City of Maupin Economic Opportunities Analysis

June 2019

Prepared for:

City of Maupin

FINAL REPORT

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Summary

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

The primary goals of the EOA are to (1) project the amount of land needed to accommodate the future employment growth within the Maupin Urban Growth Boundary (UGB), between 2019 and 2039, (2) evaluate the existing employment land supply within the City to determine if it is adequate to meet that need, and (3) to fulfill state planning requirements for a twenty-year supply of employment land.

How much buildable employment land does Maupin currently have?

Exhibit 1 shows commercial and industrial land in the Maupin Growth Boundary (UGB) with development capacity (lands classified vacant or partially vacant). The results show that Maupin has about 70 unconstrained buildable acres within the UGB.

Exhibit 1. Employment acres by plan designation, Maupin UGB, 2018

Plan Designation	Total Buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant lots
City of Maupin Designations			
General Commercial	0	0	0
Recreational Commercial	5	5	1
Residential/Commercial Transition	0	0	0
Industrial	15	14	1
Agricultural	50	50	0
Total	**70**	**69**	**1**

Source: ECONorthwest analysis of data from Wasco County and State of Oregon.

How much growth is Maupin planning for?

Goal 9 requires that cities provide for an adequate supply of commercial and industrial sites consistent with plan policies. To meet this requirement, Maupin needs an estimate of the amount of commercial and industrial land that will be needed over the 2019-2039 planning period. Exhibit 2 presents the forecast of employment growth by land use type in Maupin from 2019 to 2039.

Maupin's employment base was 315 employees in 2019. The forecast shows that by 2039, Maupin will have 385 employees, an increase of 70 jobs over the planning period.

Exhibit 2. Forecast of employment growth by land use type, Maupin UGB, 2019–2039

Land Use Type	2019 Employment	2019 % of Total	2039 Employment	2039 % of Total	Change 2019 to 2039
Industrial	13	4%	31	8%	18
Retail Commercial	17	5%	31	8%	14
Office & Commercial Services	79	25%	104	27%	25
Government	207	66%	220	57%	13
Total	**315**	**100%**	**385**	**100%**	**70**

Source: ECONorthwest
Note: The shaded percentages denote an assumption about the future change in the share of employment (as a percent of total) by land use type.

How much land will be required for employment?

The forecast for land needed to accommodate employment growth in Maupin shows that the growth of 70 new employees will result in demand for about 5 gross acres of vacant employment land.

Does Maupin have enough land to accommodate employment growth?

Exhibit 3 shows the supply of suitable employment land with the demand for employment land in the Maupin UGB.

Exhibit 3. Capacity of unconstrained vacant land with employment land demand by land use type, Maupin UGB, 2019–2039

Land Use Type	Land Supply (Suitable Gross Acres)	Land Demand (Gross Acres)	Land Sufficiency (Deficit)
Industrial	15	2	12
Commercial	5	3	2
Agricultural	50	-	50
Total	**70**	**5**	**15**

Source: ECONorthwest

What types of business does Maupin want to attract?

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

Given the current employment base, which is composed of small-sized businesses, it is reasonable to assume that much of the city's business growth will come from small-sized businesses. This growth will either come from businesses already in Maupin or new businesses that start or relocate to Maupin from within the Gorge Eastern Cascades region or from outside of the region.

The industries identified as having potential for growth in Maupin are:

- **Telecommuters, office and professional services.** The Maupin Broadband Project brought reliable Internet infrastructure to the City. This not only provides a service to existing residents of Maupin, it also presents an option for increasing telecommuters in Maupin. Telecommuting, also referred to as "working from home" or "working remotely," can help to increase the average wage and diversify the industries in Maupin, as many telecommuters work in higher paying office and professional service industries. Maupin's location also provides an advantage, as workers can easily access Portland or Bend.
- **Light manufacturing.** Maupin has opportunity for small-scale, light manufacturing. Factors including land availability and a local desire to maintain the City's existing quality of life with a more diverse economy, make smaller scale manufacturing a potential option in Maupin. With regional concentration in agricultural industries, value-added agricultural production businesses, especially those that do not require high water usage, could locate in Maupin.

  Maupin's strong tourism industry could draw light-manufacturing industries that provide higher-wage jobs, specifically those that align with outdoor recreation activities. Examples of this include kayak or other watercraft manufacturers, bike or bike part manufacturers, fly fishing product manufacturers, or outdoor apparel producers. Workers who are interested in working for these companies would also likely desire to live and work in a place with access to the amenities and quality of life in Maupin.
- **Tourism and recreation.** The Deschutes River is the primary focus of tourism activity in Maupin. River rafting and fly fishing companies are proximately located in the downtown commercial area, along with other services for visitors and residents, such as shops, restaurants, and a grocery store. Though the tourism season is concentrated in the late spring, summer, and fall months, Maupin can grow into a year-round tourist destination. The City's proximity to Portland, Bend, and The Dalles provides more convenient access for visitors than other Central or Eastern Oregon cities, presenting an opportunity to market Maupin with characteristics that are similar to Bend There is potential to reorient downtown businesses to promote year-round recreational activities and services, such as a brew pub, while still keeping an emphasis on river-oriented business in the summer season.
- **Services for residents.** As Maupin's population or the population of the outlying areas in unincorporated Wasco County grows, demand for services for residents will grow. These services include retail, restaurants, personal services (like hairdressers), financial services, medical services, and other services. Additionally, the demand for child care services will increase to meet the need for families in Maupin. These types of services present opportunities for entrepreneurship and small business development in Maupin.

- **Housing for seniors.** Housing for seniors with services (i.e., medical services or housekeeping services) may be an important type of service to support Maupin's aging population. An aging population in Maupin will also increase the need for in-home caregivers, presenting another opportunity for entrepreneurs and small business development.

What are the recommendations to support economic development in Maupin?

The conclusions about commercial and industrial land sufficiency are:

- **Maupin is forecast for growth in both commercial and industrial employment sectors.** Maupin is planning for growth of 70 new jobs in the city over the 2019 to 2039 period. About 18 of the jobs will be in industrial land uses, 25 in office and commercial services, and 14 in retail. Growth of these jobs will result in demand for about 3 gross acres of commercial land and 2 gross acres of industrial land.
- **Maupin has enough employment land to accommodate growth.** Exhibit 22 shows Maupin has enough land for employment growth over the next 20 years, with a small (2 acre) surplus of Commercial land and a surplus of 12 acres for industrial land. In addition, Maupin has 50 gross acres of land zoned Agricultural within the UGB; however, as noted it is difficult to service and access.
- **Most new businesses will be relatively small and will require small and mid-sized sites.** Maupin's businesses are generally small, averaging about 5 employees per business. Businesses with 9 or fewer employees accounted for 54% of private employment and 4 or fewer account for 20% of private employment. Growth of small businesses presents key opportunities for economic growth in Maupin. Maupin has about 12 sites smaller than 1 acre and 4 sites 2 to 5 acres in size. Maupin has one 7.7 acre industrial site. Some of the larger sites may subdivide into smaller sites.
- **Maupin will need investments in key infrastructure to accommodate substantial new growth.** The City's primary areas for investment are: (1) upgrades to the wastewater treatment plant and (2) servicing vacant land. The City is working on plans for addressing deficiencies in its wastewater treatment facility. The City will need to work with State partners to fund the necessary upgrades. In addition, the City will need to work with landowners and developers to pay for extension of water, wastewater, and transportation connections.
- **Maupin has opportunities for more efficient use of commercial and industrial lands.** Maupin could increase opportunities for redevelopment or infill development through redesignating residential land in key areas along Highway 197 (near downtown) to the Residential/Commercial Transition zone. This change would allow these properties to transition to commercial uses with changes in market demand. In addition, Maupin may have other opportunities for infill and redevelopment, especially near downtown, such as the recent development of a new city hall building on a previously underutilized site.

Furthermore, Maupin has publicly owned land in the southwestern part of the City that is zoned low-density residential. City leaders and regional partners, including Mid-Columbia Economic Development District (MCEDD) and South Wasco Alliance, have noted that this piece of land is a primary candidate for an industrial park, likely for light-industrial uses. The City will need to work to rezone this land and create a plan for the likely compatible uses and needed infrastructure in this area.

- **Maupin's primary opportunity for employment growth is related to the Deschutes River.** Growth in businesses related to tourism will be driving by increases in use of the Deschutes River. However, change in regulations and limitations on recreation on the River may limit growth of tourism in Maupin. The River provides an amenity that is attractive to telecommuters or other businesses that can locate anywhere but want to locate in Maupin because of the access to the River.

Following are ECONorthwest's recommendations to Maupin based on the analysis and conclusions in this report.

- **Update the Economy Element of the Comprehensive Plan.** The information in the Comprehensive Plan about the economy in Maupin was last updated in the mid-2000's and presents data from the 2000 Census. This report presents an updated factual basis for the Comprehensive Plan. We recommend that the City revise its existing Comprehensive Plan policies for economic development and adopt this report as an appendix to the Comprehensive Plan.
- **Identify opportunities to diversify Maupin's economic base.** Diversifying Maupin's economy will require coordinating economic development efforts with local and regional economic development organization listed below. One important way to diversify Maupin's economic base is through attracting footloose businesses that can locate anywhere but are attracted to Maupin's amenities, including telecommuters and home-based businesses. The Maupin Broadband Project provides faster and more reliable internet connectivity that will allow businesses to locate in Maupin, while maintaining a robust internet presence.
    - *Identify champions for economic development.* Pursuing economic development will require champions for economic development. They could be led by a city economic development specialist but will also need partnerships with regional agencies to move forward and create support for economic development efforts. The champions could be elected or appointed official or city staff.
    - *Develop an Economic Development Strategy.* Diversifying Maupin's economic base will require deliberate effort and would benefit from developing an Economic Development Strategy. The strategy should focus on actions that the City can take within the next five years (some of which are suggested in this report) and should have broader focus than land use, considering issues such as workforce development, identifying education and training necessary for potential higher-wage jobs, and collaborating with business to support business growth.

- *Coordinate with partners on economic development.* Maupin has existing collaborative partnerships with public agencies, including the Maupin Chamber of Commerce, MCEDD, South Wasco Alliance, Oregon Department of Transportation (ODOT), the Department of Land Conservation and Development (DLCD), North Central Regional Solutions, Business Oregon, and the Columbia Gorge Small Business Development Center. The City should continue to build on these relationships with key partners to improve infrastructure and expand on existing resources. The Regional Solutions Team can help the City coordinate with State Agencies and help solve problems and ensure the City has good access to grants and loans to support infrastructure development.
- *Work with partners to market Maupin as a place to do business.* Maupin should work with the Chamber of Commerce, MCEDD, and Business Oregon to attract and grow businesses in Maupin. For example, the City should work with Business Oregon to ensure that vacant commercial and industrial sites (for sale or lease) are listed on the Oregon Prospector website and that Business Oregon staff are aware of key development opportunities in Maupin. These marketing efforts could also include attraction of remote workers to Maupin, using Maupin's quality of life, recreational amenities, and access to Internet as potential factors to draw telecommuters.

- **Develop policies that support entrepreneurial and small business development.** These policies include continuing to allow home occupations or working closely with small businesses to ensure they have the help they need through the planning process. The City could identify opportunities to more directly support small businesses, through working with partners to provide shared workspace (such as a small amount of office space at a public building) or through development of a small business incubator, business accelerator, makerspace, or innovation hub. Development of this type of space could help attract workers in technology industries from Bend or Portland.

  Additionally, we recognize that Cities and agencies have limited resources and capacity for this type of work. If coordinating a physical space for business incubation is not possible, then the City can work with partners to help connect entrepreneurs with small business support services that already exist or suggest ways to build upon these services. The City should also work to ensure that these opportunities are made available to all community members, including culturally specific services to historically underrepresented community members such as Native American and Spanish speaking community members. More broadly, Maupin can coordinate with the County and other regional or state partners to connect small businesses and entrepreneurs with the services, resources, and other business assistance available through the Columbia Gorge Small Business Development Center.

- **Identify actions to grow tourism and attract visitors to Maupin throughout the year.** Tourism in Maupin is focused in the late spring through early fall. Growing Maupin's economy will include increasing tourism across the year. The easiest times to increase tourism may be in the "shoulder" seasons in the mid-spring and mid-fall. Increasing tourism in the "shoulder" seasons will require giving visitors a reason to come to Maupin when they normally would not. One approach to this is through developing one or more signature events that attract people to Maupin based on things that are special in Maupin. For example, some events center around a local product such as a strawberry festival or a craft brewery festival, or locally produced arts and crafts. Maupin also shares similar attributes as Bend in its climate and recreation opportunities, thus marketing Maupin as a "mini-Bend" could help to draw more visitors to the City and surrounding areas.

  Furthermore, Maupin's strong tourism industry presents opportunities to build on other economic development goals of the City, such as creating more year-round jobs in Maupin. Specifically, Maupin could attract firms to grow industries with light-industrial uses that manufacture products related to outdoor recreation. Potential businesses could include drift boat or raft manufacturers; fly fishing rod, reel, or lure producers; camping gear and apparel manufacturers, etc. Unlike typical service-sector jobs associated with tourism industries, jobs in these industries would likely be higher wage, in addition to being year-round positions.

- **Identify opportunities for infill development, redevelopment, or rezoning.** Maupin's downtown area is generally built out, with few areas with vacant land. In Maupin's core, along Highway 197, there may be opportunities for redevelopment of existing buildings and infill development of underutilized tax lots. Redevelopment could involve substantial renovation or change of use of existing buildings or demolition of existing buildings and building of newer, more productive buildings. Infill development may be expansion of existing buildings or building new buildings adjacent to existing buildings. In both cases, new development that increases capacity for business activity is an opportunity.

  In the near-term, Maupin City staff should identify opportunities for development and infill. After identifying a specific area (or areas) of near-term focus, representatives from DLCD and Regional Solutions can assist (or provide resources for assistance) in creating an implementation plan for needed infrastructure and other improvements for these specific areas. The primary barrier to any redevelopment plan is the willingness of landowners to redevelop their property.

  Maupin also has opportunities for rezoning land to better align with the target industries and the City's broad economic development goals. Near downtown Maupin, there may be opportunity to re-zone some areas to the Residential-Commercial Transition zone to extend the commercial corridor and present more options for businesses to locate in downtown Maupin.

Industrial land at the former Mountain Fir mill site is located on Highway 197 and could be rezoned to light-industrial or commercial to better align with the City's goals to grow industries in these types of uses. Additionally, rezoning the publicly owned land in the southwestern part of Maupin's UGB that is currently zoned low-density residential would provide further potential for rezoning to industrial or light-industrial. This land is better suited for industrial uses than the current industrial land to the north of Highway 197 on the northwest border of the UGB, which is difficult to service. Regional partners, including MCEDD and South Wasco Alliance, will be key partners to include in planning for infrastructure to newly rezoned industrial areas, which could provide needed space for businesses in South Wasco County, in the form of small industrial sites or a business park.

- **Explore options for UGB swap of agricultural land in north Maupin.** Maupin has about 50 vacant unconstrained acres of land zoned Agriculture within its UGB. This area is inaccessible via public roads within the UGB and would be difficult to service with necessary infrastructure (such as water and sewer services) for most employment uses. The City may explore the process of completing a swap of land for other areas currently outside of the UGB, likely areas with improved access to infrastructure, such the major transportation corridor Highway 197. The primary barrier to implementation will be landowner willingness.

  A potential area to swap land *may* be to the southwest of Maupin's current UGB. If coupled with a rezone of the existing publicly owned low-density residential land in this area to a light-industrial use, then this would create considerable opportunities for businesses to locate and expand in Maupin. The planning process for this land should consider the compatibility of these potential employment uses in this area with the existing housing or commercial uses in areas along Highway 197.

- **Monitor and replenish the supply of commercial and industrial land on a regular basis.** The buildable lands inventory identifies the existing development status of employment land in Maupin. While Maupin will not completely update the buildable lands inventory on an annual basis, City staff should still monitor the development status of these employment lands and replenish the supply of land ready for development, as possible.

- **Support development of vacant and potentially redevelopable sites through working with landowners to ensure that sites are adequately serviced with municipal infrastructure.** Aside from ensuring that there is sufficient land to support employment growth, one of the most important ways that the City can support economic development is through planning for and developing infrastructure (e.g., roads, water, sanitary sewer, and storm water systems). We recommend that the City align its goals for economic development with infrastructure development through updates to the City's Capital Improvements Plan.
    - Maupin should work with landowners of key development sites to assess whether the landowners are willing to develop or sell their land. For key development or redevelopment sites, the City can work with landowners to make land development-ready, most notably by planning for infrastructure extensions to provide services to the sites.
    - Maupin should continue to seek support for infrastructure development from organizations such as Business Oregon, ODOT, USDA, and other sources of funding. Existing issues with infrastructure systems include the elevation of the water tower reservoir, local street upgrades, powerline upgrades, and overall increased pressure on all infrastructure systems during the peak tourism season.
- **Identify opportunities to support the creation, growth, development, and retention of businesses in Maupin.** Retention and expansion of new and existing businesses, including those that create destinations and experiences for residents and visitors, is one of Maupin's key opportunities for economic growth. In addition, Maupin provides opportunities for development of small businesses, growth of entrepreneurs, and telecommuters. The City can support businesses by understanding businesses' opportunities for growth and expansion and lowering or eliminating the barriers in Maupin that limit growth and expansion. Some barriers are beyond control of the City, such as access to capital.

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1. Introduction

This report presents an Economic Opportunities Analysis (EOA) for the City of Maupin. The purpose of an EOA is to develop information as a basis for policies that capitalize on Maupin's opportunities and help address the City's challenges. The EOA includes technical analysis to address a range of questions that Maupin faces in managing its commercial and industrial land. For example, the EOA includes an employment forecast that describes how much growth Maupin should plan for over the 2019 to 2039 period and identifies the amount and type of employment land necessary to accommodate growth in Maupin over that period. The EOA also includes an inventory of commercial and industrial land within Maupin's urban growth boundary (UGB) to provide information about the amount of land available to accommodate employment growth.

This EOA 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 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.

Background

The City of Maupin last evaluated economic trends in an update to the City's Comprehensive Plan, including the Comprehensive Plan Economic Element, in 2005, based on the 2000 Census data. Substantial changes have occurred in the national and regional economy since 2005 that have implications for economic growth in Maupin, such as the recovery from the Great Recession, as well as the changes in tourism and growth in jobs that allow remote working. In 2018, the Mid-Columbia Economic Development District (MCEDD) completed a five-year economic development strategy for the Columbia Gorge region, which includes implementation strategies and actions for infrastructure improvements in Wasco County and Maupin. In addition, the City of Maupin completed a broadband project in 2018, providing high-speed internet to workers and residents in Maupin.

The purpose of the EOA was to develop a factual base to provide the City with information about current economic conditions. This factual basis provides information necessary for updating the City's economic development Comprehensive Plan policies. This report identifies opportunities to meet the City's economic development objectives and develop Comprehensive Plan policies and implementation strategies that capitalize on the City's comparative advantages and address areas of economic weakness.

The EOA provides information that the City can use to identify and capitalize on its economic opportunities. It also provides information essential to addressing the City's challenges in managing economic development, such as a lack of larger industrial sites to support growth of businesses that require large sites, underutilized commercial land, underutilized industrial land, and a lack of policy direction to address these issues.

The EOA draws on information from numerous data sources, such as the Oregon Employment Department, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, and the U.S. Census. The EOA also uses information from the following reports:

- *Columbia Gorge Economic Development Strategy*, March 2018
- *City of Maupin Comprehensive Land Use Plan*, May 2005

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 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.

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.

Organization of this Report

This report is organized as follows:

- **Chapter 2. Factors Affecting Future Economic Growth** summarizes historic economic trends that affect current and future economic conditions in Maupin, as well as Maupin's competitive advantages for economic development.
- **Chapter 3. Employment Growth and Site Needs** presents a forecast for employment growth in Maupin and describes target industries and site needs for potential growth in industries.
- **Chapter 4. Buildable Lands Inventory** presents a summary of the inventory of employment lands.
- **Chapter 5. Land Sufficiency and Conclusions** compares the supply of and demand for buildable lands and presents key concluding recommendations for Maupin.

This report also includes two appendices:

- **Appendix A. National, State, and Regional and Local Trends**
- **Appendix B. Buildable Lands Inventory Methodology**

2. Factors Affecting Future Economic Growth

Maupin exists as part of the economy of the Gorge Eastern Cascades region. While cities closer to the Columbia River are the economic centers of the region, Maupin provides urban amenities (such as stores, medical services, or personal financial services) to its residents and visitors. The economic focus of Maupin consists of recreation and other leisure activities, retail trade, and health care and social assistance sectors. In 2018, Maupin participated in the update of the Comprehensive Economic Development Strategy (CEDS) for the Mid-Columbia Economic Development District. Priorities for implementation of the plan in Maupin included funding for broadband extension and fiber network, development of the South Wasco County Library and Civic Center in downtown Maupin, and expansion of the Deschutes Rim health clinic.[1]

This chapter describes the factors affecting economic growth in Maupin within the context of national and regional economic trends. The analysis presents the City's competitive advantages for growing and attracting businesses, which forms the basis for identifying potential growth industries in Maupin.

Factors that Affect Economic Development[2]

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."[3]

That definition acknowledges that a community's wellbeing depends in part on narrower measures of economic wellbeing (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:

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[1] *Columbia Gorge Economic Development Strategy: 2017-2022.* Mid-Columbia Economic Development District. Updated March 2018.

[2] 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.

[3] *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.

- 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 wellbeing (on average and across all citizens and businesses in a jurisdiction, and all aspects of wellbeing) 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: 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 the State. Goal 9 does not dominate, but it legitimizes and requires that a local government focus on the narrower view of economic development regarding economic variables.

In that context, a major part of local economic development policy is about local support for business development and job growth; that growth comes from the creation of new firms, the expansion of existing firms, and the relocation or retention of existing firms. Specifically, new, small businesses are accounting for a larger share of the job growth in the United States.[4] This shift toward a focus on entrepreneurship, innovation, and small businesses presents additional options for local support for economic development beyond firm attraction and retention. 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.

What Factors Matter?

Why do firms locate where they do? There is no single answer—different firms choose their locations for different reasons. Key determinants 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.

[4] According to the 2018 Small Business Profile from the US Small Business Office of Advocacy, small businesses account for over 99 percent of total businesses in the United States, and their employees account for nearly 50% of American workers. https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf

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).
- **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. Entrepreneurial activity, even when unsuccessful, can offer information about the local market that other entrepreneurs can use in starting a new firm. Entrepreneurs are typically willing to take on more risk in uncertain markets, and a strengthened entrepreneurial environment can help to reduce that risk and uncertainty. [5] Entrepreneurs also tend to have more mobility than larger firms, and are more likely to locate in areas with a strong entrepreneurial environment.[6] To some degree, local governments can promote the high quality of life in an area to attract entrepreneurs, in addition to adopting regulations with minimal barriers—or at least, clear guidelines—for new, small businesses.

[5] Tessa Conroy and Stephan Weiler "Local and Social: Entrepreneurs, Information Network Effects, and Economic Growth" (2017). https://redi.colostate.edu/wp-content/uploads/sites/50/2017/05/gender_gia_Jun2017-2.pdf

[6] Emil E. Malizia and Edward J. Feser. *Understanding Local Economic Development. (*1999).

The supply, cost, and quality of any of these factors 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 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. In addition to innovations in research and development within firms or research institutions, firms may also draw on the innovative capacity of entrepreneurs in an area. These entrepreneurs may be former employees of the larger firm or businesses that relocated to an area because of the proximity to an industry cluster. Strong networks and communication between firms, research institutions, and entrepreneurs are key components to leveraging innovative capacity in an area.[7] Local governments are well-equipped to help foster these networks through supporting economic development tools such as small business assistance centers or incubation centers. Government can also 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 with different locational factors. They have used statistical models, surveys, and case studies to examine detailed data on the key factors that influence 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 would prefer locating to 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.

[7] Nancey Green Leigh and Edward Blakely. *Planning Local Economic Development: Theory and Practice.* 2013.

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, with 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 effect on the level and type of economic development in the community.

Local governments can provide support for new and existing small businesses through policies and programs that support entrepreneurship and innovation. The National League of Cities suggests strategies for local governments including: strong leadership from elected officials; better communication with entrepreneurs, especially about the regulatory environment for businesses in the community; and partnerships with colleges, universities, small business development centers, mentorship programs, community groups, businesses groups, and financial institutions.[8]

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 Maupin, the provision of buildable land has the potential to strongly influence the level and type of economic development in the City. The provision of buildable land is one of the most direct ways that Maupin can affect the level and type of economic development in the community.

[8] National League of Cities "Supporting Entrepreneurs and Small Businesses" (2012). https://www.nlc.org/supporting-entrepreneurs-and-small-business

Summary of the Effect of National, State, and Regional Trends on Economic Development in Maupin

This section presents a summary and the implications of national, state, and regional economic trends on economic growth in Maupin, which are presented in Appendix A.

- **Mixed recovery from the national recession.** Incomes grew slower in Wasco County than in Oregon since 2010 and the unemployment rate in Wasco County remained about the same as the statewide average.
    - Maupin's household income is lower than the County and State averages. In the 2012-2016 period, Maupin's median household income was $42,115, 10% lower than Wasco County's median household income of $46,814, and 21% lower than Oregon's $53,270. Maupin's median household income declined 17% over the 2000 to 2012-2016 period. During this time frame, Oregon's median household declined by 9%. Wasco County's median household income, however, grew by 13%.
    - The unemployment rate in Wasco County declined since the recession, consistent with the patterns of Oregon and the U.S. changes in employment. In 2017, the unemployment rate in Wasco County was near 4.2%, about the same as Oregon's rate of 4.1%, and less than the national rate of 4.4%.
    - Employment increased in Wasco County since 2001, with a gain of about 1,627 employees between 2001 and 2017. The largest increases were in health care and social assistance and natural resources and mining, while the largest decreases were in manufacturing and government. Maupin accounted for about 2% of employment in Wasco County. Employment in Maupin increased between 2006 and 2017 by about 62 employees.
- **Recent growth in tourism and service-sector businesses.** Employment in leisure activities, which includes tourism-related industries such as accommodation and food services and arts, entertainment, recreation, and other service-sector businesses accounted for about 60% of employment in Maupin in 2017. In 2006, employment in these industries accounted for about 50% of employment in Maupin, with an increase of 62 employees in these industries between 2006 and 2017. Employment in service-sector industries is typically low-wage, and average wages for service-sector industries in Maupin in 2017 were about $16,000, below the average wage in Maupin of $25,022.

  Tourism in Maupin focuses on recreation activities that rely on access to the Deschutes River, including rafting and fly fishing. Other recreation opportunities include cycling, hunting, hiking, and camping. The tourism season in Maupin is most active in the late spring, summer, and fall months. Many tourism industry workers leave Maupin in the winter for other work and some find it difficult to find adequate housing in Maupin during the tourism season.

- **Availability of trained and skilled labor.** Availability of labor depends, in part, on population growth and in-migration. Maupin's population increased by 14 people between 2000 and 2017, at an average annual growth rate of 0.2%. Most of the increase in population occurred between 2000 to 2010, with an increase of 114 people, though the population decreased by 100 people between 2010 and 2017. In comparison, Oregon's population grew at an average annual growth rate of 1.1% between 2000 and 2017, with 66% of population coming from in-migration.

  The current labor force participation rate is another 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. According to the 2012-2016 American Community Survey, Maupin had about 280 people in its labor force and Wasco County had over 11,900. The labor force participation rates in Maupin (52%) and Wasco County (58%) were lower than Oregon (60%) in the 2012-2016 period. Non-participants in the labor force (the 42% of people not participating in Wasco County's labor force) include students 16 years and older, retirees, and unemployed people not actively seeking work. A higher concentration of older residents in an area or a mismatch of the types of jobs available in an area and the types of skills of the labor force can contribute to low labor force participation rates.

  Five percent of workers at businesses in Maupin live in Maupin and 46% live in Wasco County. Businesses in Maupin draw employees from across Wasco County as well as Multnomah, Washington, and Clark Counties. Relative to Oregon, Maupin residents have a slightly higher level of some college or Associate degree educational attainment, though Maupin residents tend to have lower levels of Bachelor or professional degree attainment relative to the State and Wasco County.

  Discussions with stakeholders suggest that labor availability is a challenge for businesses in Maupin. One of the key issues is the seasonality of businesses, with potential workers being unable or unwilling to take jobs for a single season. In additional, businesses struggle to find dependable, sober employees semi-skilled or unskilled workers (not necessarily college educated workers) who are willing to work at some of the jobs available in Maupin.

- **Aging of the population and need for replacement workers.** Maupin has a larger percentage of residents 60 years and older relative to Oregon and Wasco County. Maupin's median age, which was 43.9 in 2000, increased to 56.3 by the 2012-2016 period. In comparison, Wasco County's median age was 41.6, and Oregon's median age was 39.1 in the 2012-2016 period.

  Wasco County's population is expected to continue to age, with people 60 years and older increasing from 18% of the population in 2016 to 24% of the population in 2035, consistent with Statewide trends. Maupin may continue to attract mid-life and older workers over the planning period. People in this age group may provide sources of skilled labor, as people continue to work until later in life. These skilled workers may provide opportunities to support business growth in Maupin.

However, older workers will eventually retire, either by choice or by necessity. As workers retire, businesses need to replace them with new workers. This need for replacement workers will continue to drive need for workers, even in the absence of other growth in Maupin. The need for in-home care will also increase with an aging population. This presents opportunities for small businesses in Maupin related to healthcare and caregiving services.

- **Increases in racial and ethnic diversity.** Overall, the nation and Oregon are becoming more racially and ethnically diverse. Between 2000 and 2012-2016, the Hispanic and Latino population in Oregon increased from 8% to 12%, while it decreased in Maupin from 5% to less than 1%. The nonwhite population in Oregon increased from 13% to 15% and decreased in Maupin from 11% to 3%. While Maupin is less ethnically and racially diverse than the State, providing culturally specific services to Native American and Spanish-speaking community members can help improve their participation in the workforce and economy.
- **Importance of small businesses in Oregon's economy.** Small business, those with 100 or fewer employees, account for 66% 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 Maupin is 5 employees per business, compared to the State average of 11 employees per private business. Businesses with 9 or fewer employees account for 54% of private employment and 4 or fewer account for 20% of private employment. Maupin has no businesses with more than 50 employees. Small businesses will play a critical role economic development in Maupin.
- **Increases in energy prices.** In 2018, lower 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 or carpool. In Maupin, the options for modes of commuting are more limited than in urban areas with access to transit, bike, and pedestrian infrastructure. Very large increases in energy prices may affect workers' willingness to commute, especially workers living the furthest from Maupin 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.

- **Increases in remote workers.**[9] Working from home has increased in Oregon in both urban and rural areas. Firms that allow workers to work remotely cover a variety of industries, allowing their employees to continue working for that firm but enjoy the quality of life and amenities of the location that the workers prefer to live. A study by the Oregon Office of Economic Analysis, found that the increase in working from home has allowed for increased industry diversity in areas such as Bend and Medford. While data on remote workers is difficult to obtain, about 2% of workers in Maupin reported that they worked from home in the 2012-2016 period. With the recent fiberoptic infrastructure completed in Maupin in 2018, workers have a more reliable option to work from their home (or remotely from an office space).

[9] *Working from Home*, Josh Lehner, Oregon Office of Economic Analysis, January 2019, https://oregoneconomicanalysis.com/2019/01/16/working-from-home/

Employment Trends in Maupin and Wasco County

The economy of the nation changed substantially between 1980 and 2017. These changes affected the composition of Oregon's economy, including Maupin's 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. This section focuses on changes in the economy in Wasco County since 2001 and in Maupin since 2006.

Exhibit 4 shows covered employment[10] in Wasco County for 2001 and 2017. Employment increased by 1,627 jobs, or 16%, over this period. The sectors with the largest increases in numbers of employees were healthcare and social assistance, natural resources and mining, retail trade, accommodation and food services, and professional and business services.

The average wage for employment in Wasco County in 2017 was about $38,572. Employment in higher wage industries, such as manufacturing and government, decreased by 150 jobs over the 2001 to 2017 time period.

Exhibit 4. Covered Employment by Industry, Wasco County, 2001-2017

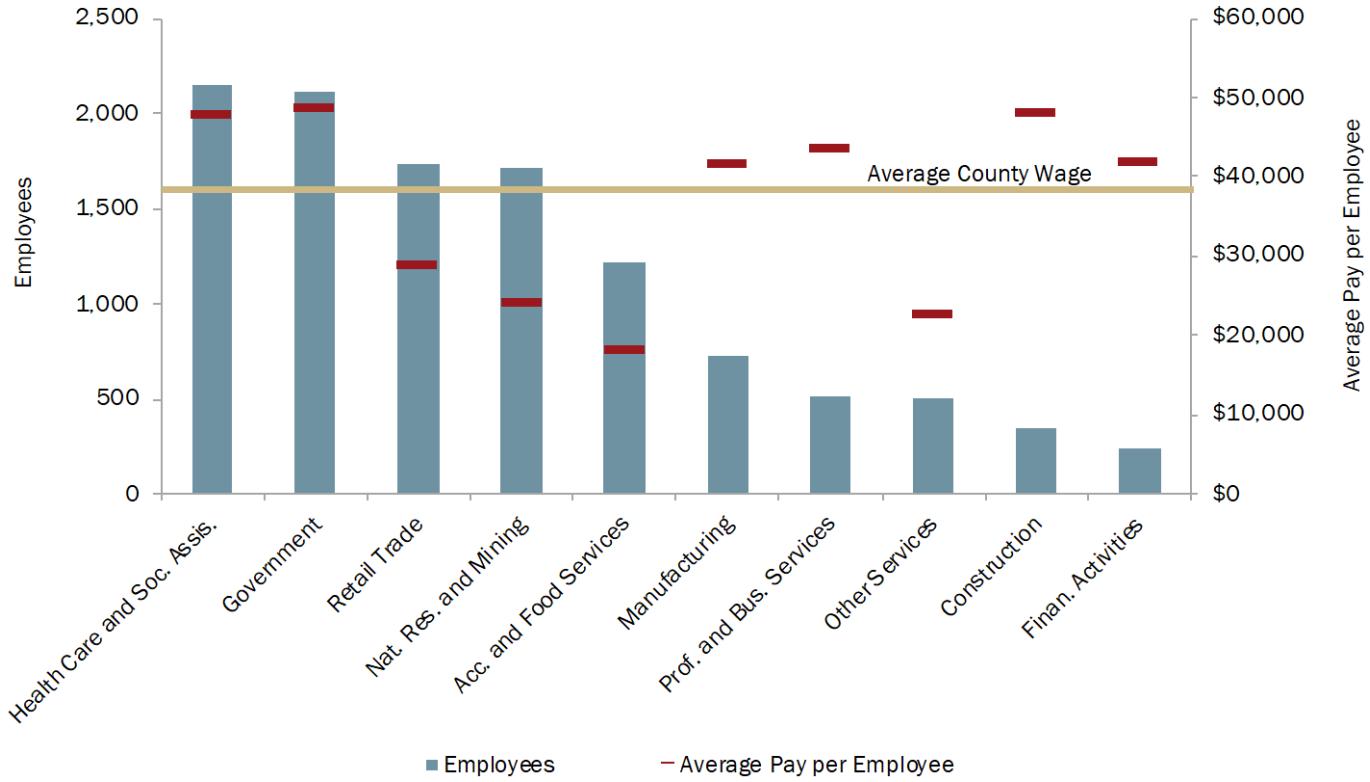
Sector	2001	2017	Change 2001 to 2017		
			Difference	Percent	AAGR
Natural Resources and Mining	1,129	1,709	580	51%	2.6%
Construction	286	351	65	23%	1.3%
Manufacturing	872	722	-150	-17%	-1.2%
Wholesale trade	222	153	-69	-31%	-2.3%
Retail trade	1,295	1,739	444	34%	1.9%
Trade, Transportation, and Utilities	121	169	48	40%	2.1%
Information	162	187	25	15%	0.9%
Financial Activities	318	247	-71	-22%	-1.6%
Professional and Business Services	293	516	223	76%	3.6%
Educational Services	38	94	56	147%	5.8%
Health care and social assistance	1,363	2,144	781	57%	2.9%
Arts, entertainment, and recreation	111	138	27	24%	1.4%
Accommodation and food services	955	1,220	265	28%	1.5%
Other Services	319	500	181	57%	2.8%
Government	2,895	2,117	-778	-27%	-1.9%
Total	10,379	12,006	1,627	16%	0.9%

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2001-2017.
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.

[10] **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.

Exhibit 5 shows covered employment and average wage for the 10 largest industries in Wasco County. Jobs in health care and social assistance, as well as government, each accounted for about 18% of the county's covered employment, and these sectors pay more per year than the county average ($48,007 and $48,631, respectively). Jobs in manufacturing, professional and business services, construction, and financial activities also paid more per year than the county average, but account for a smaller share of covered employment in the County Retail trade, natural resources and mining, accommodation and food services, and other services paid below the 2017 county average.

Exhibit 5. Covered Employment and Average Pay by Sector, 10 Largest Sectors Wasco County, 2017



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2017.

Between 2006 and 2017, employment in Maupin increased by about 61 employees (31%). Private employment increased by about 51 employees and government employment increased by about 11 employees (Exhibit 6).

Exhibit 6. Change in Covered Employment, Maupin UGB, 2006-2017

	2006 Employment	2017 Employment	Change in Employment	Percent Change in Employment
Private employment	130	181	51	39%
Government	71	82	11	15%
Total	**201**	**263**	**62**	**31%**

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2006 and 2017.

Employment in Maupin accounted for about 2% of employment in Wasco County. Exhibit 7 shows a summary of covered employment data for the Maupin UGB in 2017. The sectors with the greatest number of employees were leisure activities (32%), local government (27%), retail trade (11%), and health care and social assistance (11%). These sectors accounted for 212 jobs or 81% of Maupin's employment.

Exhibit 7. Covered Employment and Average Pay by Sector, Maupin UGB, 2017[11]

Sector/Industry	Establishments	Employees	Payroll	Average Pay / Employee
Industrial sectors	6	21	$ 785,473	$ 37,403
Retail Trade	4	28	$ 459,621	$ 16,415
FIRE, Information, Other Services	11	19	$ 463,251	$ 24,382
Health Care and Social Assistance	3	28	$ 545,170	$ 19,470
Leisure Activities	10	85	$ 1,339,329	$ 15,757
Federal Government	2	5	$ 176,592	$ 35,318
State Government	1	6	$ 318,168	$ 53,028
Local Government	7	71	$ 2,493,205	$ 35,116
Total	**44**	**263**	**$ 6,580,809**	**$ 25,022**

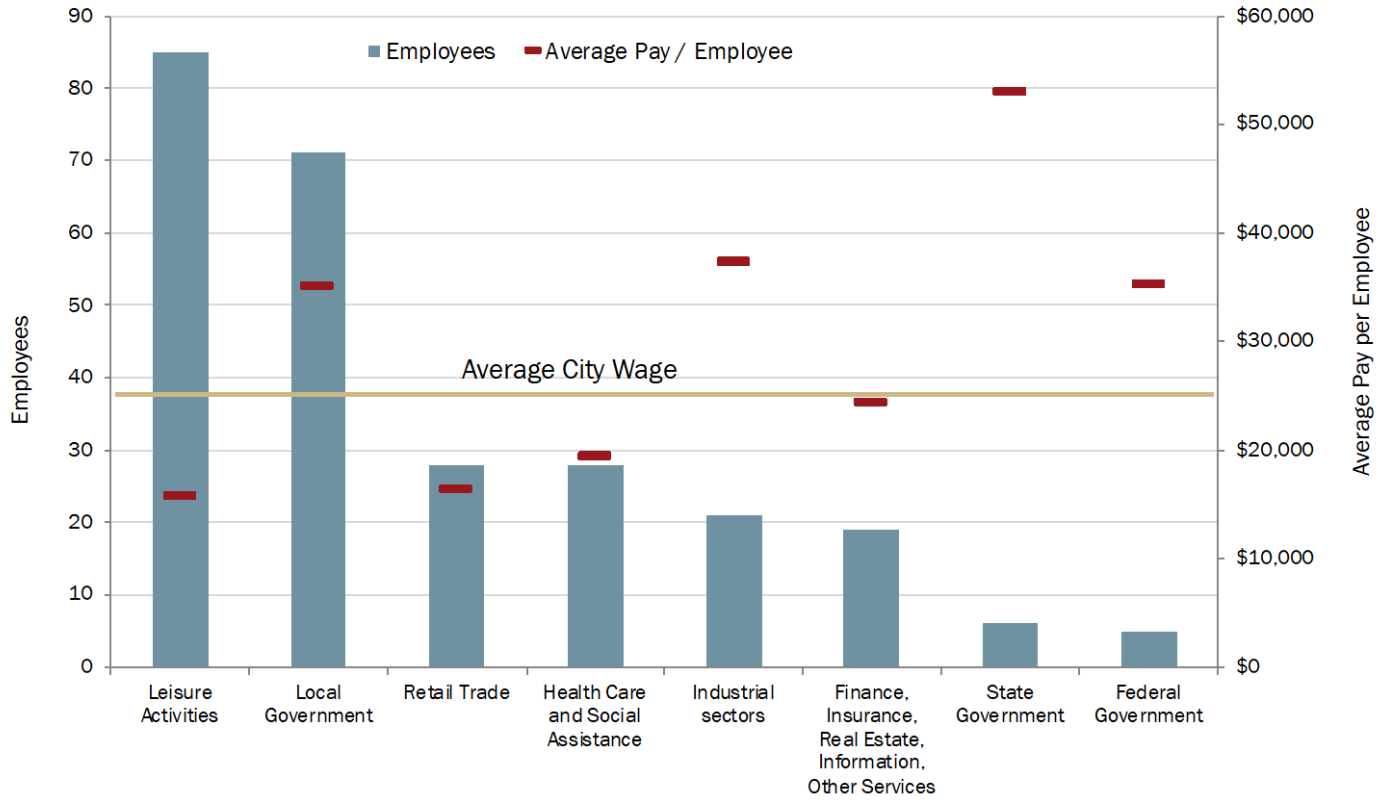
Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

The average size for a private business in Maupin was 5 employees per business, compared to the State average of 11 employees per private business. Businesses with 9 or fewer employees accounted for 54% of private employment and 4 or fewer account for 20% of private employment.

[11] The following sectors were combined due to confidentiality of QCEW data: Utilities, Transportation and Warehousing; Manufacturing and Wholesale Trade; Finance and Insurance, Real Estate and Rental and Leasing; Health Care and Social Assistance and Private Education; Arts, Entertainment and Recreation and Accommodation and Food Services.

Exhibit 8 shows the employment and average pay per employee for sectors in Maupin. Average pay for all employees ($25,022) is shown as a light brown line across the graph and average pay for individual sectors as short red lines. The figure shows that government and industrial sectors had above average wages. The lowest wages were in retail trade and leisure activities, which includes arts, entertainment, and recreation and accommodation and food services.

Exhibit 8. Covered Employment and Average Pay by Sector, Maupin UGB, 2017[12]



Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

[12] The following sectors are combined in the chart: "FIRE" includes Finance, Insurance, and Real Estate; "Leisure Activities" includes Arts/Entertainment/Recreation and Food/Accommodation Services; and "Industrial sectors" includes Agriculture/Forestry/Fishing/Hunting, Construction, Manufacturing, and Wholesale Trade.

Outlook for growth in Wasco County

Exhibit 9 shows the Oregon Employment Department's forecast for employment growth by industry for the Gorge Eastern Cascades Region (Gilliam, Hood River, Sherman, Wasco, and Wheeler Counties) over the 2017 to 2027 period. Employment in the region is forecasted to grow at an average annual growth rate of 1.0%.

The sectors that will lead employment in the region for the 10-year period are: Private Educational and Health Services (adding 670 jobs), Leisure and Hospitality (520), Trade, Transportation, and Utilities (390), Manufacturing (300), Professional and Business Services (300), and Natural Resources and Mining (270). In sum, these sectors are expected to add 2,450 new jobs or about 83% of employment growth in the Gorge Eastern Cascades Region. Wasco County accounts for about 42% of employment in these five counties, and Maupin accounts for about 2% of the County's employment.

Exhibit 9. Regional Employment Projections, 2017-2027, Gorge Eastern Cascades Region (Gilliam, Hood River, Sherman, Wasco, and Wheeler Counties)

Industry Sector	2017	2027	Change 2017 - 2027		
			Number	Percent	AAGR
Total private	24,090	26,850	2,760	11%	1.1%
Natural resources and mining	4,520	4,790	270	6%	0.6%
Mining and logging	70	60	-10	-14%	-1.5%
Construction	870	1,030	160	18%	1.7%
Manufacturing	2,500	2,800	300	12%	1.1%
Durable goods	1,130	1,230	100	9%	0.9%
Nondurable goods	1,370	1,580	210	15%	1.4%
Trade, transportation, and utilities	4,560	4,950	390	9%	0.8%
Wholesale trade	640	710	70	11%	1.0%
Retail trade	3,340	3,590	250	7%	0.7%
Transportation, warehousing, and utilities	580	650	70	12%	1.1%
Information	340	350	10	3%	0.3%
Financial activities	520	540	20	4%	0.4%
Professional and business services	1,820	2,120	300	16%	1.5%
Private educational and health services	4,070	4,740	670	16%	1.5%
Health care and social assistance	3,890	4,530	640	16%	1.5%
Leisure and hospitality	3,890	4,410	520	13%	1.3%
Arts, entertainment, and recreation	830	980	150	18%	1.7%
Accommodation and food services	3,060	3,430	370	12%	1.1%
Other services and private households	1,000	1,120	120	12%	1.1%
Government	4,120	4,300	180	4%	0.4%
Federal government	560	540	-20	-4%	-0.4%
State government	420	450	30	7%	0.7%
Local government	3,140	3,310	170	5%	0.5%
Local education	1,420	1,490	70	5%	0.5%
Total payroll employment	28,210	31,150	2,940	10%	1.0%

Source: Oregon Employment Department. Employment Projections by Industry 2017-2027.

Maupin's Strengths, Weaknesses, Opportunities and, Threats

OAR 660-009-0015(4) requires that cities conduct an assessment of community economic development potential, as part of the EOA. This assessment considers: market factors, infrastructure and public facility availability and access, labor, proximity to suppliers and other necessary business services, regulations, and access to job training.

The local factors that form Maupin's competitive advantage are summarized in the subsections below.

Strengths

- **Location.** Maupin is located in Wasco County, about 40 miles south of The Dalles on US Highway 197, and about 47 miles north of Madras. Maupin is also relatively close, about 125 miles, with access to markets in the Portland Metro area, as well as infrastructure such as Portland International Airport. In addition, Maupin is about two hours from Bend, providing access to the markets and recreational opportunities in and around Bend. These locational aspects allow both goods and workers to move in and out of Maupin relatively efficiently. Maupin's location can be an advantage especially for workers who prefer to live in Maupin for its quality of life, but still need access to urban amenities.
- **Scenic resources.** Maupin is located on the Wild and Scenic Deschutes River, which is valued for river-based recreational activities such as rafting and fly fishing. Many residents and visitors to Maupin choose to live in and visit Maupin for its scenic beauty and tourism opportunities.
- **Quality of life.** Many residents of Maupin value the City's rural environment, friendly small-town character, pleasant climate, and access to outdoor recreational amenities.
- **Tourism and outdoor recreation.** Maupin is attractive to visitors for many of the same reasons that it is attractive to residents. Maupin's tourism industry focuses on outdoor recitational opportunities including river rafting, fly fishing, hiking, cycling, and hunting.
- **Collaborative environment.** Successful local economic development is often a result of effective collaboration among governments, business owners, and community members. In recent years, Maupin's leaders have fostered this spirit of collaboration to complete projects that benefit the community, including the Maupin Broadband Project, which required coordination at the local, regional, and state levels.
- **Access to workers.** Maupin pulls workers from across Wasco County. Work at many of the businesses in Maupin does not require college education or highly specialized training. The seasonality of tourism jobs in Maupin is attractive to workers who also have seasonal jobs during Maupin's off-season, such as ski instructors or river guides who work in the southern hemisphere for the winter.

- **Access to job training.** Aside from on-the-job training, workers in Maupin have access to the Columbia Gorge Community College. The main campus is in The Dalles, about 30 miles from Maupin. A limited number of classes are offered through distance learning.
- **Faster Internet connection.** Completion of the Maupin Broadband Project brought Maupin's businesses and residents faster Internet connections. This $2 million project brought high-density fiber optic broadband connectivity to Maupin, which will allow businesses and residents who depend on fast Internet connections to locate in Maupin.
- **Transportation.** Maupin is located along Highway 197, providing connection to Bend and The Dalles. The Highway runs through Maupin, allowing for freight and automotive transportation within and beyond the City.
- **Water.** The majority of Maupin's water supply is ground water, which comes from a spring. This water is pumped up and stored in two reservoirs, providing a large source for both households and businesses. City staff estimate that up to 1,000,000 gallons of water can be pumped from the spring, though not all of it is used. The excess water runs downhill, however, city staff said they will eventually need another reservoir to hold more water to accommodate future growth. For this reason, the surplus water supply Maupin has access to is a strength as it gives the City opportunities to serve new businesses and more residents.
- **Wastewater.** Maupin's wastewater treatment plant was constructed in the 1970s and it continues to function well. It was originally designed to support 1,000 homes. Given that there are approximately 370 housing units in Maupin, the City's wastewater plant has enough capacity to serve current residents as well as future ones.

  Maupin is currently in the process of conducting a study to evaluate how well their wastewater plant operates and if there are deficiencies they can improve. Maupin public works official Nick Smith indicated infiltration is an issue, particularly during wet weather months and heavy rain events, but not a substantial one. He estimated Maupin's wastewater plant flows average 50,000 gallons daily; however, the plant's capacity allows for up to 100,000 gallons of wastewater to be treated daily. Though Maupin's wastewater flows are mostly uninhibited by their plant's existing capacity, Nick noted the City is planning to improve and upgrade the plant, which may involve increasing capacity for future population growth. Cost estimates for these improvements are not yet available.

Weaknesses

- **Highway conditions for large freight transportation.** While Maupin is only 125 from the Portland metropolitan area and is located on Highway 197, the characteristics of Highway 197 is a barrier to economic development. Most notably, Maupin is located in an area with a steep descent to the Deschutes River. As such, Highway 197 presents challenges for transporting large amounts of freight (especially bulky freight), making large-scale manufacturing in Maupin challenging.
- **Land availability and serviceability**. Maupin has relatively few commercial and industrial sites in the core of the city. Landowner willingness to sell or develop land varies, making some sites unavailable for development. Some sites within Maupin lack urban infrastructure (water, sewer, or roads), making development infeasible at this time. The cost to provide services to these sites can be prohibitive to potential developers.
- **Housing for workers.** A growing concern among Maupin leaders and community members is the lack of available workforce housing. Seasonal workers often live outside of Maupin because it is difficult finding adequate housing during the tourism seasons. Part-time residents buying homes in Maupin has also led to a decrease in available housing for full-time residents.
- **Seasonal economy**. While Maupin has strong tourism activity during the late spring through early autumn, the seasonality of this industry creates stress on local businesses and workers in the off-season. Local businesses struggle with a decrease in customers and workers struggle to find work in the off-season in Maupin.
- **Low-wage jobs.** Tourism, while helpful in providing a source of income, generally pays low wages. These jobs tend to be service-providing, which are typically minimum-wage. Combining this with the seasonality of tourism yields income for residents that can be helpful in the short-term, but it does not bolster economic well-being in the long-term. While extending tourism seasons in Maupin will provide more stability for workers year-round, these jobs will still be mostly low-wage jobs. In addition to extending year-round tourism in Maupin, the City may look to increase opportunities for higher-wage, year-round jobs to create a more diverse, resilient economy.
- **Need for more workers.** Businesses report struggling to find workers. The problems are less about finding workers with the right skills but people who want to work and are reliable and sober. In addition, Maupin lacks workers who are skilled in construction trades (i.e., plumbers, electricians, and construction workers), as well as reliable workers for service businesses and child care services.

- **Aging water distribution and sewer collection systems.** Despite Maupin having access to large quantities of water and sufficient wastewater treatment capacity, the infrastructure transporting it is old. City staff estimated some pipes are over 50 years of age. They also stated that each time a street is repaired beyond its surface level, they have to replace the water and sewer lines. The water tower reservoir location also poses issues being at a higher elevation. The City is in the process of planning for water and wastewater system improvements but those plans are not yet complete.
- **Access to suppliers and services.** Some businesses report difficulty in accessing necessary supplies and services. Most specialty services and suppliers, such as distributors for restaurant supplies or printing services, are not available in Maupin. Businesses need to travel to The Dalles or Portland to access some of these necessary services, which creates additional transportation costs.
- **Wastewater treatment.** While the City can treat existing wastewater effluent, the City likely needs upgrades to its wastewater treatment plant to accommodate substantial new development. The City is working on plans for upgrading the wastewater facilities.

Opportunities

- **Small business and entrepreneurial growth.** Maupin's quality of life, especially access to river-based recreation, make the community attractive as a place to grow small businesses. Business owners who can locate their businesses anywhere may choose to locate in Maupin, especially if they are attracted to the River. The completion of the Maupin Broadband Project removes a barrier (slow Internet connectivity) for businesses growing in Maupin. The City can continue to work with regional and state resources, such as the Columbia Gorge Small Business Development Center, to help connect small businesses and entrepreneurs with available resources and services. Small business growth may also include providing services for residents, such as child care services.
- **Remote workers.** The completion of the Maupin Broadband Project provides a feasible option for more workers to move to Maupin and work remotely for businesses located outside of the City. These workers will likely work from home, but may also seek small office spaces, if available. This presents an opportunity for development of co-working or shared office space in Maupin. Business for service-sector industries could increase beyond current seasonal demand as remote workers may require access to local shops, restaurants, and other services to connect and collaborate.
- **Regional and State partnerships.** Maupin has existing collaborative partnerships with public agencies, including Mid-Columbia Economic Development District (MCEDD), Oregon Department of Transportation (ODOT), the Department of Land Conservation and Development, Regional Solutions, Columbia Gorge Small Business Development Center, South Wasco Alliance, and Business Oregon. The City can continue to build on these relationships with key partners to improve infrastructure, identify opportunities for education and training for needed skills in potential growth industries, and expand on existing resources.

- **Redevelopment in infill development.** In Maupin's core, along Highway 197, there may be opportunities for redevelopment of existing buildings and infill development of underutilized tax lots. Redevelopment could involve substantial renovation or change of use of existing buildings or demolition of existing buildings and building of newer, more productive buildings. Infill development may be expansion of existing buildings or building new buildings adjacent to existing buildings. In both cases, new development that increases capacity for business activity is an opportunity. There may be opportunity to re-zone some areas to the Residential-Commercial Transition zone.
- **Swapping constrained land to outside of the UGB.** Maupin has land in the southwestern area of the City that is currently zoned for Agriculture, though it is inaccessible by other areas within the UGB because of lack roads. The lack of water and wastewater infrastructure is also a substantial barrier to development in this area at present. The City may explore options to swap this land out of the UGB for another area in the southwestern area of Maupin that would be more suitable to industrial development.
- **Rezoning of publicly owned residential land.** Maupin has land that is publicly owned and currently zoned Low-Density Residential in the southwestern part of the City near Highway 197. The City may explore options to rezone this land for light-industrial use, as it is suitable for employment uses, such as an industrial park. Regional partners, such as South Wasco Alliance and MCEDD may be partners to help plan for this future use.
- **Reputation as a business-friendly community.** Maupin has a reputation as a business-friendly community that welcomes steady growth. The City works with people who want to expand or locate businesses in Maupin, helping them with the development process. People who live in Maupin are aware of the importance of supporting local businesses and buying locally, where possible.
- **Tourism and related industries.** Tourism is growing in Wasco County. The number of overnight visitors to Wasco County has increased from 1,149,000 in 2016 to 1,176,000 in 2018, an increase of 27,000 overnight stays or 2.3%. To the extent that Maupin attracts visitors, growth in tourism creates opportunities for services for visitors, such as river guides, restaurants, a brew pub, overnight accommodations, and other services for visitors. Maupin shares many similar attributes with Bend, such as climate and outdoor recreation opportunities. Marketing Maupin as a place with attributes similar to Bend may help to attract new visitors to Maupin.

Threats

- **Aging population.** The decrease in available workforce in Maupin is partly due to the aging population. As workers in Maupin retire, or new residents locate in Maupin after retirement, the need for skilled, educated workers will increase.
- **Environmental and climate change risks.** Maupin's economy relies heavily on outdoor recreation-focused tourism. Environmental factors, including climate change, can threaten the success of tourism industries that rely on favorable weather conditions. Forest fires and floods are both a concern for communities in Oregon, and the risk of these natural hazards is likely to increase as a result of climate change.[13] Forest fires also cause poor air quality, which can detract visitors and decrease quality of life for residents. Other potential natural hazards that will likely increase in Maupin as a result of climate change include drought, increased invasive species, and loss of wetland ecosystems.[14]
- **Potential for decline in the state and National economies.** Changes in the State and National economies are beyond local control and directly affect Maupin's economy. National recessions generally have a greater effect on Oregon and in rural Oregon, with higher job losses and longer recovery periods than the national average.

[13] Oregon Climate Change Research Institute. *Climate Change Influence on Natural Hazards in Oregon Counties.* August 2018 and *Fourth Oregon Climate Assessment Report*. January 2019.

[14] Ibid.

Target Industries

The characteristics of Maupin will affect the types of businesses most likely to locate in the city. Maupin's attributes that may attract firms are: Maupin's access to land and resources; recreational opportunities; and quality of life.

Maupin's existing businesses are concentrated in the industries defined in Exhibit 10. The industries in green highlight are industries with a high location quotient (i.e., highly specialized compared to national employment in the industry), high employment (i.e., have more than 25 employees in Maupin), and higher than average city wages. These industries have the highest potential for growth, given existing businesses and the higher concentration of employment.

Maupin also has opportunities for employment growth in industries without a concentration of employment or a high location quotient.

Exhibit 10. Concentration of Industries and Employment, Maupin, 2017

	High Employment	Low Employment
High Location Quotient	• Arts, Entertainment, and Recreation • Accommodation and Food Services	• Real Estate and Rental and Leasing
Low Location Quotient	• Retail trade • Health care and social assistance	• Other services (except Public Administration)

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Potential Growth Industries

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

Given the current employment base, which is composed of small-sized businesses, it is reasonable to assume that much of the city's business growth will come from small-sized businesses. This growth will either come from businesses already in Maupin or new businesses that start or relocate to Maupin from within the Gorge Eastern Cascades region or from outside of the region.

The industries identified as having potential for growth in Maupin are:

- **Telecommuters, office and professional services.** The Maupin Broadband Project brought reliable Internet infrastructure to the city. This not only provides a service to existing residents of Maupin, it also presents an option for increasing telecommuters in Maupin. Telecommuting, also referred to as "working from home" or "working remotely," can help to increase the average wage and diversify the industries in Maupin, as many telecommuters work in higher paying office and professional service industries. Maupin's location also provides an advantage, as workers can easily access Portland or Bend.

- **Light manufacturing.** Maupin has opportunity for small-scale, light manufacturing. Factors including land availability and a local desire to maintain the City's existing quality of life with a more diverse economy, make smaller scale manufacturing a potential option in Maupin. With a regional concentration in agricultural industries, value-added agricultural production businesses, especially those that do not require high water usage, could locate in Maupin.

  Maupin's strong tourism industry could draw light-manufacturing industries that provide higher-wage jobs, specifically those that align with outdoor recreation activities. Examples of this include kayak or other watercraft manufacturers, bike or bike part manufacturers, fly fishing product manufacturers, or outdoor apparel producers. Workers who are interested in working for these companies would also likely desire to live and work in a place with access to the amenities and quality of life in Maupin.

- **Tourism and recreation.** The Deschutes River is the primary focus of tourism activity in Maupin. River rafting and fly fishing companies are proximately located in the downtown commercial area, along with other services for visitors and residents, such as shops, restaurants, and a grocery store. Though the tourism season is concentrated in the late spring, summer, and fall months, Maupin can grow into a year-round tourist destination. The City's proximity to Portland, Bend, and The Dalles provides more convenient access for visitors than other Central or Eastern Oregon cities, presenting an opportunity to market Maupin with characteristics that are similar to Bend There is potential to reorient downtown businesses to promote year-round recreational activities and services, such as a brew pub, while still keeping an emphasis on river-oriented business in the summer season.

- **Services for residents.** As Maupin's population or the population of the outlying areas in unincorporated Wasco County grows, demand for services for residents will grow. These services include retail, restaurants, personal services (like hairdressers), financial services, medical services, and other services. Additionally, the demand for child care services will increase to meet the need for families in Maupin. These types of services present opportunities for entrepreneurship and small business development in Maupin.

- **Housing for seniors.** Housing for seniors with services (i.e., medical services or housekeeping services) may be an important type of service to support Maupin's aging population. An aging population in Maupin will also increase the need for in-home caregivers, presenting another opportunity for entrepreneurs and small business development.

3. Employment Growth and Site Needs

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 Maupin is based on expected employment growth and the types of firms that are likely to locate in Maupin over the 20-year period. This chapter 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 Maupin. This employment land demand is driven by local growth independent of broader economic opportunities, including the growth of target industries.

The employment projections in this section build off of Maupin's existing employment base, assuming future growth is similar to Wasco County's long-term historical 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 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 Maupin presented in Exhibit 7. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in the City.
2. **Project total employment.** The projection of total employment considers forecasts and factors that may affect employment growth in Maupin 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 Maupin.

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 Maupin starts with a base of employment growth on which to build the forecast. Exhibit 11 shows ECONorthwest's estimate of total employment in Maupin in 2017.

To develop the figures, ECONorthwest started with estimated covered employment in the Maupin UGB from confidential Quarterly Census of Employment and Wages (QCEW) data provided by the Oregon Employment Department. Based on this information, Maupin had about 263 covered employees in 2017.

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 Wasco County is only about 89% of *total* employment reported by the U.S. Department of Commerce.[15] We evaluated this ratio for each industrial sector for Wasco County and used the resulting ratios to determine the number of non-covered employees. This allowed us to determine the total employment in Maupin. Exhibit 11 shows Maupin had an estimated 309 *total* employees within its UGB in 2017.

Exhibit 11. Estimated total employment by sector, Maupin UGB, 2017

	Covered Employment	Estimated Total Employment	Covered % of Total
Industrial sectors	21	26	81%
Retail Trade	28	34	82%
Finance, Insurance, Real Estate, Information, and Other Services	19	34	56%
Health Care and Social Assistance	28	33	85%
Leisure Activities	85	100	85%
Government	82	82	100%
Total Non-Farm Employment	**263**	**309**	**85%**

Source: 2017 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department.

[15] **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.

Employment Projection

The employment forecast covers the 2019 to 2039 period, requiring an estimate of total employment for Maupin in 2019.

Maupin 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.

Maupin is relying on the safe harbor described in OAR 660-024-0040(9)(a)(A), which allows the City to assume that the current number of jobs in the Maupin UGB 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. The regional employment projection for the Gorge Eastern Cascades region, which includes Wasco County, for the 2017 to 2027 period shows that employment will grow at an average annual growth rate of 1.0%.[16]

Exhibit 12 shows employment growth in Maupin between 2019 and 2039, based on the assumption that the City will grow at an average annual growth rate of 1.0%. Maupin will have 385 employees within the UGB by 2039, which is an increase of 70 employees (22%) between 2019 and 2039.

Exhibit 12. Employment growth in Maupin UGB, 2019–2039

Year	Total Employment
2019	315
2039	385
Change 2019 to 2039	
Employees	70
Percent	22%
AAGR	1.0%

Source: ECONorthwest

[16] "Regional Employment Projections by Industry & Occupation, 2017-2027," Gorge Eastern Cascades (Gilliam, Hood River, Sherman, Wasco, and Wheeler Counties) Oregon Employment Department. https://www.qualityinfo.org/.

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 Maupin 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, retail commercial, office and commercial services, and government.

Exhibit 13 shows the expected share of employment by land-use type in 2019 and the forecast of employment growth by land-use type in 2039 in the Maupin UGB. For each land-use type, we assumed that the share of total employment will increase, except for Government, which will remain at about the same number of employees and decrease in overall share of employment in Maupin.

Exhibit 13. Forecast of employment growth by land use type, Maupin UGB, 2019–2039

	2019		2039		Change 2019
Land Use Type	Employment	% of Total	Employment	% of Total	to 2039
Industrial	13	4%	31	8%	18
Retail Commercial	17	5%	31	8%	14
Office & Commercial Services	79	25%	104	27%	25
Government	207	66%	220	57%	13
Total	**315**	**100%**	**385**	**100%**	**70**

Source: ECONorthwest
Note: The shaded percentages denote an assumption about the future change in the share of employment (as a percent of total) by land use type.

Estimate of Demand for Commercial and Industrial Land

Exhibit 14 shows demand for vacant (including partially vacant) land in Maupin over the 20-year period. The assumptions used in Exhibit 14 are:

- **Employment density.** Employees per acre 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. Exhibit 14 assumes the following numbers of net employees per acre: Industrial will have an average of 10 employees per acre, and Retail Commercial and Office and Commercial Services will have an average of 15 employees per acre.

  These employment densities are consistent with employment densities in Oregon cities of similar size as Maupin. Some types of employment will have higher employment densities (e.g., a multistory office building), and some will have lower employment densities (e.g., a convenience store with a large parking lot).

- **Conversion from net-to-gross acres**. The data about employment density is in *net* acres, which does not include land for public right-of-way. Future land need for employment should include land in tax lots needed for employment plus land needed for public right-of-way. 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 public right-of-way.[17] A net-to-gross conversion is expressed as a percentage of gross acres that are in public right-of-way.

  Based on empirical evaluation of Maupin's existing net-to-gross ratios, ECONorthwest uses a net-to-gross conversion factor of 15% for industrial and commercial.

Using these assumptions, the forecasted growth of 57 new employees will result in the following demand for vacant (and partially vacant) employment land: 2 gross acres of industrial land and 3 gross acres of commercial land.

Exhibit 14. Demand for vacant land to accommodate employment growth, Maupin UGB, 2019–2039

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	18	10	2	2
Commercial	39	15	3	3
Total	**57**		**4**	**5**

Source: ECONorthwest

[17] 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.

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, Maupin 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 forecast of employment growth in Exhibit 13 and the average size of business in Maupin in 2017 (using analysis of Quarterly Census of Employment and Wage data), employment growth in Maupin will require sites as summarized in Exhibit 15.

Exhibit 15. Estimate of sites needed for new employment by land use type, Maupin UGB, 2019–2039

Land Use Type	Employment growth (2019-2039)	Average business size	Estimate forecast of growth of new businesses
Industrial	18	4	6
Commercial	39	6	7

Source: QCEW, ECONorthwest

The potential growth industries described in the prior section are generally small businesses. For the most part, Maupin's potential growth industries need relatively flat sites, especially for industrial or manufacturing businesses. Commercial businesses, especially those serving tourism, will need a site with high visibility and/or a location along Highway 197. Industrial businesses will need easy access to Highway 197 but may not need a location directly along Highway 197.

For the most part, the size of sites needed by most potential growth industries will range from space in an existing building to a site of one acre or less to sites up to 5 acres for manufacturing businesses.

Manufacturing and other industrial businesses likely to locate in Maupin will have a range of space needs:

- **Small-scale manufacturing space.** Businesses would be located in an industrial building with many other users.
- **Space in an existing building.** The majority of businesses that work with Business Oregon on site selection request space in existing buildings.
- **A site to develop a new building.** Some manufacturers may need a site to build a building specific to their needs, possibly with accessory buildings for storage. These businesses are most likely to need a site of one to five acres in size.

Site needs for new services for residents and visitors may include businesses locating in existing buildings, commercial nodes of one-half to two acres in residential neighborhoods, or commercial development sites generally less than two acres for new commercial buildings. Development of senior housing with services may require sites of about one to five acres and may be located in residential areas.

4. Buildable Lands Inventory

The buildable lands inventory is intended to identify commercial and industrial lands that are available for development for employment uses within the Maupin UGB. The inventory is sometimes characterized as *supply* of land to accommodate anticipated employment growth. Population and employment growth drive *demand* for land. The amount of land needed depends on the type of development and other factors.

This chapter presents results of the commercial and industrial buildable lands inventory for the Maupin UGB. The results are based on analyses of Wasco County and State of Oregon GIS data by ECONorthwest and reviewed by City staff. The remainder of this chapter summarizes key findings of the buildable lands inventory.

The general steps in the buildable lands inventory are:

1. Generate UGB "land base"
2. Classify lands by development status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

The next section provides a summary of the results of the commercial and industrial buildable lands inventory for the Maupin UGB in both tabular and map formats. **Appendix B presents the full buildable lands inventory, including the methodology for developing the inventory.**

Land Base

Exhibit 16 summarizes all land included in the employment land base (e.g., lands with plan designations that allow employment) in the Maupin UGB. ECONorthwest used this land base in the buildable lands analysis for Maupin. The land base includes traditional employment designations within the Maupin UGB. According to 2018 data, within Maupin's UGB there are about 191 acres in 114 tax lots in total.

Exhibit 16. Acres in Maupin UGB, 2018

Plan Designation	Number of taxlots	Percent	Total taxlot acreage	Percent
City of Maupin Designations				
General Commercial	28	25%	4	2%
Recreational Commercial	47	41%	33	17%
Residential/Commercial Transition	17	15%	3	1%
Industrial	21	18%	92	48%
Agricultural	1	1%	59	31%
Total	**114**	**100%**	**191**	**100%**

Source: ECONorthwest analysis of data from Wasco County.

Development Status

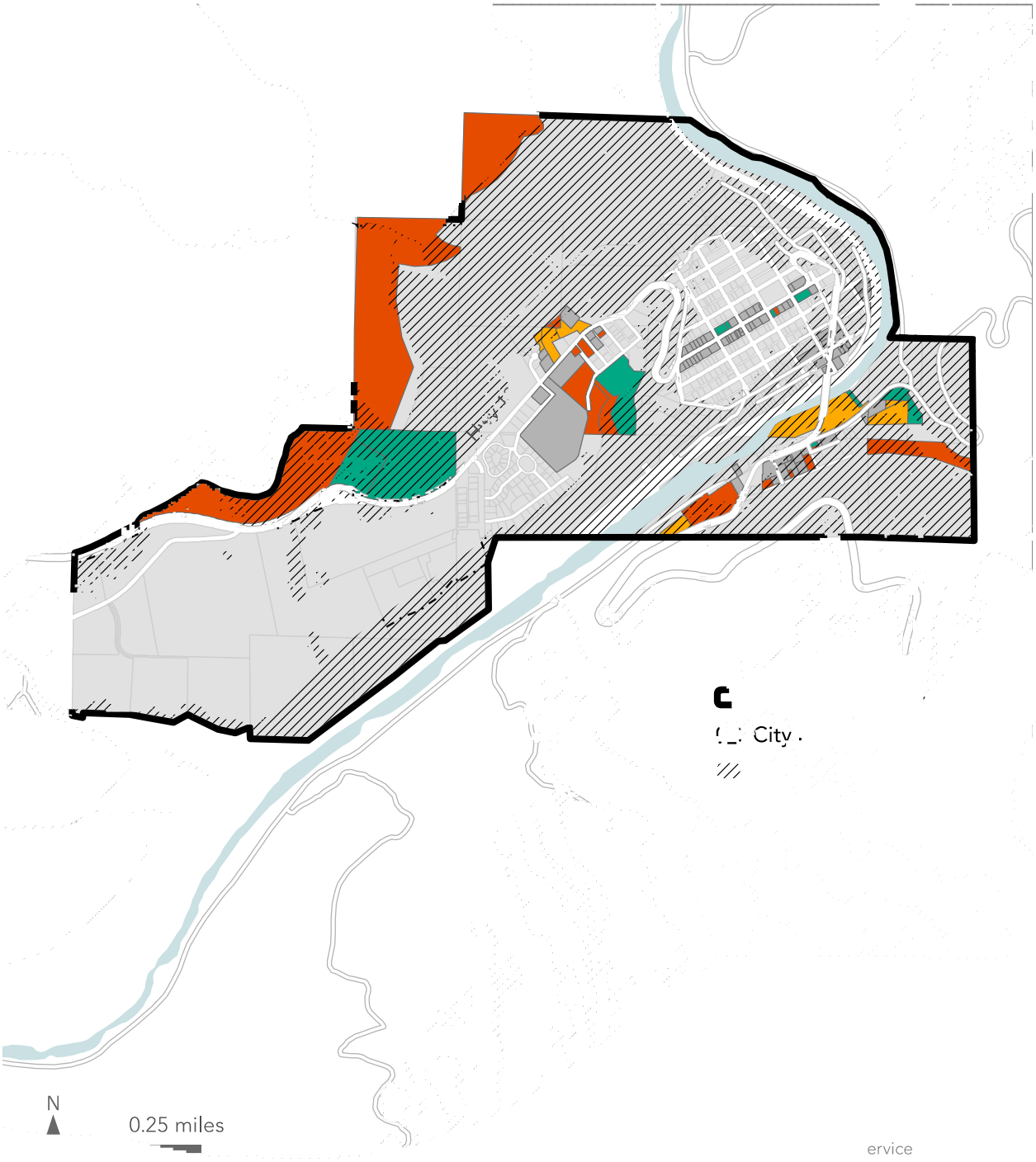
Exhibit 17 shows commercial, industrial, and agricultural land in Maupin by development status. Of the 191 acres in the Maupin UGB, about 38 acres (20%) are in classifications with no development capacity (or, "committed acres"). Of the remaining 153 acres, 82 acres (43%) are constrained and 70 acres (37%) are buildable land with development capacity.

Exhibit 17. Employment acres by classification and plan designation, Maupin UGB, 2018

Plan Designation	Total acres	Committed acres	Constrained acres	Buildable acres
City of Maupin Designations				
General Commercial	4	4	0	0
Recreational Commercial	33	6	21	5
Residential/Commercial Transition	3	3	0	0
Industrial	92	26	52	15
Agricultural	59	0	9	50
Total	**191**	**38**	**82**	**70**

Source: ECONorthwest analysis of data from Wasco County and State of Oregon.

Exhibit 18. Employment land by classification with development constraints, Maupin UGB, 2018



Vacant Buildable Land

The next step in the commercial and industrial buildable land inventory was to net out portions of vacant tax lots that are unsuitable for development. Areas unsuitable for development fall into three categories: (1) developed areas of partially vacant tax lots, (2) areas with service constraints, (3) areas with physical constraints (areas with wetlands, floodways, riparian setback areas and steep slopes).

Exhibit 19 shows unconstrained buildable acres for vacant and partially vacant land by plan designation. The results show that Maupin has about 70 net buildable acres in commercial, industrial and agricultural designations. Of this, 8% (5 acres) is in commercial designations, 21% (15 acres) is in industrial designations, and 71% (50 acres) is in agricultural designations.

Exhibit 19. Employment land with unconstrained development capacity (Vacant, and Partially Vacant) by plan designation, Maupin UGB, 2018

Plan Designation	Total Buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant lots
City of Maupin Designations			
General Commercial	0	0	0
Recreational Commercial	5	5	1
Residential/Commercial Transition	0	0	0
Industrial	15	14	1
Agricultural	50	50	0
Total	**70**	**69**	**1**

Source: ECONorthwest analysis of data from Wasco County and State of Oregon.

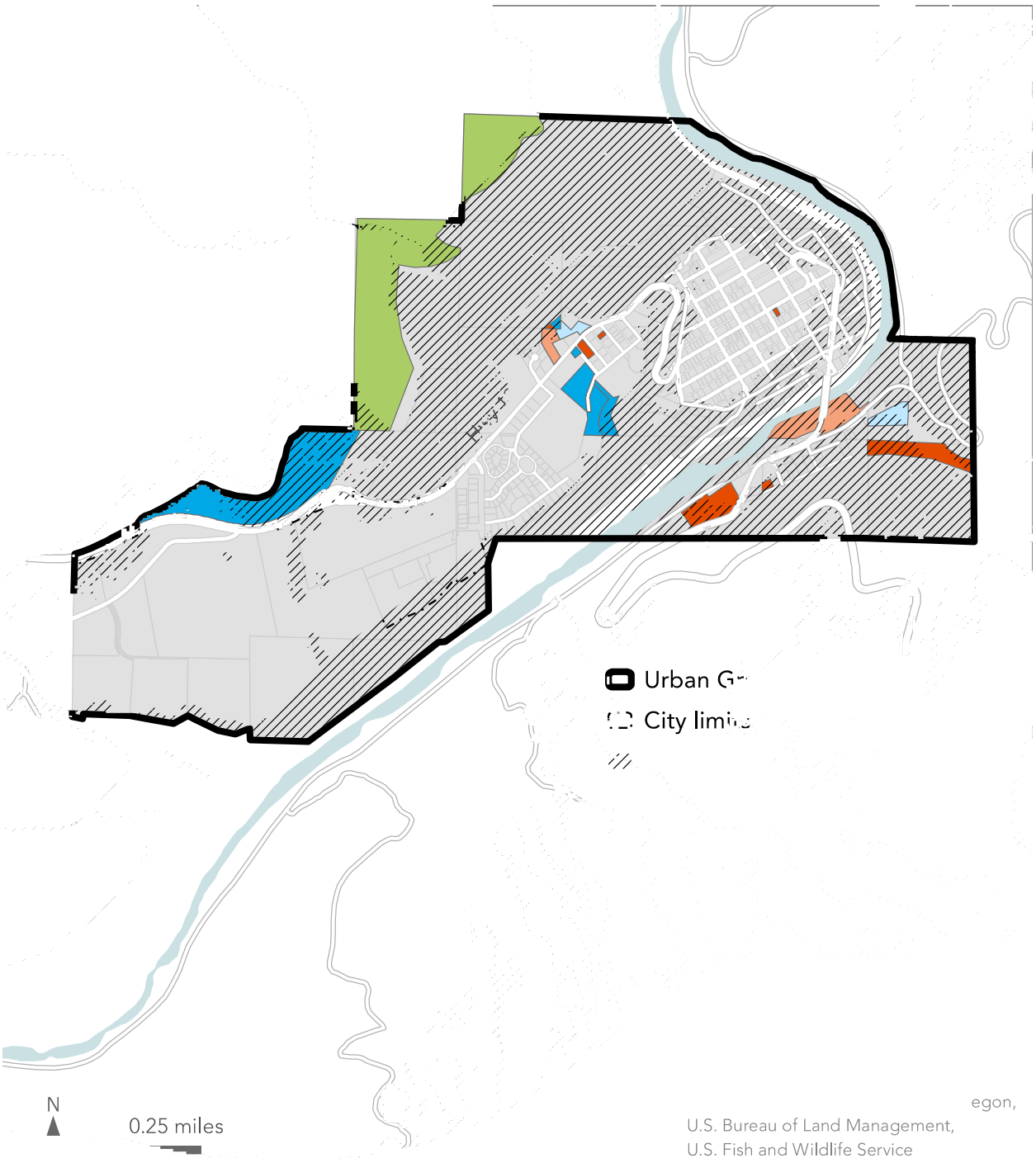
Exhibit 20 shows the size of lots by plan designations for buildable employment land. Maupin has 9 lots that are smaller than 0.5 acres (with 1.3 acres of land), 3 lots between 0.5 and 1 acres (1.9 acres of land), 4 lots between 2 and 5 acres in size (9.1 acres of land), 1 lot between 5 and 10 acres in size (7.7 acres of land) and 1 lot over 20 acres in size (50 acres of land).

Exhibit 20. Lot size by plan designation, buildable acres, Maupin UGB, 2018

	Buildable acres in taxlot						
	<0.5 acres	0.5-1 acres	1-2 acres	2-5 acres	5-10 acres	10-20 acres	>20 acres
Buildable acres on taxlots							
City of Maupin Designations							
General Commercial	0.1	0	0	0	0	0	0
Recreational Commercial	0.7	0.5	0.0	4.1	0	0	0
Residential/Commercial Transition	0	0	0	0	0	0	0
Industrial	0.5	1.3	0.0	5.0	7.7	0	0
Agricultural	0	0	0	0	0	0	50
Acreage subtotal	**1.3**	**1.9**	**0.0**	**9.1**	**7.7**	**0**	**50**
Number of taxlots with buildable acreage							
City of Maupin Designations							
General Commercial	1	0	0	0	0	0	0
Recreational Commercial	5	1	0	2	0	0	0
Residential/Commercial Transition	0	0	0	0	0	0	0
Industrial	3	2	0	2	1	0	0
Agricultural	0	0	0	0	0	0	1
Taxlot count subtotal	**9**	**3**	**0**	**4**	**1**	**0**	**1**

Source: ECONorthwest analysis of data from Wasco County and State of Oregon.

Exhibit 21. Buildable employment land by Plan Designation with development constraints, Maupin UGB, 2018



5. Land Sufficiency and Conclusions

This chapter presents conclusions about Maupin's employment land sufficiency for the 2019-2039 period. The chapter then concludes with a discussion about Maupin's 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 economic growth needs throughout the planning period.

Land Sufficiency

Exhibit 22 shows commercial and industrial land sufficiency within the Maupin UGB. It shows:

- **Vacant unconstrained land** from Exhibit 19 within the UGB. Exhibit 22 shows that Maupin has 15 gross acres of industrial land, 5 gross acres of commercial land, and 50 gross acres of agricultural land.
- **Demand for commercial and industrial land** from Exhibit 14. Exhibit 22 shows Maupin will need a total of 2 gross acres for industrial uses and 3 gross acres for commercial uses over the 2019-2039 period.

Exhibit 22 shows that Maupin has:

- A 12-acre surplus of industrial land.
- A 2-acre surplus of commercial land.
- A 50-acre surplus of agricultural land. This supply will likely meet needs for both industrial and commercial demand, resulting in a 15-acre surplus of employment land. Much of this agricultural land has limited access, making it challenging (at best) to develop. The City may evaluate swapping this land out of the UGB for land that could more easily be serviced and developed.

Exhibit 22. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, Maupin UGB, 2019-2039

Land Use Type	Land Supply (Suitable Gross Acres)	Land Demand (Gross Acres)	Land Sufficiency (Deficit)
Industrial	15	2	12
Commercial	5	3	2
Total: Industrial and Commercial	**20**	**5**	**15**
Agricultural	50	-	50

Source: ECONorthwest

A consideration of site needs and the supply of buildable land by site sizes (Exhibit 20) suggests that Maupin has sufficient sites to accommodate the forecast of growth.

- **Industrial sites.** Exhibit 15 estimates that Maupin will need six new sites for industrial businesses, generally smaller than five acres. Exhibit 20 shows that Maupin has five vacant sites smaller than one acre, two sites between two to five acres, and one nearly eight-acre site. These sites will provide opportunities for growth of the forecast of industrial employment, as well as providing for a range of site sizes. Some of the sites, however, may not be ready for development. For example, the unconstrained industrial land on the southwestern border of the UGB is difficult to service. The City may need to work with landowners to plan for extension of urban infrastructure (e.g., sewer and water service) to make development feasible.
- **Commercial sites.** Exhibit 15 estimates that Maupin will need seven new sites for commercial businesses, generally smaller than two acres. Exhibit 20 shows that Maupin has seven vacant sites smaller than one acre and two sites between two and five acres. These sites will provide opportunities for growth of the forecast of commercial employment, as well as providing for a range of site sizes. The City may need to work with landowners to plan for extension of urban infrastructure (e.g., sewer and water service) to make development feasible. In addition, the City may want to consider re-zoning some residential land along Highway 197, such as areas just north of downtown, to Residential/Commercial Transition, to provide more opportunities for commercial development along the Highway.

Conclusions and Recommendations

The conclusions about commercial and industrial land sufficiency are:

- **Maupin is forecast for growth in both commercial and industrial employment sectors.** Maupin is planning for growth of 70 new jobs in the city over the 2019 to 2039 period. About 18 of the jobs will be in industrial land uses, 25 in office and commercial services, and 14 in retail. Growth of these jobs will result in demand for about 3 gross acres of commercial land and 2 gross acres of industrial land.
- **Maupin has enough employment land to accommodate growth.** Exhibit 22 shows Maupin has enough land for employment growth over the next 20 years, with a small (2 acre) surplus of Commercial land and a surplus of 12 acres for industrial land. In addition, Maupin has 50 gross acres of land zoned Agricultural within the UGB; however, as noted it is difficult to service and access.
- **Most new businesses will be relatively small and will require small and mid-sized sites.** Maupin's businesses are generally small, averaging about 5 employees per business. Businesses with 9 or fewer employees accounted for 54% of private employment and 4 or fewer account for 20% of private employment. Growth of small businesses presents key opportunities for economic growth in Maupin. Maupin has about 12 sites smaller than 1 acre and 4 sites 2 to 5 acres in size. Maupin has one 7.7 acre industrial site. Some of the larger sites may subdivide into smaller sites.
- **Maupin will need investments in key infrastructure to accommodate substantial new growth.** The City's primary areas for investment are: (1) upgrades to the wastewater treatment plant and (2) servicing vacant land. The City is working on plans for addressing deficiencies in its wastewater treatment facility. The City will need to work with State partners to fund the necessary upgrades. In addition, the City will need to work with landowners and developers to pay for extension of water, wastewater, and transportation connections.
- **Maupin has opportunities for more efficient use of commercial and industrial lands.** Maupin could increase opportunities for redevelopment or infill development through redesignating residential land in key areas along Highway 197 (near downtown) to the Residential/Commercial Transition zone. This change would allow these properties to transition to commercial uses with changes in market demand. In addition, Maupin may have other opportunities for infill and redevelopment, especially near downtown, such as the recent development of a new city hall building on a previously underutilized site.

  Furthermore, Maupin has publicly owned land in the southwestern part of the City that is zoned low-density residential. City leaders and regional partners, including Mid-Columbia Economic Development District (MCEDD) and South Wasco Alliance, have noted that this piece of land is a primary candidate for an industrial park, likely for light-industrial uses. The City will need to work to rezone this land and create a plan for the likely compatible uses and needed infrastructure in this area.

- **Maupin's primary opportunity for employment growth is related to the Deschutes River.** Growth in businesses related to tourism will be driving by increases in use of the Deschutes River. However, change in regulations and limitations on recreation on the River may limit growth of tourism in Maupin. The River provides an amenity that is attractive to telecommuters or other businesses that can locate anywhere but want to locate in Maupin because of the access to the River.

Following are ECONorthwest's recommendations to Maupin based on the analysis and conclusions in this report.

- **Update the Economy Element of the Comprehensive Plan.** The information in the Comprehensive Plan about the economy in Maupin was last updated in the mid-2000's and presents data from the 2000 Census. This report presents an updated factual basis for the Comprehensive Plan. We recommend that the City revise its existing Comprehensive Plan policies for economic development and adopt this report as an appendix to the Comprehensive Plan.
- **Identify opportunities to diversify Maupin's economic base.** Diversifying Maupin's economy will require coordinating economic development efforts with local and regional economic development organization listed below. One important way to diversify Maupin's economic base is through attracting footloose businesses that can locate anywhere but are attracted to Maupin's amenities, including telecommuters and home-based businesses. The Maupin Broadband Project provides faster and more reliable internet connectivity that will allow businesses to locate in Maupin, while maintaining a robust internet presence.
    - *Identify champions for economic development.* Pursuing economic development will require champions for economic development. They could be led by a city economic development specialist but will also need partnerships with regional agencies to move forward and create support for economic development efforts. The champions could be elected or appointed official or city staff.
    - *Develop an Economic Development Strategy.* Diversifying Maupin's economic base will require deliberate effort and would benefit from developing an Economic Development Strategy. The strategy should focus on actions that the City can take within the next five years (some of which are suggested in this report) and should have broader focus than land use, considering issues such as workforce development, identifying education and training necessary for potential higher-wage jobs, and collaborating with business to support business growth.

- *Coordinate with partners on economic development.* Maupin has existing collaborative partnerships with public agencies, including the Maupin Chamber of Commerce, MCEDD, South Wasco Alliance, Oregon Department of Transportation (ODOT), the Department of Land Conservation and Development (DLCD), North Central Regional Solutions, Business Oregon, and the Columbia Gorge Small Business Development Center. The City should continue to build on these relationships with key partners to improve infrastructure and expand on existing resources. The Regional Solutions Team can help the City coordinate with State Agencies and help solve problems and ensure the City has good access to grants and loans to support infrastructure development.
- *Work with partners to market Maupin as a place to do business.* Maupin should work with the Chamber of Commerce, MCEDD, and Business Oregon to attract and grow businesses in Maupin. For example, the City should work with Business Oregon to ensure that vacant commercial and industrial sites (for sale or lease) are listed on the Oregon Prospector website and that Business Oregon staff are aware of key development opportunities in Maupin. These marketing efforts could also include attraction of remote workers to Maupin, using Maupin's quality of life, recreational amenities, and access to Internet as potential factors to draw telecommuters.

- **Develop policies that support entrepreneurial and small business development.** These policies include continuing to allow home occupations or working closely with small businesses to ensure they have the help they need through the planning process. The City could identify opportunities to more directly support small businesses, through working with partners to provide shared workspace (such as a small amount of office space at a public building) or through development of a small business incubator, business accelerator, makerspace, or innovation hub. Development of this type of space could help attract workers in technology industries from Bend or Portland.

  Additionally, we recognize that Cities and agencies have limited resources and capacity for this type of work. If coordinating a physical space for business incubation is not possible, then the City can work with partners to help connect entrepreneurs with small business support services that already exist or suggest ways to build upon these services. The City should also work to ensure that these opportunities are made available to all community members, including culturally specific services to historically underrepresented community members such as Native American and Spanish speaking community members. More broadly, Maupin can coordinate with the County and other regional or state partners to connect small businesses and entrepreneurs with the services, resources, and other business assistance available through the Columbia Gorge Small Business Development Center.

- **Identify actions to grow tourism and attract visitors to Maupin throughout the year.** Tourism in Maupin is focused in the late spring through early fall. Growing Maupin's economy will include increasing tourism across the year. The easiest times to increase tourism may be in the "shoulder" seasons in the mid-spring and mid-fall. Increasing tourism in the "shoulder" seasons will require giving visitors a reason to come to Maupin when they normally would not. One approach to this is through developing one or more signature events that attract people to Maupin based on things that are special in Maupin. For example, some events center around a local product such as a strawberry festival or a craft brewery festival, or locally produced arts and crafts. Maupin also shares similar attributes as Bend in its climate and recreation opportunities, thus marketing Maupin as a "mini-Bend" could help to draw more visitors to the City and surrounding areas.

  Furthermore, Maupin's strong tourism industry presents opportunities to build on other economic development goals of the City, such as creating more year-round jobs in Maupin. Specifically, Maupin could attract firms to grow industries with light-industrial uses that manufacture products related to outdoor recreation. Potential businesses could include drift boat or raft manufacturers; fly fishing rod, reel, or lure producers; camping gear and apparel manufacturers, etc. Unlike typical service-sector jobs associated with tourism industries, jobs in these industries would likely be higher wage, in addition to being year-round positions.

- **Identify opportunities for infill development, redevelopment, or rezoning.** Maupin's downtown area is generally built out, with few areas with vacant land. In Maupin's core, along Highway 197, there may be opportunities for redevelopment of existing buildings and infill development of underutilized tax lots. Redevelopment could involve substantial renovation or change of use of existing buildings or demolition of existing buildings and building of newer, more productive buildings. Infill development may be expansion of existing buildings or building new buildings adjacent to existing buildings. In both cases, new development that increases capacity for business activity is an opportunity.

  In the near-term, Maupin City staff should identify opportunities for development and infill. After identifying a specific area (or areas) of near-term focus, representatives from DLCD and Regional Solutions can assist (or provide resources for assistance) in creating an implementation plan for needed infrastructure and other improvements for these specific areas. The primary barrier to any redevelopment plan is the willingness of landowners to redevelop their property.

  Maupin also has opportunities for rezoning land to better align with the target industries and the City's broad economic development goals. Near downtown Maupin, there may be opportunity to re-zone some areas to the Residential-Commercial Transition zone to extend the commercial corridor and present more options for businesses to locate in downtown Maupin.

Industrial land at the former Mountain Fir mill site is located on Highway 197 and could be rezoned to light-industrial or commercial to better align with the City's goals to grow industries in these types of uses. Additionally, rezoning the publicly owned land in the southwestern part of Maupin's UGB that is currently zoned low-density residential would provide further potential for rezoning to industrial or light-industrial. This land is better suited for industrial uses than the current industrial land to the north of Highway 197 on the northwest border of the UGB, which is difficult to service. Regional partners, including MCEDD and South Wasco Alliance, will be key partners to include in planning for infrastructure to newly rezoned industrial areas, which could provide needed space for businesses in South Wasco County, in the form of small industrial sites or a business park.

- **Explore options for UGB swap of agricultural land in north Maupin.** Maupin has about 50 vacant unconstrained acres of land zoned Agriculture within its UGB. This area is inaccessible via public roads within the UGB and would be difficult to service with necessary infrastructure (such as water and sewer services) for most employment uses. The City may explore the process of completing a swap of land for other areas currently outside of the UGB, likely areas with improved access to infrastructure, such the major transportation corridor Highway 197. The primary barrier to implementation will be landowner willingness.

  A potential area to swap land *may* be to the southwest of Maupin's current UGB. If coupled with a rezone of the existing publicly owned low-density residential land in this area to a light-industrial use, then this would create considerable opportunities for businesses to locate and expand in Maupin. The planning process for this land should consider the compatibility of these potential employment uses in this area with the existing housing or commercial uses in areas along Highway 197.

- **Monitor and replenish the supply of commercial and industrial land on a regular basis.** The buildable lands inventory identifies the existing development status of employment land in Maupin. While Maupin will not completely update the buildable lands inventory on an annual basis, City staff should still monitor the development status of these employment lands and replenish the supply of land ready for development, as possible.

- **Support development of vacant and potentially redevelopable sites through working with landowners to ensure that sites are adequately serviced with municipal infrastructure.** Aside from ensuring that there is sufficient land to support employment growth, one of the most important ways that the City can support economic development is through planning for and developing infrastructure (e.g., roads, water, sanitary sewer, and storm water systems). We recommend that the City align its goals for economic development with infrastructure development through updates to the City's Capital Improvements Plan.
    - Maupin should work with landowners of key development sites to assess whether the landowners are willing to develop or sell their land. For key development or redevelopment sites, the City can work with landowners to make land development-ready, most notably by planning for infrastructure extensions to provide services to the sites.
    - Maupin should continue to seek support for infrastructure development from organizations such as Business Oregon, ODOT, USDA, and other sources of funding. Existing issues with infrastructure systems include the elevation of the water tower reservoir, local street upgrades, powerline upgrades, and overall increased pressure on all infrastructure systems during the peak tourism season.
- **Identify opportunities to support the creation, growth, development, and retention of businesses in Maupin.** Retention and expansion of new and existing businesses, including those that create destinations and experiences for residents and visitors, is one of Maupin's key opportunities for economic growth. In addition, Maupin provides opportunities for development of small businesses, growth of entrepreneurs, and telecommuters. The City can support businesses by understanding businesses' opportunities for growth and expansion and lowering or eliminating the barriers in Maupin that limit growth and expansion. Some barriers are beyond control of the City, such as access to capital.

Appendix A. National, State, and Regional and Local Trends

National Trends

Economic development in Maupin 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 real GDP to grow by 3.1% in 2018, 2.4% in 2019, and settle just under 2% growth for the rest of the decade (through 2028), assuming current laws remain intact.[18]

  The unemployment rate is expected to decrease to 3.6% by the end of 2018 and fall to 3.4% in 2019. Thereafter, the CBO predicts the unemployment rate will rise to 3.8% in 2020 and approach 4.8% through the end of the forecast period (2028).[19]

  As demand for labor increases and market competition for workers pushes the growth of hourly wage compensation, the CBO projects "the increase in labor compensation, in turn, dampens demand for labor, slowing employment growth and, by 2020, diminishing the positive employment gaps."[20]

- **The aging of the Baby Boomer 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 61 million in 2017 to over 86 million in 2035, a 41% increase. However, due to lower-birth rate replacement generations, the number of covered workers is only expected to increase 9% over the same time period, from 174 million to almost 190 million in 2035. Currently, there are 35 Social Security beneficiaries per 100 covered workers in 2014 but by 2035 there will be 46 beneficiaries per 100 covered workers. This will increase the percent of the federal budget dedicated to Social Security and Medicare.[21]

  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

[18] Congressional Budget Office. *An Update to the Economic Outlook: 2018 to 2028. August 2018*. Retrieved from: https://www.cbo.gov/system/files?file=2018-08/54318-EconomicOutlook-Aug2018-update.pdf.

[19] *Ibid*.

[20] *Ibid*.

[21] The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2015, *The 2018 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, June 5, 2018. Retrieved from: https://www.ssa.gov/oact/tr/2018/tr2018.pdf.

about 30% in 1992.[22] 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. In 2017, this share reached 5.5%, or a 90% increase over the 2000 to 2017 period. Over the same seventeen-year period, workers 45 to 64 years increased by about 7%.[23]

- **Need for replacement workers.** The need for workers to replace retiring Baby Boomers will outpace job growth. According to the Bureau of Labor Statistics, total employment in the United States will grow by about 11.5 million jobs over 2016 to 2026. Annually, they estimate there will be 18.7 million occupational openings over the same period. This exhibits the need for employees over the next decade as the quantity of openings per year is large relative to expected employment growth. About 71% of annual job openings are in occupations that do not require postsecondary education.[24]
- **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 registered nurses, software developers, general and operations managers, accountants and auditors, market research analysts and marketing specialists, and management analysts. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for approximately 71% of all new jobs by 2026. These occupations typically have lower pay than occupations requiring an academic degree.[25]

  The national median income for people over the age of 25 in 2017 was about $47,164. Workers without a high school diploma earned $20,124 less than the median income, and workers with a high school diploma earned $10,140 less than the median income. Workers with some college earned $6,916 less than median income, and workers with a bachelor's degree earned $13,832 more than median. Workers in Oregon experience the same patterns as the nation but pay is generally lower in Oregon than the national average.[26]
- **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

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

[23] Analysis of 2000 Decennial Census data, 2010 U.S. Census American Community Survey, 1-Year Estimates, and 2017 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.

[24] "Occupational Employment Projections to 2016-2026," Bureau of Labor Statistics, 2018.

[25] "Occupational Employment Projections to 2016-2026," Bureau of Labor Statistics, 2018.

[26] Bureau of Labor Statistics, Employment Projections, March 2018. http://www.bls.gov/emp/ep_chart_001.htm

industries. These include wireless telecommunications carriers, computer and peripheral equipment manufacturing, electronics and appliance stores, and commercial equipment manufacturing wholesalers.[27]

Since the end of the recession (or 2010), labor productivity has increased across a handful of large sectors but has also decreased in others. In wholesale trade, productivity—measured in output per hour—increased by 19% over 2009 to 2017. Retail trade gained even more productivity over this period at 25%. Food services, however, have remained stagnant since 2009, fluctuating over the nine-year period and shrinking by 0.01% over this time frame. Additionally, the Bureau of Labor Statistics reports multifactor productivity in manufacturing has been slowing down 0.3% per year over the 2004 to 2016 period. Much of this, they note, is due to slowdown in semiconductors, other electrical component manufacturing, and computer and peripheral equipment manufacturing.[28]

- **The importance of entrepreneurship and growth in small businesses.** According to the 2018 Small Business Profile from the US Small Business Office of Advocacy, small businesses account for over 99 percent of total businesses in the United States, and their employees account for nearly 50% of American workers.[29] The National League of Cities suggests ways that local governments can attract entrepreneurs and increase the number of small businesses including strong leadership from elected officials; better communication with entrepreneurs, especially about the regulatory environment for businesses in the community; and partnerships with colleges, universities, small business development centers, mentorship programs, community groups, businesses groups, and financial institutions.[30]
- **Increases in automation across sectors.** Automation is a long-running trend in employment, with increases in automation (and corresponding increases in productivity) over the last century and longer. The pace of automation is increasing, and the types of jobs likely to be automated over the next 20 years (or longer) is broadening. Lower paying jobs are more likely to be automated, with potential for automation of more than 80% of jobs paying less than $20 per hour over the next 20 years. About 30% of jobs paying $20 to $40 per hour and 4% of jobs paying $40 or more are at risk of being automated over the next 20 years.[31]

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[27] Brill, Michael R. and Samuel T. Rowe, "Industry Labor Productivity Trends from 2000 to 2010." Bureau of Labor Statistics, *Spotlight on Statistics,* March 2013.

[28] Michael Brill, Brian Chanksy, and Jennifer Kim. "Multifactor productivity slowdown in U.S. manufacturing," *Monthly Labor Review*, U.S. Bureau of Labor Statistics, July 2018. Retrieved from: https://www.bls.gov/opub/mlr/2018/article/multifactor-productivity-slowdown-in-us-manufacturing.htm.

[29] US Small Business Office of Advocacy. 2018 Small Business Profile. https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf

[30] National League of Cities "Supporting Entrepreneurs and Small Businesses" (2012). https://www.nlc.org/supporting-entrepreneurs-and-small-business

[31] Executive Office of the President. (2016). Artificial Intelligence, Automation, and the Economy.

Low- to middle-skilled jobs that require interpersonal interaction, flexibility, adaptability, and problem solving will likely persist into the future as will occupations in technologically lagging sectors (e.g. production of restaurant meals, cleaning services, hair care, security/protective services, and personal fitness).[32] This includes occupations such as (1) recreational therapists, (2) first-line supervisors of mechanics, installers, and repairers, (3) emergency management directors, (4) mental health and substance abuse social workers, (5) audiologists, (6) occupational therapists, (7) orthotists and prosthetists, (8) healthcare social workers, (9) oral and maxillofacial surgeons, and (10) first-line supervisors of firefighting and prevention workers. Occupations in the service and agricultural or manufacturing industry are most at-risk of automation because of the manual-task nature of the work.[33,34,35] This includes occupations such as (1) telemarketers, (2) title examiners, abstractors, and searchers, (3) hand sewers, (4) mathematical technicians, (5) insurance underwriters, (6) watch repairers, (7) cargo and freight agents, (8) tax preparers, (9) photographic process workers and processing machine operators, and (10) accounts clerks.[36]

- **Consolidation of Retail.** Historical shift in retail businesses, starting in the early 1960s, was the movement from one-off, 'mom and pop shops' toward superstores and the clustering of retail into centers or hubs. Notably, we still see this trend persist; for example, in 1997, the 50 largest retail firms accounted for about 26% of retail sales and by 2007, they accounted for about 33%.[37] The more recent shift began in the late 1990s, where technological advances have provided consumers the option to buy goods through e-commerce channels. The trend toward e-commerce has become increasingly preferential to millennials and Generation X, who are easier to reach online and are more responsive to digital ads than older generations.[38] Since 2000, e-commerce sales grew from 0.9% to 6.4% (2014) and are forecasted to reach 12% by 2020. It is reasonable to expect this trend to continue. With it has come closures of retail stores. By 2027 for example, an estimated 15% of about 1,050 U.S. malls in smaller markets will close, impacting local employment levels, local government revenue streams (tax dollars), and neighborhood character.

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[32] Autor, David H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. Journal of Economic Perspectives, Volume 29, Number 3, Summer 2015, Pages 3–30.

[33] Frey, Carl Benedikt and Osborne, Michael A. (2013). The Future of Employment: How Susceptible Are Jobs to Computerisation? Oxford Martin School, University of Oxford.

[34] Otekhile, Cathy-Austin and Zeleny, Milan. (2016). Self Service Technologies: A Cause of Unemployment. International Journal of Entrepreneurial Knowledge. Issue 1, Volume 4. DOI: 10.1515/ijek-2016-0005.

[35] PwC. (n.d.). Will robots really steal our jobs? An international analysis of the potential long-term impact of automation.

[36] Frey, Carl Benedikt and Osborne, Michael A. (2013). The Future of Employment: How Susceptible Are Jobs to Computerisation? Oxford Martin School, University of Oxford.

[37] Hortaçsu, Ali and Syverson, Chad. (2015). The Ongoing Evolution of US Retail: A Format Tug-of-War. Journal of Economic Perspectives, Volume 29, Number 4, Fall 2015, Pages 89-112.

[38] Pew Research Center (2010b). Generations 2010. Retrieved Online at: http://www.pewinternet.org/Reports/2010/Generations-2010.aspx

While it is unclear what impact e-commerce will have on employment and brick and mortar retail, it seems probable that e-commerce sales will continue to grow, shifting business away from some types of retail. Over the next decades, communities must begin considering how to redevelop and reuse retail buildings in shopping centers, along corridors, and in urban centers.

The types of retail and related services that remain will likely be sales of goods that people prefer to purchase in person or that are difficult to ship and return (e.g., large furniture), specialty goods, groceries and personal goods that maybe needed immediately, restaurants, and experiences (e.g., entertainment or social experiences).

- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. High-quality natural resources continue to be important in some states, especially in the Western U.S. Increases in the population and in households' incomes, plus changes in tastes and preferences have dramatically increased demands for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such amenities contribute to a region's quality of life and play an important role in attracting both households and firms.[39]

- **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 through 2050, total energy consumption will increase with rising population. Energy consumption is expected to grow primarily from industrial (0.9%) and, to a lesser extent, commercial users (0.4%). Residential consumption is forecasted to stagnate (0.0%), and transportation will slightly decrease (-0.1%). This decrease in energy consumption for transportation is primarily due to increased federal standards and increased technology for energy efficiency in vehicles. Going forward through the projection period, potential changes in federal laws (such as decreases in car emissions) leave energy demand somewhat uncertain.

  Energy consumption by type of fuel is expected to change over the planning period. By 2050, the U.S. will continue to shift from crude oil towards natural gas and renewables. For example, from 2017 to 2050, the Energy Information Administration projects that U.S. overall energy consumption will average a 0.4% annual growth rate, while consumption of renewable sources grows at 1.4% per year. With increases in energy efficiency, strong domestic production of energy, and relatively flat demand for energy by some industries, the U.S. will be able to be a net exporter of energy over the 2017 to 2050 period. Demand for electricity is expected to increase, albeit slowly, over 2017 to 2050 as population grows and economic activity increases.[40]

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[39] 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.

[40] Energy Information Administration, 2018, *Annual Energy Outlook 2018 with Projections to 2050*, U.S. Department of Energy, February 2018. https://www.eia.gov/outlooks/aeo/pdf/AEO2018.pdf. Note, the cited growth rates are shown

- **Impact of rising energy prices on commuting patterns.** As energy prices increase over the planning period, energy consumption for transportation will decrease. These increasing energy prices may decrease willingness to commute long distances, though with expected increases in fuel economy, it could be that people commute further while consuming less energy.[41] Over 2019 to 2035, the U.S. Energy Information Administration estimates in its forecast that the decline in transportation energy consumption a result of increasing fuel economy more than offsets the total growth in vehicle miles traveled (VMT). VMT for passenger vehicles is forecasted to increase through 2050.

- **Potential impacts of global climate change.** The consensus among the scientific community that global climate change is occurring expounds important ecological, social, and economic consequences over the next decades and beyond.[42] 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.[43]

  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, (5) increase sea level, (6) increase wildfire frequency, and (7) increase forest vulnerability to tree disease.[44] These changes are also likely to reduce winter snowpack and shift the timing of spring runoff earlier in the year.[45]

  The Oregon Climate Change Research Institute (OCCRI) evaluated potential scenarios for "Climate Change Influence on Natural Hazards in Oregon Counties" in 2018. OCCRI specifically focused on Counties in the Gorge and Eastern Oregon and evaluated the potential increased or decreased risk for natural hazards such as heat waves, cold waves, heavy rains, river flooding, drought, wildfire, poor air quality, windstorms, dust storms,

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in the Executive Summary and can be viewed here: https://www.eia.gov/outlooks/aeo/data/browser/#/?id=2-AEO2018&cases=ref2018&sourcekey=0.

[41] Energy Information Administration, 2018, *Annual Energy Outlook 2018 with Projections to 2050*, U.S. Department of Energy, February 2018.

[42] U.S. Global Change Research Program. *National Climate Assessment*. 2018. https://nca2018.globalchange.gov/

[43] Oregon Global Warming Commission. *2018 Biennial Report to the Legislature.* 2018. https://www.keeporegoncool.org/reports/

[44] U.S. Global Change Research Program. *National Climate Assessment*. "Chapter 24: Northwest." 2018. https://nca2018.globalchange.gov/chapter/24/

[45] 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.

increased invasive species, and loss of wetland ecosystems. Across the eight counties evaluated, the hazards most likely to increase with the effects of climate change are heat waves, heavy rains, river flooding, wildfires, increased invasive species, and loss of wetland ecosystems.[46]

These anticipated changes point toward some of the ways that climate change is likely to impact ecological systems and the goods and services they provide. There is considerable uncertainty about how long it would take for some of the impacts to materialize and the magnitude of the associated economic consequences. Assuming climate change proceeds as today's models predict, however, some of the potential economic impacts of climate change in the Pacific Northwest will likely include:[47]

- *Potential impact on agriculture and forestry.* Climate change may impact Oregon's agriculture through changes in growing season, temperature ranges, and water availability.[48] Climate change may impact Oregon's forestry through an increase in wildfires, a decrease in the rate of tree growth, a change in the mix of tree species, and increases in disease and pests that damage trees.[49]
- *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,[50] (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.

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

[46] Oregon Climate Change Research Institute. *Climate Change Influence on Natural Hazards in Oregon Counties.* August 2018 and *Fourth Oregon Climate Assessment Report*. January 2019.

[47] 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.

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

[49] "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.

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

economic conditions (as the Goal 9 requirements intend) and does not attempt to predict the impacts of short-run national business cycles on employment or economic activity.

State Trends

Short-Term Trends

According to the Oregon Office of Economic Analysis (OEA), the Oregon economy "continues to hit the sweet spot."[51] They also report, "job gains are enough to match population growth and absorb the workers coming back into the labor market. Wages are rising faster than in the typical state, as are household incomes."[52] Though they note recent growth is slower than growth experienced several years ago.

Wages in Oregon continue to remain below the national average, but they are at its highest point relative to the early 1980s. The OEA reports that new Oregon Employment Department research "shows that median hourly wage increase for Oregon workers since 2014 has been 3.1 percent annually for the past three years."[53] These wage increases are "substantially stronger for the Oregonians who have been continually employed over the last three years."[54]

By the end of 2018, the OEA forecasts 41,700 jobs will be added to Oregon's economy. This is an approximate 2.2% annual growth in total nonfarm employment relative to 2017 levels.[55] The leisure and hospitality, construction, professional and business services, and health services industries are forecasted to account for well over half of the total job growth in Oregon for 2018. Oregon continues to have an advantage in job growth compared to other states, due to its industrial sector and in-migration flow of young workers in search of jobs.

The housing market continues to recover as Oregon's economy improves. Oregon is seeing an increase in household formation rates, which is good for the housing market as this will "help drive up demand for new houses".[56] Though younger Oregonians are tending to live at home with their parents longer, the aging Millennial generation (from their early 20s to mid-to-late 30s) and the state's increase in migration will drive demand for homes in the coming years. Housing starts in 2018 are on track to just under 22,000 units annually. This is "driven in large part by a decline in multifamily permit activity."[57] Through 2020, the OEA forecasts moderate to strong housing growth. Beyond this time frame, the OEA forecasts an average growth of 24,000

[51] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2018. Vol. XXXVIII, No. 3, page 2.

[52] *Ibid*, page 2.

[53] *Ibid*, page 5.

[54] *Ibid*, page 5.

[55] *Ibid*, page 13.

[56] *Ibid*, page 13.

[57] *Ibid*, page 13.

units per year to satisfy the demand for Oregon's growing population and to make up for the under development of housing post-recession.[58]

The Oregon Index of Leading Indicators (OILI) has grown quite rapidly since January 2017. The leading indicators showing improvement are: consumer sentiment, industrial production, initial claims, the manufacturing purchasing managers index (PMI), new incorporations, semiconductor billings, and withholdings. The indicators that are slowing include air freight and the Oregon Dollar Index and the indicators not improving include help wanted ads and housing permits.[59]

Oregon's economic health is dependent on the export market. The value of Oregon exports in 2017 was $21.9 billion. The countries that Oregon exports the most to are China (18% of total Oregon exports), Canada (11%), Malaysia (11%), South Korea (9%), Japan (8%), and Vietnam (7%).[60] With straining trade relations overseas, specifically with China, Oregon exports are left potentially vulnerable, as China is a top destination for Oregon exports.[61] An economic slowdown across many parts of Asia will have a spillover effect on the Oregon economy. Furthermore, with the United States' withdrawal from the Trans-Pacific Partnership in January 2017, it is unclear how much Pacific Northwest trade will be impacted in the years to come.

Long-term Trends

State, regional, and local trends will also affect economic development in Maupin 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 2017, Oregon's population increased by about 1.3 million, 66% of which was from people moving into Oregon (net migration). The average annual increase in population from net migration over the same time period was just over 33,200. During the early- to mid-1990's, Oregon's net migration was highest, reaching over 60,000 in 1991, with another smaller peak of almost 42,100 in 2006. In 2017, net migration reached just over 56,800 persons. Oregon has not seen negative net migration since a period of negative net migration in the early- to mid-1980's.[62] Oregon's population has continued to get more ethnically and racially diverse, with Latino population growing from 8% of the population in 2000 to 12% of the

[58] *Ibid*, page 13.

[59] *Ibid*, page 10.

[60] United States Census Bureau. State Exports from Oregon, 2014-2017. Retrieved from: https://www.census.gov/foreign-trade/statistics/state/data/or.html.

[61] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2018. Vol. XXXVIII, No. 3, page 14.

[62] Portland State University Population Research Center. 2017 Annual Population Report Tables. April 2017. Retrieved from: https://www.pdx.edu/prc/population-reports-estimates.

population in 2012-2016. The non-white population grew from 13% of the population to 15% of the population over the same period. The share of Latino and non-white population decreased in Maupin since 2000.

- **Forecast of job growth.** Total nonfarm employment is expected to increase from 1.91 million in 2018 to just over 1.99 million in 2022, an increase of 80,000 jobs. The industries with the largest growth are forecasted to be Professional and Business Services, Health Services, and Retail, accounting for 61% of employment growth.[63]
- **Continued importance of manufacturing to Oregon's economy.** Oregon's exports totaled $19.4 billion in 2008, nearly doubling since 2000, and reached almost $22 billion in 2017. The majority of Oregon exports go to countries along the Pacific Rim, with China, Canada, Malaysia, South Korea, and Japan as top destinations. Oregon's largest exports are tied to high tech and mining, as well as agricultural products.[64] Manufacturing employment is concentrated in five counties in the Willamette Valley or Portland area: Washington, Multnomah, Lane, Clackamas, and Marion Counties.[65]
- **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.[66]
- **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 2017, the average annual wage in Oregon was $51,117, and the median household income was $60,212 (compared to national average wages of $53,621 in 2017, and national household income of $60,336).[67] Total personal income (all classes of income, minus Social Security contributions, adjusted for inflation) in Oregon is expected to increase by 22%, from

[63] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2018. Vol. XXXVIII, No. 3, page 38.

[64] United States Census Bureau. State Exports from Oregon, 2014-2017. Retrieved from: https://www.census.gov/foreign-trade/statistics/state/data/or.html.

[65] Oregon Employment Department. *Employment and Wages by Industry (QCEW)*. 2017 Geographic Profile, Manufacturing (31-33). Retrieved from: qualityinfo.org.

[66] Although Oregon's economy has diversified since the 1970's, natural resource-based manufacturing accounts for about 38% of employment in manufacturing in Oregon in 2017, with the most employment in Food Manufacturing (nearly 30,000) and Wood Product Manufacturing (nearly 23,000) (QCEW).

[67] Average annual wages are for "Total, all industries," which includes private and public employers. Oregon Quarterly Census of Employment and Wages, 2017. Retrieved from: https://www.qualityinfo.org; Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2017; Total, U.S. Census American Community Survey 1-Year Estimates, 2017, Table B19013.

$202.2 billion in 2018 to $247.5 billion in 2022.[68] Per capita income is expected to increase by 16% over the same time period, from $48,000 (thousands of dollars) in 2018 to $55,800 in 2022 (in nominal dollars).[69]

- **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 was from small businesses).

  In 2017 small businesses (those with 100 or fewer employees) accounted for 95% of all businesses and 66% of all private-sector employment in Oregon. Said differently, most businesses in Oregon are small (in fact, 78% of all businesses have fewer than 10 employees), but the largest share of Oregon's employers work for large businesses.

  The average annualized payroll per employee for small businesses was $37,149 in 2015, which is considerably less than that for large businesses ($54,329) and the statewide average for all businesses ($47,278).[70] Younger workers are important to continue 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 startup companies were created each month; 29% of these companies were founded by people between 20 to 34 years of age.[71]

- **Entrepreneurship in Oregon.** The creation of new businesses is vital to Oregon's economy as their formations generate new jobs and advance new ideas and innovations into markets. They also can produce more efficient products and services to better serve local communities. According to the Kauffman Index, Oregon ranked 13th in the country in 2017 for its startup activity, a measurement comprised of three statistics: rate of new entrepreneurs, opportunity share of new entrepreneurs, and startup density.[72] This ranking is higher than its 2016 rank of 15. Oregon's rate of new entrepreneurs (the percent of adults that became an entrepreneur in a given month) was in steady decline post-recession, but since 2013, it has gradually recovered to about 0.34% in 2016. This rate is still well below Oregon's pre-recession peak of 0.43% in 2000, but its recent growth broadly exhibits business ownership and formation is increasing.

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[68] Office of Economic Analysis. Oregon Economic and Revenue Forecast, September 2018. Vol. XXXVIII, No. 3, page 39.

[69] *Ibid*, page 39.

[70] U.S Census Bureau, 2015 Statistics of U.S. Businesses, Annual Data, Enterprise Employment Size, U.S and States. https://www.census.gov/data/tables/2015/econ/susb/2015-susb-annual.html.

[71] 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.

[72] Kauffman Foundation. *The Kauffman Index, Oregon*. Retrieved from: https://www.kauffman.org/kauffman-index/profile?loc=41&name=oregon&breakdowns=growth|overall,startup-activity|overall,main-street|overall.

Moreover, in 2018, the Oregon Office of Economic Analysis reports new business applications in Oregon are increasing. They do, however, simultaneously note startup businesses "are a smaller share of all firms than in the past."[73] Though this measurement of economic activity does not constitute a full understanding of how well entrepreneurship is performing, it does provide an encouraging signal.

[73] Lehner, Josh. (August 2018). "Start-Ups, R&D, and Productivity." Salem, OR: Oregon Office of Economic Analysis. Retrieved from: https://oregoneconomicanalysis.com/2015/03/13/start-ups-and-new-business-formation/.

Regional and Local Trends

Throughout this section and the report, Maupin is compared to Wasco County and the State of Oregon. These comparisons are to provide context for changes in Maupin's socioeconomic characteristics.

Availability of Labor

The availability of trained workers in Maupin 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 Maupin over the next 20 years include its growth in its overall population, growth in the senior population, and commuting trends.

Population Change

Population growth in Oregon tends to follow economic cycles. Oregon's population grew from 2.8 million people in 1990 to 4.1 million people in 2017, an increase of almost 1,300,000 people at an average annual rate of 1.4%. Oregon's growth rate slowed to 1.1% annual growth between 2000 and 2017.

Maupin's population decreased, on an annual average basis, over the 1990 to 2017 period, by 31 residents. Wasco County's population grew over 1990 to 2017, though its annual average growth rate was slower relative to Oregon, with a rate of 0.8% compared to 1.4%.

Exhibit 23. Population Growth, Maupin, Wasco County, and Oregon, 1990 – 2017

Geography					Change, 1990 - 2017		
	1990	2000	2010	2017	Number	Percent	AAGR
Maupin	456	411	525	425	-31	-7%	-0.3%
Wasco County	21,683	23,791	24,280	27,100	5,417	25%	0.8%
Oregon	2,842,337	3,421,399	3,844,195	4,141,100	1,298,763	46%	1.4%

Source: U.S. Census Bureau, 1990, 2000, and 2010. Portland State University Population Estimates, 2017.

Age Distribution

The number of people aged 65 and older in the U.S. is expected to increase by nearly three-quarters by 2050, while the number of people under age 65 will only grow by 16%. 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.[74]

Exhibit 24 through Exhibit 27 show the following trends:

- Maupin's population is aging faster than the populations of both Wasco County and Oregon per their respective median ages. During the 2012-2016 period, 44% of Maupin residents residing in Maupin were 60 years and older (Exhibit 26). This suggests that Maupin is attracting more people in their later adult lives and those over 65 years of age. This, in turn, affects potential availability of mid-career workers.
- Wasco County's population is expected to continue to age, with people 60 years and older increasing from 18% of the population in 2016 to 24% of the population in 2035. This is consistent with statewide trends. Maupin and Wasco County may continue to attract mid-life and older workers over the planning period. While the share of retirees in these respective areas may increase over the next 20 years, availability of people nearing retirement (e.g., 55 to 70 years old) is likely to increase. People in this age group may provide sources of skilled labor, as people continue to work until later in life. These skilled workers may provide opportunities to support business growth in these areas.

Maupin's median age has increased by about 12.4 years since 2000, a change much larger than Wasco County's change of 1.7 years and Oregon's change of 2.8. This increase suggests Maupin is attracting more workers in their later adult lives and more people over 65 years of age.

Exhibit 24. Median Age, Maupin, Wasco County, and Oregon, 2000 to 2012-2016

Source: U.S. Census Bureau, 2000 Decennial Census, Table P013; American Community Survey 2012-2016 5-year estimates, Table B01002.

2000	43.9 Maupin	39.3 Wasco County	36.3 Oregon
2012-16	56.3 Maupin	41.6 Wasco County	39.1 Oregon

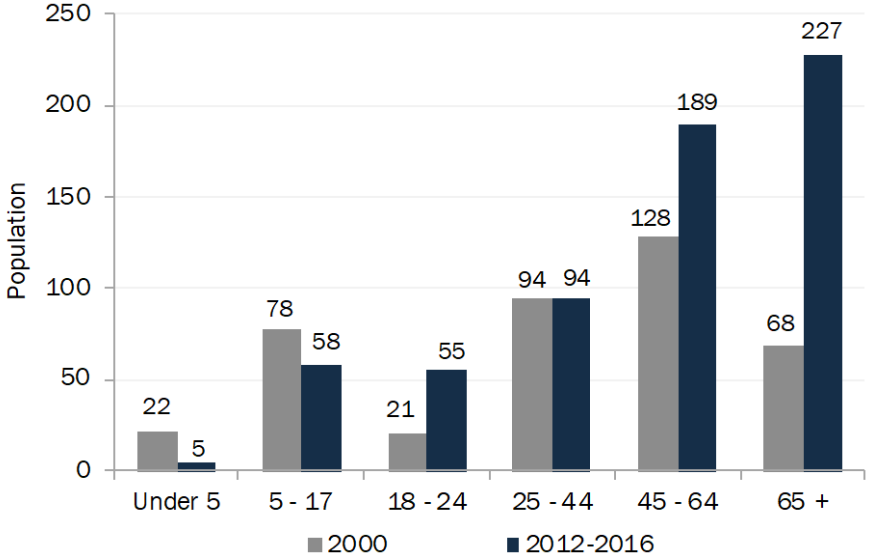
[74] The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2017, *The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, July 13, 2017. *The Budget and Economic Outlook: Fiscal Years 2018 to 2028*, April 2018.

Over 2000 to 2012-2016, Maupin's largest population increase was for those aged 65 and older.

This is consistent with statewide trends.

Exhibit 25. Maupin Population Change by Age Group, 2000 to 2012-2016

Source: U.S. Census Bureau, 2000 Summary File; American Community Survey 2012-2016 5-year estimates, Table B01001.



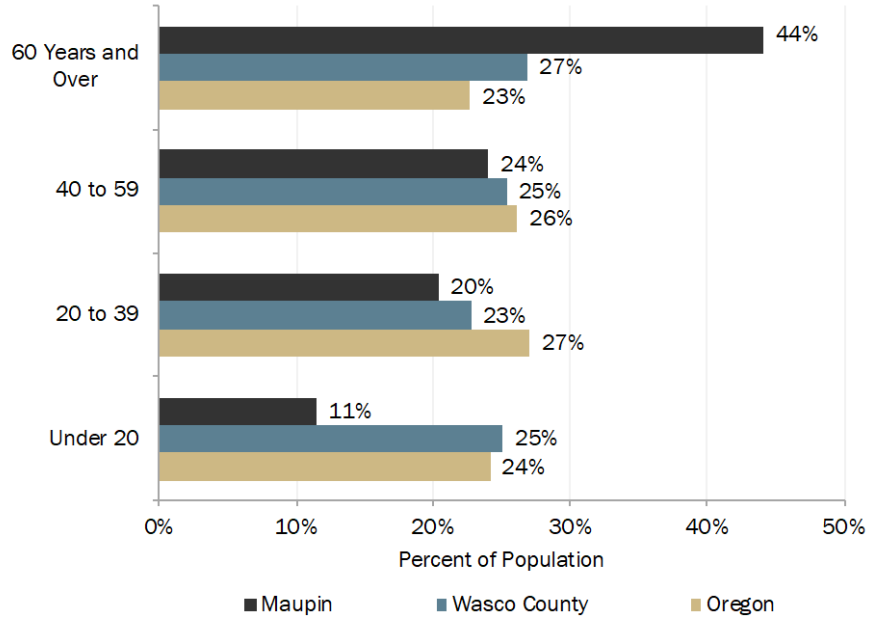
During the 2012-2016 period, 44% of Maupin residents were over 60 years of age.

This proportion of older residents was nearly double that of the State.

Additionally, the proportion of Maupin residents under 20 years of age was much smaller relative to Wasco County and Oregon.

Exhibit 26. Population Distribution by Age, Maupin, Wasco County, and Oregon, 2012-2016

Source: U.S. Census Bureau, American Community Survey, 2012-2016 5-year estimate, Table B01001.

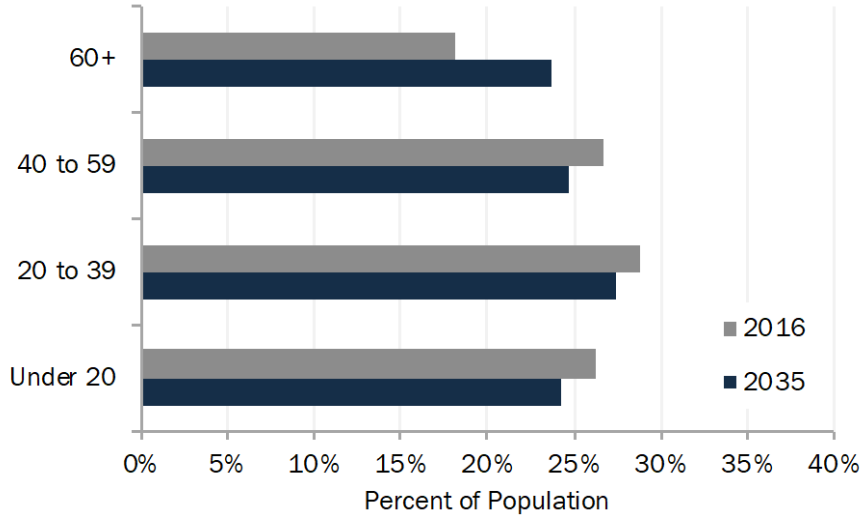


By 2035, Wasco County will have a larger share of residents older than 60 than it does today.

The share of residents aged 60 years and older will account for 18% of Wasco County's population, compared to 24% in 2016.

Exhibit 27. Population Growth by Age Group, Wasco County, 2016 - 2035

Source: Oregon Population Forecast, 2016.



Race and Ethnicity

Maupin, unlike Oregon overall, is becoming less racially and ethnically diverse. The Hispanic and Latino as well as non-white populations decreased in Maupin between 2000 and 2012-2016. The Hispanic and Latino population in Maupin decreased from 5% to less than 1%, while the non-white population decreased from 11% to 3%. The non-white population in Wasco County also decreased from 13% to 12%, while the Hispanic and Latino population increased from 9% to 17% between 2000 and 2012-2016. While Maupin is less ethnically and racially diverse than the State, providing culturally specific services to Native American and Spanish-speaking community members can help improve their participation in the workforce and economy.

The non-white population is defined as the share of the population that identifies as another race other than "White alone" according to Census definitions. The small population in Maupin results in small sample sizes, and thus margin of error is considerable for the estimate of these populations.

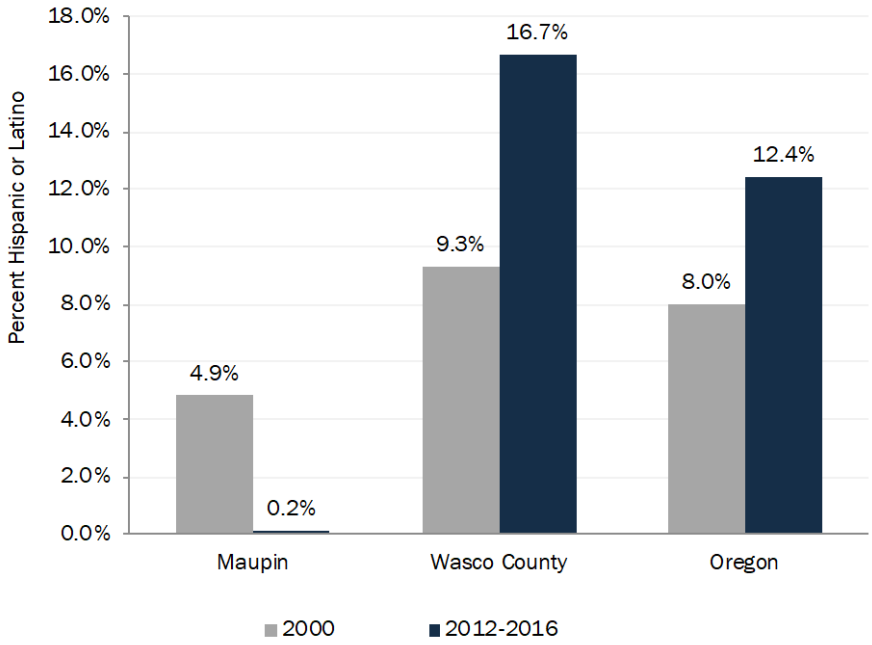
Exhibit 28 and Exhibit 29 show the change in the share of Hispanic and Latino and non-white populations in Maupin, compared to Wasco County and Oregon, between 2000 and 2012-2016. The group with the largest share of the non-white population in 2012-2016 was those that identify as "two or more races," representing 2% of the population in Maupin.

Maupin's Hispanic / Latino population decreased between 2000 and 2012-2016 from 5% to less than 1%.

Maupin and Wasco County are less ethnically diverse than the State.

Exhibit 28. Hispanic or Latino Population as a Percent of the Total Population, 2000, 2012-2016

Source: U.S. Census Bureau, 2000 Decennial Census Table P008, 2012-2016 ACS Table B03002.



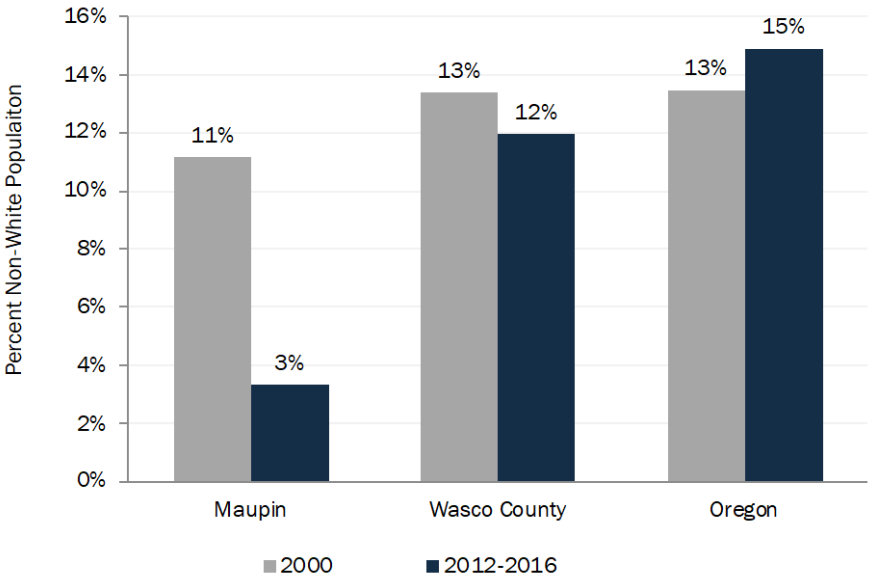
The non-white population in Maupin decreased between 2000 and 2012-2016.

Maupin is less racially diverse than Wasco County and the State, with the non-white population at 3% compared to 12% in Wasco County and 15% in Oregon

The group with the largest share of the non-white population was "two or more races" representing 3% of the population in Maupin.

Exhibit 29. Non-White Population as a Percent of the Total Population, 2000, 2012-2016

Source: U.S. Census Bureau, 2000 Decennial Census Table P007, 2012-2016 ACS Table B02001.



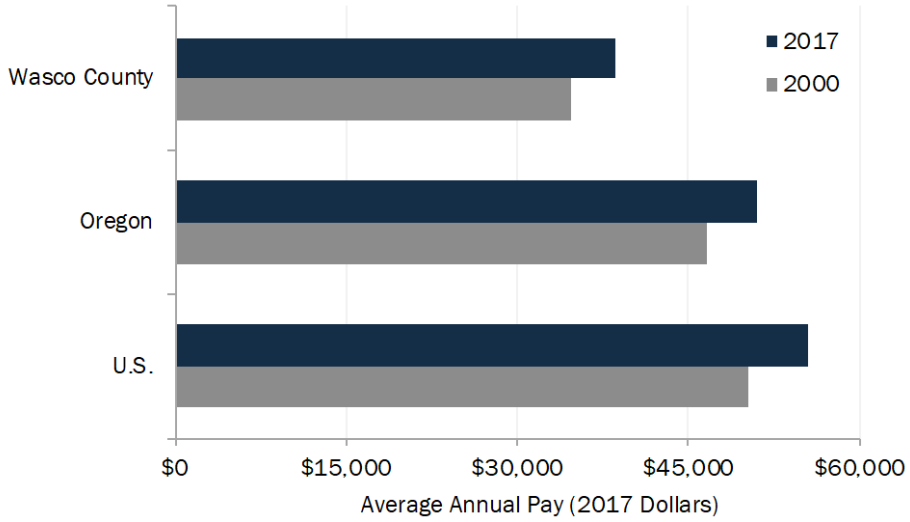
Income

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. Maupin's median household income ($42,115) was below the County median ($46,814). Average wages at businesses in Maupin ($25,022) were also below the County average ($38,572).

Between 2000 and 2017, Wasco County's average wages increased as they also did in Oregon and the nation. When adjusted for inflation, average annual wages grew by 11% in Wasco County and 10% in both Oregon and the nation.

From 2000 to 2017, average annual wages rose in Wasco County, Oregon, and the nation. In 2017, average annual wages were $38,572 in Wasco County, $51,117 in Oregon, and $55,390 across the nation.

Exhibit 30. Average Annual Wage, Covered Employment, Wasco County, Oregon, and the U.S., 2000 to 2017, Inflation-adjusted 2017 Dollars
Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.



Over the 2012-2016 period, the median household income in Maupin was below Wasco County's and Oregon's median household income by 10% and 21%, respectively.

Exhibit 31. Median Household Income (MHI),[75] 2012-2016
Source: U.S. Census Bureau, American Community Survey 2012-2016 5-year estimates, Table B19013.

$42,115	$46,814	$53,270
Maupin	Wasco County	Oregon

[75] The Census calculated household income based on the income of all individuals 15 years old and over in the household, whether they are related or not.

Maupin median family income during the 2012-2016 period, similar to median household income, was below the median family income of both Wasco County and Oregon by 12% and 28%, respectively.

Exhibit 32. Median Family Income,[76] 2012-2016

Source: U.S. Census Bureau, American Community Survey 2012-2016 5-year estimates, Table B19113.

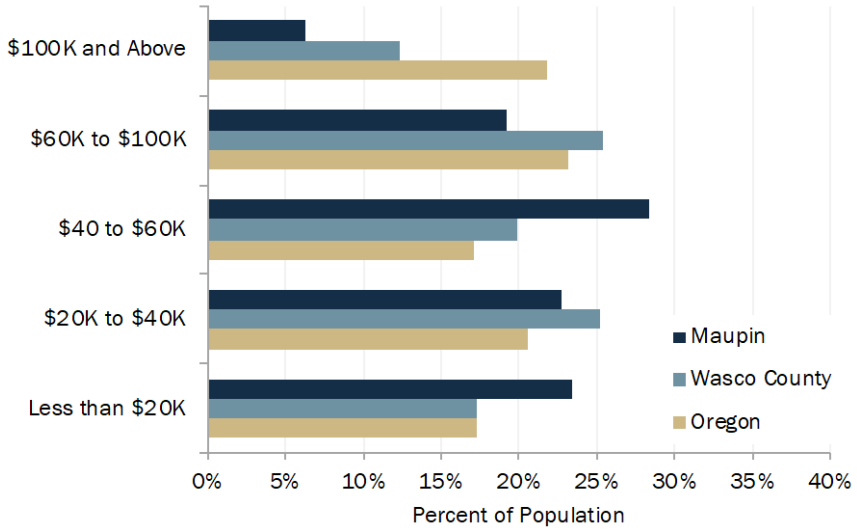
$47,279	$53,602	$65,479
Maupin	Wasco County	Oregon

During the 2012-2016 period, 46% of Maupin households earned less than $40,000 annually, compared to 42% of Wasco County households and 38% of Oregon households.

Over the same period, 28% of Maupin households earned between $40,000 and $59,999, a proportion larger than both Wasco County residents (20%) and residents statewide (17%).

Exhibit 33. Household Income by Income Group, Maupin, Wasco County, and Oregon, 2012-2016, Inflation-adjusted 2016 Dollars

Source: U.S. Census Bureau, American Community Survey 2012-2016 5-year estimates, Table B19001.



[76] The Census calculated family income based on the income of the head of household, as identified in the response to the Census forms, and income of all individuals 15 years old and over in the household who are related to the head of household by birth, marriage, or adoption.

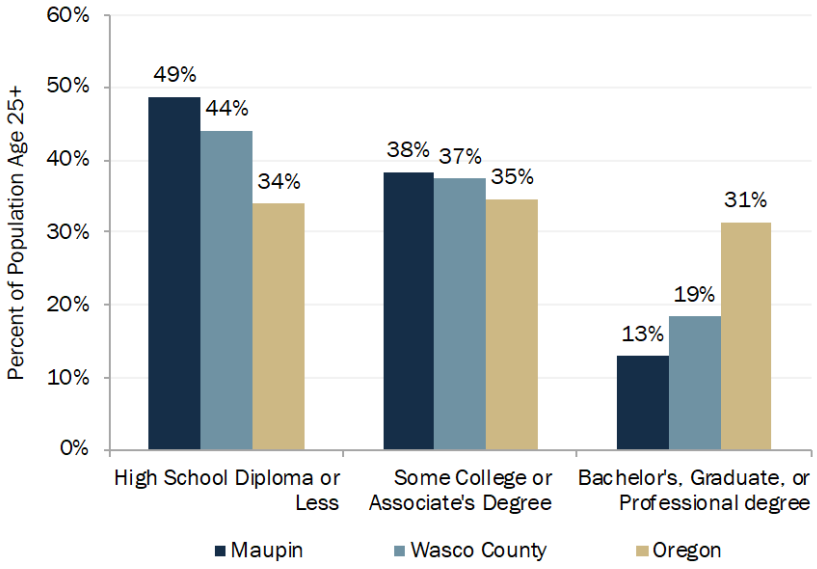
Educational Attainment

The availability of trained, educated workers affects the quality of labor in a community. Educational attainment is an important labor force factor because firms need to be able to find educated workers.

Maupin's residents are consistent with residents statewide regarding their completion of some or attainment of an Associate degree; however, attainment of a bachelor's degree or a professional degree is quite low for Maupin's residents relative to Oregon residents.

Exhibit 34. Educational Attainment for the Population 25 Years and Over, Maupin, Wasco County, and Oregon, 2012-2016

Source: U.S. Census Bureau, American Community Survey 2012-2016 5-year estimates, Table B15003.



Labor Force Participation and Unemployment

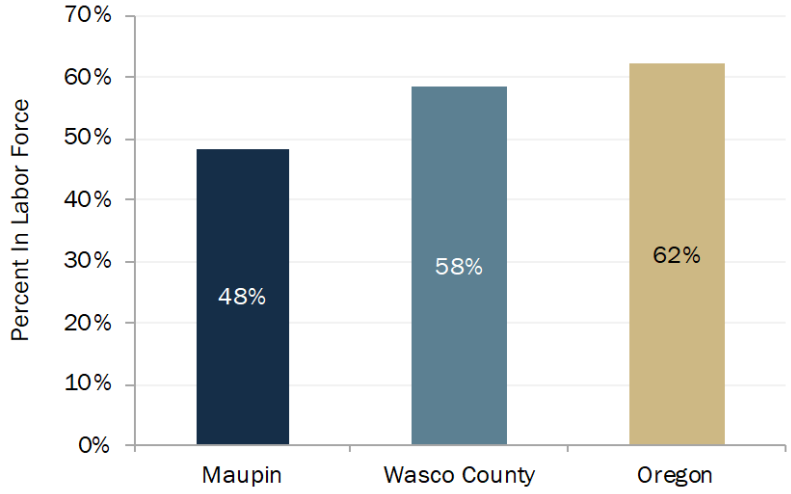
The current labor force participation rate is an important consideration in the availability of labor. The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2012-2016 American Community Survey, Wasco County had more than 11,900 people in its labor force during that period and Maupin had 280 people in its labor force.

In 2017, the Oregon Office of Economic Analysis reported that 64% of job vacancies were difficult to fill. The most common reason for difficulty in filling jobs included a lack of applications (30% of employers' difficulties), lack of qualified candidates (17%), unfavorable working conditions (14%), a lack of soft skills (11%), and a lack of work experience (9%).[77] These statistics indicate a mismatch between the types of jobs that employers are demanding and the skills that potential employees can provide.

Maupin has a lower labor force participation rate relative to Wasco County and Oregon. The likely reason for the lower labor force participation rate in Maupin is the larger share of persons over 60 years old.

Exhibit 35. Labor Force Participation Rate, Maupin, Wasco County, and Oregon, 2012-2016

Source: U.S. Census Bureau, American Community Survey 2012-2016 5-year estimates, Table B23001.

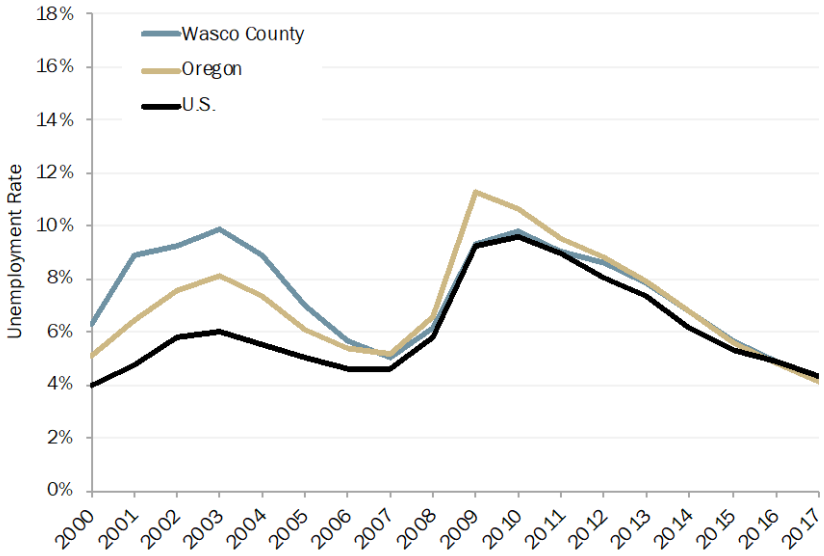


[77] *Oregon's Current Workforce Gaps: Difficult-to-fill Job Openings, Oregon Job Vacancy Survey*, Oregon Employment Department, June 2018.

The unemployment rates in Wasco County, Oregon, and the nation have declined since the Great Recession. Unemployment rates for 2017 in Wasco County (4.2%) and Oregon (4.1%) are below their respective 2000 rates (6.3% and 5.1%, respectively).

Exhibit 36. Unemployment Rate, Wasco County, Oregon, and the U.S., 2000 – 2017

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics and Labor Force Statistics.



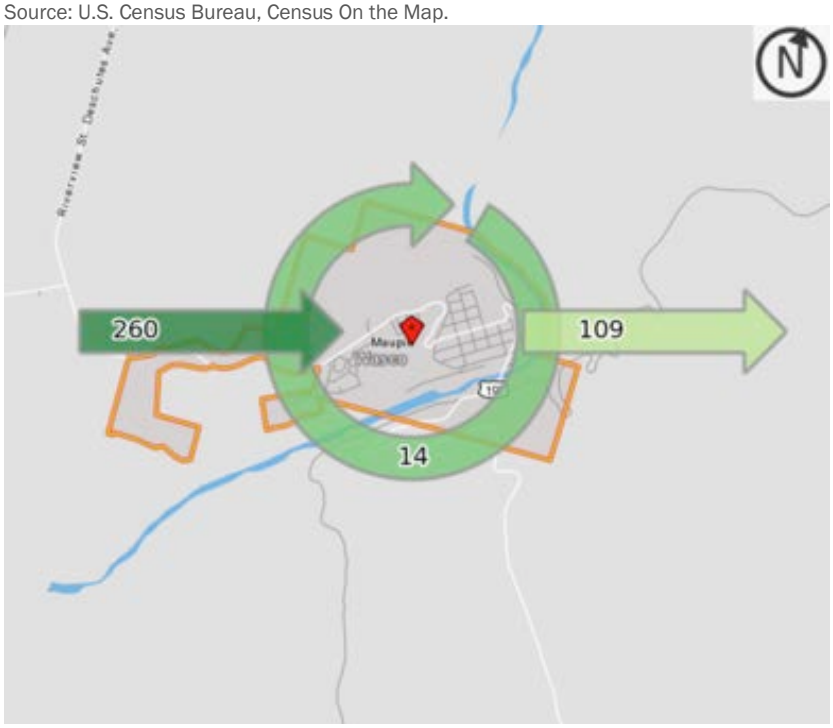
Commuting Patterns

Commuting plays an important role in Maupin's economy because employers in the area are able to access workers from people living in cities across Wasco County and from the broader Gorge Eastern Cascades Region.

Exhibit 38 shows 12% of people who work in Maupin commute from The Dalles, 5% remain in Maupin, and 5% commute from Portland. The remaining workers commute from other cities located across the Region.

Maupin is part of an interconnected regional economy. Fewer people both live and work in Maupin than commute into or out of the city for work. This commuting pattern differs from Wasco County in that there are more persons employed and living in the county than persons who commute into or out of the county for work.

Exhibit 37. Commuting Flows, Maupin, 2015
Source: U.S. Census Bureau, Census On the Map.



About 5% of all people who work in Maupin also live in Maupin.

Exhibit 38. Places Where Maupin Workers Lived,[78] 2015
Source: U.S. Census Bureau, Census On the Map.

12%	5%	5%	4%
The Dalles	Maupin	Portland	Dufur

[78] In 2015, 274 people worked at businesses in Maupin, with 5% (14) people both employed and working in Maupin.

About 11% of residents who live in Maupin also work in Maupin.
Eleven percent of Maupin residents commute to The Dalles for work.

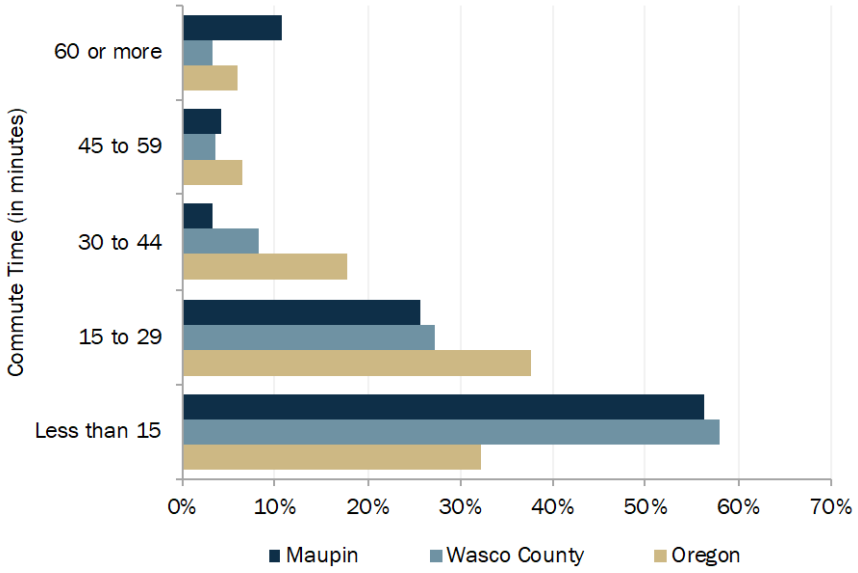
Exhibit 39. Places Where Maupin Residents were Employed,[79] 2015
Source: U.S. Census Bureau, Census On the Map.

11%	11%	4%	4%
Maupin	The Dalles	Dufur	Portland

During the 2012-2016 period, about 56% of Maupin residents had a commute of less than 15 minutes, compared to 58% of Wasco County's residents and 32% of Oregon residents.

The majority of Maupin residents (56%) have a commute time of less than 15 minutes. This is consistent with Wasco County, where 58% of County residents have a commute time of this length.

Exhibit 40. Commute Time by Place of Residence, Maupin, Wasco County, and Oregon, 2012-2016
Source: U.S. Census Bureau, American Community Survey 2012-2016 5-year estimates, Table B08303.



[79] In 2015, 123 residents of Maupin worked, with 11% of Maupin residents (14 people) both living and employed in Maupin.

Tourism in Central Oregon and Wasco County

Longwoods International provides regional statistics on travel. The following information is from Longwoods International's 2017 Regional Visitor Report for the Central Oregon Region, which is comprised of southern Crook, Deschutes, Jefferson, and southern Wasco counties (which includes Maupin).[80] Broadly, travelers to Central Oregon accounted for:[81]

- 4.5 million overnight trips in 2017, or 13% of all Oregon overnight travel that year.
- The primary market area for travelers over 2016 and 2017 were Oregon, Washington, and California: 51% of Central Oregon visitors came from Oregon, 13% came from Washington, and 11% came from California.
- About 58% of visitors stayed 2 or fewer nights over 2016 and 2017 in Central Oregon, 35% stayed 3-6 nights, and 7% stayed 7 or more nights. The average nights spent in Central Oregon was 2.8.
- The average per person expenditures on overnight trips in 2017 ranged from $13 on transportation at destination to $54 per night on lodging.
- About 78% of visits to the Central Oregon Region over 2016 and 2017 were via personally-owned automobiles, 13% were by rental car, and 12% were via an online taxi service (such as Lyft or Uber).
- Over 2016 and 2017, visitors tended to be younger- or middle-aged adults, with the average age being about 45.1. Those aged 25 to 44 comprised 39% of overnight visits, 37% were between 45 and 64, and 13% were 65 or older. About 65% of visitors graduated college or completed a post-graduate education. Additionally, 33% of visitor earned less than $50,000 in household income, 42% earned between $50,000 and $99,999, and 25% earned more than $100,000. The average household income for Central Oregon visitors was about $72,435.

Wasco County's direct travel spending increased 84% from 2000 to 2017.
The Central Oregon Region's direct travel spending increased by 143% over the same period.

Exhibit 41. Direct Travel Spending ($ millions), 2000 and 2017
Source: Dean Runyan Associates, Oregon Travel Impacts, 1991-2017.

2000	$370.9 Central Oregon Region	$66.6 Wasco County
2017	$902.9 Central Oregon Region	$122.3 Wasco County

[80] Travel Oregon. "Central Oregon Overnight Travel Study: 2017," Longwoods International, October 2018. Retrieved from: http://industry.traveloregon.com/content/uploads/2018/10/OR-2017-Central-Region-Visitor-Report.pdf.

[81] Longwoods International issues caution in interpreting these tourism estimates in Central Oregon as the sample size for this region is low.

Wasco County's lodging tax receipts increased 160% over 2006 to 2017.

Exhibit 42. Lodging Tax Receipts ($ millions), 2006 and 2017
Source: Dean Runyan Associates, Oregon Travel Impacts, 1991-2017.

2006	$0.5 Wasco County
2017	$1.3 Wasco County

Wasco County's largest visitor spending for purchased commodities is accommodation and food services.

Exhibit 43. Largest Visitor Spending Categories ($ millions), Wasco County, 2017
Source: Dean Runyan Associates, Oregon Travel Impacts.

$31.3 Accommodations and Food Services	$7.3 Arts, Entertainment, and Recreation	$3.4 Retail

Wasco County's largest employment generated by travel spending is in the accommodations and food services industry.

Exhibit 44. Largest Industry Employment Generated by Travel Spending (thousands), Wasco County, 2017
Source: Dean Runyan Associates, Oregon Travel Impacts.

1.2 jobs Accommodations & Food Services	0.5 jobs Arts, Entertainment. and Recreation	0.1 jobs Retail

The number of overnight visitors to Wasco County has increased from 1,149,000 in 2016 to 1,176,000 in 2018, an increase of 27,000 overnight stays or 2.3%.

Appendix B. Buildable Lands Inventory

The buildable lands inventory is intended to identify commercial and industrial lands that are available for development for employment uses within the Maupin UGB. The inventory is sometimes characterized as *supply* of land to accommodate anticipated employment growth. Population and employment growth drive *demand* for land. The amount of land needed depends on the type of development and other factors.

This appendix presents results of the commercial and industrial buildable lands inventory for the Maupin UGB. The results are based on analyses of Wasco County and State of Oregon GIS data by ECONorthwest and reviewed by City staff. The remainder of this appendix summarizes key findings of the buildable lands inventory.

Methods and Definitions

The BLI for Maupin includes all land that allows commercial and industrial uses within the UGB. From a practical perspective, land was included in the BLI if it met all of the following criteria: 1) it is inside the Maupin UGB, 2) it is inside a tax lot (as defined by Wasco County), and 3) if its current zoning/comprehensive plan designation allows employment uses.[82] Note that tax lots do not generally include road or railroad rights-of-way or water. The inventory then builds from the tax lot-level database to estimates of buildable land by plan designation.

Inventory Steps

The steps in the BLI are:

6. Generate UGB "land base"
7. Classify lands by development status
8. Identify constraints
9. Verify inventory results
10. Tabulate and map results

[82] In Maupin, the comprehensive plan map and the zone map are the same.

Step 1: Generate UGB "land base"

The commercial and industrial inventory used all of the tax lots in the Maupin UGB with the appropriate comprehensive plan designations: General Commercial, Recreation Commercial, Industrial, and Agricultural.[83] Exhibit 45 shows the specific designations that were used in the BLI.

Exhibit 45. Zones in Maupin that will be included in BLI

City of Maupin Zones	Included in BLI?
Agricultural	Yes
General Commercial	Yes
Recreation Commercial	Yes
Industrial	Yes
Residential/Commercial Transition	Yes
Low Density Residential	No
Medium Density Residential	No
High-Density Residential	No
Open Space	No

Step 2: Classify lands

In this step, ECONorthwest classified each tax lot with an employment plan designation (based on definition above) into one of five mutually exclusive categories based on development status:

- Developed land
- Vacant land
- Partially vacant land
- Undevelopable land
- Public or exempt land

ECONorthwest identified buildable land and classified development status using a rule-based methodology. The rules are described below in Exhibit 46.

[83] Six tax lots were recently rezoned from Residential to Residential/Commercial Transition. The City has not updated its comprehensive plan since then, and as of January 2019 the tax lot continues to have a plan designation of residential. Based on previous correspondence with DLCD staff (for another BLI in a different city), we are including these tax lots in the BLI EOA land base. All tax lots are developed, so this change does not add and development capacity. A recommendation of the EOA will be to update the city's Comprehensive Plan map to reflect this change to the zoning map, as well as any other changes made to the zoning map but not to the Comprehensive Plan Map.

Exhibit 46. Rules for Development Status Classification

Development Status	Definition	Statutory Authority
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 For the purpose of criteria (a) above, lands with improvement values of $0 and without mobile homes (as identified by Wasco Assessment property class codes) were considered vacant.	OAR 660-009-005(14) We included all tax lots in the land base in the inventory—a more inclusive approach than required by law. Tax lots smaller than the thresholds were evaluated based on existing 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. This determination was based on a visual assessment and City staff verification.	No statutory definition
Undevelopable Land	Vacant tax lots less than 3,000 square feet in size are considered undevelopable.	No statutory definition
Public or Exempt Land	Lands in public or semi-public ownership are considered unavailable for commercial or industrial 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 and exempt land were identified using the Wasco County Assessment property class codes. This category only includes public lands that are located in commercial plan designations.[84]	No statutory definition
Developed Land	OAR 660-009-005(1) defines developed land as "Non-vacant land that is likely to be redeveloped during the planning period." Lands not classified as vacant, partially-vacant, undevelopable, or public or exempt are considered developed.	OAR 660-009-005(1) We propose to address redevelopment potential on the demand side—operationalizing a definition of developed land consistent with this definition is complicated

[84] Two parcels (4S 14E 32 CD 2600 and 4S 14E 32 DB 4000) were recategorized from public/exempt to developed because the City plans to sell these lots for private use.

Step 3: Identify constraints

As shown in Exhibit 47, the BLI included development constraints consistent with guidance in OAR 660-008-0005(2).

Exhibit 47. Constraints to be included in BLI

Constraint	Statutory Authority	Threshold	File name/location
Goal 5 Natural Resource Constraints			
Regulated Wetlands	OAR 660-008-0005(2)	Within National Wetlands Inventory	https://www.fws.gov/wetlands/Data/Data-Download.html
National Scenic River Corridor	OAR 660-008-0005(2)		
Natural Hazard Constraints			
Floodways	OAR 660-008-0005(2	Lands within FEMA floodway, compiled by DLCD from various sources	Oregon Spatial Data Library
100 Year Floodplain	OAR 660-008-0005(2	Lands within FEMA 100-year floodplain, compiled by DLCD from various sources	Oregon Spatial Data Library
Steep Slopes	OAR 660-008-0005(2	Slopes greater than 15%	Oregon Spatial Data Library, 10-meter DEM

These areas were evaluated as prohibitive constraints (unbuildable). All constraints were merged into a single constraint file, which was then used to identify the area of each tax lot that is constrained. These areas were deducted from lands that are identified as vacant or partially vacant.

Step 4: Verify inventory results

ECONorthwest used a multi-step verification process. The first verification step involved a "visual assessment" of land classifications using GIS and recent aerial photos. The visual assessment involves reviewing classifications overlaid on recent aerial photographs to verify uses on the ground. ECONorthwest reviewed all tax lots included in the inventory using the visual assessment methodology. The second round of verification involved City staff verifying the visual assessment output. ECONorthwest amended the BLI based on City staff review and a discussion of staff's comments. The final verification is reviewed by stakeholders, most especially PAC members.

Step 5: Tabulate and map results

The results of the commercial BLI are presented in tabular and map format in the remainder of this appendix. This includes a zoning/comprehensive plan map, the land base by classification, vacant and partially vacant lands by plan designation, and vacant and partially vacant lands by plan designation with constraints showing.

Land Base

Exhibit 48 summarizes all land included in the employment land base (e.g., lands with plan designations that allow employment) in the Maupin UGB. ECONorthwest used this land base in the buildable lands analysis for Maupin. The land base includes traditional employment designations within the Maupin UGB. According to 2018 data, within Maupin's UGB there are about 191 acres in 114 tax lots in total.

Exhibit 48. Acres in Maupin UGB, 2018

Plan Designation	Number of taxlots	Percent	Total taxlot acreage	Percent
City of Maupin Designations				
General Commercial	28	25%	4	2%
Recreational Commercial	47	41%	33	17%
Residential/Commercial Transition	17	15%	3	1%
Industrial	21	18%	92	48%
Agricultural	1	1%	59	31%
Total	**114**	**100%**	**191**	**100%**

Source: ECONorthwest analysis of data from Wasco County.

The next step in the inventory was to classify lands into mutually-exclusive categories that relate to their development status. The categories include:

- Vacant land
- Partially vacant land
- Developed land
- Undevelopable land
- Public or exempt land

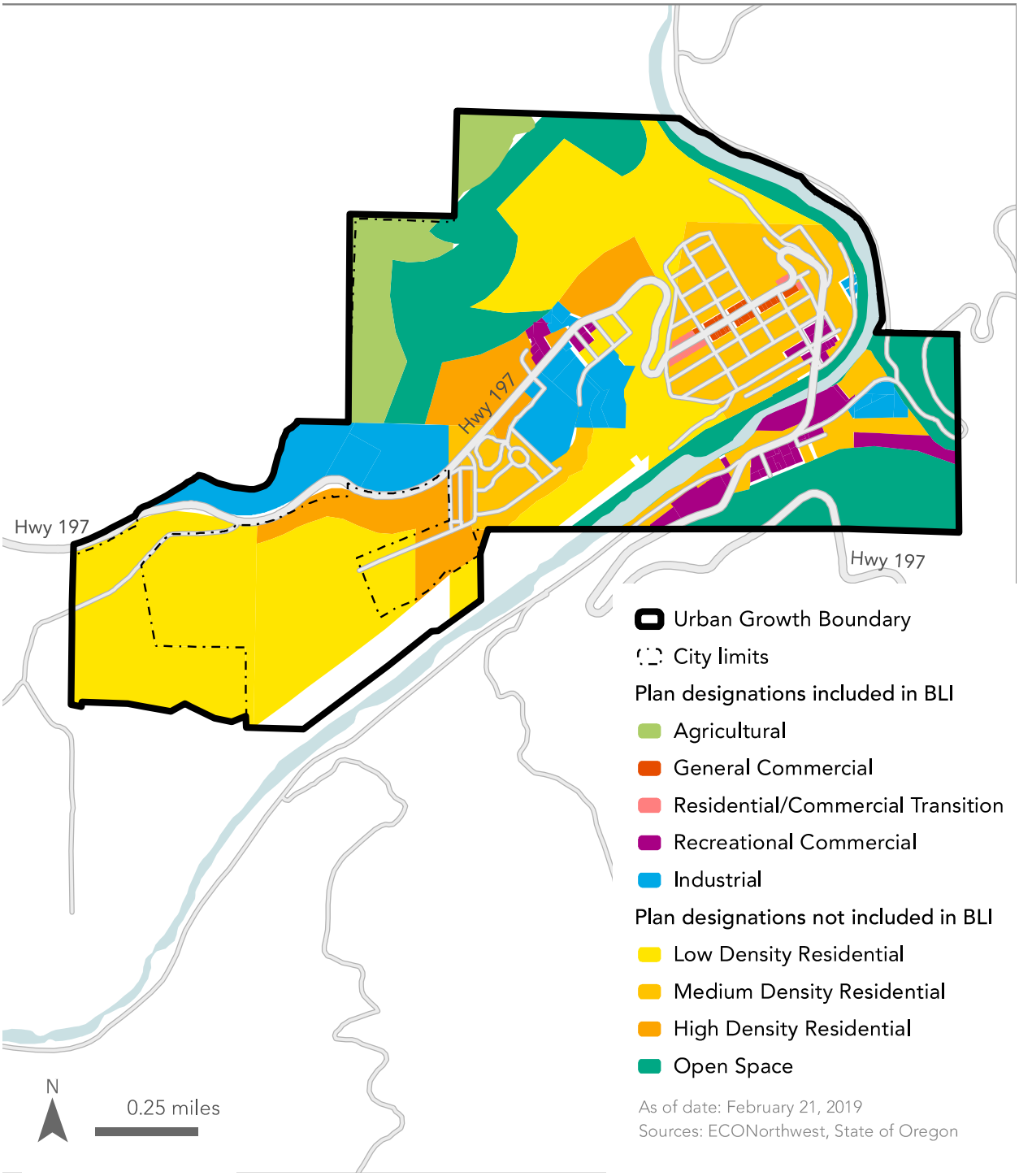
Exhibit 49 shows commercial, industrial, and agricultural land in Maupin by classification (development status). Of the 191 acres in the Maupin UGB, about 38 acres (20%) are in classifications with no development capacity (or, "committed acres"). Of the remaining 153 acres, 82 acres (43%) are constrained and 70 acres (37%) are buildable land with development capacity.

Exhibit 49. Employment acres by classification and plan designation, Maupin UGB, 2018

Plan Designation	Total acres	Committed acres	Constrained acres	Buildable acres
City of Maupin Designations				
General Commercial	4	4	0	0
Recreational Commercial	33	6	21	5
Residential/Commercial Transition	3	3	0	0
Industrial	92	26	52	15
Agricultural	59	0	9	50
Total	**191**	**38**	**82**	**70**

Source: ECONorthwest analysis of data from Wasco County and State of Oregon.

Exhibit 50. Comprehensive plan designations, Maupin UGB, 2018



Vacant Buildable Land

The next step in the commercial and industrial buildable land inventory was to net out portions of vacant tax lots that are unsuitable for development. Areas unsuitable for development fall into three categories: (1) developed areas of partially vacant tax lots, (2) areas with service constraints, (3) areas with physical constraints (areas with wetlands, floodways, riparian setback areas and steep slopes).

Exhibit 51 shows unconstrained buildable acres for vacant and partially vacant land by plan designation. The results show that Maupin has about 70 net buildable acres in commercial, industrial and agricultural designations. Of this, 8% (5 acres) is in commercial designations, 21% (15 acres) is in industrial designations, and 71% (50 acres) is in agricultural designations.

Exhibit 51. Employment land with unconstrained development capacity (Vacant, and Partially Vacant) by plan designation, Maupin UGB, 2018

Plan Designation	Total Buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant lots
City of Maupin Designations			
General Commercial	0	0	0
Recreational Commercial	5	5	1
Residential/Commercial Transition	0	0	0
Industrial	15	14	1
Agricultural	50	50	0
Total	**70**	**69**	**1**

Source: ECONorthwest analysis of data from Wasco County and State of Oregon.

The following maps show buildable lands and development constraints for Maupin for commercial and industrial lands.

Exhibit 52. Employment land by classification with development constraints, Maupin UGB, 2018

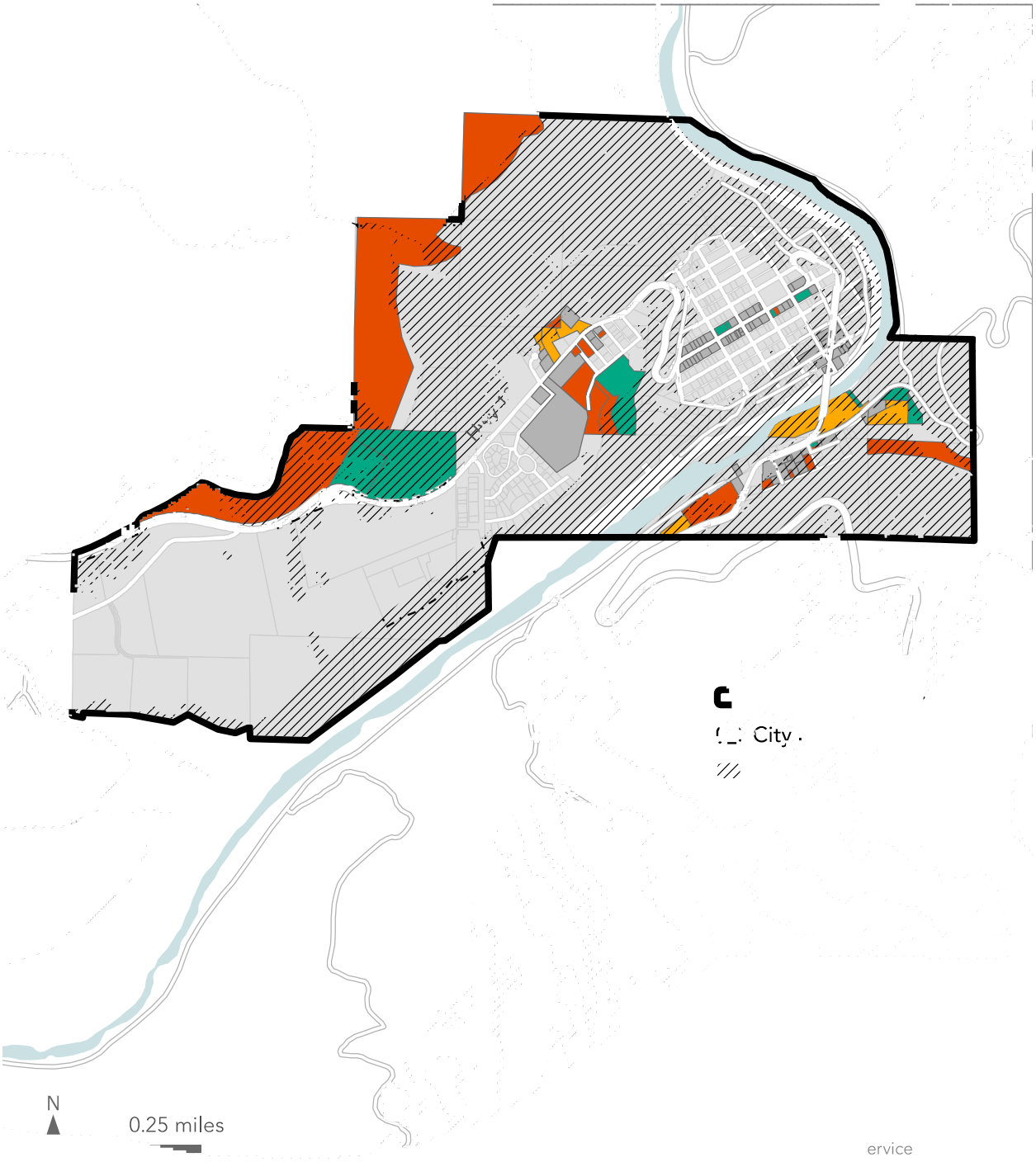


Exhibit 53. Buildable employment land by Plan Designation with development constraints, Maupin UGB, 2018

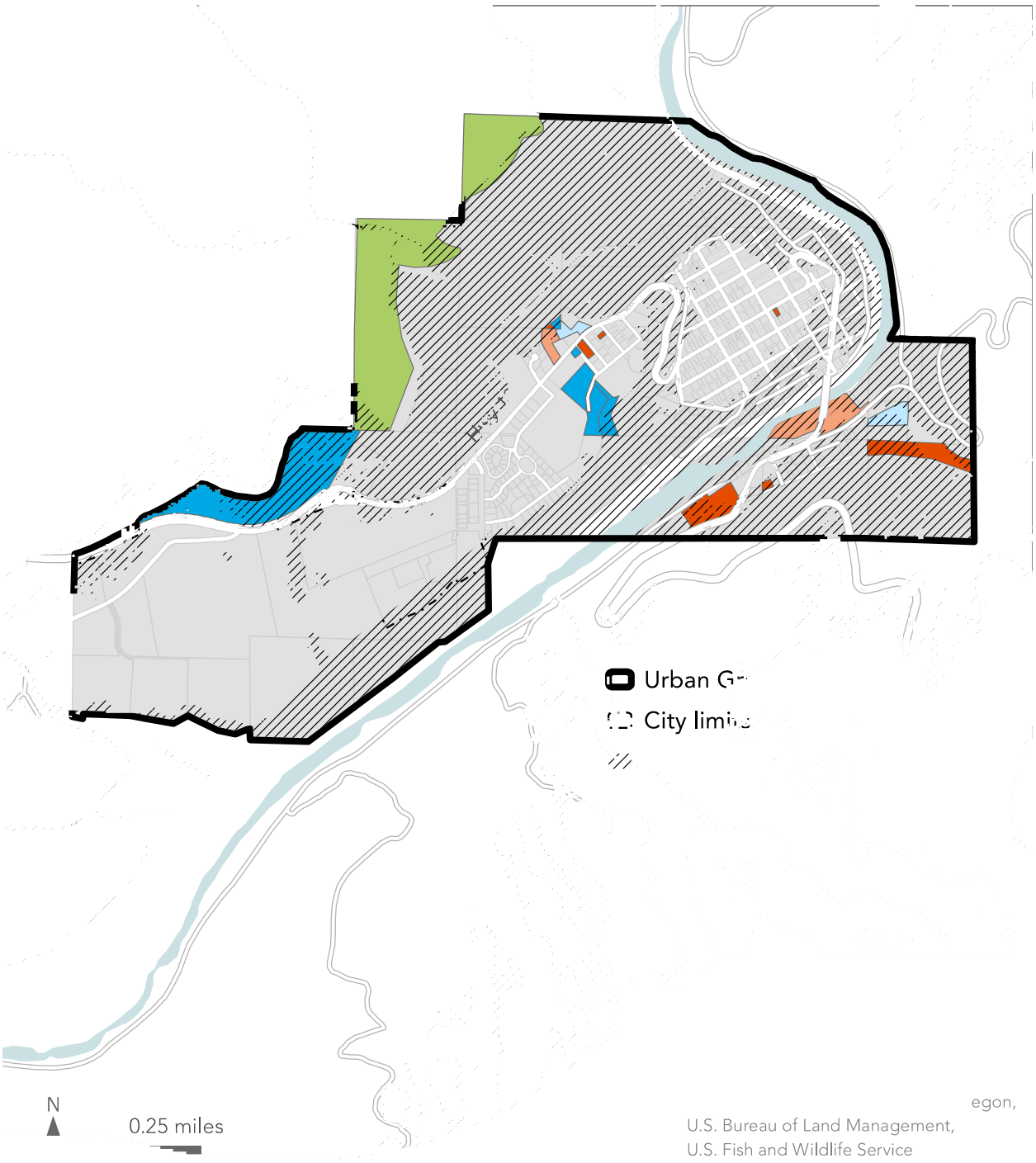


Exhibit 54. Employment land development constraints by constraint type, Maupin UGB, 2018

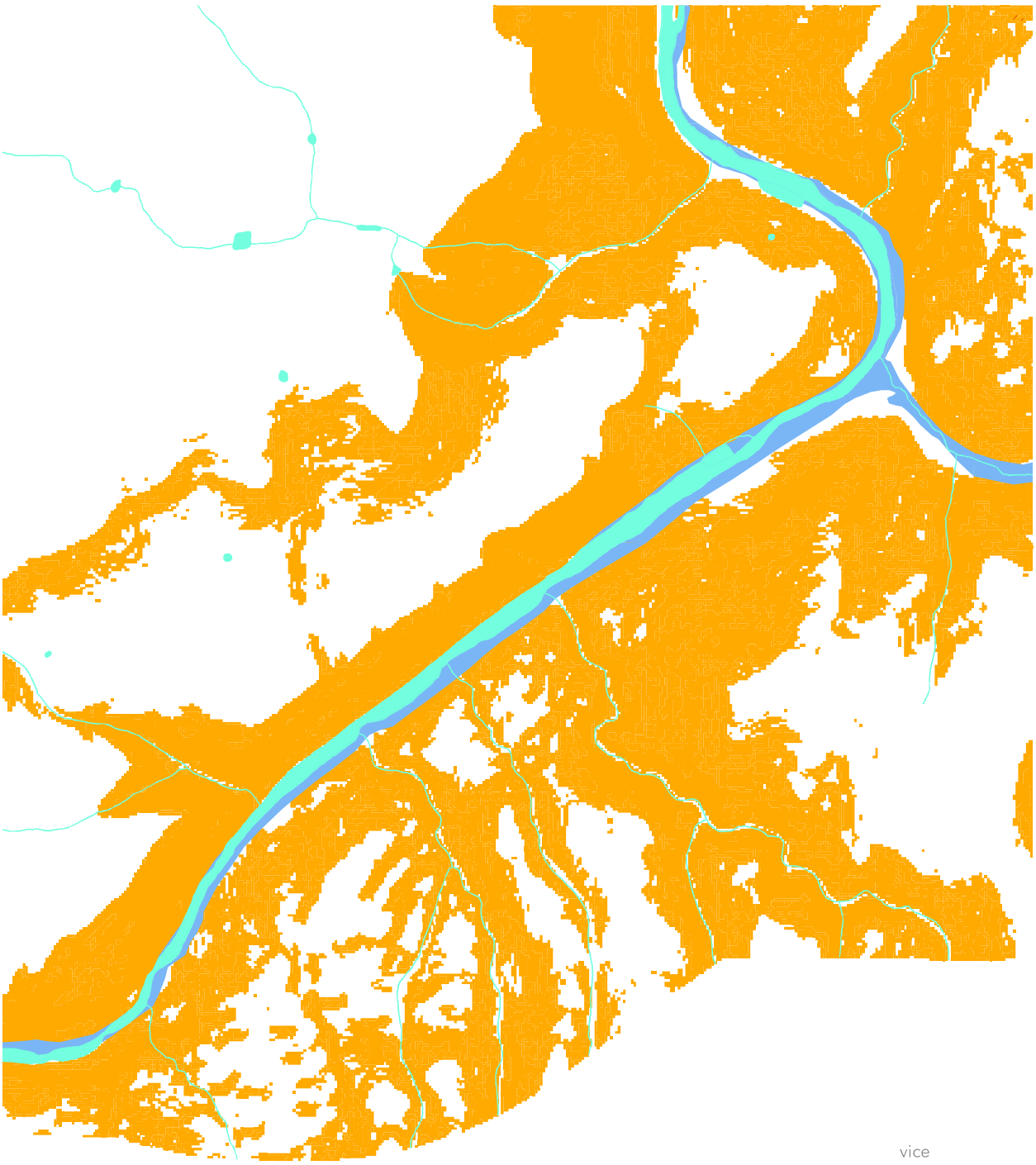


Exhibit 55 shows the size of lots by plan designations for buildable employment land. Maupin has 9 lots that are smaller than 0.5 acres (with 1.3 acres of land), 3 lots between 0.5 and 1 acres (1.9 acres of land), 4 lots between 2 and 5 acres in size (9.1 acres of land), 1 lot between 5 and 10 acres in size (7.7 acres of land) and 1 lot over 20 acres in size (50 acres of land).

Exhibit 55. Lot size by plan designation, buildable acres, Maupin UGB, 2018

	Buildable acres in taxlot						
	<0.5 acres	0.5-1 acres	1-2 acres	2-5 acres	5-10 acres	10-20 acres	>20 acres
Buildable acres on taxlots							
City of Maupin Designations							
General Commercial	0.1	0	0	0	0	0	0
Recreational Commercial	0.7	0.5	0.0	4.1	0	0	0
Residential/Commercial Transition	0	0	0	0	0	0	0
Industrial	0.5	1.3	0.0	5.0	7.7	0	0
Agricultural	0	0	0	0	0	0	50
Acreage subtotal	**1.3**	**1.9**	**0.0**	**9.1**	**7.7**	**0**	**50**
Number of taxlots with buildable acreage							
City of Maupin Designations							
General Commercial	1	0	0	0	0	0	0
Recreational Commercial	5	1	0	2	0	0	0
Residential/Commercial Transition	0	0	0	0	0	0	0
Industrial	3	2	0	2	1	0	0
Agricultural	0	0	0	0	0	0	1
Taxlot count subtotal	**9**	**3**	**0**	**4**	**1**	**0**	**1**

Source: ECONorthwest analysis of data from Wasco County and State of Oregon.