 Economic Development Vision

"We envision that in 2020 Corvallis will be an economically strong and well-integrated City, fostering local businesses, regional cooperation and clean industry."

"Corvallis recognizes that its livability is a primary source of its economic vitality. Corvallis boasts a vibrant, healthy economy that draws its strength from four directions:

- *Broad base of employment in a diverse number of fields, with a predominance of small, locally-owned businesses;*

- *Family wage jobs linked in part to education, technology, health care, professional services, and research;*
- *Active and convenient regional transportation system which makes it easy to walk, cycle or ride mass transit;*
- *Business and community collaboration to maintain and improve the City's air and water quality."*

COMMENT:

This language is directly from the 2020 Vision which creates alignment between the City's overall community vision and the comprehensive plan. As we commented above, this vision is still applicable in 2015. It could be modified, but we do not see any pressing need to revisit the vision and encourage the City to focus effort on implementation.

8.2 Employment and Economic Development

8.2.1 The City and County shall support diversity in type, scale, and location of professional, industrial, and commercial activities to maintain a low unemployment rate and to promote diversification of the local economy.

COMMENT:

This policy is really a plan map/zoning policy that is largely integrated into the City's planning documents. It would appear to pertain primarily to plan map or boundary amendments.

8.2.2 The City shall monitor changes in demographic information to assure that the type, quantity, and location of services, facilities, and housing remain adequate to meet changing needs.

COMMENT:

This requirement is partially addressed in the annual Land Development Information Report (the monitoring of changes in demographic information). Given that this is the economy element of the plan, we assume that demographic extends to economic data. As an observation, the requirement is vague on whether the data should be local or consider the implications of broader trends.

8.2.3 The City shall support existing businesses and industries and the establishment of locally-owned, managed, or controlled small businesses.

COMMENT:

This policy implies the city will support existing and new businesses with an emphasis on local businesses. It provides little direction in the context of development review. The City should consider whether it wants to single-out specific classes of businesses by policy—it

implies a normative judgment about what the city wants to support which may have important exceptions.

8.2.4 The City shall monitor the jobs / housing balance and develop strategies in response to that information to retain a balance over time.

COMMENT:

The work ECO did last year on housing and the locational decisions and preferences of households meet the intent of this policy. The policy, however, does not provide direction on how the concept of jobs/housing balance is operationalized and measured, or whether specific targets exist.

8.2.5 The City shall participate in coordinated land use planning and economic development efforts among Corvallis, Philomath, Benton County, and Linn County. This shall include strategies to address regional jobs / housing balance.

COMMENT:

In the late 1990s, ECO conducted a regional housing and economic analysis that addresses the spirit of this policy. It's not clear what the framework is for the City to implement this policy on an ongoing basis given that the policy lists four different local governments, and implies coordination with other cities in the region. This would be an appropriate role for the Cascades-West Council of Governments.

8.2.6 In times of low unemployment or of rapid job growth that adversely affects the jobs / housing balance, the City Council will adjust its economic development policies to focus on the availability of affordable housing and on the maintenance of existing businesses, rather than on the recruitment of new businesses.

COMMENT:

In our view, economic development requires a long-term, sustained vision and an implementation program that matches that vision. As recent analysis has suggested, the relationship between employment and housing is extremely complicated. If the City's economic development policy matches the community vision, then it is unclear why the City would amend those policies. We recommend the City focus on strategies to encourage affordable housing and consider deleting this policy.

8.2.7 The City shall periodically evaluate the effects of economic activity on the community and its air, land, and water resources.

COMMENT:

It is unclear what actions the City will take to conduct this evaluation, and what actions it would implement if the evaluation concluded the impacts were negative. The City already has strong natural resource protection policies.

8.2.8 The City shall stay responsive to emerging technologies that support local businesses.

COMMENT:

This policy appears aimed at keeping the City competitive. However, the policy is unclear on what steps the City will take to be responsive.

8.3 Labor Market

COMMENTS:

As a general observation, workforce development is not a service the City of Corvallis provides. While the policies are sound from the perspective of supporting economic development, it is not clear how the City will support and implement the policies. We do not comment on the individual policies.

8.3.1 The City shall support the delivery of effective, coordinated job training and other career assistance.

8.3.2 The City shall support programs and initiatives for the development of a skilled, trained workforce.

8.3.3 The City shall encourage local employers to provide their employees with opportunities for training and career development.

8.3.4 The City shall seek opportunities to minimize unemployment among all segments of the community.

8.4 Education

COMMENTS:

Similar to workforce, education is not a service the City of Corvallis provides. We note that the establishment of the Research Accelerator and Innovation Network (RAIN) program and the City's involvement in RAIN, Corvallis is effectively implementing policy 8.4.2. We have no further comments on the education policies.

8.4.1 The City shall encourage and support Oregon State University as a major education and research center.

8.4.2 The City shall support Oregon State University to facilitate the transfer from research to business of new technologies developed at the University.

8.4.3 The City shall support Linn - Benton Community College as the region's Community College.

8.4.4 The City shall encourage collaboration between the Corvallis School District 509J, Oregon State University, Linn - Benton Community College, and local employers to address emerging education and workforce needs of the community.

8.5 Government Services

8.5.1 Local government administrative offices shall remain centralized in the downtown.

COMMENT:

The location of City offices supports the sound implementation of this policy.

8.5.2 The City shall work with the U. S. Postal Service to retain its main customer service center in the downtown.

COMMENT:

USPS has closed several offices in Corvallis but continues to maintain its main customer service center on SW Jefferson Avenue. This is a sound policy given the importance of a full suite of government services in the City Center.

8.5.3 The City shall seek to maintain the community's desired level of public services. As needed, the City shall evaluate alternative funding mechanisms, including property tax levies, for programs or services that are deemed a priority by the community.

COMMENT:

This policy focuses more on public finance than economy or economic development.

8.6 Visitor and Conference Activities

COMMENTS:

This suite of policies suggest that travel and tourism is one of Corvallis' target industries. Moreover, this suite of policies is consistent with the direction in OAR 660-009-0020 that cities identify targeted industries.

8.6.1 The City shall encourage adequate support facilities for Corvallis' expanding visitor and conference activities.

8.6.2 City policies shall encourage lodging and conference facilities in close proximity to visitor services and public transportation.

8.6.3 The City shall consider possible benefits to visitor and conference activities when evaluating possible transportation-related improvements through annual updates to the Capital Improvement Plan.

8.6.4 The City shall support the development of visitor and conference-related amenities that promote the historical and cultural focus of the community.

8.7 Health Services

COMMENTS:

This section recognizes the importance of health services to economic development. Heath services, however, are not a service the City of Corvallis provides. The intent of the policies is clear; it is less clear what the policies expect of staff in terms of implementation. We have no further comments on the health services policies.

8.7.1 The City shall encourage cooperation among local, State, Federal, and private agencies in planning and providing for health and related social services.

8.7.2 The City shall support the development or expansion of health services to meet regional, as well as local, needs and the role of Corvallis as a regional medical center.

8.7.3 The City shall accommodate land uses that support the availability of a continuum of health care options, including primary care, assisted living, home health care, and nursing home care.

8.7.4 The City shall stay responsive to demographic trends to evaluate changing health care needs of the community.

8.7.5 The City shall continue to encourage healthy lifestyles by supporting a variety of opportunities for recreational activity and social interaction.

8.7.6 The City shall promote access to available sources of health services by encouraging a broader geographic distribution of facilities and by coordinating land use and transportation decisions that pertain to health services.

8.7.7 The City shall work with the County, health service agencies, and local health care providers to encourage the provision of additional Alzheimer's facilities for Medicare, Medicaid, and other lower-income patients.

8.8 Child Care Facilities and Services

COMMENTS:

This section recognizes the importance of child care to economic development. Child care, however, is not a service the City of Corvallis provides, nor is it a service it can require employers to provide. The intent of the policies is clear; it is less clear what the policies expect of staff in terms of implementation. We have no further comments on the education policies.

8.8.1 The City shall encourage all employers to help their employees meet child care needs. Strategies include: subsidies to help pay the cost of care (especially for low-wage workers); flexible hours and benefits; enhanced child care resource and referral to help find and manage care; and, where appropriate, child care facilities on or near-site.

8.8.2 The City shall continue to work with public and private organizations to promote good quality child care options that are affordable and convenient to all segments of the community.

8.9 Industrial Land Development and Land Use

COMMENTS:

We recommend the City adopt a goal or policy stating the intent to maintain a 20-year supply of land consistent with Goal 9 and OAR 660-009. Such a policy would expressly address the intent of OAR 660-009 that cities "…provide an adequate land supply for economic development and employment growth."

We also recommend that the City adopt the following policies demonstrating a commitment to provide competitive short-term land supply as required by OAR 660-009-0020(1)(b). These policies are adapted from policies recently proposed for the City of Bend.

- The City establishes a goal to have at least 25% of the predicted economic land need identified in the adopted EOA qualify as competitive short-term land supply.
- Beginning in 2016, and every X years thereafter, the City will:
    - Update the economic lands Buildable Lands Inventory to identify developed and vacant economic lands by General Plan designation;
    - Estimate the acreage of vacant economic lands that qualify as competitive short-term supply;
    - If the acreage of vacant lands that qualify as competitive short-term supply is less than the 25% goal, then staff will deliver a report to the City Council that details:
        - Economic lands that have a relatively good opportunity to qualify as competitive short-term land supply to meet the 25% goal,
        - Obstacles preventing those lands from qualifying as competitive short-term supply, and
        - Efforts, plans, and potential funding mechanisms to prepare the lands to qualify as competitive short-term supply.

We provide comments on specific policies below—if a policy does not have a comment, that means we deem it goal compliant and in need of no further consideration or change at this time.

8.9.1 The City shall designate appropriate and sufficient land in a variety of different parcel sizes and locations to fulfill the community's industrial needs.

COMMENT:

This policy could be modified to address the 20-year need.

8.9.2 In designating new industrial properties, and in redesignating properties to industrial zoning from other designations, the City shall work to diversify the locations of industrial properties within the community.

8.9.3 Lands designated for industrial use shall be preserved for industrial and other compatible uses and protected from incompatible uses.

COMMENT:

Some jurisdictions we have worked with have struggled with zone changes for industrial land. One interpretation of this policy is that it would not allow a zone change from industrial to other uses. The City should consider whether there are specific instances when it might want to allow such zone changes. If not, then this policy requires no modification.

8.9.4 The Land Development Code shall maintain standards for the purpose of minimizing the negative impacts of industrial development on surrounding properties.

8.9.5 The City shall develop standards to improve the compatibility of General and Intensive Industrial uses, including minimum standards for building materials and appearance, prohibition of pole-mounted signs, and outside storage and screening requirements.

8.9.6 The City shall develop standards for General and Intensive Industrial Districts intended to reduce traffic impacts. These standards shall include direct pedestrian connections from building entrances to sidewalks and transit stops, location of building entrances within ¼ mile of potential transit routes for uses with more than 50 employees, and consideration of requiring transportation demand management strategies by new uses with more than 50 employees.

8.9.7 The City shall designate Research-Technology Center (RTC) as a distinct industrial district that helps continue the practice of providing adequate green open space to maintain community livability. The RTC district shall contain the following features:

A. Campus-like development plan;

B. Use of natural site characteristics and other significant design elements as a means of buffering adjacent land uses;

C. Orderly, economic provision of an adequate level of key facilities; and

D. The RTC district shall be used to help assure the availability and adequacy of sites for "high-tech," "biotech," and renewable resource-based businesses and industries, and to foster the transfer of academic and private research results into practical applications.

8.9.8 The City shall encourage the development or expansion of industries in the vicinity of the Corvallis Municipal Airport, provided that such industries meet the requirements of the Airport Industrial Park Master Plan.

8.9.9 The City shall coordinate planning activities with Benton County in order that lands suitable for industrial use, but not needed within the planning period, are zoned in a manner which retains these lands for future industrial use.

COMMENT:

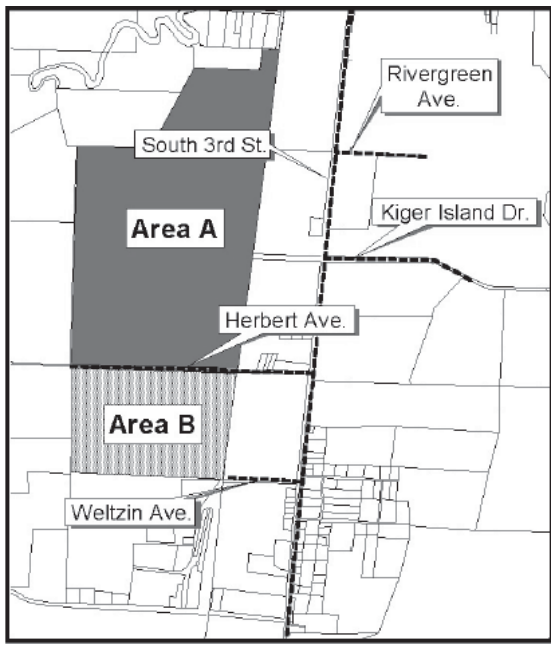
This is a sound land preservation policy. We did not review the specific code language, but large lot zoning requirements are typical implementation approaches.

8.9.10 For the subject property shown on the map below there shall be no land division and no industrial or commercial development until annexation to the City of Corvallis. Upon annexation, the minimum lot size is 50 acres for all lots within the subject property. This 50 acre minimum lot size for each lot may be reduced only after an industrial park has been approved through the Planned Development process. Lots of less than 50 acres in size, which existed at the date of the original adoption of this policy, may be developed or reduced in size through the Planned Development process. The subject property contains land located inside and outside of the City Limits. A maximum of 50% of the land in Area A (the area inside the City Limits on December 31, 1998) and 50% of the land in Area B (the area outside the City Limits on December 31, 1998) described on the following exhibit can be developed as industrial parks. To evaluate the supply and demand of industrial land, this policy shall be periodically reviewed:

A. When triggered by 25% and/or again by 50% of the combined land in Area A and Area B is approved as industrial park through the Planned Development process; and

B. At the time of Periodic Review of the Comprehensive Plan.

South Corvallis Industrial Land



8.9.11 Any proposed development within Area A or B must be compatible with airport operations at the Corvallis airport.

8.9.12 The City shall evaluate whether to amend the Land Development Code to provide alternatives to the use of Planned Development overlays for industrial districts. An example would be the creation of different overlays or design guidelines with specific standards that do not require discretionary reviews.

COMMENT:

If the City has already conducted this evaluation, we recommend this policy be deleted or modified.

8.9.13 The City shall implement the following relative to a Research-Technology district:

A. Ensure that buildings are located near the street with direct pedestrian connections that maximize access to transit stops;

B. Discourage parking lots located between streets and main entrances to buildings;

C. Promote small commercial uses to encourage pedestrian activity; and

D. Encourage design features that complement adjacent neighborhoods and natural features.

8.9.14 The City shall encourage the location of on-site parking behind or beside buildings rather than in the front.

8.9.15 Industrial and commercial development adjacent to rail lines shall be designed and constructed in a way that does not preclude the future use of the rail facility.

8.9.16 The City shall amend Land Development Code provisions related to the Intensive Industrial Districts. This amendment shall establish that Conditional Development approval shall be required for previously established intensive industrial uses when either of the following conditions apply:

A. A change in operation or increase in production creates the need to secure approval from an environmental permitting agency to increase air, water, or noise emissions unless such emission levels were approved by the City through a previous land use process.

B. Specific limits or conditions related to operations, physical expansion, etc., established by a previous land use approval are exceeded.

8.9.17 The City shall develop standards for a Limited Industrial - Office district on a Citywide basis.

8.9.18 The Mixed Use Employment district shall be encouraged in industrial districts that are easily accessible by transit and pedestrians.

8.10 Commercial and Office Land Development and Land Use

As a general principle, our view is policies that are thoughtful and somewhat restrictive on commercial retail uses are appropriate. The City's policies are consistent with that principle. We provide comments on specific policies below—if a policy does not have a comment, that means we deem it goal compliant and in need of no further consideration or change at this time.

8.10.1 The location, type, and amount of commercial activity within the Urban Growth Boundary shall be based on community needs.

COMMENT:

This policy is legally permissible, but if the City were to pursue a boundary amendment, community needs would need to be translated into a land demand model. The EOA provides that analysis at the UGB level for the 2016-36 period. It does not address the location of commercial activity.

8.10.2 Given the community's intention to prevent decline in existing commercial areas, the City shall explore opportunities to facilitate and assist in the redevelopment of existing commercial areas, in a manner that meets current standards.

8.10.3 All areas with commercial Comprehensive Plan Map designations other than Central Business District and Professional Office shall be redesignated as Mixed Use Commercial. (See Policy 8.10.7 for direction on Land Development Code standards to be developed to address the community's commercial needs.)

COMMENT:

The BLI ECO is currently completing suggests that the City has fully implemented this policy. If the City amends the comprehensive plan, it should consider deleting this policy.

8.10.4 New commercial development shall be concentrated in designated mixed use districts, which are located to maximize access by transit and pedestrians.

8.10.5 Commercial activity extending from existing commercial areas along collector or arterial streets (strip type development) shall not be permitted beyond the area designated in the Comprehensive Plan Map, dated December 1998, except, commercial activity on the south side of Circle Boulevard may be extended east 490 feet to the existing railroad right-of-way, located on the west boundary of Hewlett-Packard.

8.10.6 The City shall monitor the impact of the new mixed use districts on the availability of office space to ensure sufficient land to fulfill the community's professional and administrative office needs.

COMMENT:

Monitoring retail and office development is useful activity. In a recent survey conducted by the University of Oregon, about 10% of responding Oregon cities reported they monitor any type of development. Commercial development is particularly challenging since most building permit data systems do not collect data on built space for new or redeveloped commercial uses. We note that the most recent Land Development Information Report reports the location and value of commercial development, but does not include information on the amount of built space, whether that space is new or a remodel of existing space, and how much land it consumed. The City should consider more detailed monitoring of commercial (and industrial) development if it is practical given cost.

8.10.7 The City shall develop standards for a hierarchy of mixed use commercial districts, with minor neighborhood centers serving neighborhood shopping and office needs, major neighborhood centers serving community shopping and office needs, and the downtown commercial districts serving regional shopping and office needs. The Professional and Administrative Office district can serve both community and regional office needs. Major neighborhood centers shall be sited at transit nodes on arterial streets and shall incorporate pedestrian-scale features such as building orientation to the street and limiting the maximum block perimeter. As the Land Development Code is updated, districts shall be developed that address all of the community's desired commercial needs.

COMMENT:

This is a sound approach to meeting commercial land needs. It's not clear what analysis the City has done in terms of developing the required hierarchy—the zoning code establishes the hierarchy to some degree.

8.10.8 The City shall locate major and minor neighborhood centers near the junctions of arterials or collectors.

8.10.9 The City shall require at least one major commercial entrance to be located immediately adjacent to the public or private streets within the neighborhood center and mixed use areas. Additionally, parking lots shall be located to the rear of buildings, and where they do not disrupt the pedestrian streetscape, may be located to the side of buildings.

8.10.10 Along the shopping street of neighborhood centers, the City shall encourage occupation of ground floor storefront space by retail and service users that serve local neighborhood needs and generate high volumes of pedestrian traffic.

8.10.11 In order to provide for more compact commercial development and to encourage a mix of uses in commercial districts, the City shall develop standards that will require some types of large commercial development to have multiple stories. These additional levels may be dedicated to parking or to other commercial or residential uses permitted in the district.

8.10.12 The City shall develop standards for commercial, office, and industrial districts to require that, any spaces in excess of the minimum standard shall be located in underground or structured parking facilities in developments with large minimum parking requirements (such as over 200 spaces).

8.10.13 The City shall develop standards in the Land Development Code to encourage or require with development or redevelopment, the consolidation of vehicle accesses on arterial streets, where appropriate and practical.

8.11 Downtown Area

(See Article 13 - Special Areas of Concern for more specific information on the downtown area.)

COMMENT:

We have no specific comments on this set of policies.

8.12 North 9th Street Area

COMMENTS:

We have no specific comments on this set of policies.

8.12.1 Commercial activity on or extending from North 9th Street shall be limited to the area designated in the Comprehensive Plan Map, dated December 1998, except, commercial activity on the south side of Circle Boulevard may be extended east 490 feet to the existing railroad right-of-way, located on the west boundary of Hewlett-Packard.

8.12.2 10th Street and Highland Drive shall be designated for residential uses adjacent to the street except for areas currently designated commercial.

8.12.3 The City shall develop standards that minimize conflicts between abutting land uses and the transportation function of 9th Street and enact adopted provisions of the Transportation Alternatives Analysis that address issues such as driveway consolidation, access conflicts, and pedestrian refuge islands.

8.12.4 As a transition between more intensive commercial uses and residential uses, professional and administrative office uses shall not be extended beyond the area designated on the Comprehensive Plan Map, dated December 1998.

8.13 South 3rd Street Area

(See Sections 9.8, 11.3, and 13.11 for South Corvallis Area findings and policies.)

COMMENTS:

We have no specific comments on this set of policies.

8.14 Highway 20/34

COMMENTS:

We have no specific comments on this set of policies.

8.14.1 Development along Highway 20/34 is appropriate when it is developed in accordance with applicable local area and regional plans such as the West Corvallis - North Philomath Plan, the Corvallis Transportation System Plan, and the Highway 20/34 Corridor Plan.

8.14.2 To provide an attractive City gateway and protect the transportation function of the highway, linear commercial activity along Highway 20/34 shall not be extended beyond the boundaries shown on the adopted Comprehensive Plan Map, dated December 1998.

8.14.3 Highway 20/34 is a major gateway into Corvallis. Special attention shall be given to public and private development along this corridor to ensure that it reflects and contributes to a positive and desirable image of the community in keeping with policies within the Comprehensive Plan.

8.14.4 Direct access to Highway 20/34 shall be restricted to maintain the carrying capacity and enhance the safety levels of the highway. This will be achieved through the following requirements:

A. New or expanded development shall comply with the Oregon Department of Transportation Interim Transportation and Access Strategy until adoption of the final version of the Highway 20/34 Corridor Plan.

B. New or expanded development on sites within 1/4 mile of Highway 20/34 shall have direct access to a local and/or collector street wherever practicable.

C. Collector streets should be used for access to Highway 20/34 rather than local streets or direct access from individual properties. Access from local streets onto Philomath Boulevard may be allowed where no connection to a collector street is available.

D. New or existing local street access to Highway 20/34 shall be restricted or eliminated where possible.

E. Full street access points should be consolidated and spaced no closer than 1/4 mile intervals along Highway 20/34.

F. At least one collector street shall connect West Hills Road and Country Club Drive as designated in the West Corvallis - North Philomath Plan.

G. New or expanded development shall comply with State highway access regulations and other accepted traffic engineering standards.

8.14.5 Multiple accesses to properties along Highway 20/34 and related major streets shall be consolidated when:

A. Land uses develop, expand, intensify and/or change.

B. Properties are consolidated and/or divided.

C. Lot lines are adjusted.

Comprehensive Plan: Housing

The legal basis for comprehensive plan policies related to economy or economic development is found in Goal 10, ORS 197.303-312 and OAR 660-008. At the highest level, our evaluation addresses the extent to which Corvallis is compliant with these requirements.

Consistent with many comprehensive plans, the Corvallis comprehensive plan housing element includes a factual base, and employment and policies. The factual base is somewhat out of date, which is to be expected given that the plan is dated 1998 and reflects conditions from the late 1990s. As a general observation, it appears that all housing policies comply with applicable statutes and administrative rules.

No statutory or statewide planning goal requires Corvallis to adopt housing policies, or defines specific policies that cities must have to comply with the statewide planning system beyond having a comprehensive plan and implementing ordinances. Corvallis meets those requirements. Goal 10 does include a set of planning guidelines that outline planning steps. Those steps are codified in more detail in ORS 197.296 and the planning steps outlined in the guidelines will be addressed in the 2016 Housing Needs Assessment ECO is working on.

Goal 10 also includes a set of implementation guidelines that are more pertinent to local housing policy. These include:

1. Plans should provide for a continuing review of housing need projections and should establish a process for accommodating needed revisions.

2. Plans should take into account the effects of utilizing financial incentives and resources to (a) stimulate the rehabilitation of substandard housing without regard to the financial capacity of the owner so long as benefits accrue to the occupants; and (b) bring into compliance with codes adopted to assure safe and sanitary housing the dwellings of individuals who cannot on their own afford to meet such codes.

3. Decisions on housing development proposals should be expedited when such proposals are in accordance with zoning ordinances and with provisions of comprehensive plans.

4. Ordinances and incentives should be used to increase population densities in urban areas taking into consideration (1) key facilities, (2) the economic, environmental, social and energy consequences of the proposed densities and (3) the optimal use of existing urban land particularly in sections containing significant amounts of unsound substandard structures.

5. Additional methods and devices for achieving this goal should, after consideration of the impact on lower income households, include, but not be limited to: (1) tax incentives and disincentives; (2) building and construction code revision; (3) zoning and land use controls; (4) subsidies and loans; (5) fee and less-than-fee acquisition techniques; (6) enforcement of local health and safety codes; and (7) coordination of the development of urban facilities and services to disperse low income housing throughout the planning area.

6. Plans should provide for a detailed management program to assign respective implementation roles and responsibilities to those governmental bodies operating in the planning area and having interests in carrying out the goal.

COMMENTS:

We first note that the guidelines listed above are just that—guidelines. The City is not required to implement any of the recommendations. We also note, that some of the guidelines above go beyond the comprehensive plan. Corvallis has a well-developed housing program that likely addresses many of the suggested elements.

With respect to specific guidelines, the LDIR addresses guideline 1. The housing element includes policies that partially address guidelines 2 and 4. Following the theme of this evaluation, we recommend the City consider add policies related to housing affordability.

9.1 Relevant Vision Statement Elements

The Housing Element establishes the following vision:

"Development standards have been created based on the characteristics of traditional Corvallis neighborhoods. These standards ensure that development and redevelopment create, protect, and enhance neighborhood form while facilitating the community-wide needs to improve transportation choices, provide housing for a diverse population within safe attractive neighborhoods, and maintain resource lands, natural areas, and recreational open spaces."

"More efficient land use through higher densities and compact development reduces the amount of land required for development and the negative impacts of an extended infrastructure. . . . The number of daily auto trips and the length of those trips has been significantly reduced by: close coordination of land use and transportation decisions creating a careful mix of uses within neighborhoods; designing and building neighborhoods that are safe, easy, and convenient to walk and bicycle in; and building pedestrian connections between neighborhoods."

COMMENT:

We note that the vision does not include any language about housing affordability or meeting the housing needs of Corvallis residents. It does mention "meeting the needs of a diverse population," but does so in the context of neighborhood form and livability. The language in the second paragraph addresses land use efficiency, which relates to housing affordability, but focuses accessibility. We recommend the City consider adding language into the housing vision that addresses affordability.

9.2 Neighborhood-Oriented Development

In addition to the vision statement in section 9.1, the Housing Element establishes a set of goals for neighborhood-oriented development.

COMMENTS:

Section 9.2 establishes a vision for neighborhood development in Corvallis. The policies will have the most effect on new development, but apply retroactively to pre-existing development. We note that the policies do not address housing mix or price. We have no other comments on the neighborhood-oriented development policies.

Policies:

9.2.1 City land use decisions shall protect and maintain neighborhood characteristics (as defined in 9.2.5) in existing residential areas.

9.2.2 In new development, City land use actions shall promote neighborhood characteristics (as defined in 9.2.5) that are appropriate to the site and area.

9.2.3 The City shall identify, inventory, analyze, and map existing and potential comprehensive neighborhood areas within the City and the Urban Growth Boundary and, through public processes, determine how they will be preserved, renewed, and or created.

9.2.4 Neighborhoods shall be pedestrian-oriented. Neighborhood development patterns shall give priority consideration to pedestrian-based uses, scales and experiences in determining the orientation, layout, and interaction of private and public areas.

9.2.5 Development shall reflect neighborhood characteristics appropriate to the site and area. New and existing residential, commercial, and employment areas may not have all of these neighborhood characteristics, but these characteristics shall be used to plan the development, redevelopment, or infill that may occur in these areas. These neighborhood characteristics are as follows:

A. Comprehensive neighborhoods have a neighborhood center to provide services within walking distance of homes. Locations of comprehensive neighborhood centers are determined by proximity to major streets, transit corridors, and higher density

housing. Comprehensive neighborhoods use topography, open space, or major streets to form their edges.

B. Comprehensive neighborhoods support effective transit and neighborhood services and have a wide range of densities. Higher densities generally are located close to the focus of essential services and transit.

C. Comprehensive neighborhoods have a variety of types and sizes of public parks and open spaces to give structure and form to the neighborhood and compensate for smaller lot sizes and increased densities.

D. Neighborhood development provides for compatible building transitions in terms of scale, mass, and orientation.

E. Neighborhoods have a mix of densities, lot sizes, and housing types.

F. Neighborhoods have an interconnecting street network with small blocks to help disperse traffic and provide convenient and direct routes for pedestrians and cyclists. In neighborhoods where full street connections cannot be made, access and connectivity are provided with pedestrian and bicycle ways. These pedestrian and bicycle ways have the same considerations as public streets, including building orientation, security-enhancing design, enclosure, and street trees.

G. Neighborhoods have a layout that makes it easy for people to understand where they are and how to get to where they want to go. Public, civic, and cultural buildings are prominently sited. The street pattern is roughly rectilinear. The use and enhancement of views and natural features reinforces the neighborhood connection to the immediate and larger landscape.

H. Neighborhoods have buildings (residential, commercial, and institutional) that are close to the street, with their main entrances oriented to the public areas.

I. Neighborhoods have public areas that are designed to encourage the attention and presence of people at all hours of the day and night. Security is enhanced with a mix of uses and building openings and windows that overlook public areas.

J. Neighborhoods have automobile parking and storage that does not adversely affect the pedestrian environment. Domestic garages are behind houses or otherwise minimized (e.g., by setting them back from the front facade of the residential structure.) Parking lots and structures are located at the rear or side of buildings. On-street parking may be an appropriate location for a portion of commercial, institutional, and domestic capacity. Curb cuts for driveways are limited, and alleys are encouraged.

K. Neighborhoods incorporate a narrow street standard for internal streets which slows and diffuses traffic.

L. Neighborhood building and street proportions relate to one another in a way that provides a sense of enclosure.

M. Neighborhoods have street trees in planting strips in the public right-of-way.

9.2.6 The City shall investigate and implement incentives to encourage the development of the neighborhood characteristics identified in 9.2.5.

9.2.7 To facilitate neighborhood-oriented development, the Land Development Code shall include provisions for:

A. Reduced setbacks and minimum lot size requirements in residential districts;

B. Varied lot dimensions within a neighborhood development; and

C. The consideration of an average lot size within a neighborhood development.

9.2.8 To maintain connectivity and promote interactions within and among neighborhoods, gated development shall not be permitted.

9.3 Residential Land Development and Land Use

COMMENTS:

These policies address land supply and needed housing types. Policy 9.3.1 addresses land supply in the urbanizable area (e.g., the unincorporated area of the UGB). The City should consider modifying that policy or adding a new one that requires a 20-year land supply that includes enough land by plan designation to accommodate needed housing types and densities. Section 9.3 includes policies that provide support to siting affordable housing developments—which are often difficult to site because neighbors don't want them nearby. Policy 9.3.6 prohibits City staff or decision makers from excluding needed housing types.

9.3.1 Corvallis and Benton County shall work together to assure that adequate urbanizable land is available to meet housing needs during the planning period and to prevent development patterns that preclude future urbanization.

9.3.2 Where a variety of dwelling types are permitted by the development district, innovative site development techniques and a mix of dwelling types should be encouraged to meet the range of demand for housing.

9.3.3 The City shall encourage a mix of residential land uses and densities throughout the City through the application of the criteria of the Land Development Code and through exploration of new approaches that respect the community's values.

9.3.4 No one who sells, rents, or leases a house, apartment, or other real property within the City Limits of Corvallis shall discriminate on the basis of race, religion, sex, sexual orientation, marital status, color, national origin, age, familial status (children), mental or physical disability, or source of income.

9.3.5 Residential developments shall conform to the density ranges specified by the Comprehensive Plan and be of housing types permitted by the applicable zoning district.

9.3.6 The development review process shall not result in the exclusion of needed housing at densities permitted by underlying district designations or result in unreasonable cost or delay.

9.3.7 To the maximum extent possible in residential areas, glare from outdoor lighting shall be shielded and noise shall be limited.

9.4 Housing Needs

COMMENTS:

This group of policies requires monitoring housing development to ensure it is meeting the needs of all Corvallis households. This is a good set of policies that demonstrate City commitment to meeting housing needs.

9.4.1 To meet Statewide and Local Planning goals, the City shall continue to identify housing needs and encourage the community, university, and housing industry to meet those needs.

9.4.2 The City shall continue to periodically review the immediate and long-term effects of fees, charges, regulations, and standards on dwelling costs and on community livability as defined in the Corvallis 2020 Vision Statement.

9.4.3 The City shall investigate mechanisms to assure the vitality and preservation of Corvallis' residential areas.

9.4.4 The City shall encourage the repair and maintenance of existing dwelling units and shall pursue opportunities to focus financial assistance programs in specific areas of the City on a census tract or neighborhood basis.

9.4.5 The City shall maintain appropriate standards to assure the repair and rehabilitation of housing units that may be hazardous to the health, safety, and welfare of the inhabitants.

9.4.6 The City shall maintain minimum standards for multi-family units that encourage the development of units designed for long-term family living. Factors which need to be considered include privacy, child and adult recreation areas, variety of building design, play space / open space, and landscaping.

9.4.7 The City shall encourage development of specialized housing for the area's elderly, disabled, students, and other groups with special housing needs.

9.4.8 The City shall maintain information concerning housing supply and demand, ascertain the housing needs of special groups, keep abreast of and utilize sources of Federal and State funding, and provide information and coordination among all participants in the local housing market.

9.4.9 Residential development should consider and accommodate to the maximum extent possible, the future needs of senior citizens.

9.4.10 The City shall continue to monitor the demand for seasonal farm worker housing.

9.5 Housing Affordability

COMMENTS:

This set of policies requires additional monitoring on housing affordability and identifies a number of specific metrics. These are sound policies that demonstrate a commitment to addressing housing affordability—which is a well-documented issue in Corvallis.

9.5.1 The City shall plan for affordable housing options for various income groups, and assure that such options are dispersed throughout the City.

9.5.2 The City shall address housing needs in the Urban Growth Boundary by encouraging the development of affordable dwelling units which produce diverse residential environments and increase housing choice.

9.5.3 Annually, the City shall determine the number of units of housing sold that are affordable to households with incomes at or below both 80% and 50% of the Benton County median for a household of three persons. In conducting this process of measurement, results shall be tabulated on the basis of a three-year moving average.

9.5.4 It shall be the goal of the City that 15% of residential owner-occupied units be affordable to buyers with incomes at or below 80% of Benton County median for a household of three persons.

9.5.5 The City shall determine annually the number of rental housing units affordable to households with incomes at or below both 80% and 50% of the Benton County median for a household of two persons. In conducting this process of measurement, results shall be tabulated on the basis of a three year moving average.

9.5.6 It shall be the goal of the City that 15% of residential rental units be affordable to renters with incomes at or below 50% of Benton County median for a household of two persons.

9.5.7 If either of the goals established in 9.5.3. or 9.5.5., above, is not being met, the City shall investigate and implement programs and/or legislative initiatives in order to better meet said goals. Such initiatives could include, but should not be limited to, those identified in finding 9.5.j., above.

9.5.8 In determining how Federal entitlement funds shall be expended, the City shall evaluate strategies for coordinating the use of these funds with other local resources, such as the City's community development allocations funding and Benton County's affordable housing development loan fund.

9.5.9 The City shall monitor "expiring use" housing projects that are at risk of being lost as a source of affordable housing due to the expiration of HUD financing and the associated restrictions on rental charges. The City shall work in partnership with local housing organizations in an effort to assure that these housing units are preserved or replaced as a source of affordable housing.

9.5.10 The City shall continue to investigate and develop suitable methods and programs in order to assist low- and very-low-income households in meeting their housing needs.

9.5.11 The City shall ensure that adequate land is designated and districted to allow for manufactured home parks and subdivisions.

9.5.12 The Land Development Code shall contain specific requirements to assure that manufactured home parks and subdivisions will be developed in a manner which is well planned and compatible with surrounding land uses.

9.5.13 New subdivisions and planned developments of more than 5 acres in low density districts shall incorporate two or more of the following elements in at least 10% of the total acreage:

A. Zero lot line or attached dwellings (where allowed);

B. Minimum allowed lot area; or

C. Dwelling size less than 1,200 square feet.

9.5.14 The City shall evaluate modifying residential district standards to include a wider variety of housing types in each district and incorporating any design standards necessary to improve the compatibility of those additional types.

9.5.15 The City shall evaluate increasing the minimum density in low density residential districts.

9.6 Downtown Residential Neighborhood

9.6.1 The City shall preserve and encourage a mix of housing types in the downtown residential neighborhood.

9.6.2 The City shall encourage the preservation of historically significant homes and buildings within the Downtown Residential Neighborhood.

9.6.3 The City shall amend the Land Development Code to encourage the following in the Downtown Residential Neighborhood:

A. Building to the higher end of the allowed density range through intensive site utilization;

B. Reduction of on-site parking requirements; and

C. Maintenance of historic character.

9.7 Oregon State University Housing

COMMENTS:

This set of policies addresses housing on and near the OSU campus. Student housing is an ongoing issue in Corvallis and has many potential neighborhood impacts. While student housing is not identified as a needed housing type by the state or in the HNA, the City should continue to closely monitor student housing development and working with OSU administration. These policies provide a foundation for those efforts.

9.7.1 The City shall encourage the rehabilitation of old fraternity, sorority, and other group buildings near OSU for continued residential uses.

9.7.2 The City shall encourage OSU to establish policies and procedures to encourage resident students to live on campus.

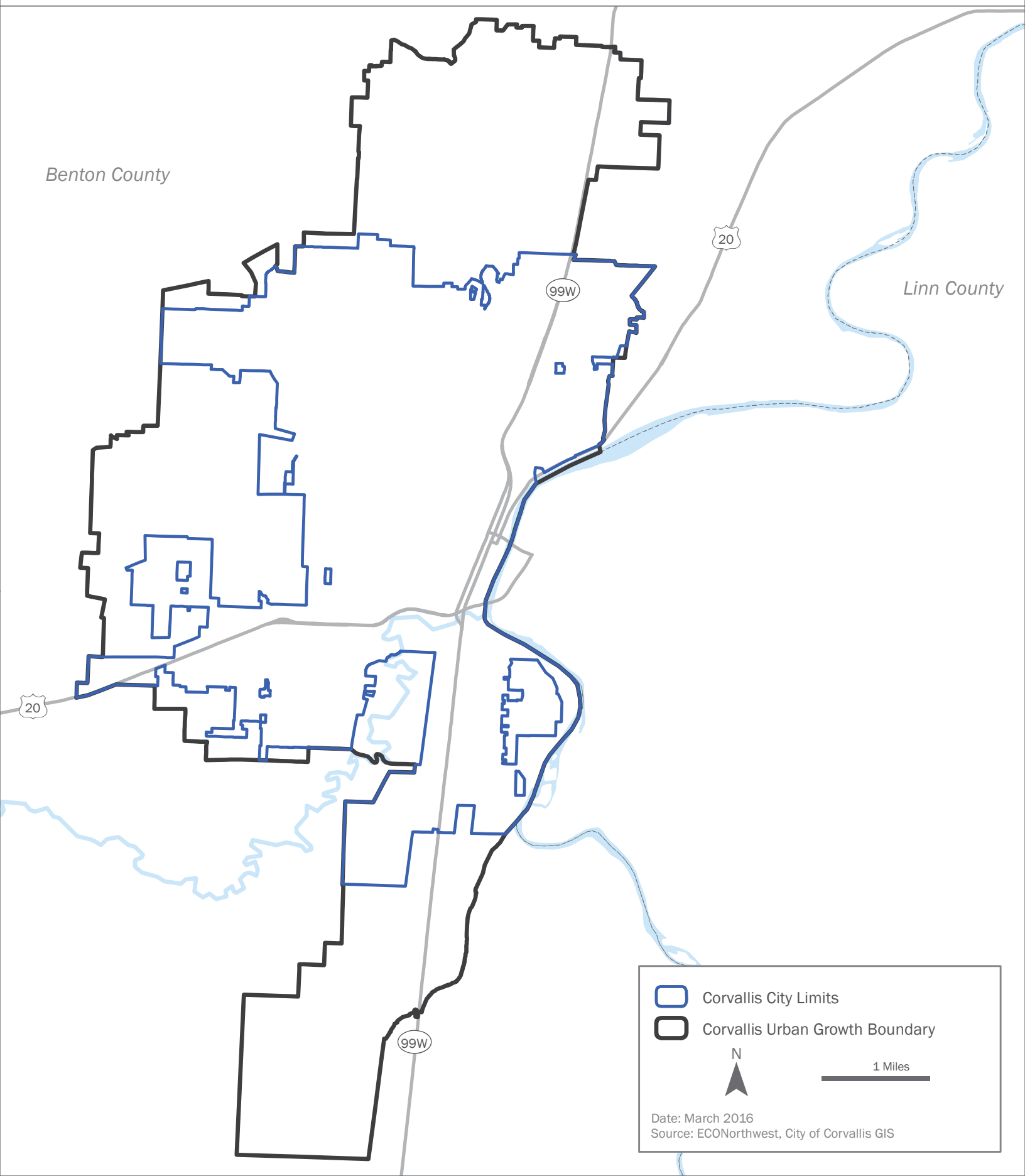
9.7.3 The City and OSU shall work toward the goal of housing 50% of the students who attend regular classes on campus in units on campus or within a 1/2 mile of campus.

9.7.4 The City shall evaluate cooperative programs and investments with OSU to provide alternative transportation services specifically targeted towards students, faculty, and staff.

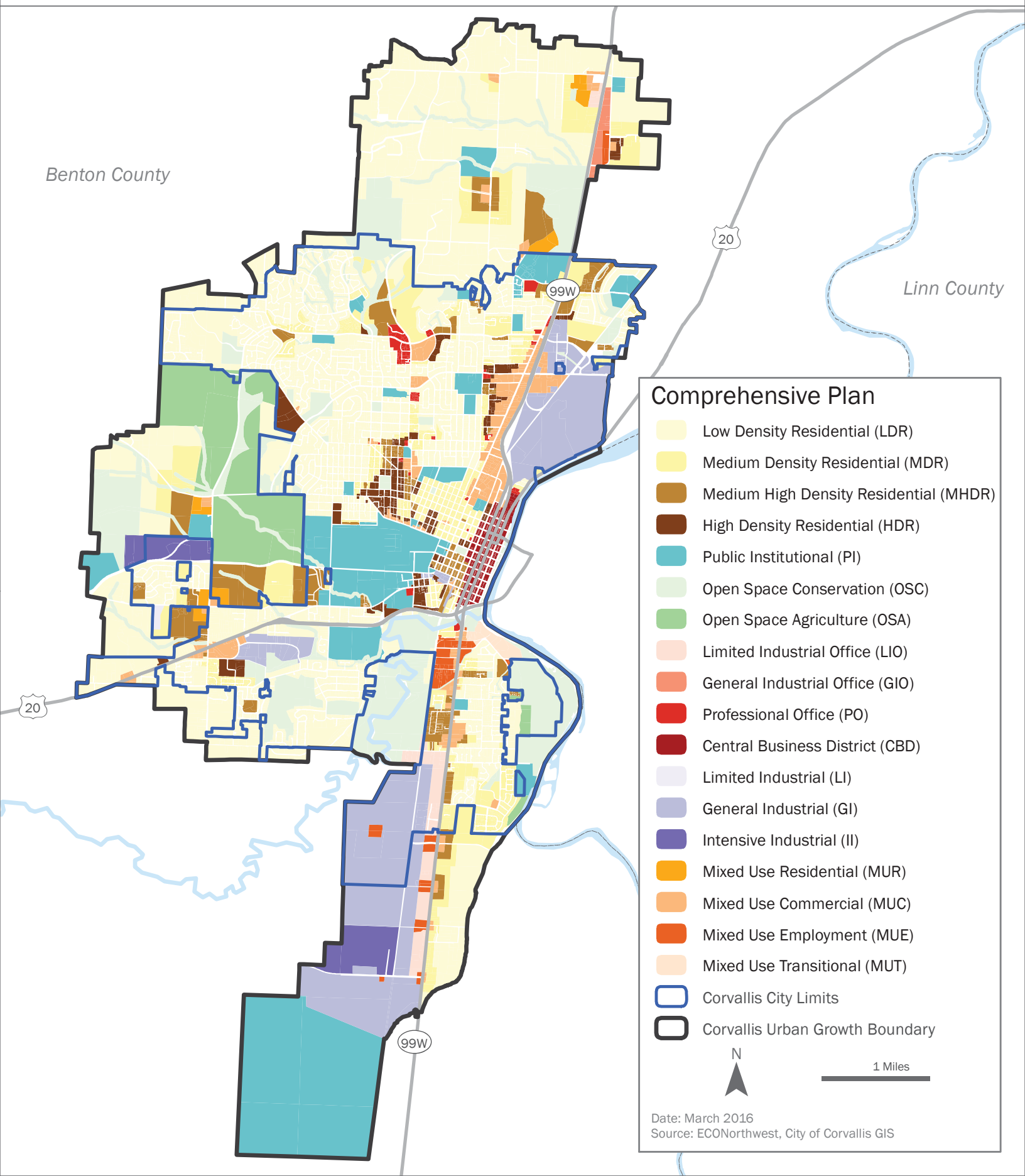
9.7.5 The City shall encourage Oregon State University and its fraternities, sororities, and cooperative housing owners to pursue opportunities for retrofitting residential units with fire sprinkler systems, and to provide fire sprinkler systems for all new residential units.

CORVALLIS BLI 2016

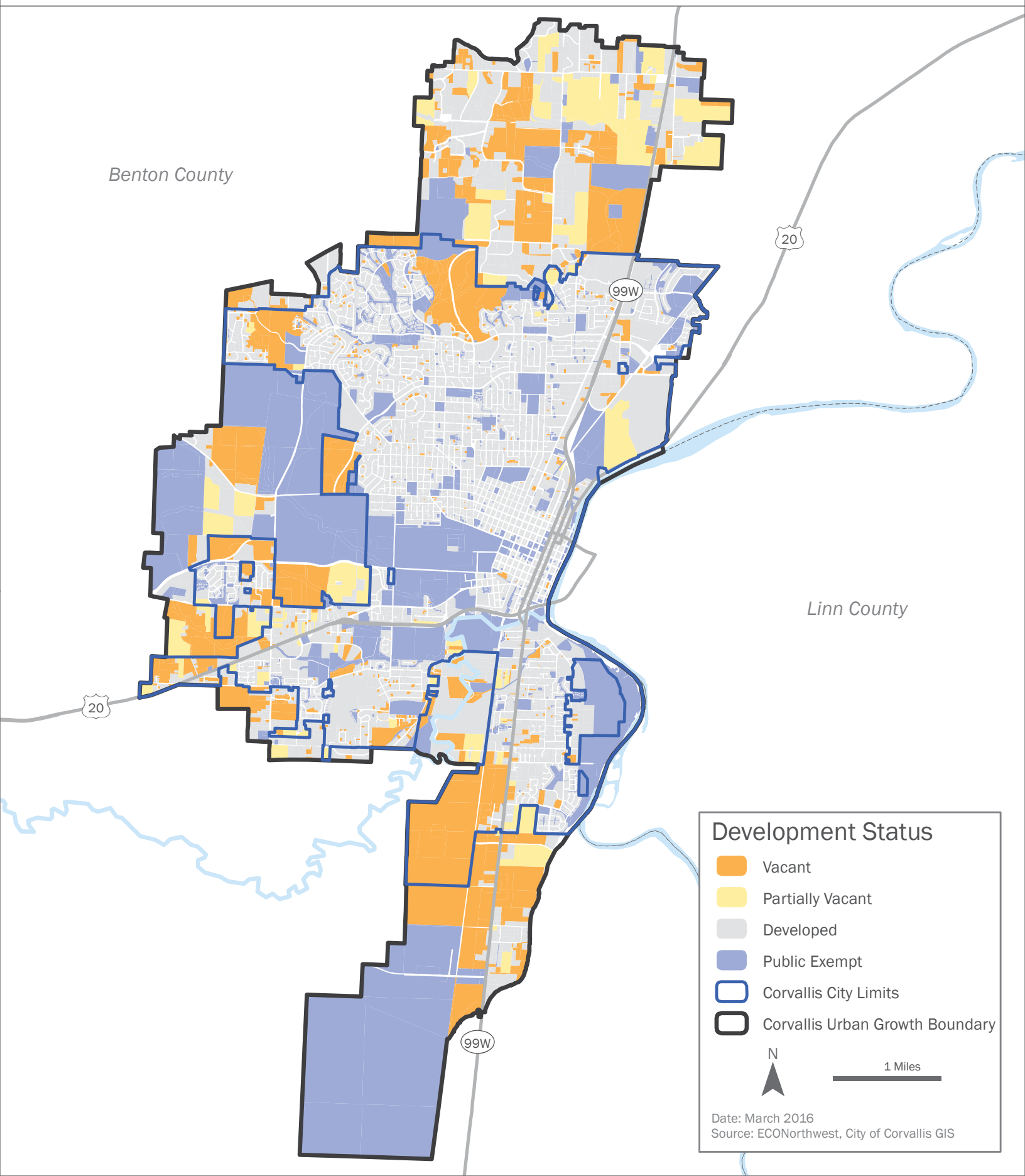
CITY LIMITS AND URBAN GROWTH BOUNDARY



CORVALLIS BLI 2016
LAND BY COMPREHENSIVE PLAN DESIGNATION

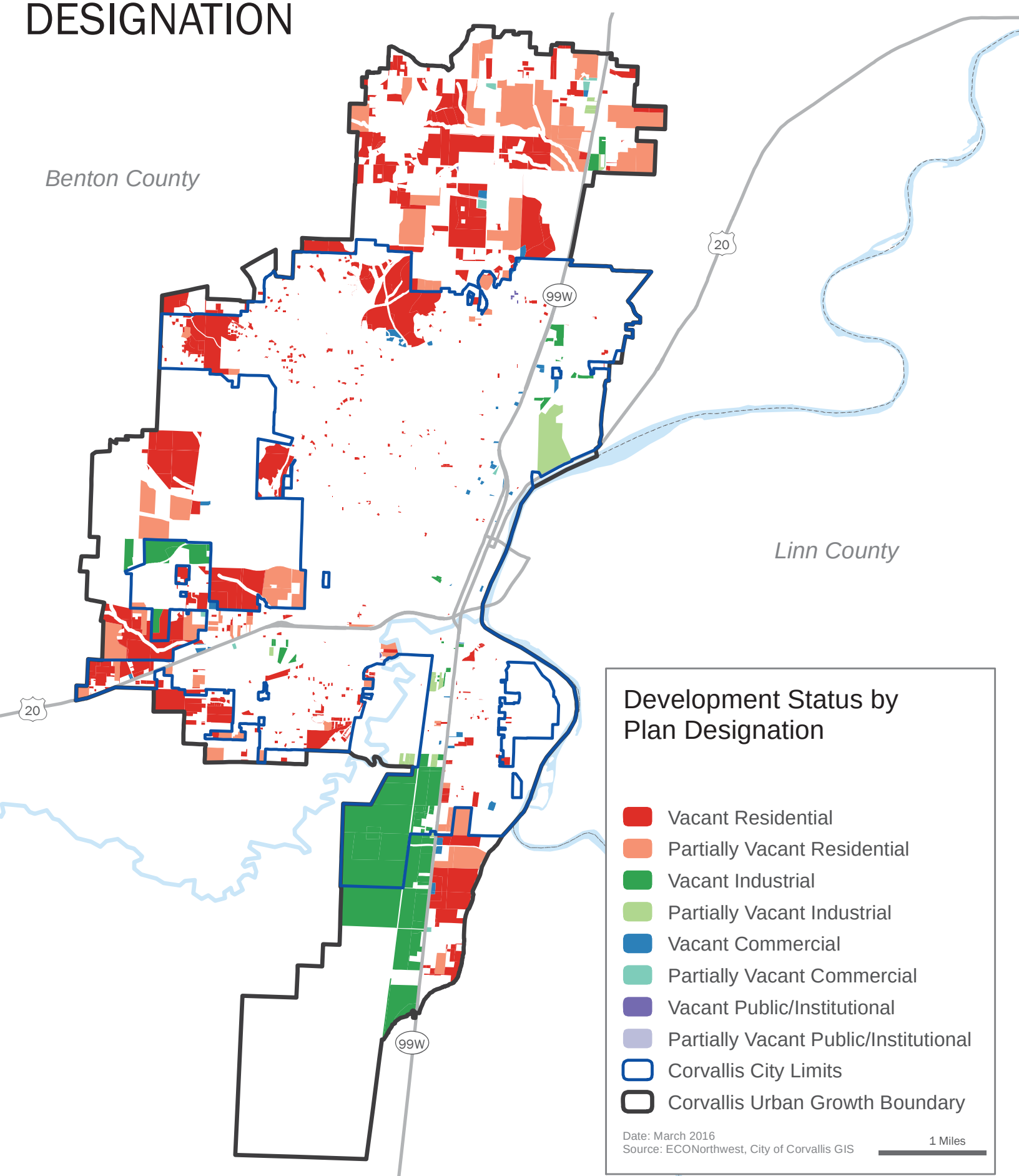


CORVALLIS BLI 2016
LAND BY DEVELOPMENT STATUS



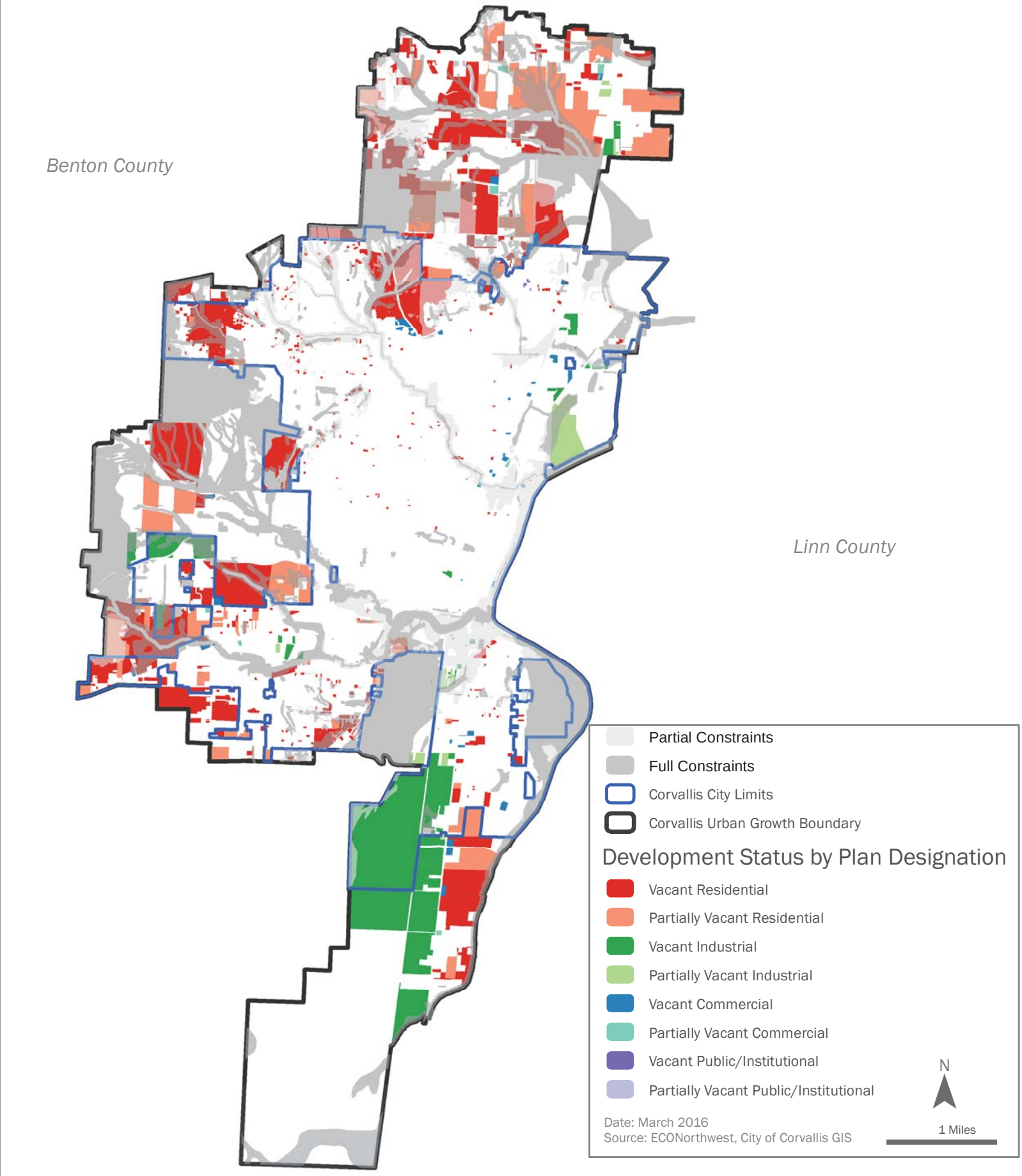
CORVALLIS BLI 2016

VACANT AND PARTIALLY VACANT LAND BY PLAN DESIGNATION



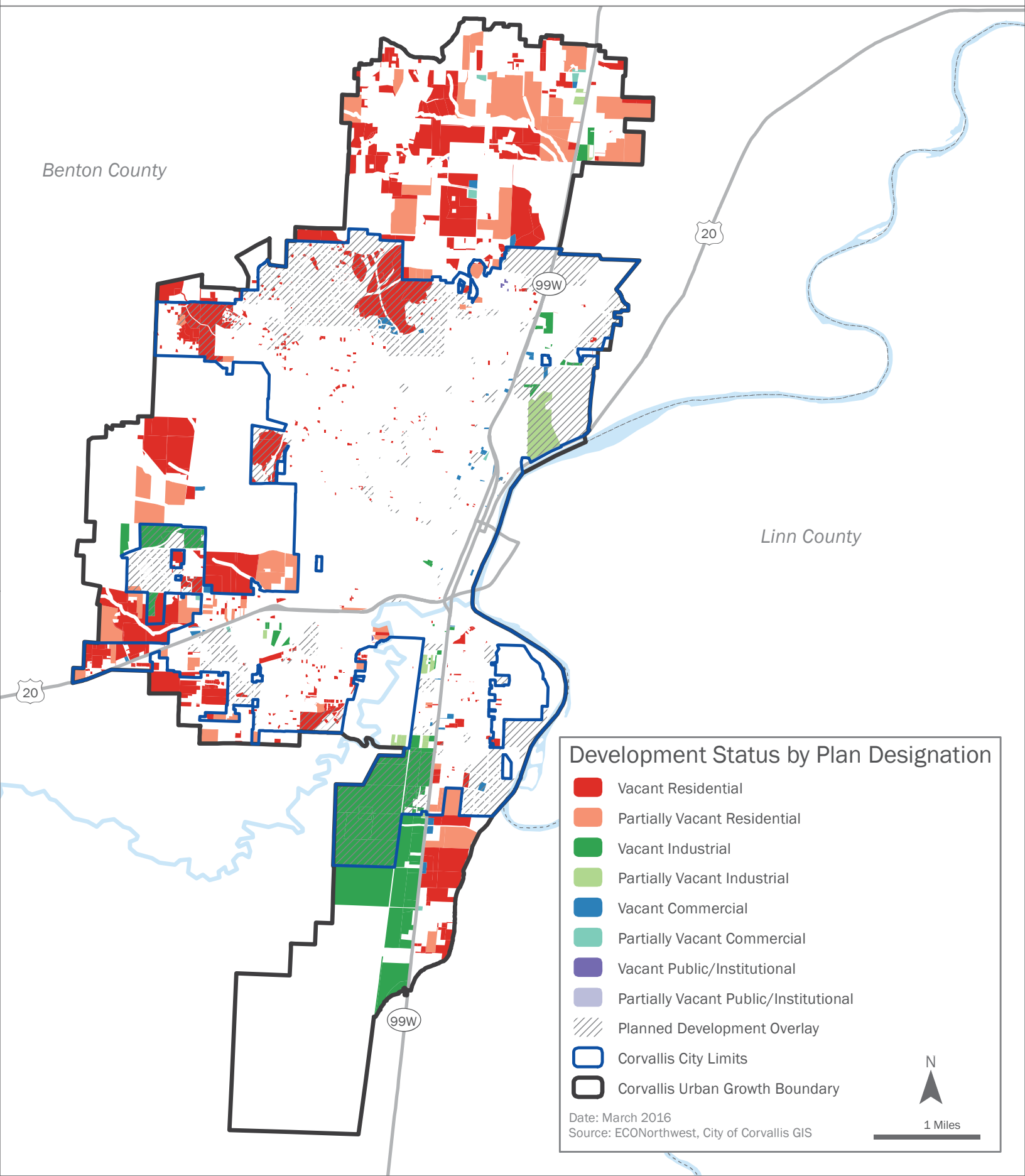
CORVALLIS BLI 2016

VACANT AND PARTIALLY VACANT LAND BY PLAN DESIGNATION WITH DEVELOPMENT CONSTRAINTS



CORVALLIS BLI 2016

VACANT AND PARTIALLY VACANT LAND BY PLAN DESIGNATION WITH PLANNED DEVELOPMENT OVERLAY



TO: City Council for August 16, 2016

FROM: Paul Bilotta, Community Development Director

DATE: August 8, 2016

THROUGH: Mark W. Shepard, P.E., City Manager

SUBJECT: Imagine Corvallis 2040 Vision Development Update

Action Requested:

City Council consideration and feedback regarding August 1, 2016, refined draft vision statements.

Discussion:

Over the past several months, the Imagine Corvallis 2040 Steering Committee has been seeking the public's input regarding our community's goals, values, and priorities for the future as they work to develop vision statements for the Imagine Corvallis 2040 Vision. In February, the Steering Committee began reaching out to identified interested parties and potential stakeholders and partners. In March, the Steering Committee held a series of three public workshops that were attended by over 300 community members, and developed an online survey to gather information from as many members of the community as possible. The online survey was taken by over 1,000 community members, who responded to the same questions the community considered in the workshops:

1. What do you appreciate about Corvallis?
2. What is the biggest challenge for Corvallis now or in the future?
3. What is your vision for the future of Corvallis?
4. What is one strategy for achieving your vision?
5. How would you know your vision was being accomplished?

The input received from the public outreach efforts was used to create a series of vision statements for each of the six focus areas; how we *engage and support*, how we *learn and thrive*, how we *create and celebrate*, how we *innovate and prosper*, how we *plan and change*, and how we *steward and sustain*. The Steering Committee spent April and May distilling the comments received into statements that reflect the vision of the community, making revisions as feedback was received.

In June, a second online survey was designed that asked the community if the vision statements that were developed reflected their vision. The community was also asked what actions or strategies might be employed to reach the visions, and if there were any visions, goals, or ideas that were missing. At the close of the survey, 967 responses were received. The Steering Committee solicited input from the public through social media posts, emails to all interested parties, and direct contact with those they had engaged with for feedback in the early vision development phase. Survey cards were also given to neighbors who participated in the National Night Out, and those who visited the Fire Department and Bookmobile exhibits at the Benton County Fair.

Based on the input received regarding the draft vision statements, a drafting committee was formed to further refine the vision statements. The attached draft vision statements reflect those changes. They have been provided to the City Council for discussion and feedback.

Now that the vision statements are in their final draft phase (subject to City Council feedback and/or approval) the Steering Committee will be working to identify actions and strategies that will help the

community achieve the vision, to be incorporated into the Community Plan. Many actions and strategies have been identified by the community through the vision development and vetting activities, and early drafts of actions and strategies have been developed that assign specific actions and strategies to appropriate focus areas.

The Steering Committee will be working with these identified actions and strategies over the next two months, seeking feedback from the community on what they have heard as well as new ideas that may be brought forward. Timelines will be assigned to actions and strategies based on a number of considerations such as public support, cost/financial considerations, anticipated results, and potential partners or sponsors. The Steering Committee intends to engage the public in outreach throughout this process, with a major outreach effort at the end of September. The resultant actions and strategies will become the Imagine Corvallis 2040 Community Plan.

Concurrent with this effort, the consultant is in the process of developing metrics for ongoing evaluation of the community's achievement of the vision. An early draft of potential metrics will be presented to the Steering Committee at its August 18th meeting, with continued development of measurement tools, informed by both the vision statements and the actions and strategies, ongoing into October. The vision, community plan, and metrics will be used by the city and the broader community, in part, as a tool to guide the community's short- and long-term decision-making.

Other cities have created a vision implementation committee which will be responsible for ensuring that the City and other partners and sponsors are enacting the community plan, that the measurement tools are being applied to determine whether actions and strategies are advancing the community's vision, and whether revisions to the identified actions and strategies should be considered in order to reach the vision. It is anticipated that a similar committee might also be one of the recommendations brought to the City Council in the Fall.

The City Council is asked to review the refined draft vision statements attached to this memo and provide feedback to staff.

Budget Impact:

No budget impact.

Attachments:

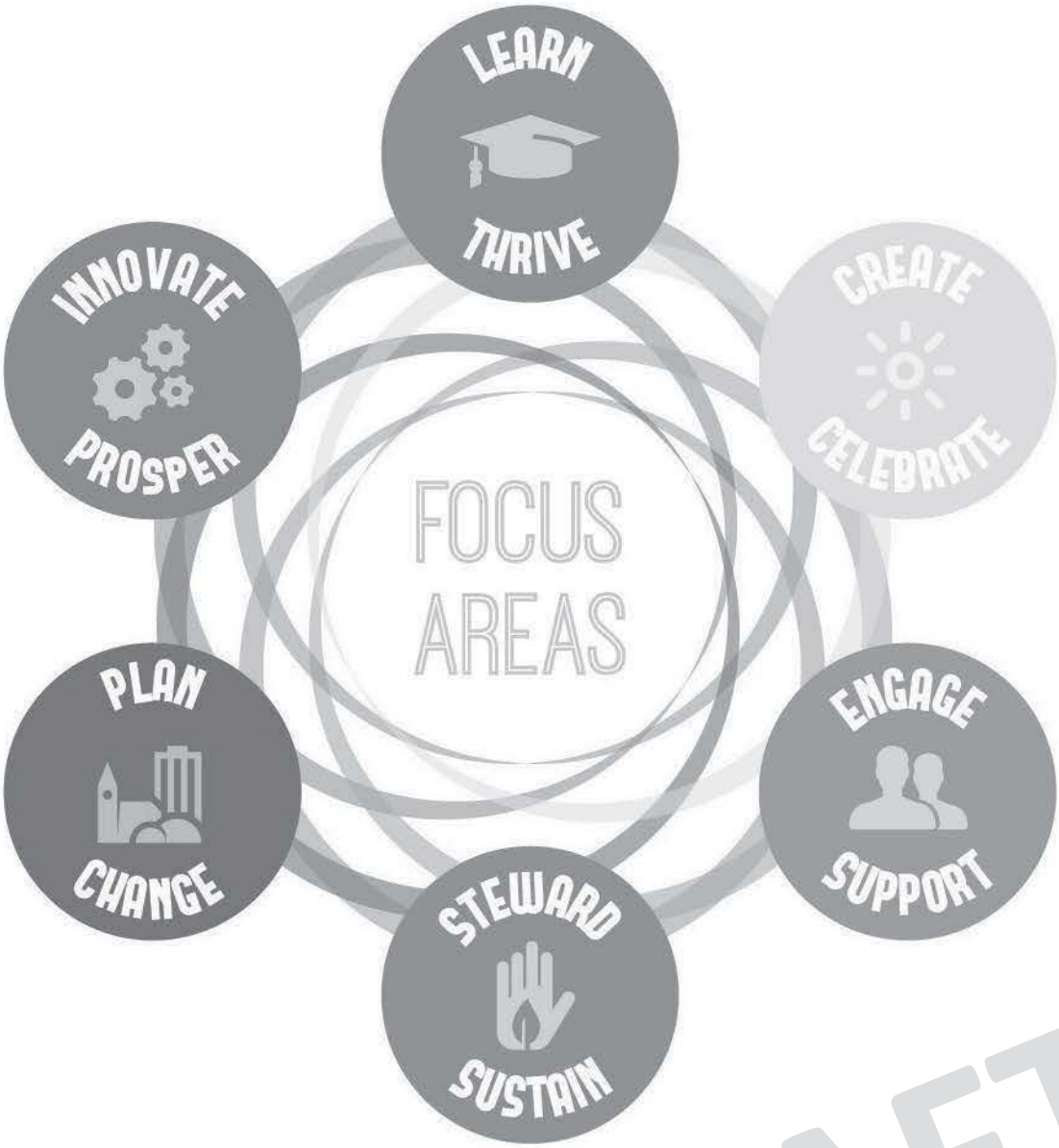
Attachment CC-A: Imagine Corvallis 2040 Draft Vision Statements (August 1, 2016)

IMAGINE CORVALLIS 2040

OUR COMMUNITY VISION IN ACTION

DRAFT

August 1, 2016


LEARN
THRIVE
CREATE
CELEBRATE
ENGAGE
SUPPORT
STEWARD
SUSTAIN
PLAN
CHANGE
INNOVATE
PROSPER
FOCUS
AREAS

DRAFT

IMAGINE CORVALLIS 2040
OUR COMMUNITY VISION IN ACTION

ENGAGE AND SUPPORT

Corvallis cultivates and engages a diverse and changing population emphasizing interculturally effective, inclusive and equitable programs and services.

Well-Being & Basic Needs
Corvallis advances the well-being of all of its residents, especially those with fewer resources, by addressing basic needs for food, shelter, safety, and health care.

Community Affordability
Corvallis accommodates all income groups as integral parts of the community and ensures that people who work in Corvallis can afford to live here.

Open & Transparent Local Government
Corvallis emphasizes open, accessible, and transparent government, fostering meaningful public involvement and volunteerism, an informed and engaged population, and community members who are empowered to participate in governance and decision-making.

Safe, Secure & Welcoming Community
Corvallis is a safe, secure, and welcoming community for everyone, promoting respectful relations and collaboration between community members and those providing public safety services.

Strong, Vital Neighborhoods
Corvallis promotes strong, vital neighborhoods, supporting neighborhood-centered activities and involving neighborhoods in how the community grows and develops.

Collaborative City/University Relationships
Corvallis promotes positive and collaborative City/University relationships in all aspects of community life.

Core Community Values
Corvallis decision makers honor the Corvallis 2040 Vision and Community Plan in its decisions and actions.

City Services & Financial Stability
Corvallis balances the community's desire for services with financial stability and planning for long-term needs and contingencies through a transparent public process.

IMAGINE CORVALLIS 2040
OUR COMMUNITY VISION IN ACTION

LEARN AND THRIVE

Corvallis recognizes and strengthens the connections between education, health care, human services, and personal wellness to support a healthy, educated, livable community.

Equitable, Accessible Health Care and Education
Corvallis creates new opportunities for learning and growth, accessibility and engagement, and support and inclusion. This results in high-level individual and community well-being. Community members contribute to and benefit from the resources needed to thrive.

Education & Diversity
Corvallis promotes ongoing education, communication, and enhanced understanding of cultural differences, welcoming and empowering people of diverse backgrounds, cultures, and abilities.

Pathways for Student Achievement
Corvallis promotes student achievement in learning, careers and life, recognizing and supporting the growing diversity of pathways to and definitions of personal and career success.

Opportunities for Teaching & Learning
Corvallis promotes depth and breadth of teaching and learning from early childhood to adulthood through its schools, libraries, and other centers of community learning.

Culture of Learning, Engagement & Achievement
Corvallis values education, leveraging the presence of Oregon State University and Linn-Benton Community College to foster a culture of learning, engagement, and achievement.

Access to Healthy Lifestyles
Corvallis provides access for all to healthy food and water, a healthy and active lifestyle.

Access to Healthy Services
Corvallis provides a well-coordinated and affordable system for medical, dental, and mental health care.

Community Partnership for Human Services
Corvallis ensures access to health care services through a strong and collaborative partnership of nonprofit agencies, government, and local organizations to provide emergency and preventive services.

IMAGINE CORVALLIS 2040
OUR COMMUNITY VISION IN ACTION

INNOVATE AND PROSPER

Corvallis has a vibrant, diverse economy with a wide range of companies and businesses that are environmentally responsible and involved in the community while serving customers all over the world.

Family & Living Wage Jobs
Corvallis continues to increase the number and types of family and living wage jobs that provide meaningful work and support middle class opportunities, making housing, health care, and education more attainable.

Nurturing Small-to-Medium Sized Business
Corvallis fosters and supports a growing number of small-to-medium sized, locally-owned companies and businesses as its key strength. These organizations are pillars of the community's economy and its future economic growth.

Recruitment of New Companies & Job Creation
Corvallis targets and supports responsible new companies, including green manufacturing and value-added businesses, diversifying the community's economic base and creating new employment opportunities.

Innovative Tech Businesses & Start-Ups
Corvallis and Oregon State University work closely together to incubate innovative technology and other start-up companies and the local services that support them.

Vibrant Downtown with Employment, Retail & Housing
Corvallis supports its economy and local businesses with a vibrant downtown that combines employment, professional services, retail, housing, and entertainment to form an attractive, business-friendly district.

Balanced Economic Growth with Livability
Corvallis carefully balances economic growth and opportunity with continued community livability, sustainability, and protection of the natural environment.

Global Economic Impacts & Local Benefits
Corvallis has significant connections with and positive impacts on the global economy, attracting industry, talent, and services and connecting them with the scholarship, research, and cultural diversity that OSU brings to the community.

IMAGINE CORVALLIS 2040
OUR COMMUNITY VISION IN ACTION

CREATE AND CELEBRATE

Corvallis has a strong identity centered on arts, culture, and celebration. The arts are an essential element of the community, its economy, and quality of life.

Community Support for the Arts & Artisans
Corvallis demonstrates exceptional community support for arts and culture, as well as for local artisans and creatives.

Variety of Arts Venues
Corvallis enjoys a wide variety of venues to engage in the arts, from performance centers, museums, and galleries, to affordable community spaces for people to learn, create, and express art.

Accessibility of Arts
Corvallis works to make the learning and experience of art and culture a life-long endeavor accessible to all community members through higher education institutions, schools, community institutions, and arts and cultural organizations.

Creative Destination
Corvallis is a destination for the Willamette Valley and beyond, attracting artists and creative thinkers, supporting local businesses, and generating significant tourism investment in the community, its artists, and its economy.

Tourism and Visitor Attractions
Corvallis attracts visitors to sports and cultural events, signature community events, and heritage programs.

Celebrating Our History, Culture & Sense of Place
Corvallis cultivates and celebrates its history and local sense of place through its arts, culture, festivals, neighborhood celebrations, and events.

IMAGINE CORVALLIS 2040
OUR COMMUNITY VISION IN ACTION

PLAN AND CHANGE

Corvallis is a compact, well-planned city with extensive mixed-use development, including housing, retail and jobs in downtown and along major corridors. Vibrant neighborhoods contain a diverse mix of affordable housing, parks and open spaces – all accessible by transit, biking and walking.

Mixed Use Development
Corvallis plans and implements higher-density, mixed use development in targeted areas of the city, blending residential, commercial, and retail uses, and dining and entertainment options, focused on the downtown area and major commercial centers.

Integrated Parks, Green Spaces & Public Places
Corvallis integrates parks and public spaces throughout the city, creating and maintaining new parks in underserved areas of the community and promoting new green spaces in higher-density development and redevelopment areas.

Diverse & Affordable Housing
Corvallis fosters the development of housing that is affordable at all stages of life, featuring a range of housing types, sizes, costs, and configurations throughout the city.

Stable, Healthy Neighborhoods
Corvallis honors its neighborhood character, working to preserve and protect the unique identity and characteristics of existing neighborhoods. New residential development incorporates elements that foster neighborhood qualities.

Alternative Transportation & Public Transit
Corvallis has a high quality and heavily-utilized regional public transit system, and supports alternative forms of transportation including bicycle and pedestrian options.

Coordinated City & University Planning
Corvallis works closely with Oregon State University to improve community livability, minimize its impacts on neighborhoods, mitigate parking and traffic issues, and improve collaboration between the City and University.

Well-Planned & Maintained Infrastructure
Corvallis supports a reliable, safe, and connected community through well-planned, maintained, and sustainable infrastructure, including streets and bridges, pedestrian and bicycle networks, water systems, information technology, energy systems, and public buildings.

IMAGINE CORVALLIS 2040
OUR COMMUNITY VISION IN ACTION

STEWARD AND SUSTAIN

Corvallis promotes a safe, sustainable and resilient city through efficiently managing its land use development, natural resources and infrastructure.

Sustainable, Climate-Sensitive City
Corvallis is an environmentally sustainable, climate-sensitive city, with broad community awareness and a climate action plan that addresses the many impacts of climate change.

Population Changes and Migration
Corvallis addresses growth driven by climate change and migrations, while it builds resilience into its plans and policies.

Community Resiliency
Corvallis plans for unpredictable events, focusing on individual and neighborhood preparedness, as well as emergency response and recovery programs with special attention to the community's most vulnerable populations.

Open Spaces, Natural Areas & Wetland Protection
Corvallis works to preserve and protect significant tracts of open space, including parks, natural areas, and wetlands within and surrounding the city, maintaining the area's rural feel, natural vegetation, and environmental character.

Agricultural Lands & Food Security
Corvallis supports healthy and sustainable agricultural and food security by preserving and protecting farmlands surrounding the city and encouraging small-scale agriculture.

Renewable Energy
Corvallis derives most of its energy from renewable energy sources to power its buildings, infrastructure, transportation systems, public institutions, and private homes.

Green & Sustainable University
Corvallis works collaboratively with Oregon State University to plan and implement a green, sustainable campus with a light environmental footprint.

Community Safety
Corvallis maintains safety and livability for all residents and visitors by providing community-focused, effective and high-quality police, fire, Emergency Medical Services, and 911 dispatch services that meet nationally recognized standards.