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City of Prineville Economic Opportunities Analysis

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Executive Summary

The City of Prineville is conducting an Economic Opportunities Analysis (EOA) to inventory buildable commercial and industrial land, identify the City's economic development potential, forecast growth and land needs for 20 years, and determine whether the City has enough land to accommodate growth. The primary goals of the EOA are to (1) project the amount of land needed to accommodate the future employment growth within Prineville between 2025 and 2045, (2) evaluate the existing employment land supply within the city to determine if it is adequate to meet that need, (3) help the City understand its economic opportunities in the context of Prineville's comparative advantages and disadvantages, and (4) to fulfill state planning requirements for a twenty-year supply of employment land.

How much buildable employment land does Prineville currently have?

Prineville's Urban Growth Boundary (UGB) contains approximately 4,032 acres of commercial- and industrial-designated land. Of this land, 1,580 acres are unconstrained and buildable, almost evenly split between 793 acres of commercial land and 787 acres of industrial land.

How much growth is Prineville planning for?

Prineville's employment base is projected to grow from 9,732 jobs in 2025 to 12,429 in 2045, an increase of 2,697 jobs. Most new employment will require commercial or industrial land, with 1,198 new industrial jobs and 1,361 new commercial jobs.

Does Prineville Have Sufficient Land for Employment?

Prineville has sufficient land over the next 20 years for most employment needs but has a deficit of large industrial sites. Key findings of land sufficiency for the 2025–2045 period are:

- ◆ **Commercial.** Prineville will need approximately 84 total acres of commercial land. Currently, Prineville has 113 acres of commercial land, a surplus of 29 acres.
- ◆ **Industrial.** Prineville has enough smaller industrial sites to accommodate expected growth but a deficit of large industrial sites to accommodate growth. Exhibit 1 shows the conclusion about sufficiency of Prineville's industrial land.
 - *Small industrial sites.* Prineville will need 44 industrial sites smaller than 25 acres (84% of the City's industrial site needs). Prineville has 101 industrial sites smaller than 25 acres. Prineville has enough smaller industrial sites to accommodate expected growth.



- *Large industrial sites.* Prineville will need 9 industrial sites larger than 50 acres and has 7 industrial sites in this size class. As a result, Prineville has a deficit of large industrial sites. Using an average site size of 251.7 acres (based on the current average site size in that category), **Prineville will need an additional 503 acres of buildable industrial land in two sites for target industries.** The EOA describes the target industries for these sites, which includes biomass facilities, a wide range of manufacturing facilities, and possibly future need for additional land for data centers.

Exhibit 1. Comparison of the Capacity of Unconstrained Vacant Land with Employment Land Demand by Land Use Type, Prineville UGB, 2025–2045

	Employees by TOTAL Parcel Size						Total
	Less than 2 acres	2 - 5 Acres	5 - 10 Acres	10 - 25 Acres	25 - 50 Acres	50+ Acres	
Estimated Sites Needed	24	13	7	2	-	9	55
Buildable Sites	54	35	9	3	5	7	113
Comparison of Sites Needed and Existing Sites	30	22	2	1	5	(2)	
Does Prineville have enough sites for growth?	Yes	Yes	Yes	Yes	NA	No	
Estimated Unmet Land Need (acres)	-	-	-	-	-	503	503

Source: EConorthwest

In addition, the City has three sites zoned Heavy Industrial that the City is considering rezoning to residential or other urban uses. These three sites are included in the buildable lands inventory (shown in the number of sites in Exhibit 1). These sites are unsuited for Heavy Industrial uses because they are adjacent to developing residential areas, separated topographically from the lower industrial properties, and divided by an irrigation canal restricting access.

These sites total of 109 acres (See Exhibit 27). One of these sites is larger than 50 acres (72 buildable unconstrained acres). The other sites are 11 buildable unconstrained acres and 26 buildable unconstrained acres in size.

If the City re-zones some or all of these sites, the City may want to determine whether it needs to replenish its buildable land supply to ensure it is able to meet future employment land needs.

What are Prineville’s growth opportunities?

Prineville’s key competitive advantages include:

- ◆ **Location.** Prineville is located in central Oregon’s East Cascades region, drawing employees from the broader Central Oregon labor market. Additionally, its proximity to National Forests and outdoor recreation attracts residents and visitors.
- ◆ **Transportation Connections.** Prineville owns and operates the Prineville Railway, a short-line railroad attached to railroad tracks that connect with Redmond and then run north and south, providing shipping and distribution opportunities to the rest of the state. Additionally, Prineville’s location along Highway 26 and Highway 126 connects the City with transportation routes spanning Oregon and the West Coast.



- ◆ **Availability of public facilities.** Prineville has a significant amount of existing and future capacity available in its water systems, provided at a slightly lower cost than other central Oregon cities. Prineville also has excess capacity within its wastewater system.
- ◆ **Infrastructure investments.** In recent years, Prineville has made major investments into its infrastructure, including the Crooked River Wetlands Complex, Aquifer Storage and Recovery (ASR) System, the \$13.5 million Combs Flat Road extension, U.S. 26/3rd Street corridor improvements, and town center infrastructure revitalization.
- ◆ **Business-friendly environment.** Prineville offers a range of incentive programs designed to attract and support businesses, including a Long-Term Rural Enterprise Zone Facility tax exemption. Additionally, businesses benefit from low-cost industrial land and competitive power rates, making Prineville an economically attractive location for new and expanding enterprises.
- ◆ **Resilient economy.** In 2022, Heartland Forward ranked Prineville ninth on a list of the Most Dynamic Micropolitan (cities with a population under 50,000).¹ Heartland Forward cited Prineville’s diversification of its economy in the past decade, largely due to the construction of its new data centers.

Given these factors, Prineville is an attractive location for residents and business. The City has growth potential in several industries, including biomass energy production, data centers, manufacturing, and services for visitors and residents.

What are the key conclusions?

The conclusions about commercial and industrial land sufficiency are:

- ◆ **Prineville’s economy has changed substantially since the last EOA was completed.** Since 2008, Prineville added 946 jobs, many of which are related to growth of the data centers. The growth in data centers is a driving factor in increasing average wages in Crook County from nearly \$34,700 in 2008 to more than \$70,200 in 2022. In addition, Prineville expanded or altered its UGB six times between 2012 and 2017, primarily for data center development and expansion, all in the southern part of the City in areas with Light Industrial zoning.
- ◆ **Prineville is forecasted to grow in both the commercial and industrial employment sectors.** Prineville is planning for growth of 2,697 new jobs in the city over the 2025 to 2045 period. About 1,361 of the jobs will be in commercial and retail services and 1,198 of the jobs will be industrial.
- ◆ **Prineville has enough employment land to accommodate commercial growth.** Exhibit 29 shows that Prineville has enough land for commercial employment growth over the next 20 years, with a surplus of 68 acres. For its target industries, Prineville will have need for commercial sites ranging from space in existing buildings to custom built

¹ Guernsey, Dean. Bend Bulletin, Prineville makes top 10 on list of economically dynamic small towns in the nation. Retrieved from [Bend Bulletin](#). 2022.



buildings on sites from 1 to 5 acres, which can be accommodated on existing buildable land within the UGB.

- ◆ **Prineville has a large amount of employment on large sites.** Prineville has a large amount of employment (43% of employment) on sites larger than 50 acres. These large sites have an average size of 251.7 acres and are in use by businesses like Meta and Apple. The Site Needs for Target Industries section describes the site needs for the two 50+ acre sites. One of these sites is for a proposed biomass facility, which the City is actively working on development of.
- ◆ **Prineville has a deficit of large industrial sites and will need to consider a UGB expansion to accommodate the need for a large site for a biomass facility.** Prineville has a deficit of sites larger than 50 acres for industrial development. Prineville needs two sites more than it has within the UGB, averaging 251.7 acres. The sites needs for a biomass facility (Exhibit 17) are for a site not found within the Prineville UGB.
- ◆ **Prineville will need to expand its UGB to accommodate the growth of a biomass facility.** The site needs for a biomass facility cannot be met within the existing Prineville UGB. The City does not have a sufficiently large site in an area with City of Prineville Railway access; that can also be served by City water and sewer systems. In order to accommodate growth of a biomass facility, the City will need to expand its UGB.
- ◆ **Prineville may rezone some Heavy Industrial land.** The EOA identified three Heavy Industrial sites that are unsuited for Heavy Industrial uses because they are adjacent to developing residential areas, separated topographically from the lower industrial properties, and divided by an irrigation canal restricting access. If the City re-zones some or all of these sites, the City may want to determine whether it needs to replenish its buildable land supply to ensure it is able to meet future employment land needs.



1. Introduction

The City of Prineville is initiating an update to its Economic Opportunities Analysis (EOA), the first update since 2007. The purpose of an EOA is to develop information as a basis for policies that capitalize on Prineville's opportunities and help address the City's challenges. Prineville's economy has changed substantially since 2007. Most notably, several large data centers have located in Prineville, the largest of which are Apple and Meta data centers. These data centers employ approximately 700 employees, excluding construction workers across both campuses, and were a driving factor in increasing average wages in Crook County from nearly \$34,700 in 2008 to more than \$70,200 in 2022.

Since 2007, Prineville expanded or altered its UGB six times between 2012 and 2017, primarily for data center development and expansion, all in the southern part of the City in areas with Light Industrial zoning.

- ◆ **2012 UGB land exchange.** The City adjusted two long, skinny (and hard to develop) parcels into two 160 parcels shaped closer to squares (and easier to develop) with frontage along George Millican Road. The Department of State Lands (DSL) parcel was left outside the UGB.
- ◆ **2013 land replenishment.** The City worked with the Department of State lands to bring 160 acres of DSL land left outside the UGB in 2012 land exchange into the UGB to account for large developments by Meta and Apple.
- ◆ **2013 expansion for Apple.** The City worked with the County to expand the UGB by 96 acres for expansion of Apple's data center development.
- ◆ **2014 expansion for Apple.** The City worked with the County to expand the UGB by 114 acres for expansion of Apple's data center development.
- ◆ **2015 expansion near the airport.** The City expanded the UGB for 160 acres near the airport for data center development that has not materialized.
- ◆ **2017 expansion for Meta.** The City expanded the UGB by 38 acres for an expansion of Meta's data center development.

Currently, the City is exploring adding a biomass facility, which could offer several benefits. Economically, it would diversify the city's industrial base, creating direct jobs in construction and operations while supporting local forestry and agricultural industries by providing a market for waste materials. Environmentally, the facility would promote sustainability by using renewable biomass sources, reducing reliance on fossil fuels, and mitigating wildfire risks through forest thinning. A biomass facility would also provide a stable energy source to meet the growing energy demands of local industries, including Prineville's data centers, while contributing to Oregon's renewable energy goals. In 2023, Oregon Governor Tina Kotek wrote a letter supporting this project, noting that the project

would be “a key piece of infrastructure that will support local power needs and resilience as well as the economic use of forest biomass from forest restoration projects.”

Updating the EOA provides Prineville with new information about commercial and industrial land supply and land need. It includes technical analysis to address a range of questions that Prineville faces in managing its commercial and industrial land. The EOA includes an employment forecast that describes how much growth Prineville should plan for from 2025 to 2045 and identifies the amount and type of employment land necessary to accommodate growth in Prineville over that 20-year planning period. The EOA also includes an inventory of commercial and industrial land within Prineville’s urban growth boundary (UGB) to provide information about land available to accommodate employment growth.

This EOA complies with Statewide Planning Goal 9 requirements, the Goal 9 Administrative Rule (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 needs based on the forecast for employment growth, the City’s economic development objectives, and the specific needs of target industries.

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.

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 EOA 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 that are 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 process 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 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. If an EOA includes analysis of land needs for one or more target industries, the analysis must describe typical site characteristics, based on Oregon Business Development Department (OBDD) guidance or other industry standards regarding typical site characteristics.

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 Prineville, as well as Prineville's competitive advantages for economic development.
- ◆ **Chapter 3. Employment Growth and Site Needs** presents a forecast for employment growth in Prineville and describes potential growth 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 Prineville.

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

Prineville is part of the Central Oregon region's economy, including Crook, Deschutes, and Jefferson Counties. This chapter describes the factors affecting economic growth in Prineville within the context of national and regional economic trends. The analysis presents the City's competitive advantages for growing, attracting, and retaining businesses, which form the basis for identifying potential growth industries in Prineville.

Factors That Affect Economic Development²

The fundamental purpose of Goal 9 (the Statewide Planning Goal for Economic Development) is to ensure that local governments plan 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 a 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 well-being depends partly on narrower measures of economic well-being (e.g., jobs and income) and 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 opportunities. The assumptions are that:

- ◆ Business and job growth contribute to and are consistent with economic development, increased income, and increased economic welfare. From the municipal point of view, investment and the resulting increases in property tax are important outcomes of economic development.
- ◆ The evaluation of trade-offs and balancing policies to decide whether such growth is likely to lead to overall gains in well-being (on average and across all citizens and businesses in a jurisdiction) is something that decision-makers do after an economic strategy has been presented to them for consideration.

² The information in this section is based on previous Goal 9 studies conducted by ECONorthwest, as well as “An Economic Development Toolbox: Strategies and Methods” published by the American Planning Association.

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.



That logic is consistent with the tenets 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 significant part of local economic development policy is about local support for business development and job growth; that growth comes from creating new firms, expanding existing firms, and relocating or retaining existing firms. Specifically, new small businesses are accounting for a larger share of the job growth in the United States. 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, two key questions for economic development policy are addressed in depth in this document:

- ◆ What are the factors that influence business and job growth?
- ◆ What is the relative importance of each?

What factors matter?

Why do firms locate where they do? There is no single answer—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.

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

- ◆ **Labor.** Labor is often the most important factor of production. All other things being equal, firms look at productivity—labor output per dollar. Productivity can decrease if certain types of labor are in short supply, which increases costs by requiring either higher pay to acquire the labor that is available, recruiting labor from other areas, or using less productive labor that is available locally.
- ◆ **Land.** Demand for land depends on the type of firm. Manufacturing firms typically need more space and tend to prefer suburban locations where land is relatively less expensive and less difficult to develop. Warehousing and distribution firms often need to locate close to interstate highways.
- ◆ **Local infrastructure.** An important role of government is to increase economic capacity by improving the 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.** Firms need to move their product (either goods or services) to market, and they rely on access to different modes of transportation to accomplish 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 (e.g., raw lumber), and others need intermediate materials (e.g., dimensioned lumber).
- ◆ **Entrepreneurship.** This input to production may be considered good management or, 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. Even when unsuccessful, entrepreneurial activity can offer information about the local market that other entrepreneurs can use to start 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.⁴ Entrepreneurs also tend to have more mobility than larger firms and are more likely to locate in areas with a strong entrepreneurial environment.⁵ 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.

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 typically 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. In recent years in Oregon (especially the Portland region), incentives have been used more to attract businesses to the Portland region, rather than substantially distinguishing between cities in the Portland region. For manufacturing industries with significant equipment costs, however, property or investment tax credit or abatement incentives can play a significant role in location decisions.

⁴ 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

⁵ Emil E. Malizia and Edward J. Feser. *Understanding Local Economic Development*. (1999).



This discussion may make it appear that a location decision is based entirely on a straightforward 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.⁶ 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.

⁶ Nancey Green Leigh and Edward Blakely. *Planning Local Economic Development: Theory and Practice*. 2013.



How important are these factors?

Economists have attempted to understand how changes in public policies affect local job growth by identifying 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 influencing business location decisions.

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 with 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. 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.

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

Local governments can support 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 regarding the regulatory environment for businesses in the community; and partnerships with colleges, universities, small business development centers, mentorship programs, community groups, business groups, and financial institutions.⁷

Local governments in Oregon also play a central role in the provision of buildable land through including lands in the urban growth boundary (UGB), as well as through the determination of plan designations and zoning and the provision of public services. Typically, businesses need buildable land to locate or expand in a community. However, providing buildable land alone is insufficient 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 Prineville, the provision of buildable land has the potential to strongly influence the level and type of economic

⁷ National League of Cities “Supporting Entrepreneurs and Small Businesses” (2012).



development in the City, and the provision of buildable land is one of the most direct ways that Prineville can affect the level and type of economic development in the community.

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

This section summarizes the implications of national, state, and regional economic trends on economic growth in Prineville, which are presented in Appendix A.

- ◆ **County and local employment growth.** The number of employees in Crook County increased by 39% between 2008 and 2022, with an average annual growth rate of 3%, adding 1,916 employees. In 2022, the industries with the largest increases in total jobs were construction, accommodations and food services, and health care and social assistance. Jobs in Prineville accounted for approximately 74% of Crook County's overall employment and increased by 939 employees, or 19% (1.2% average annual growth rate) from 2008 to 2022. Looking ahead, employment in the Central Oregon region is projected to grow at a slower rate of approximately 1% per year from 2022 to 2032. This slower regional labor force growth will likely also impact Prineville.
- ◆ **Changes in manufacturing.** Changes in manufacturing have had a mixed impact on Prineville. The shift toward automation and technology has led to a decline in traditional manufacturing jobs, as many routine tasks have been automated. As of 2022, manufacturing jobs accounted for just under 10% of Prineville's covered employment. However, from 2008 to 2022, manufacturing jobs decreased by 365, or 38%. However, while traditional manufacturing has faced challenges, advanced manufacturing and tech-driven industries, such as data centers, have helped diversify the local economy. These changes have shifted the focus from labor-intensive manufacturing to high-tech and automated processes, requiring fewer workers but more specialized skills. As a result, Prineville's economy is evolving, with a greater emphasis on technology and innovation, reshaping the city's employment landscape.
- ◆ **Shifts in Oregon's major industries.** The state's traditionally strong timber and high-tech industries are expected to experience slower job growth in the future. Historically, Prineville's economy was driven by timber, agriculture, and Les Schwab Tires. However, shifts in Oregon's major industries, particularly in technology, have driven the City's economic diversification and reduced the city's reliance on the manufacturing industry. In particular, the region's data center capacity and demand are expected to grow, supported by Oregon's CHIPS Act investments. In 2010, the City began establishing major data centers by companies like Meta and Apple, driving infrastructure improvements, including better broadband access, attracting related industries and businesses. As of 2023, the City identified natural products, building products, high technology, renewable energy, aviation and aerospace, and advanced manufacturing as major industries in its portfolio.⁸
- ◆ **Increases in automation.** Increases in automation will continue impacting businesses across industrial and commercial sectors in different ways. Automation is more likely

⁸ Economic Development for Central Oregon, "[2023 Central Oregon Economic Profile](#)" (2023).



to decrease employment in manufacturing and administrative/clerical roles involving routine tasks as those processes become automated. Conversely, automation increases will drive job growth in higher-skilled roles that are difficult to fully automate, such as management positions requiring human skills like problem-solving and interpersonal abilities, analysis roles involving critical thinking and decision-making, and technical fields requiring human expertise alongside technology. Oregon's overall risk of automation is consistent with national trends, with lower and middle-wage jobs at higher risk of being automated.

Increases in automation will likely also impact Prineville, particularly within its manufacturing and data center industries. This shift is evident in Prineville's data centers, where automation has streamlined operations, requiring fewer workers for routine tasks but more for managing and supporting complex systems. As automation increases across industries, the local economy will likely become increasingly reliant on higher-skilled positions, driving a need for workforce training and education to fill these emerging roles.

- ◆ **Growth of data centers in Central and Eastern Oregon.** In the 2000s, data centers became increasingly prevalent across the United States to support technical services like cloud computing. Development of data centers has been substantial in Central and Eastern Oregon, driven in part by the region's available industrial land, tax incentives, and access to water and electricity. Major tech companies have established large centers in the area, including Google and Amazon in The Dalles. In Prineville, Meta and Apple each started with one center and have since expanded with additional land and centers in the city. As artificial intelligence has advanced, demand for data centers has surged to support advanced computation needs. These data centers demand considerable energy, with the Northwest Power and Conservation Council estimating that data centers in the Northwest could require the equivalent of five million homes in additional power by 2030.⁹
- ◆ **The aging of the baby boomer generation and the need for replacement workers.** Just over a quarter (27%) of Prineville's residents are 60 years or older, a slightly higher share than the state (25%) but lower than Crook County (33%). While Prineville has fewer senior residents than the County, its population is also growing older. Over the past two decades, Prineville's median age increased by just under eight years, and the number of adults aged 45 to 64 and 65 years and older nearly doubled.

However, the share of Crook County residents aged 60 and older is expected to decrease from 34% to 27% between 2022 and 2047. This contrasts with state trends, which predict an increase in the percentage of senior residents. If Prineville has a relatively younger workforce, the City could be positioned to replace retiring workers if workforce skills match job openings.

- ◆ **Growth of entrepreneurship and small business.** Prineville's average private business size is 9.7 employees, close to the state average of 9.4. New businesses are crucial for Oregon's economy, generating jobs and fostering innovation. Factors such as high inflation, rising interest rates, and tighter lending may slow new formations. However,

⁹ Mike Rogoway, The Oregonian/OregonLive, "[Soaring Data Center Electricity Demand Could Trigger Northwest Blackouts, Industry Insiders Say](#)" (December 11, 2024).



increased personal savings, home equity, more remote work, and a growing millennial workforce may counter these challenges. Small businesses can diversify Prineville's economy, reducing dependence on major employers and supporting locally owned ventures for residents and tourists. This diversification can strengthen the local economy against downturns and stimulate niche market innovation such as outdoor services, specialty retail, and tech ventures.

- ◆ **Continued transformation of retail.** Over the past two decades, the trend toward supercenters and e-commerce has steadily increased. While the growth of online shopping, accelerated by the COVID-19 pandemic, is likely to persist, there will continue to be demand for the local purchase of retail goods. Consumers still prefer brick-and-mortar stores for items such as large furniture, home improvement goods, specialty goods, and groceries. Furthermore, consumer preferences have shifted to spending at restaurants and experience-focused business establishments (e.g., entertainment or recreation). This could benefit Prineville, given its access to outdoor recreation opportunities and small-town appeal. It could present opportunities to attract retailers that focus on unique, experiential offerings or cater to residents and visitors seeking local products or services. As larger retailers consolidate or move online, Prineville's retail sector could see a greater emphasis on small, local businesses that offer personal services or specialized products, helping to support the local economy while enhancing the city's appeal to tourists and residents.
- ◆ **Changing places where work is being done.** The pandemic facilitated a shift in many industries, opening opportunities for employees to work from home at levels never seen before. Due to the shift to working from home and concerns around the pandemic, many workers started moving away from urban centers in pursuit of more space. As more people seek out locations that offer a high quality of life, affordable housing, and access to outdoor recreation, Prineville's small-town charm and proximity to natural amenities make it an attractive destination for remote workers. With improvements in broadband infrastructure, driven by the presence of major data centers, the city is well positioned to support a growing remote workforce.
- ◆ **Continued increase in demand for energy.** In 2022 and 2023, energy prices, especially gasoline prices, increased sharply. Reasons for the increase include increased travel and international sanctions against Russia for the war in Ukraine (which results in less Russian fuel on the global market). Energy prices and demand will likely continue to increase in the coming years. For Prineville, data centers may face higher operational costs as energy prices rise, driven by growing consumption and shifts in energy policy. These increased costs could impact the city's ability to attract new tech companies and retain existing ones, especially if energy prices significantly outpace other regions.

Rising energy demand also presents an opportunity for Prineville to explore and invest in sustainable energy solutions. The city could benefit from integrating renewable energy sources to mitigate the cost of traditional energy sources while positioning itself as an environmentally conscious hub for tech-driven industries. Energy-efficient technologies and infrastructure investments could also help Prineville's businesses, including its data centers, manage costs and remain competitive in the evolving energy landscape.



- ◆ **Household income and average wages.** Prineville’s median household income (\$72,050) is similar to the County (\$70,221) and the state (\$76,632) in 2022. However, the average annual wage at private businesses in Prineville was about \$72,095, higher than the County average of \$57,388 in 2022 and the state average of \$54,822. Residents with higher incomes are likelier to spend money within the community, supporting local businesses and fostering entrepreneurship. Additionally, higher incomes can help Prineville retain skilled workers, particularly in tech-driven industries like data centers, by offering competitive wages compared to other regions. This can enhance the city's attractiveness as a place to live and work, drawing new residents. However, wages are not uniformly high, and higher incomes can also contribute to rising housing costs, which could pose affordability challenges for lower-income residents, potentially exacerbating economic inequality within the community.
- ◆ **High rates of inflation.** For several decades, inflation rates have generally stayed below 3% in the United States. Inflation started to increase in 2021, reaching 9.1% in 2022, the highest level in about 40 years.¹⁰ In 2023, the annual inflation rate was 3.4%, a marked reduction from the 2022 inflation rate.¹¹ High inflation rates may slow economic growth, erode purchasing power, discourage savings, and lead to a national recession. Consumers may start decreasing spending on nonessentials, which could impact parts of Prineville’s retail and tourism economy.
- ◆ **Climate change.** Climate change is likely to have a range of impacts on Prineville, affecting its economy, environment, and infrastructure. As temperatures rise and precipitation patterns shift, the region could face increased droughts, wildfires, and water scarcity risks. However, climate change may also spur economic opportunities, such as developing renewable energy projects. Prineville could position itself as a leader in sustainable energy solutions, helping mitigate the impacts of climate change while attracting businesses that prioritize environmental responsibility.

Employment Trends in Prineville and Crook County

The national economy changed substantially between 2008 and 2022, affecting the composition of Oregon’s economy, including Prineville’s economy. The most striking change at the national level was the shift from manufacturing to service-sector employment. In Oregon, the most important shift during this period has been the shift from a timber-based economy to a more diverse service-based economy. This section of the EOA focuses on changes in the economy in Crook County and Prineville since 2008.

¹⁰ Bureau of Labor Statistics, U.S. Department of Labor, *The Economics Daily*, Consumer prices up 9.1% over the year ended June 2022, largest increase in 40 years at <https://www.bls.gov/opub/ted/2022/consumer-prices-up-9-1-percent-over-the-year-ended-june-2022-largest-increase-in-40-years.htm> (visited July 25, 2022).

¹¹ Bureau of Labor Statistics, U.S. Department of Labor, *The Economics Daily*, Consumer Price Index: 2023 in Review, <https://www.bls.gov/opub/ted/2024/consumer-price-index-2023-in-review.htm>



Employment Trends in Crook County

Exhibit 2 shows covered employment in Crook County for 2008 and 2022. During this period, employment increased by 1,916 jobs, a 39% increase. Across all sectors, the average annual wage for jobs in Crook County in 2022 was \$70,221.

From 2008 to 2022, the construction sector saw the largest increase in employment, with 521 new employees, followed by accommodation and food services with 222 employees, health care and social assistance with 195 employees, and professional, scientific, and technical services with 187 employees. Conversely, the manufacturing sector experienced the largest decrease in employment, losing 396 employees.

Exhibit 2. Covered Employment by Industry, Crook County, 2008–2022

Sector	2008	2022	Change 2008 to 2022		
			Difference	Percent	AAGR
Agriculture, forestry, fishing and hunting	138	163	25	18%	1.2%
Mining, quarrying, and oil and gas extraction	26	21	-5	-19%	-1.5%
Construction	357	878	521	146%	6.6%
Manufacturing	1,120	724	-396	-35%	-3.1%
Wholesale trade	(c)	328	n/a	n/a	n/a
Retail trade	(c)	616	n/a	n/a	n/a
Transportation, warehousing & utilities	(c)	275	n/a	n/a	n/a
Information	35	(c)	n/a	n/a	n/a
Finance and insurance	105	96	-9	-9%	-0.6%
Real estate and rental and leasing	75	86	11	15%	1.0%
Professional, scientific, and technical services	87	274	187	215%	8.5%
Management of companies and enterprises	68	10	-58	-85%	-12.8%
Administrative and support and waste management	153	280	127	83%	4.4%
Educational services	120	75	-45	-38%	-3.3%
Health care and social assistance	522	717	195	37%	2.3%
Arts, entertainment, and recreation	67	15	-52	-78%	-10.1%
Accommodation and food services	562	784	222	40%	2.4%
Other services	222	252	30	14%	0.9%
Unclassified	(c)	(c)	n/a	n/a	n/a
Total all government	1,276	1,255	-21	-2%	-0.1%
Total	4,933	6,849	1,916	39%	2.4%

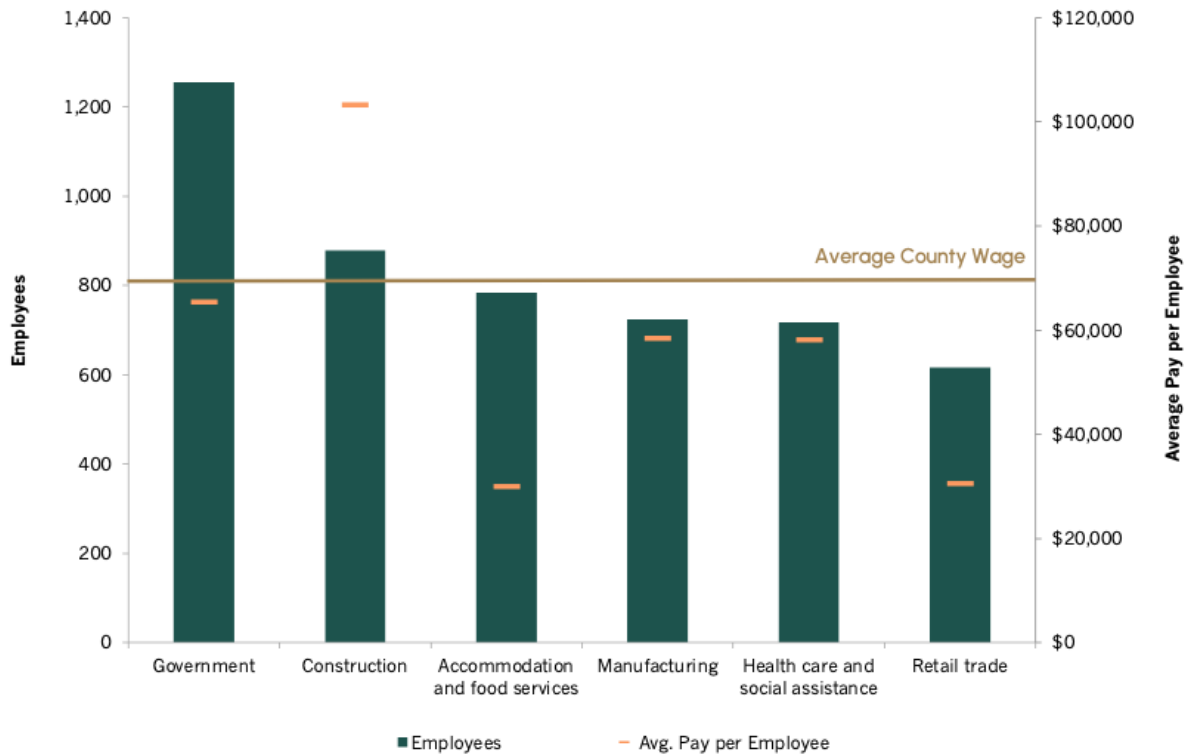
Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2008–2022. Sectors highlighted in blue have wages higher than the County average.

Notes: AAGR refers to the average annual growth rate; (c) indicates that data is classified as confidential.

Exhibit 3 shows covered employment and average wage for the six largest sectors in Crook County. The government had the most employees, accounting for approximately 18% of the County's total covered employment, followed by the construction and accommodation and food services sector (13% and 11% of employees, respectively). Of the top six sectors, only the construction sector paid above-average wages for the County. Jobs in management of companies and enterprises also paid more than the County average but accounted for a smaller share of covered employment.



Exhibit 3. Covered Employment and Average Pay by Sector, 6 Largest Sectors, Crook County, 2022



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2022.

From 2008 to 2022, wages more than doubled in the County, increasing 102%. Of sectors with greater than 100 employees, those with notable wage increases include construction (167%), accommodation and food services (123%), and administration and support and waste management (110%). While wages and employment for the information sector (which would include data center employees) are classified as confidential in the County by the Oregon Employment Department, the data center development over the period likely accounts for much of the County’s average wage increase.¹² In Oregon overall, the average wage for employees in the information sector was roughly \$121,000 in 2022, higher than the average wages for any sector in the County.

Employment in Prineville

Exhibit 4 shows the change in covered employment in the Prineville urban growth boundary (UGB) from 2008 to 2022. Over this period, employment in Prineville increased by about 946 jobs, a 19% growth rate (an average of 1.2% annually). The construction sector saw the largest increase of 551 new employees, followed by information, finance, and insurance with 483 new employees. Conversely, manufacturing experienced the

¹² Sectors are classified as confidential if there are fewer than three firms in the sector, or if any one firm makes up at least 80% of employment in the sector.



greatest decrease with 365 fewer employees, followed by transportation and warehousing with 207 fewer employees.

Exhibit 4. Change in Covered Employment, Prineville UGB, 2008–2022

Sector	2008	2022	Change 2001 to 2022		
			Difference	Percent	AAGR
Natural Resources and Mining	59	36	-23	-39%	-3.5%
Construction	137	688	551	402%	12.2%
Manufacturing	954	589	-365	-38%	-3.4%
Wholesale Trade	100	312	212	212%	8.5%
Retail Trade	521	587	66	13%	0.9%
Transportation, Warehousing, and Utilities	387	180	-207	-53%	-5.3%
Information, Finance and Insurance	141	624	483	343%	11.2%
Real Estate and Rental and Leasing	43	84	41	95%	4.9%
Management, Professional, Scientific, and Technical Services	147	250	103	70%	3.9%
Administrative, Support, Waste Management and Remediation	98	204	106	108%	5.4%
Private Education	35	51	16	46%	2.7%
Health Care and Social Assistance	584	676	92	16%	1.1%
Accommodation, Food Services, Arts, Entertainment and Recreation	517	555	38	7%	0.5%
Other Services (except Public Administration)	185	204	19	10%	0.7%
Government	1,158	965	-193	-17%	-1.3%
Total	5,066	6,012	946	19%	1.2%

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2008–2022.

Sectors highlighted in blue have wages higher than average wages.

Notes: AAGR refers to the average annual growth rate.

Exhibit 5 summarizes covered employment data for the Prineville UGB in 2022. The sectors with the highest number of employees were government (16% of Prineville’s total covered employment); construction (11%); health care and social assistance (11%); information, finance, and insurance (10%); manufacturing (10%); and retail trade (10%). Across all sectors, the average pay in Prineville was \$72,050. The average size for a private business in Prineville was 9.7 employees per business, similar to the state average of 9.4 employees.

Exhibit 5. Covered Employment and Average Pay by Sector, Prineville UGB, 2022¹³

Sector	Establishments	Employees	Average Pay per Employee
Natural Resources and Mining	7	36	\$49,097
Construction	60	688	\$111,339
Manufacturing	26	589	\$58,026
Wholesale Trade	24	312	\$55,380
Retail Trade	58	587	\$30,929
Transportation, Warehousing, and Utilities	19	180	\$62,563
Information, Finance and Insurance	47	624	\$206,699
Real Estate and Rental and Leasing	24	84	\$59,359
Management, Professional, Scientific, and Technical Services	46	250	\$50,948
Administrative, Support, Waste Management and Remediation	30	204	\$42,468
Private Education	6	51	\$20,079
Health Care and Social Assistance	73	676	\$58,508
Accommodation, Food Services, Arts, Entertainment and Recreation	48	555	\$23,148
Other Services (except Public Administration)	53	204	\$31,790
Government	33	965	\$60,532
Total	583	6,012	\$72,050

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2022. Sectors highlighted in blue have wages higher than average wages.

Like the County overall, wages in the City more than doubled from 2008 to 2022, increasing by 121%. This rise is likely due to wage increases in the information sector; while wage and employment data for information is confidential, the average wage for the combined information and finance and insurance sectors rose by 521%. Additionally, the average wage for these combined sectors in Prineville in 2022 was just under \$207,000 annually, compared to \$108,000 statewide. Other sectors that experienced significant wage increases during this period include construction (276%) and real estate and rental and leasing (207%)

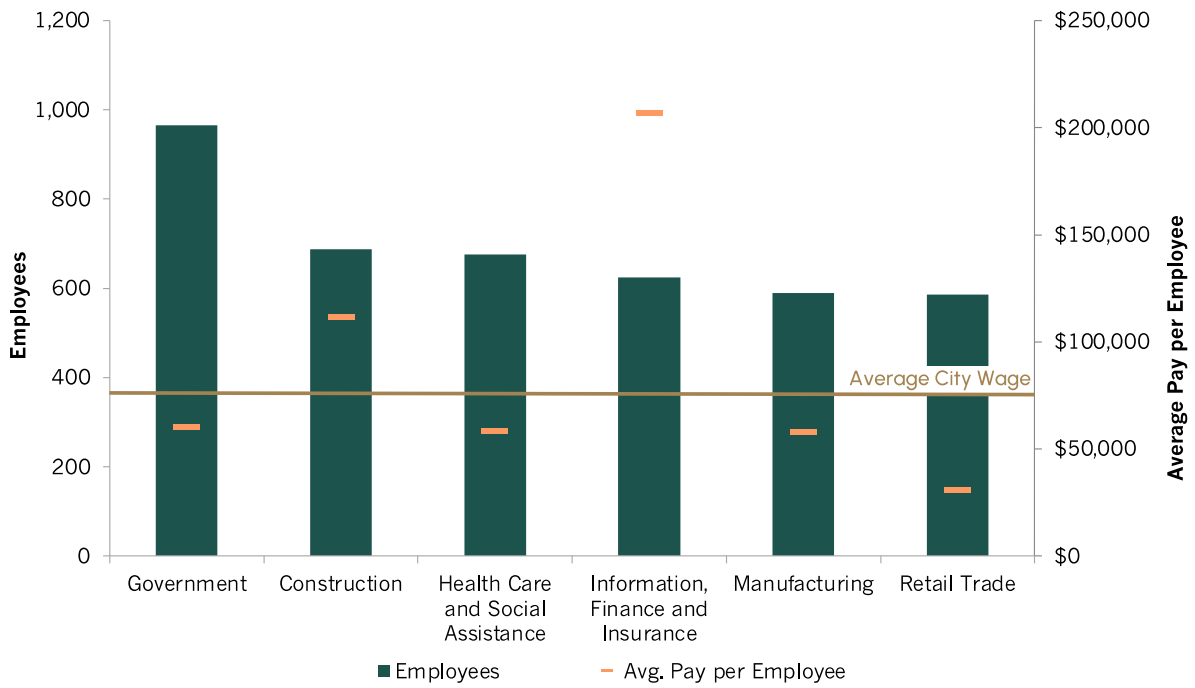
Exhibit 6 shows the employment and average pay per employee for the six largest Prineville industry sectors, which comprise 69% of covered employment. Among these top six sectors, construction and information, finance, and insurance jobs paid above-average wages, while retail trade jobs paid the lowest wages.

Like the County overall, wages in the City more than doubled from 2008 to 2022, increasing by 121%. This rise is likely due to wage increases in the information sector; while wage and employment data for information is confidential, the average wage for the combined information and finance and insurance sectors rose by 521%. Additionally, the average wage for these combined sectors in Prineville in 2022 was just under \$207,000 annually, compared to \$108,000 statewide. Other sectors that experienced significant wage increases during this period include construction (276%) and real estate and rental and leasing (207%)

¹³ The following sectors were combined due to confidentiality of QCEW data: Agriculture, Forestry, Fishing, Hunting, Mining, Quarrying, Oil and Gas, Utilities; Information, Finance and Insurance.



Exhibit 6. Covered Employment and Average Pay for Six Largest Sectors, Prineville UGB, 2022



Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2022.

Outlook for Growth in Crook County

Exhibit 7 shows the Oregon Employment Department’s forecast for employment growth by industry for the Central Oregon region (Crook, Deschutes, and Jefferson Counties) from 2022 to 2032. Employment in the region is forecasted to grow at an average annual growth rate (AAGR) of 1.0%.

The sectors expected to see the most employment growth are leisure and hospitality (projected to add 2,610 jobs), private education and health services (2,600 jobs), professional and business services (1,580 jobs), and construction (1,400 jobs). Together, these sectors are forecasted to add 8,190 new jobs, accounting for approximately 67% of total employment growth in the Central Oregon region. Prineville accounts for about 75% of the County’s total employment, and Crook County accounts for about 5.5% of jobs across the Central Oregon region.

Exhibit 7. Regional Employment Projections, 2022–2032, Central Oregon Region (Crook, Deschutes, and Jefferson Counties)

Industry Sector	2022	2032	Change 2022-2032		
			Number	Percent	AAGR
Total Private	92,200	103,000	10,800	12%	1.1%
Natural Resources and Mining	1,410	1,470	60	4%	0.4%
Mining and Logging	290	290	0	0%	0.0%
Construction	8,840	10,240	1,400	16%	1.5%
Manufacturing	8,160	8,830	670	8%	0.8%
Durable Goods	5,510	5,950	440	8%	0.8%
Wood Product Manufacturing	2,030	2,130	100	5%	0.5%
Nondurable Goods	2,660	2,880	220	8%	0.8%
Trade, Transportation, and Utilities	18,550	19,470	920	5%	0.5%
Wholesale Trade	2,830	3,060	230	8%	0.8%
Retail Trade	13,040	13,430	390	3%	0.3%
Transportation, Warehousing, and Utilities	2,680	2,970	290	11%	1.0%
Information	2,340	2,730	390	17%	1.6%
Financial Activities	5,900	6,090	190	3%	0.3%
Professional and Business Services	11,550	13,130	1,580	14%	1.3%
Educational and Health Services	16,760	19,360	2,600	16%	1.5%
Health care and social assistance	15,430	17,830	2,400	16%	1.5%
Health care	12,730	14,660	1,930	15%	1.4%
Leisure and Hospitality	14,640	17,250	2,610	18%	1.7%
Accommodation and Food Services	12,450	14,520	2,070	17%	1.5%
Other Services	4,050	4,430	380	9%	0.9%
Government	12,910	13,610	700	5%	0.5%
Federal Government	1,240	1,220	-20	-2%	-0.2%
State Government	1,340	1,390	50	4%	0.4%
Local Government	10,330	11,000	670	6%	0.6%
Local Government Education	4,770	4,840	70	1%	0.1%
Self-Employment	6,890	7,600	710	10%	1.0%
Total Employment	112,000	124,210	12,210	11%	1.04%

Note: AAGR is the Annual Average Growth Rate.

Source: Oregon Employment Department. Employment Projections by Industry 2022-2032.



Prineville's Competitive Advantage

Economic development opportunities in Prineville will be affected by local conditions as well as the national and state economic conditions discussed above. Prineville's economic conditions, relative to other parts of Central Oregon, form its competitive advantage for economic development, which has implications for the types of firms most likely to locate and expand in the area.

Prineville has several competitive advantages for economic development. Its strategic location in Central Oregon provides good regional transportation links via highways and rail, connecting it to major urban centers and distribution routes. Prineville's quality of life, characterized by its small-town charm, access to outdoor recreation, and recent investments in education and health care, attracts both residents and businesses. In recent years, the addition of major tech companies' data centers, diversification of the local economy, business incentive programs, and infrastructure investments have all positioned Prineville as an attractive location for economic growth and business expansion.

The discussion earlier in this chapter provided information about Prineville's existing base of businesses and access to labor. This section summarizes these and other local factors that form Prineville's competitive advantages, with additional details in the sections following this summary.

Prineville's advantages for economic development include:

- ◆ **Location.** Prineville is located in Central Oregon, in the East Cascades region. Prineville is located roughly 20 miles from Redmond and 36 miles from Bend. Businesses in Prineville have access to workers from the broader Central Oregon Labor Market. Just about 18% of Prineville workers commute in from Bend or Redmond, and over a quarter of Prineville residents work in Bend or Redmond.
- ◆ **Transportation.** Prineville is located along Highway 26, which runs east from Portland toward Mount Hood and then heads southeast toward Prineville. Additionally, Prineville serves as the eastern terminal of Highway 126, which runs from Florence to Prineville through Redmond. In Redmond, Highway 126 intersects with Highway 97, a significant route for trucking between Central Washington and Northern California.
- ◆ **Rail connections.** Prineville owns and operates the Prineville Railway, a short-line railroad with access to two Class 1 railroads, Burlington Northern Santa Fe and Union Pacific; Burlington Northern Santa Fe stops in Prineville at the Prineville Freight Depot. The railway includes a transload-reload facility and a small public warehouse. The City is positioned at the eastern terminal of railroad tracks that connect with Redmond and then run north and south, providing shipping and distribution opportunities to the rest of the state.
- ◆ **Business-friendly environment.** Prineville offers a range of incentive programs designed to attract and support businesses, including a Long-Term Rural Enterprise Zone Facility tax exemption, allowing a property tax exemption of up to 15 years for



industrial firms making a substantial new capital investment in the City.¹⁴ The city also provides workforce training programs to ensure a skilled labor pool and fast-track permitting to expedite the setup process.¹⁵ Additionally, businesses benefit from low-cost industrial land and competitive power rates, making Prineville an economically attractive location for new and expanding enterprises.

- ◆ **Infrastructure investments.** In recent years, Prineville has invested in infrastructure to support its growing community and economy. Key projects include; the Crooked River Wetland Complex, Aquifer Storage and Recovery system, the \$13.5 million Combs Flat Road extension, providing an alternate north–south route to alleviate Main Street and Highway 26 congestion. The city is also partnering with ODOT to improve the U.S. 26/3rd Street corridor, enhancing safety and mobility. Additionally, Prineville has focused on revitalizing its town center with upgraded street lighting, sidewalks, and façade improvements. These efforts are complemented by the development of the Barnes Butte Recreation Area, preserving over 600 acres for public use.
- ◆ **Data centers.** Data centers can have a positive impact on a city's economy by creating jobs directly and indirectly and driving infrastructure improvements. In Prineville, Meta and Apple have built two major data centers, diversifying the local economy and reducing its reliance on the timber and tire industries. The tech investments have also led to better infrastructure, including water systems, improved power and internet connectivity, benefiting local businesses and residents. These data centers help diversify the local economy, increase tax revenue, and attract other businesses.
- ◆ **Availability of high-speed internet.** Prineville's access to broadband, fiber, and fixed wireless connections is an economic advantage for the community. With access to fast and reliable internet, local businesses can operate more efficiently, reaching broader markets and improving customer service. This connectivity also attracts new businesses and remote workers, fostering economic growth and diversification. Additionally, high-speed internet supports educational opportunities and innovation, making Prineville a more attractive place to live and work.
- ◆ **Labor Force.** Prineville's location in Central Oregon provides access to a broader pool of workers in the region. Located roughly 30 minutes from Redmond and 50 minutes from Bend, the city is part of a commute shed that expands the City's labor base. With access to a large labor force, the city can attract businesses that may be hesitant to locate in cities with fewer workers.
- ◆ **Economic dynamism.** In 2022, Heartland Forward ranked Prineville ninth on a list of the most dynamic micropolitan regions (cities with a population under 50,000), partly due to its economic recovery after the COVID-19 pandemic.¹⁶ Crook County was the first county in Oregon to fully recover job losses from the pandemic. Heartland Forward cited Prineville's diversification of its economy in the past decade with the construction of its new data centers. This project supported a range of industries, including the information, construction, and professional sectors.

¹⁴ City of Prineville, [Annual Comprehensive Financial Report](#), Year Ended June 30, 2024.

¹⁵ Prineville Chamber, [8 Reasons to Do Business in Prineville, Oregon](#). Accessed January 3, 2025.

¹⁶ Guernsey, Dean. Bend Bulletin, Prineville makes top 10 on list of economically dynamic small towns in the nation. Retrieved from [Bend Bulletin](#). 2022.



- ◆ **Tourism and access to outdoor recreation.** Travel spending in Crook County increased by 168% over the last two decades, twice as much as in Central Oregon overall. Water sports, cycling, and rock hunting attract tourists to the area in the summer months. The City also has horse races and a rodeo that attracts visitors.
- ◆ **Quality of life and population growth.** Prineville attracts residents for many of the same reasons that it attracts visitors. Prineville is growing faster than the County and state, attracting residents with its dynamic downtown, small-town feel, and access to outdoor recreational activities. Jobs in Prineville also attract younger families and professionals to the area, causing the Crook County School District to have the highest growth rate in Central Oregon in recent years.

Prineville has also made significant recent investments in education and health care to enhance the quality of life for its residents. The city has expanded career and technical training programs at Crook County High School, focusing on manufacturing and other in-demand skills. Additionally, the newly constructed Central Oregon Community College/Oregon State University Open Campus provides higher education opportunities locally. In health care, the new St. Charles Health System facility offers accessible and comprehensive medical services.

Prineville's disadvantages for economic development include:

- ◆ **Distance from an interstate.** Prineville's location presents challenges for companies that depend on efficient access to major transportation routes. While Prineville is located along Highways 26 and 126, it is a roughly 30-minute drive to reach Highway 97, a significant route for trucking between Central Washington and Northern California. Prineville's distance from these major routes may draw residents and visitors who seek a more remote location, but it can be a disadvantage for many types of businesses that need direct access to an interstate, such as warehousing and distribution.
- ◆ **Isolated location.** Prineville's geographic location presents some challenges for economic development. Situated in Central Oregon, the city faces logistical hurdles, including higher transportation costs and longer delivery times for goods and services. This isolation can deter businesses that rely on efficient supply chains and quick market access. Additionally, the limited local market size restricts the potential business customer and employee base, which could make it more difficult to achieve economies of scale.
- ◆ **Challenging topography.** The City is situated within an ancient caldera, among large rimrock buttes from ancient lava flows. These buttes can restrict the City's available land for development, increase the cost and complexity of building infrastructure (such as roads or utilities), and limit the City's accessibility for businesses that may rely on efficient transportation and logistics.
- ◆ **Access to electricity.** Prineville's electricity supply faces challenges due to the tight energy market in Central Oregon. While the city has some renewable energy sources, such as solar power, which perform well during the summer, it needs more availability at night and during winter months, necessitating the import of additional power from Bonneville Power Administration (BPA). Wind energy contributes to the mix but is also



weather dependent. To address these limitations, the city is considering biomass energy as a viable option to supplement solar power and ensure a stable baseload supply.

- ◆ **Housing shortages.** Prineville’s rapid economic growth, driven by the establishment of large data centers, led to a surge in demand for housing. The City’s 2019 Housing Needs Analysis estimated that as of 2018, the City had a low housing vacancy rate of 1.7%, indicating a demand for additional housing units. By 2039, the Analysis estimates a need for 1,020 new housing units to support Prineville’s population. Of these units, the Analysis identifies a need for ownership housing in the middle of the pricing spectrum and rental housing at the lower and middle end of the spectrum.
- ◆ **Childcare.** A 2019 Child Care Fact Sheet found that childcare in the City meets only 17% of the childcare demand for children under five, identifying development, labor, and funding barriers.¹⁷ Current data from the Center for American Progress and the University of Minnesota suggests that childcare is still scarce in the City as of 2024.¹⁸ Lack of childcare in a city can be a significant barrier to economic development and limit workforce participation. However, Prineville has taken steps to alleviate obstacles to childcare facility development, and two new childcare facilities have since opened, with additional facilities in the pipeline.
- ◆ **Infrastructure limitations.** Prineville’s rapid growth, particularly due to the establishment of large data centers by companies like Meta and Apple, has put a strain on its infrastructure. The increased demand for resources such as water and energy has challenged the city’s capacity to keep up. These data centers require substantial amounts of electricity, leading to increased demand on the grid. This surge in power consumption has challenged the city’s ability to maintain a stable and reliable energy supply.

Public Facilities and Services¹⁹

The provision and costs of public facilities and services can impact a firm’s decision to expand or relocate to a city. One of the primary considerations about developing a site is whether it has infrastructure to or near the site, including water, wastewater, electricity, and transportation. If infrastructure is not developed to or near the site, the consideration becomes whether infrastructure can be extended quickly and feasibly.

This section discusses Prineville’s infrastructure at the city level and reviews whether Prineville has or is planning to have sufficient capacity to support the amount and types of development proposed in the EOA.

¹⁷ Bend Chamber. NeighborImpact Child Care Resources in collaboration with TRACES. [City of Prineville – Child Care Fact Sheet](#). 2019.

¹⁸ Center for American Progress. [U.S. Child Care Deserts Interactive Map](#). 2020.

¹⁹ Information was obtained through an interview on 9/26/24 with Eric Klann, City of Prineville City Engineer.



WATER

Prineville has a significant amount of existing and future capacity available in its water systems, provided at a slightly lower cost than other Central Oregon cities. Prineville's water system primarily relies on groundwater sourced from several wells within the city, with a current capacity of two million gallons per day available for use. The City has a total water treatment capacity of 6.5 million gallons, with peak consumption reaching 4.5 million gallons on high-demand days. The water system is in good condition, supported by recent investments to accommodate data centers that require substantial water on peak days in the summer for cooling. Currently, the City is drilling an additional ASR well to add aquifer storage capacity another two million gallons of pumping capacity.

WASTEWATER

Like its water system, Prineville has excess capacity within its wastewater system. Prineville's wastewater system has a capacity of 2.6 million gallons per day. Current usage is less than half the capacity, averaging 1.1 million gallons per day. Wastewater is treated and handled through surface storage in evaporative lagoons, infiltration in the Wetlands Complex and irrigation of ag fields and municipal golf course. There are no immediate plans for expansion, given the existing capacity.

RAILWAY SYSTEM²⁰

Prineville has owned its railway system since 1918, an important asset for the City's transportation infrastructure and economic development. The railway facilitates efficient transport of goods, significantly reducing truck traffic on I-26, I-126, and I-97, promoting environmental sustainability and traffic safety. Prineville's railway connects with two Class 1 railroads, allowing for a diverse range of freight, including industrial chemicals, propane, asphalt, and agricultural products like barley and animal feed.

While current rail traffic is limited, the railway serves as an essential logistical backbone for industries, and there is potential for expansion to meet growing transport demands. With plans for a new railway spur to enhance site accessibility, the city aims to keep rail operations away from urban centers to minimize noise and safety concerns. Ideally, any railroad expansion would have limited road crossings on low-speed-limit roads without much traffic. With any additional spurs, the City would also need to include additional railcar storage.

²⁰ Information was obtained through an interview on 9/30/24 with Matt Wiederholt, City of Prineville Railway Manager.



3. Employment Growth and Site Needs

Goal 9 requires cities to prepare an estimate of the amount of commercial and industrial land needed over a 20-year planning period. The forecast of employment land needs and site characteristics for Prineville is based on expected employment growth and the types of firms that are likely to locate in Prineville. This chapter presents an employment forecast and analysis of potential growth industries built from recent economic trends.

Forecast of Employment Growth and Land Demand

Demand for industrial and commercial land will be driven by the expansion and relocation of existing businesses and the growth of new businesses in Prineville. Local growth independent of broader economic opportunities drives this employment land demand.

The employment projections in this section build off Prineville's existing employment base, assuming future growth is similar to Prineville's population growth forecast for 2025 to 2045. **The employment forecast does not consider 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 housing, parks, and other uses). Major economic events, such as the successful recruitment of a very large employer, are difficult to include in an economic opportunities analysis. The implications, however, are relatively predictable: more demand for land (of all types) and public services.

ECONorthwest has four steps to project demand for industrial and commercial land:

1. **Establish base employment for the projection.** We start with the estimate of covered employment in Prineville presented in Exhibit 5. Because covered employment does not include all workers, we adjusted it to reflect total employment in the city.
2. **Project total employment.** This projection considers forecasts and factors that may affect employment growth in Prineville 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.



Employment Base for Projection

The employment projection aims to model future employment land needs for general employment growth. The forecast of employment growth in Prineville starts with a base of employment on which to build the forecast. Exhibit 8 shows ECONorthwest’s estimate of total employment in Prineville in 2022.

To develop the figures, ECONorthwest started with estimated covered employment in the Prineville UGB from confidential Quarterly Census of Employment and Wages (QCEW) data provided by the Oregon Employment Department. Based on this information, Prineville had about 6,012 covered employees in 2022, as shown in Exhibit 5.

Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Data analysis shows that *covered* employment reported by the Oregon Employment Department for Crook County is only about 64% of *total* employment reported by the U.S. Department of Commerce.²¹ We evaluated this ratio for each employment sector for Crook County and used the resulting ratios to determine the number of noncovered employees. This allowed us to determine the total employment in Prineville. Exhibit 8 shows Prineville had an estimated 9,381 *total* employees within its UGB in 2022.

Exhibit 8. Estimated Total Employment by Sector, Prineville UGB, 2022

Sector	Covered Employment	Estimated Total Employment	Covered % of Total
Natural Resources and Mining	36	59	62%
Construction	688	1,019	67%
Manufacturing	589	712	83%
Wholesale Trade	312	358	87%
Retail Trade	587	979	60%
Transportation, Warehousing, and Utilities	180	275	66%
Information, Finance and Insurance	624	1,138	55%
Real Estate and Rental and Leasing	84	801	10%
Management, Professional, Scientific, and Technical Services	250	557	45%
Administrative, Support, Waste Management and Remediation	204	340	60%
Private Education	51	79	65%
Health Care and Social Assistance	676	833	81%
Accommodation, Food Services, Arts, Entertainment and Recreation	555	670	83%
Other Services (except Public Administration)	204	542	38%
Government	965	1,020	95%
Total	6,012	9,381	64%

Source: 2022 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department.

²¹ 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 data from the U.S. Department of Commerce. Total employment includes all covered employees, plus sole proprietors and other noncovered workers.



Employment Projection

The employment forecast covers the 2025 to 2045 period, requiring an estimate of total employment for Prineville in 2025. The base employment starts with the estimated 9,381 total jobs in Prineville in 2022, shown in Exhibit 8.

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

Exhibit 9 shows the forecast rate options, which include employment growing at the same rate as the PSU population growth rate (1.04%), the OED regional employment growth rate (1.04%),²² or the historic employment growth rate in Prineville from 2008 to 2022 (1.23%). The PSU and OED growth rates are the safe harbor options in OAR 660-024-0040(9)(a)(A) and OAR 660-024-0040(9)(a)(B).

Exhibit 9. Forecast Rate Options for Employment Growth in Prineville UGB, 2025–2045

Year	Jobs grow at the rate of...		
	Population Growth Forecast for the City (2025-45) (1.04%)	Regional Employment Growth (1.04%)	Historic Employment Growth in Prineville (2008-22) (1.23%)
2025	9,677	9,677	9,732
2045	11,905	11,902	12,429
Change 2025 to 2045			
Employees	2,228	2,225	2,697
Percent	23%	23%	28%
Rate (AAGR)	1.04%	1.04%	1.23%

Source: EConorthwest

The City selected the forecast based on the historic growth rate for Prineville (1.23% average annual growth rate) because Prineville has been growing faster than the expected rate of growth in Central Oregon, driven in large part by quality of life and industrial development, including data centers. Chapter 2 describes how employment and payroll in Prineville have changed since 2008, a factor largely attributable to growth in data centers.

Exhibit 10 shows employment growth in Prineville between 2025 and 2045, based on the assumption that the city will grow at an average annual growth rate of 1.23%. By 2045, Prineville will have 12,429 employees within the UGB, an increase of 2,697 employees (28%) between 2025 and 2045.

²² During the EOA process, EConorthwest used the OED forecast rates for the 2022–2032 period.



Exhibit 10. Employment Growth in Prineville UGB, 2025–2045

Year	Total Employment
2025	9,732
2045	12,429
Change 2025 to 2045	
Employees	2,697
Percent	28%
Rate (AAGR)	1.23%

Source: EConorthwest

Allocate Employment to Different Land Use Types

The next step in forecasting employment is to allocate future employment to broad categories of land use. Firms wanting to expand or locate in Prineville will look for a variety of site characteristics specific to their industry and circumstances. We grouped employment into four broad categories of land use based on the North American Industrial Classification System (NAICS): industrial, retail commercial, office and commercial services, and government.²³

Exhibit 11 shows the expected share of employment by land use type in 2025 and the forecast of employment growth by land use type in 2045 in the Prineville UGB. The results assume:

- ◆ **Industrial, including information.** Industrial employment will grow from 39% of Prineville’s employment in 2025 to 40% by 2045. This assumption reflects the growth of sectors like construction, wholesale trade, or information, which grew faster than average in Prineville since 2008. Industrial sectors are forecast to add 1,198 employees in Prineville over the 20-year period.

The information sector is included in industrial because, in Prineville, information employment is primarily employment at data centers, which are located on land zoned Light Industrial. The site characteristics of data center sites are more similar to industrial uses than commercial or retail sites.

- ◆ **Commercial and retail services, excluding information.** These types of commercial uses are forecast to account for 51% of employment in Prineville by 2045. It is likely that some types of commercial uses, such as retail, will grow slower (reflective of national trends of declining local retail activity) and other types of commercial uses that serve local residents will continue to grow at rates consistent with historical rates.

²³ Industrial employment includes construction and agriculture; manufacturing; transportation and warehousing; and wholesale trade. Retail commercial is retail trade. Office and commercial includes information; finance and insurance; real estate; professional services; management of companies; administrative support and waste management; educational services; health care and social assistance; recreation; accommodation and food service; and other services. Government includes all employment at federal, state, local, and other governmental agencies.



Commercial sectors are forecast to add 1,361 employees in Prineville over the 20-year period.

- ◆ **Government.** Employment in government is forecast to decrease from 10% to 9% of employment in Prineville, reflecting decreasing employment trends in government in Prineville since 2008. Growth (138 employees) is likely to be concentrated in K–12 education.

Exhibit 11. Forecast of Employment Growth by Land Use Type, Prineville UGB, 2023–2043

Land Use Type	2025		2045		Change 2025 to 2045
	Employment	% of Total	Employment	% of Total	
Industrial, including Information	3,774	39%	4,972	40%	1,198
Commercial & Retail Services, excluding Information	4,978	51%	6,339	51%	1,361
Government	980	10%	1,118	9%	138
Total	9,732	100%	12,429	100%	2,697

Source: ECONorthwest

*Number of Employees

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 (excluding Information)

This section shows demand for vacant (including partially vacant) land in Prineville over the 20-year period. The assumptions used in this analysis are:

- ◆ **Employment density.** Employees per net 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 12 assumes that commercial and retail services will have a density of 20 employees per acre.²⁴ These employment densities are consistent with Oregon cities similar in size to Prineville. 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.²⁵ A net-to-

²⁴ Government employment is not included when discussing employment land demand because growth in government employment does not result directly in the need for more land for public uses. For instance, schools require land based on expected growth of students in the school district or replacement of existing obsolete schools, rather than as a result of growth in government employment. Local or regional governments may grow and continue to occupy existing built space or may need land based on factors other than employment growth. In addition, government employment locates in a range of zones, including commercial, residential, public, and other zones.

²⁵ 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.



gross conversion is expressed as a percentage of gross acres that are in public right-of-way. Based on empirical evaluation of Prineville’s existing net-to-gross ratios in areas designated for and developed with commercial uses, ECONorthwest uses a net-to-gross conversion factor of 23% for commercial.

Using these assumptions, the forecasted growth of 1,361 new commercial employees will result in demand for 84 acres of vacant (and partially vacant) employment land for commercial uses.

Exhibit 12. Demand for Vacant Land to Accommodate Commercial Employment Growth, Prineville UGB, 2025–2045

Land Use Type	Employment Growth	Employees per Net Acre	Land Demand (Net Acres)	Land Demand (Gross Acres)
Commercial & Retail Services, excluding Information	1,361	20	68	84

Source: ECONorthwest

Industrial Land Need (including Information)²⁶

The land needed to accommodate the growth of 1,198 new industrial employees is based on analysis of existing development patterns on lands zoned Light Industrial and Heavy Industrial in Prineville. Exhibit 13 shows the characteristics of existing development sites on industrially zoned land. For sites smaller than 10 acres, the analysis looks at individual parcels. For sites larger than 10 acres, the analysis combines contiguous parcels with common ownership into a single site. For example, Apple owns 364 acres of land in 3 contiguous parcels. Those parcels function as one larger site for Apple, with three data center buildings constructed and three more approved located across the parcels. Apple started with one data center building in 2012 and has plans to build three more with room for future growth.

About 57% of Prineville’s industrial employment is located on sites smaller than 25 acres, with average site sizes ranging from 0.7 acres to 18.1 acres. Prineville has a concentration of employment (43% of employment) on sites larger than 50 acres, averaging 251.7 acres in size.

Exhibit 13. Characteristics of Existing Developed Industrial Land by Site Size, Prineville UGB

	Characteristics of Employment Sites by Site Size					
	Less than 2 acres	2 - 5 Acres	5 - 10 Acres	10 - 25 Acres	25 - 50 Acres	50+ Acres
Percentage of Covered Industrial Employment	12%	13%	23%	8%	0%	43%
Employees per Business	6.3	12.0	42.0	56.3	-	61.6
Average Site Size (acres)	0.7	3.3	6.3	18.1	-	251.7

Source: Analysis by ECONorthwest

Source of employment data: 2022 covered employment from confidential Quarterly Census of

²⁶ This section includes employment in the “information” sector because that employment is in data centers in Prineville, located on land designated as Light Industrial.



Employment and Wage (QCEW) data provided by the Oregon Employment Department.
 Source of site characteristics: Prineville BLI database, City of Prineville, Crook County

Exhibit 14 allocates the 1,198 new industrial employees to sites based on the assumptions in Exhibit 13. The majority of new employment is forecast to locate on sites smaller than 25 acres (679 employees), resulting in demand for 46 new sites. In addition, Prineville is forecast to have growth of 519 employees on 9 sites.

Exhibit 14. Employment and Estimated Sites Needed by Site Size, Prineville UGB, 2025–2045

	Employees and Sites Needed by Site Size						All Employment
	Less than 2 acres	2 - 5 Acres	5 - 10 Acres	10 - 25 Acres	25 - 50 Acres	50+ Acres	
New Industrial Employees	147	152	278	102	-	519	1,198
Estimated New Businesses	24	13	7	2	-	9	55
Estimated Sites Needed	24	13	7	2	-	9	55

Source: ECONorthwest

Target Industries

The characteristics of Prineville will affect the types of businesses most likely to locate in the city. Attributes that may attract firms are Prineville’s infrastructure investments, high-capacity water systems, access to railway transport, municipal broadband, and quality of life.

Prineville’s existing businesses are concentrated in the industries defined in Exhibit 15. The industries highlighted in green are those with higher-than-average city wages. Industries with a high location quotient (i.e., highly specialized compared to national employment in the industry), high employment (i.e., have more than 50 employees in Prineville), and higher-than-average city wages have the highest growth potential. However, Prineville also has opportunities for employment growth in industries without a concentration of employment or a high location quotient.



Exhibit 15. Concentration of Industries and Employment, Prineville, 2022

	High Employment (50 employees or more)	Low Employment (at least 10 employees)
High Location Quotient	<ul style="list-style-type: none"> ◆ Specialty Trade Contractors ◆ Data Processing, Hosting, and Related Services ◆ Wood Product Manufacturing ◆ Plastics and Rubber Products Manufacturing ◆ Merchant Wholesalers, Durable Goods ◆ Food and Beverage Stores ◆ Truck Transportation ◆ Nursing and Residential Care Facilities ◆ Religious, Grantmaking, Civic, Professional, and Similar Organizations 	<ul style="list-style-type: none"> ◆ Forestry and Logging
Low Location Quotient	<ul style="list-style-type: none"> ◆ Construction of Buildings ◆ Hospitals ◆ Merchant Wholesalers, Nondurable Goods ◆ Motor Vehicle and Parts Dealers ◆ Credit Intermediation and Related Activities ◆ Real Estate ◆ Administrative and Support Services ◆ Professional, Scientific, and Technical Services ◆ Educational Services ◆ Social Assistance ◆ Ambulatory Health Care Services ◆ Food Services and Drinking Places ◆ Repair and Maintenance ◆ Accommodation 	<ul style="list-style-type: none"> ◆ Machinery Manufacturing ◆ Furniture and Related Product Manufacturing ◆ Heavy and Civil Engineering Construction ◆ Beverage and Tobacco Product Manufacturing ◆ Support Activities for Agriculture and Forestry ◆ Fabricated Metal Product Manufacturing ◆ Transportation Equipment Manufacturing ◆ Food Manufacturing ◆ Nonmetallic Mineral Product Manufacturing ◆ Building Material and Garden Equipment and Supplies Dealers ◆ Support Activities for Transportation ◆ Warehousing and Storage ◆ Telecommunications ◆ Couriers and Messengers ◆ Insurance Carriers and Related Activities ◆ Rental and Leasing Services ◆ Waste Management and Remediation Services ◆ Personal and Laundry Services

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2022.

Note: Green highlighting indicates higher than Prineville average wage.



Target Industries for Prineville

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

Given the current employment base, composed of both small and large businesses, it is reasonable to assume that the city's business growth will come from a similar range of business sizes. This growth will either come from businesses already in Prineville or new businesses that start in or relocate to Prineville. The industries identified as having potential for growth in Prineville are:

- ◆ **Biomass.** Prineville's access to the railway and proximity to the Ochoco National Forest make it well-suited for developing biomass energy production. By utilizing forest by-products and waste, the City can expand its energy portfolio, create renewable energy, and support sustainable forest management. Investments in biomass energy infrastructure could also diversify the City's economic profile and contribute to regional energy resilience, wildfire prevention, and improved air quality. (Biomass is classified under 221 in the 2022 NAICS codes.)
- ◆ **Data centers.** Prineville's expansion into the data center industry in the past two decades has led to significant infrastructure investments and workforce expansion that support the City's ability to host large-scale data centers. Meta and Apple have large data center campuses, with Meta occupying roughly 375 acres and Apple expanding from 154 to 364 acres. These factors provide a solid foundation for attracting further investment in and from this sector. (Data centers are classified under 518 in the 2022 NAICS codes.)
- ◆ **Manufacturing.** Prineville's target manufacturing industries will evolve as automation continues to change manufacturing industries. Based on existing businesses in Prineville, these industries may include wood products and plastic and rubber product manufacturing. (Manufacturing is classified under 31-33 in the 2022 NAICS codes, with wood products under 321 and plastic and rubber products under 326). In addition, Prineville targets a wide range of other manufacturing types: food manufacturing (NAICS code 311), beverage and tobacco product manufacturing (312), apparel manufacturing (391), leather and allied product manufacturing (316), wood product manufacturing (321), paper manufacturing (322), printing and related support activities (323), nonmetallic mineral product manufacturing (327), primary metal manufacturing (331), fabricated metal product manufacturing (332), machinery manufacturing (333), computer and electronic product manufacturing (334), electrical equipment appliance and component manufacturing (335), transportation equipment manufacturing (336), furniture and related product manufacturing (337), and miscellaneous manufacturing (339).
- ◆ **Waste Management and Remediation Services.** Prineville may target development of a recycling facility to address regional or statewide materials recovery facilities (recycling). (NAICS code 5629)



- ◆ **Services for visitors.** Prineville is located in Central Oregon, a recreational destination for Oregonians and visitors to the State. Prineville is near the Ochoco National Forest and Crooked River National Grassland. These natural areas provide access to a range of outdoor recreational activities. Visitors that stop or stay in Prineville create demand for services such as hotels, restaurants, retail, and experiences available in or near Prineville.
- ◆ **Services for residents.** As the population of Prineville and the outlying areas in Crook County grows, demand for services for residents will increase. These services include retail, restaurants, medical services, childcare services, and other services. These services present opportunities for entrepreneurship and small business development in Prineville.

Site Needs for Target 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.

OAR 660-009-0015(2) does state that “industrial 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, Prineville 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.

The potential growth industries described in the prior section of this EOA are a mixture of business sizes, from small to large-sized businesses. For the most part, Prineville’s potential growth industries require sites with minimal topographic constraints, smaller than 25 acres, with some demand for sites larger than 50 acres (as shown in Exhibit 14).

Exhibit 16 shows the site characteristics needed for competitive sites for the target industries, as well as other industries, using Business Oregon’s Industrial Development Competitiveness Matrix. The key site characteristics that are examined in a UGB expansion include site topography, site dimensions and shape, location in relation to the UGB, development status (largely vacant), ownership, site availability, compatibility with surrounding uses, and access to services such as highways, water, sewer, and electrical.



Exhibit 16. Industrial Development Competitiveness Matrix, Business Oregon

INDUSTRY SECTOR	SITE SIZE (ACRES)	SITE TOPOGRAPHY (SLOPE)	DISTANCE TO INTERSTATE OR OTHER PRINCIPAL ARTERIAL	TRIP GENERATION (ADT/ACRE)	RAILROAD OR PORT ACCESS	TELECOMMUNICATIONS (MAJOR DEPENDENCY)	WATER (MINIMUM LINE SIZE - INCHES OR DIAMETER)	SEWER (MINIMUM SERVICE LINE DIAMETER SIZE)	NATURAL GAS (ON-SITE)	ELECTRICITY (MINIMUM SERVICE DEMAND - MEGAWATTS)	ELECTRICITY REDUNDANCY DEPENDENCY
Heavy Industrial/ Manufacturing	10 to 100+	0 to 5%	within 10 miles	40 to 60	Preferred	Preferred	8 to 12 inches	6 to 8 inches	Competitive	2 MW	Required
High-Tech/ Cleantech Manufacturing	5 - 100+	0 to 5%	within 10 miles	40 to 60	Preferred	Required	12 to 16 inches	12 to 18 inches	Competitive	4 to 6 MW	Preferred
Food Processing	5 - 25+	0 to 5%	within 30 miles	40 to 60	Preferred	Required	12 to 16 inches	10 to 12 inches	Preferred	2 to 6 MW	Not Required
Advanced Manufacturing & Assembly	5 - 25+	0 to 7%	within 15 miles	40 to 60	Not Required	Required	8 to 12 inches	10 to 12 inches	Competitive	1 MW	Required
General Manufacturing	5 - 15+	0 to 5%	within 20 miles	40 to 50	Preferred	Required	6 to 10 inches	6 to 8 inches	Competitive	0.5 MW	Not Required
Industrial Business Park and R&D Campus	20 - 100+	0 to 7%	N/A	60 to 150	Preferred	Required	8 to 12 inches	10 to 12 inches	Competitive	0.5 MW	Required
Business/Admin Services	5 - 15+	0 to 12%	N/A	170 to 180	Not Required	Required	4 to 6 inches	6 to 8 inches	Preferred	0.5 MW	Not Required
Regional Warehouse/ Distribution	20 - 100+	0 to 5%	within 5 miles (only interstate or equivalent)	40 to 80	Preferred	Preferred	4 to 8 inches	4 inches	Preferred	1 MW	Not Required
Local Warehouse/ Distribution	10 - 25+	0 to 5%	within 5 miles (only interstate or equivalent)	40 to 80	Preferred	Preferred	4 to 6 inches	4 inches	Preferred	1 MW	Not Required
UVA Manufacturing/ Research	10 - 25+	0 to 7%	N/A	40 to 80	Not Required	Required	4 to 8 inches	6 inches	Preferred	0.5 MW	Not Required
Data Center	10 - 25+	0 to 7%	within 30 miles	20 to 30	Avoid	Required	16 inches	8 to 10 inches	Preferred	5 to 25 MW	Required
Rural Industrial	5 - 25+	0 to 5%	N/A	40 to 50	N/A	Preferred	4 to 8 inches (or on-site source)	4 to 6 inches	Preferred	1 MW	Not Required

Source: Business Oregon, Infrastructure Finance Authority, Industrial Development Competitiveness Matrix.

Note: Items identified as “preferred” are those that increase the feasibility of the subject property and its future reuse. Items identified as “required” are factors seen as mandatory in most cases and have become industry standards.



SITE NEEDS FOR BIOMASS FACILITY

Prineville is working with partners on development of the Prineville Renewable Energy Project (PREP), a 35 MW baseload renewable energy facility relying on environmentally sourced biomass. The site requirements for the biomass facility are closely related to its operational characteristics. The facility will require significant space for material storage, processing facilities, transportation infrastructure, and collocated industries. Biomass will be delivered by both truck and railcar, necessitating adequate infrastructure to manage the high volumes of material efficiently. The site needs for a biomass facility are consistent with Heavy Industrial/Manufacturing in Exhibit 16.

PREP will process biomass from Central Oregon and across Oregon. PREP will consume biomass at a rate of 71 tons per hour to sustain 24/7 operations, with deliveries via railcar and trucks. Combined, these delivery methods will ensure a steady supply to sustain the plant's 24/7 operations.

Exhibit 17 describes the site needs for the biomass facility.

Exhibit 17. Summary of Site Needs for Biomass Facility

Site Characteristic	Description
Site acreage	<p>Site must be at least 200 developable acres.</p> <p>The acreage size is based on the following expected uses within the site:</p> <ul style="list-style-type: none"> • Material storage requirements: 55 acres. PREP will need storage space for a minimum of one month's supply of biomass to account for potential supply chain disruptions, such as those caused by adverse weather effects or transportation challenges. PREP will use about 71 tons of biomass per hour, 24 hours per day and seven days a week. • Truck and rail logistics: 35 acres. PREP will need space for truck and railcar deliveries of biomass in bulk. These activities will require about 10 acres to accommodate truck deliveries and about 25 acres for the rail spur and rail yard to manage railcars and unloading. • Processing facilities and operations: 40 acres. PREP will need space for on-site processing (e.g., biomass chipping and drying), fire suppression systems and safety buffer zones, and other operations. • Sawmill: 35 acres. The facility will include a small sawmill, which will use waste steam from biomass facilities. The sawmill will require space for log storage, milling facilities,



Site Characteristic	Description
	<p>and storage of finished products. Locating the sawmill with PREP is energy efficient and supports project efficiency.</p> <ul style="list-style-type: none"> • Buffer Areas: 20 acres. PREP will need sufficient buffer zones to mitigate noise, emissions, and stormwater management and to provide wildlife habitat preservation off the PREP site. • Future expansion: 15 acres. PREP will need space for future expansion of operations or changes in operations.
Site slope	<p>Site must have a slope of 10% or less.</p> <p>Business Oregon’s Industrial Development Competitiveness Matrix (Exhibit 16) shows that biomass and other cleantech industries generally need flat sites.</p>
Site dimensions and shape	<p>Site must be relatively rectilinear and not divided by off-site roads or river.</p> <p>For a site to function as a single site for one business, it should not be bisected by roads (other than roads for internal circulation).</p> <p>The presence of streams or rivers increases the likelihood of flooding and would also make development of the site more challenging.</p>
Location of site in relation to existing UGB	<p>Site must be adjacent to the UGB.</p> <p>To be considered for the large lot industrial site, the site must be adjacent to the existing Prineville UGB. This requirement avoids creating challenges to future municipal service, such as “cherry stems,” and avoids creating greater conflicts with agricultural uses around Prineville. The site should be near existing industrial areas to avoid conflicts with existing commercial and residential uses.</p>
Current development status	<p>Site must be largely vacant.</p> <p>The sites should be largely free of existing development. There may be existing farm structures or a residential structure on parcels in the site.</p>
Current ownership	<p>Site may be made up of one large parcel or multiple adjacent parcels and have no more than three owners.</p> <p>Sites with fewer owners reduce the cost and uncertainty of land assembly. Developing an industrial building on a site on two or more tax lots requires negotiating land assembly. Land assembly is difficult and often costly for a number of reasons. People own land for a variety of reasons, such as the desire to</p>



Site Characteristic	Description
	<p>develop the land, keep the land undeveloped, or sell the land for a profit. Getting landowners to sell land can be difficult, especially if the ownership is legally disputed, as is the case with some inheritances. If a landowner is a willing seller, they may have an unrealistic expectation of their land's value in the context of comparable land values. In addition, one parcel of land may have multiple owners, compounding the issues described above.</p>
<p>Compatibility with surrounding uses</p>	<p>Site must be located in areas where the expected industrial uses are compatible with surrounding land uses.</p> <p>Industrial site users typically reject sites located in areas where a manufacturing operation will be incompatible with surrounding uses (established or planned). OAR 660-009-0025(6) recognizes that compatibility is an important factor when locating new employment land. It strongly encourages cities to manage the encroachment and intrusion of incompatible uses with employment uses.</p> <p>Biomass processing facilities are generally compatible with other industrial uses, commercial uses, and some public uses. They may also coexist well with agricultural uses, particularly when the biomass facility supports local agriculture by utilizing agricultural residues as feedstock. However, compatibility with adjacent land uses is crucial to prevent conflicts that could disrupt operations. Odors from biomass processing, emissions, or increased traffic from feedstock deliveries and product shipping can create issues with nearby residential areas. Biomass combustion can also release particulate matter, nitrogen oxides, sulfur dioxide, and, at times, carbon monoxide, which could pose public health concerns. Additionally, ash and waste by-products may contain contaminants that pose risks to soil and water if not properly managed. Such conflicts might require the biomass facility to implement costly changes to minimize environmental impacts, potentially affecting operational efficiency and economic viability.</p> <p>For this reason, the target industries proposed for this site will require a location that does not present incompatibility concerns.</p>
<p>Access to rail</p>	<p>Site must be accessible by rail to allow for transportation of biomass fuel (vegetation) to be transported to the facility.</p>



Site Characteristic	Description
	<p>For a biomass facility, rail access is essential to efficiently transport biomass fuel, such as vegetation or agricultural residues, to the site. Rail infrastructure allows for the movement of large volumes of biomass over long distances, reducing transportation costs and minimizing environmental impact compared to road transport. Without rail access, the alternative of using trucks can lead to increased traffic congestion on local roads, higher emissions, and greater wear on infrastructure, particularly in densely populated or urban areas. Reliable rail access supports continuous, large-scale biomass delivery, which is critical for maintaining a steady supply to the facility and ensuring consistent energy production. Therefore, selecting a site with rail connectivity is a key consideration for operational efficiency, cost-effectiveness, and reduced environmental impact in biomass energy production.</p>
<p>Access to municipal infrastructure, highways, water, and sewer</p>	<p>Site must have future access to highways, water, and sewer.</p> <p>This access must be consistent with the requirements presented in Business Oregon’s Industrial Development Competitiveness Matrix (Exhibit 16). While it would be preferable if these types of infrastructure were available to the edge of the parcel, it is likely that new off-site infrastructure will need to be built to provide services to any site around Prineville.</p>
<p>Access to power</p>	<p>Site must have future access to electrical power.</p> <p>This access must be consistent with the requirements presented in Business Oregon’s Industrial Development Competitiveness Matrix (Exhibit 16). While it would be preferable to have electrical service available to the edge of the parcel, it is likely that electrical service will need to be built to provide electricity to any of the sites around Prineville.</p> <p>The biomass facility will add electricity to the power grid, increasing the local (and potentially regional) supply of electricity.</p>



SITE NEEDS FOR DATA CENTERS

Prineville has several data centers, notably Meta and Apple data centers, which have grown over time. The Meta data center is 375 acres in size, with 11 data center buildings constructed from 2010 through 2024. The Apple data center is 364 acres in size with three data center buildings constructed from 2012 through 2024 and three more approved.

The site needs in Exhibit 18 are based on the information from Business Oregon in Exhibit 16 and the characteristics of data centers located in Prineville.

Exhibit 18. Summary of Site Needs for Data Centers

Site Characteristic	Description
<p>Site acreage</p>	<p>Site must be at least 25 acres and likely larger.</p> <p>The acreage size of additional data centers will depend on the needs of the particular company. The Meta and Apple data centers in Prineville both started on smaller sites (120 acres and 160 acres, respectively) and expanded as the company needed more data center buildings.</p> <p>Data centers typically need land for buildings, parking lots, drainage, utilities, substations, contractor offices, laydown areas, areas for future expansion, and buffers for security perimeters.</p>
<p>Site slope</p>	<p>Site must have a slope of 7% or less.</p> <p>Business Oregon’s Industrial Development Competitiveness Matrix (Exhibit 16) shows that data centers generally need flat sites.</p>
<p>Site dimensions and shape</p>	<p>Site must be relatively rectilinear and not divided by off-site roads or rivers.</p> <p>For a site to function as a single site for one business, it should not be bisected by roads (other than roads for internal circulation).</p> <p>The presence of streams or rivers increases the likelihood of flooding and would also make development of the site more challenging.</p>
<p>Location of site in relation to existing UGB</p>	<p>Site must be adjacent to the UGB.</p> <p>To be considered for the large lot industrial site, the site must be adjacent to the existing Prineville UGB. This requirement avoids creating challenges to future municipal service, such as “cherry stems,” and avoids creating greater conflicts with agricultural uses around Prineville.</p>
<p>Current ownership</p>	<p>Site may be made up of one large parcel or multiple adjacent parcels and have no more than three owners.</p>



Site Characteristic	Description
	<p>Sites with fewer owners reduce the cost and uncertainty of land assembly. Developing an industrial building on a site on two or more tax lots requires negotiating land assembly. Land assembly is difficult and often costly for a number of reasons. People own land for a variety of reasons, such as the desire to develop the land, keep the land undeveloped, or sell the land for a profit. Getting landowners to sell land can be difficult, especially if the ownership is legally disputed, as is the case with some inheritances. If a landowner is a willing seller, they may have an unrealistic expectation of their land's value in the context of comparable land values. In addition, one parcel of land may have multiple owners, compounding the issues described above.</p>
<p>Compatibility with surrounding uses</p>	<p>Site must be located in areas where the expected industrial uses are compatible with surrounding land uses.</p> <p>Industrial site users typically reject sites located in areas where a manufacturing operation will be incompatible with surrounding uses (established or planned). OAR 660-009-0025(6) recognizes that compatibility is an important factor when locating new employment land. It strongly encourages cities to manage the encroachment and intrusion of incompatible uses with employment uses.</p> <p>For this reason, the target industries proposed for this site will require a location that does not present incompatibility concerns.</p>
<p>Access to municipal infrastructure, highways, water, and sewer</p>	<p>Site must have future access to highways, water, and sewer.</p> <p>This access must be consistent with the requirements presented in Business Oregon's Industrial Development Competitiveness Matrix (Exhibit 16). While it would be preferable if these types of infrastructure were available to the edge of the parcel, it is likely that new off-site infrastructure will need to be built to provide services to any site around Prineville.</p>
<p>Access to power</p>	<p>Site must have future access to electrical power.</p> <p>This access must be consistent with the requirements presented in Business Oregon's Industrial Development Competitiveness Matrix (Exhibit 16). While it would be preferable to have electrical service available to the edge of the parcel, it is likely that electrical service will need to be built to provide electricity to any of the sites around Prineville.</p>



SITE NEEDS FOR OTHER MANUFACTURING

The site needs for manufacturing consider the requirements for manufacturing target industries, particularly wood products and plastic and rubber product manufacturing. These industries could fit into the categories of advanced manufacturing and assembly and general manufacturing in the Business Oregon Competitiveness Matrix in Exhibit 16.

Exhibit 19. Summary of Site Needs for Data Centers

Site Characteristic	Description
Site acreage	<p>Site must be at 5 to 25 acres and possibly larger.</p> <p>The site size for a manufacturer will depend on the needs of the particular company.</p>
Site slope	<p>Site must have a slope of 7% or less.</p> <p>Business Oregon’s Industrial Development Competitiveness Matrix (Exhibit 16) shows that manufacturers generally need flat sites.</p>
Site dimensions and shape	<p>Site must be relatively rectilinear and not divided by off-site roads or rivers.</p> <p>For a site to function as a single site for one business, it should not be bisected by roads (other than roads for internal circulation).</p> <p>The presence of streams or rivers increases the likelihood of flooding and would also make development of the site more challenging.</p>
Location of site in relation to existing UGB	<p>Site must be adjacent to the UGB.</p> <p>To be considered for the large lot industrial site, the site must be adjacent to the existing Prineville UGB. This requirement avoids creating challenges to future municipal service, such as “cherry stems,” and avoids creating greater conflicts with agricultural uses around Prineville.</p>
Current ownership	<p>Site may be made up of one large parcel or multiple adjacent parcels and have no more than three owners.</p> <p>Sites with fewer owners reduce the cost and uncertainty of land assembly. Developing an industrial building on a site on two or more tax lots requires negotiating land assembly. Land assembly is difficult and often costly for a number of reasons. People own land for a variety of reasons, such as the desire to develop the land, keep the land undeveloped, or sell the land for a profit. Getting landowners to sell land can be difficult, especially if the ownership is legally disputed, as is the case with some inheritances. If a landowner is a willing seller, they may have an unrealistic expectation of their land’s value in the context of comparable land values. In addition, one</p>



Site Characteristic	Description
	parcel of land may have multiple owners, compounding the issues described above.
Compatibility with surrounding uses	<p>Site must be located in areas where the expected industrial uses are compatible with surrounding land uses.</p> <p>Industrial site users typically reject sites located in areas where a manufacturing operation will be incompatible with surrounding uses (established or planned). OAR 660-009-0025(6) recognizes that compatibility is an important factor when locating new employment land. It strongly encourages cities to manage the encroachment and intrusion of incompatible uses with employment uses.</p> <p>For this reason, the target industries proposed for this site will require a location that does not present incompatibility concerns.</p>
Access to municipal infrastructure, highways, water, and sewer	<p>Site must have future access to highways, water, and sewer.</p> <p>This access must be consistent with the requirements presented in Business Oregon’s Industrial Development Competitiveness Matrix (Exhibit 16). While it would be preferable if these types of infrastructure were available to the edge of the parcel, it is likely that new off-site infrastructure will need to be built to provide services to any site around Prineville.</p>
Access to power	<p>Site must have future access to electrical power.</p> <p>This access must be consistent with the requirements presented in Business Oregon’s Industrial Development Competitiveness Matrix (Exhibit 16). While it would be preferable to have electrical service available to the edge of the parcel, it is likely that electrical service will need to be built to provide electricity to any of the sites around Prineville.</p>



4. Buildable Lands Inventory

The buildable lands inventory (BLI) is intended to identify commercial and industrial lands available for development for employment use within the City of Prineville urban growth boundary (UGB). The inventory is sometimes characterized as land supply to accommodate anticipated employment growth. Population and employment growth drive *demand* for land. The amount of land needed depends on development type and other factors.

This chapter presents results of the commercial and industrial buildable lands inventory for the Prineville UGB. The results are based on analyses of City of Prineville, Cook County, and State of Oregon GIS data by ECONorthwest and was reviewed by City staff. The remainder of this chapter summarizes key findings of the BLI. The general steps in the buildable lands inventory are:

1. Generate UGB “land base”
2. Classify lands by buildable area status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

The following chapter summarizes the results of the commercial and industrial buildable lands inventory for the Crook County UGB in tabular and map formats. **Appendix B presents more details on the methodology for developing the inventory.**

Land Base

The land base for the Crook County employment Buildable Lands Inventory includes all tax lots in the urban growth boundary in plan designations that allow for employment. Exhibit 20 shows the land base by plan designation in the UGB.



Exhibit 20. Employment Land Base by Plan Designation, Crook County UGB, 2024

Plan Designation	Number of Tax Lots	Percent	Total Tax Lot Acreage	Percent (Total Acreage)
Core Commercial	342	31%	67	2%
Outlying Commercial	451	41%	376	9%
Light Industrial	149	14%	2,084	52%
Heavy Industrial	146	13%	656	16%
Mixed Use	8	1%	57	1%
Airport	3	0.3%	792	20%
Total	1,099	100%	4,032	100%

Source: EConorthwest analysis, City of Prineville, Crook County

Note: The number of tax lots represented is greater than the actual total number of tax lots in the analysis due to split plan designations.

Buildable Area Status

Exhibit 21 shows the total acres of commercial and industrial tax lots classified by development status. We used a rule-based classification (described in Appendix B) to define an initial development status. We confirmed development status through a series of reviews by EConorthwest and City staff based on local knowledge and review of aerial maps.

Exhibit 21. Employment Acres by Classification and Plan Designation, Prineville UGB, 2024

Plan Designation	Total Acres	Committed Acres	Constrained Acres	Buildable Acres
Core Commercial	67	51	16	-
Outlying Commercial	376	235	80	61
Light Industrial	2,084	832	27	1,225
Heavy Industrial	656	327	92	237
Mixed Use	57	1	3	53
Airport	792	787	-	5
Total	4,032	2,233	219	1,580

Source: EConorthwest analysis, City of Prineville, Crook County

Development Constraints

The buildable lands inventory identifies the following conditions as constraints that prohibit development: FEMA Regulatory Floodway and 100-Year Floodplains, landslide susceptibility, slopes greater than 15%, and the City’s Natural Features Overlay Districts, which include protections for dry washes, scenic resources, rimrock setbacks, surface

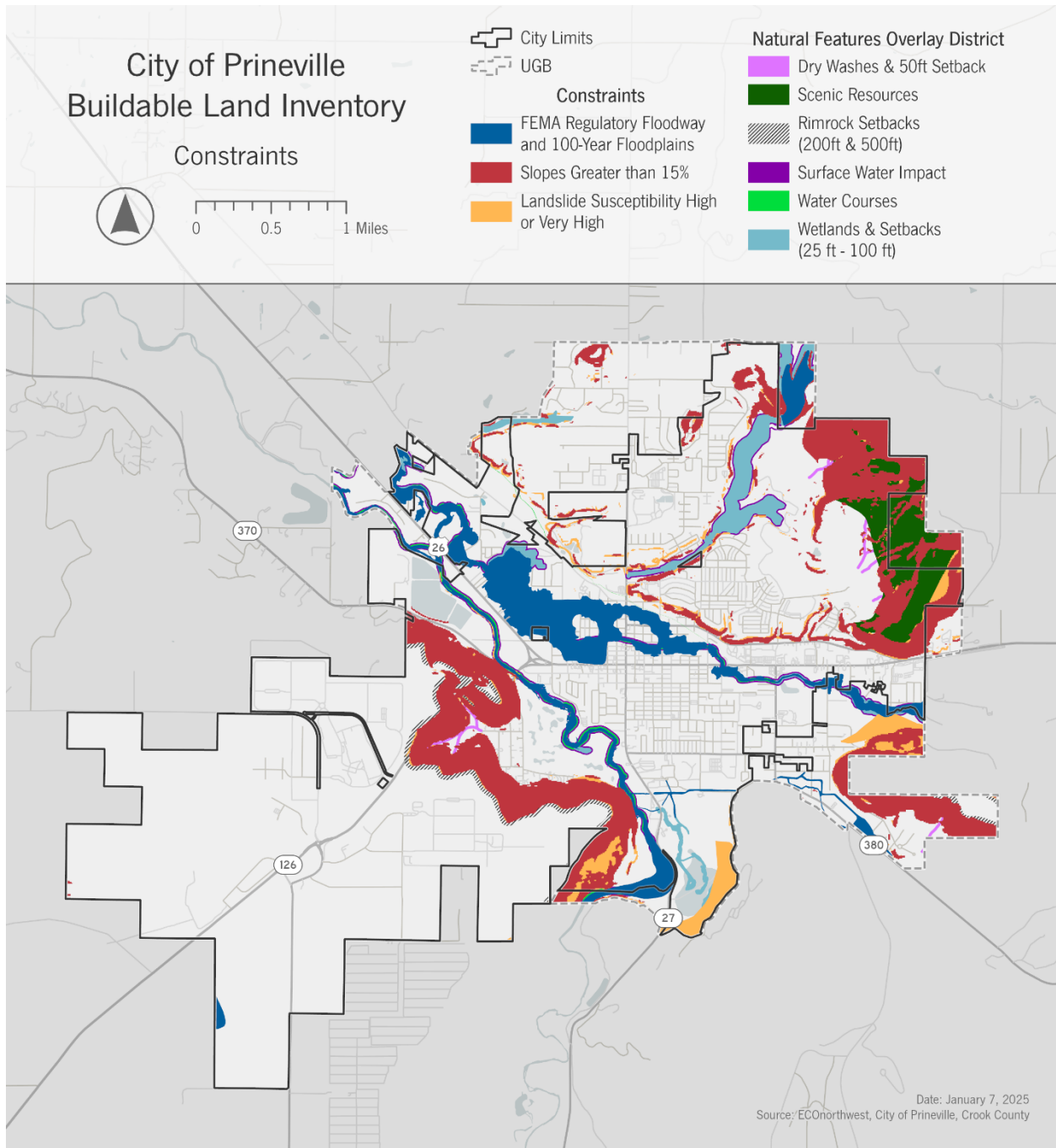


water impact including setbacks, water sources, wetlands and wetland setbacks. These constraints are shown on Exhibit 22.

Exhibit 23 shows development status with constraints applied, resulting in buildable acres. Vacant or partially vacant land with these constraints is considered unavailable for development and was removed from the inventory of buildable land.

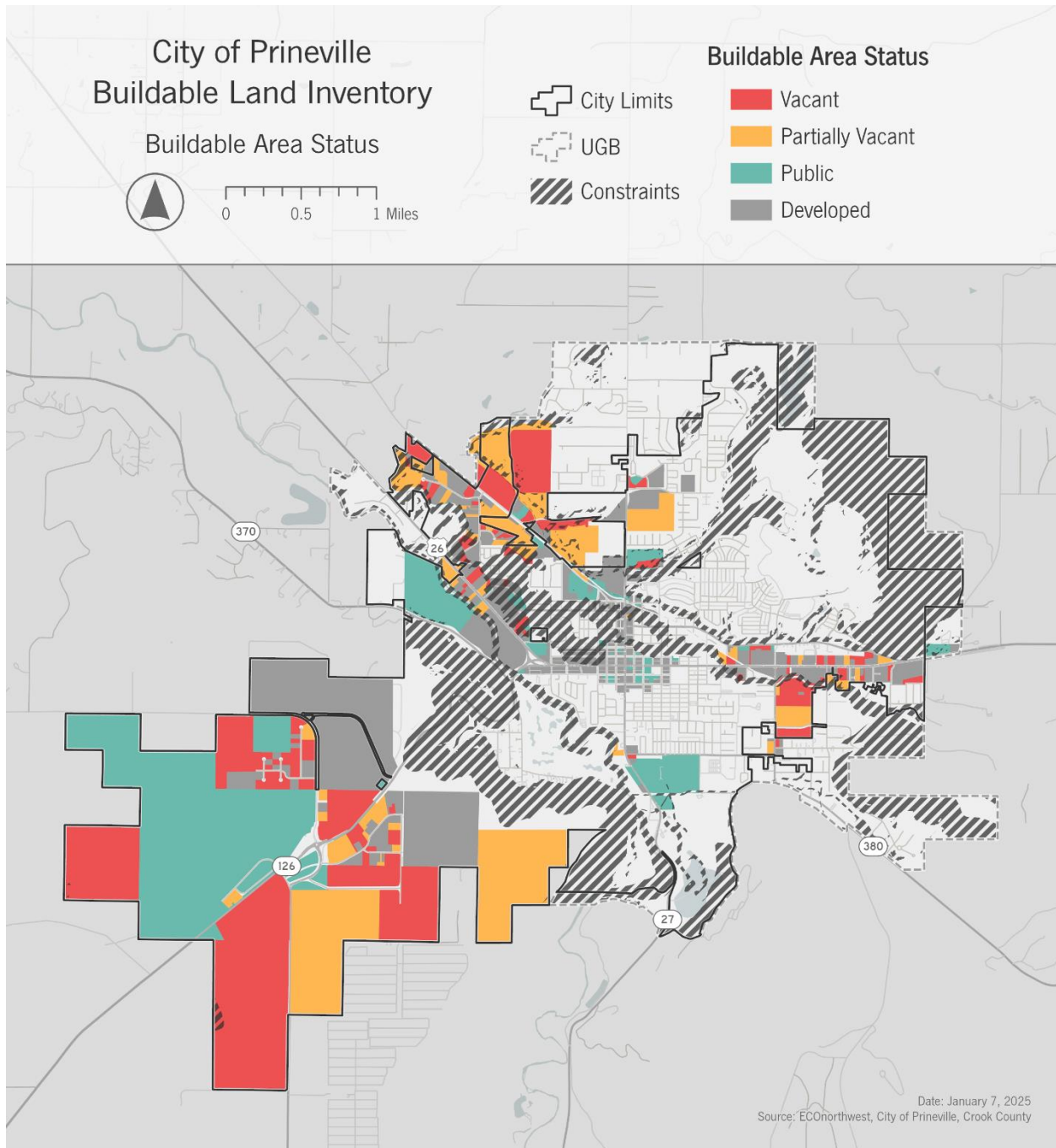


Exhibit 22. Development Constraints, Prineville UGB, 2024



Source: ECONorthwest analysis, City of Prineville, Crook County

Exhibit 23. Buildable Area Status with Constraints, Prineville UGB, 2024



Source: ECONorthwest analysis, City of Prineville, Crook County

Vacant Buildable Land

The next step in the commercial and industrial buildable lands inventory was to net out portions of vacant tax lots that are unsuitable for development. Areas unsuitable for development fall into two categories: (1) developed areas of partially vacant tax lots and (2) areas with physical constraints (i.e., areas within wetlands, floodplains, steep slopes).

Exhibit 24 shows buildable acres (i.e., acres in tax lots after constraints are deducted) for vacant and partially vacant land by plan designation.

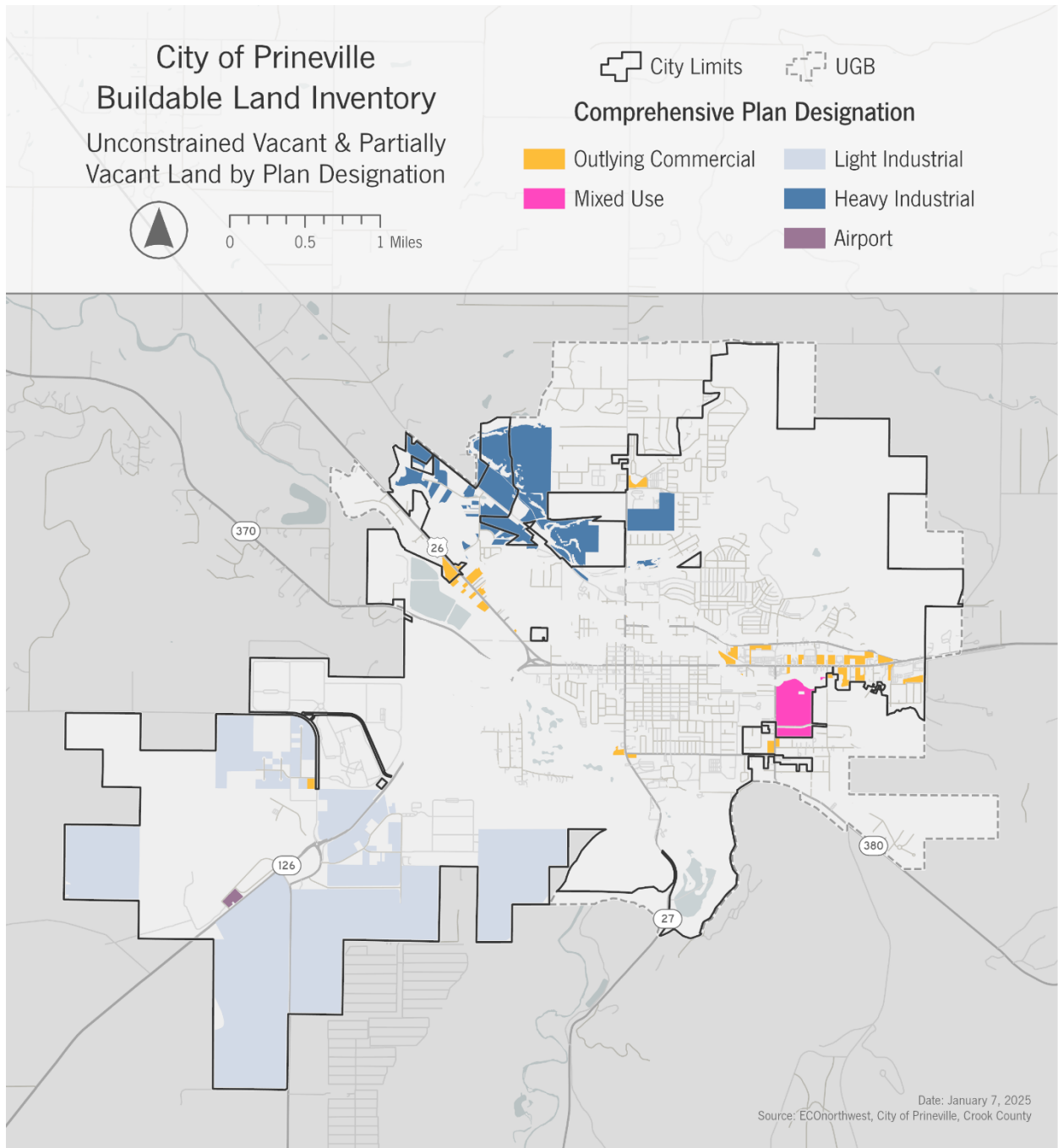
Exhibit 24. Buildable Acres in Vacant/Partially Vacant Tax Lots by Plan Designations, Prineville UGB, 2024

Plan Designation	Total Buildable Acres	Share of Buildable Acres	Buildable Acres on Vacant Lots	Buildable Acres on Partially Vacant Lots
Outlying Commercial	61	4%	36	24
Light Industrial	1,225	78%	913	312
Heavy Industrial	237	15%	135	102
Mixed Use	53	3%	32	20
Airport	5	0.3%	-	5
Total	1,580	100%	1,116	464

Source: ECONorthwest analysis, City of Prineville, Crook County

Exhibit 25 shows Prineville’s buildable vacant and partially vacant commercial and industrial land by plan designation. Note that tax lots shown as partially vacant in the map in Exhibit 25 do not distinguish the part of the tax lot that is unavailable for development. The buildable lands inventory database accounts for the portion of the tax lot that is developed (and considered unavailable for future development), and the portion of the tax lot that is vacant is shown in Exhibit 23.

Exhibit 25. Buildable Employment Land by Plan Designation, Prineville's UGB, 2024



Source: ECONorthwest analysis, City of Prineville, Crook County

Exhibit 26 shows the size of lots by plan designations for buildable employment land. Prineville has 14 lots that are smaller than 0.5 acres (with 4 acres of land); 79 lots between 0.5 and 2 acres (92 acres of land); 44 lots between 2 and 5 acres in size (126 acres of land); 12 lots between 5 and 10 acres in size (86 acres of land); 6 lots between 10 and 25 acres in size (111 acres of land); 5 lots between 25 and 50 acres in size (192 acres of land); and 7 sites larger than 50 acres in size (969 acres of land).²⁷

Exhibit 26. Site Size by Plan Designation, Buildable Acres, Prineville UGB, 2024

Plan Designation	Buildable Sites Size								Total
	0 - 0.5 Acres	0.5 - 1 Acres	1 - 2 Acres	2 - 5 Acres	5 - 10 Acres	10 - 25 Acres	25 - 50 Acres	50+ Acres	
Outlying Commercial	2	9	27	23	-	-	-	-	61
Light Industrial	1	5	31	66	17	39	166	901	1,225
Heavy Industrial	1	6	15	37	55	29	26	68	237
Mixed Use	0	-	-	-	10	42	-	-	53
Airport	-	-	-	-	5	-	-	-	5
Acreage Total	4	19	73	126	86	111	192	969	1,580
Outlying Commercial	6	12	20	9	-	-	-	-	47
Light Industrial	3	7	22	23	3	2	4	6	70
Heavy Industrial	4	7	11	12	7	2	1	1	45
Mixed Use	1	-	-	-	1	2	-	-	4
Airport	-	-	-	-	1	-	-	-	1
Tax Lot Total	14	26	53	44	12	6	5	7	167

Source: ECOnorthwest analysis, City of Prineville, Crook County

²⁷ For sites with vacant land larger than 10 acres, we identified tax lots that had common ownership and were adjacent to each other to identify tax lots that will function as single sites. Appendix B documents three examples of large sites in common ownership that function as single sites.

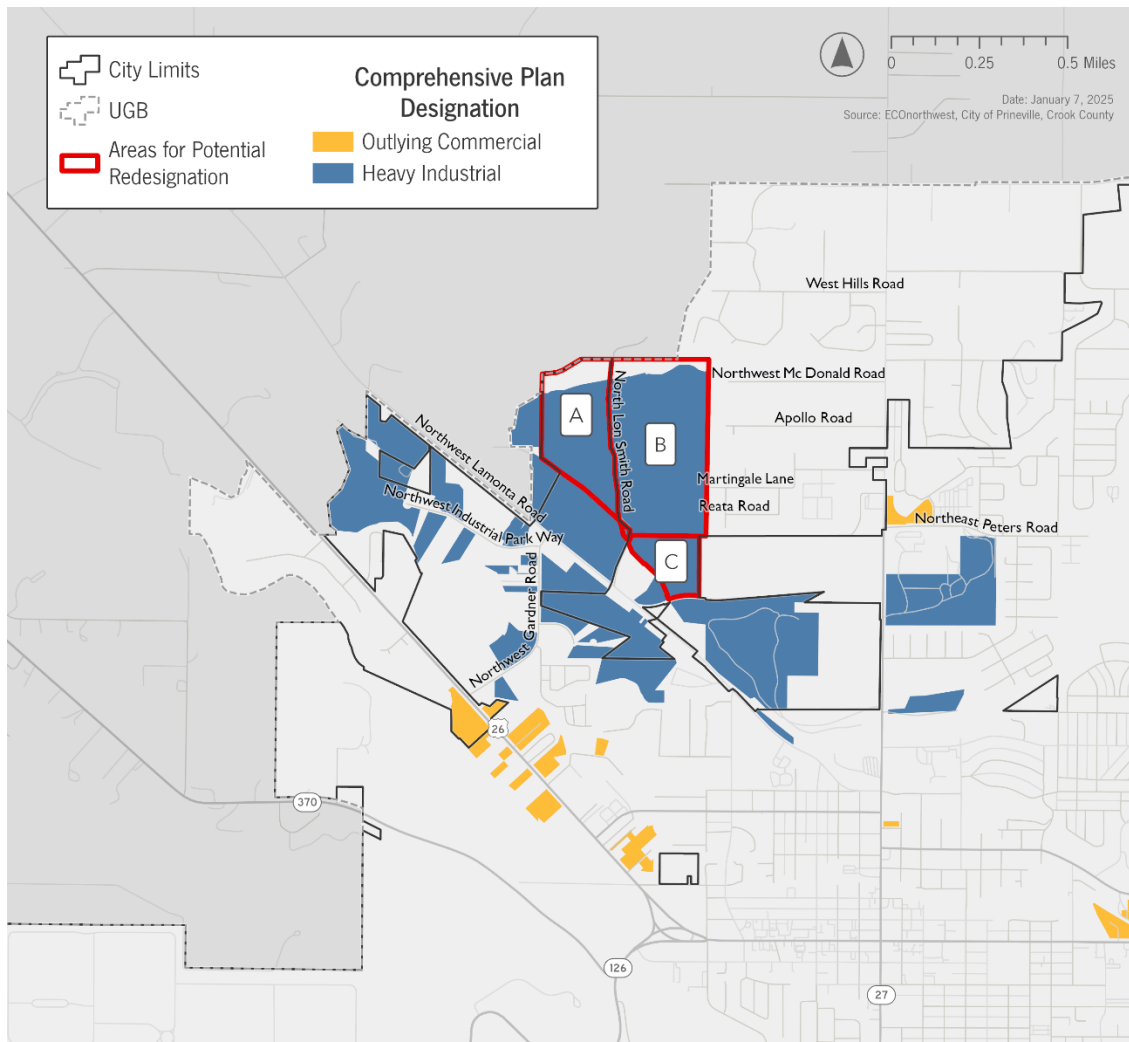


Areas for Potential Redesignation

Exhibit 27 and Exhibit 28 show areas in Prineville that the City should consider redesignating from Heavy Industrial to residential or other urban uses. These sites are unsuited for Heavy Industrial uses because they are adjacent to developing residential areas, separated topographically from the lower industrial properties, and divided by an irrigation canal restricting access.

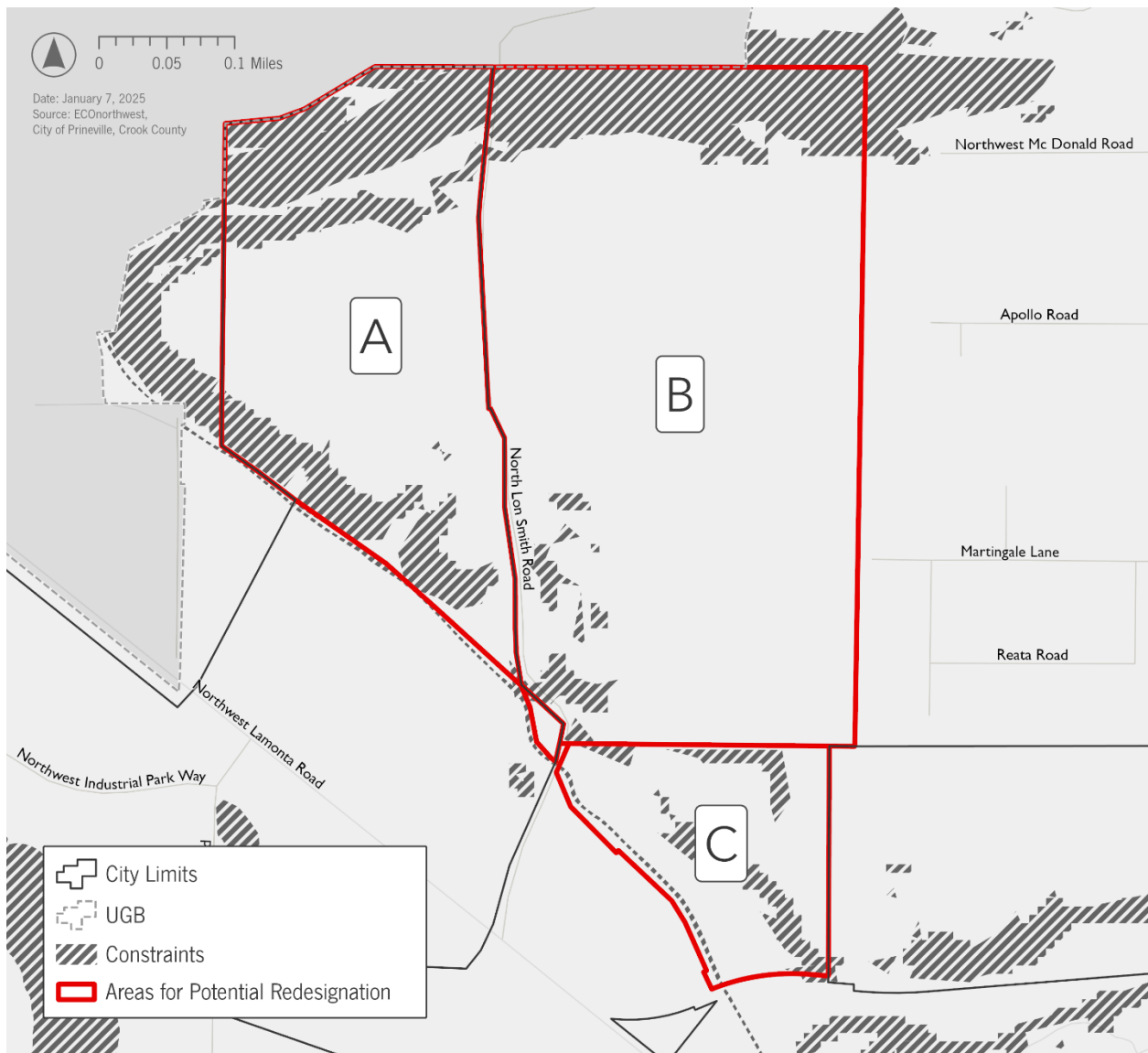
- ◆ Area A is comprised of two parcels, totaling 26 buildable unconstrained acres.
- ◆ Area B is comprised of three parcels, totaling 72 buildable unconstrained acres.
- ◆ Area C is comprised of two parcels, totaling 11 buildable unconstrained acres.

Exhibit 27. Areas for Potential Redesignation, Prineville UGB, 2024



Source: ECOnorthwest analysis, City of Prineville, Crook County

Exhibit 28. Details of Areas for Potential Redesignation, Prineville UGB, 2024



Source: ECONorthwest analysis, City of Prineville, Crook County

5. Land Sufficiency and Conclusions

This chapter presents conclusions about Prineville’s employment land sufficiency for the 2025–2045 period, as well as recommendations for the City to consider for meeting its economic growth needs throughout the planning period.

Commercial Land Sufficiency

Exhibit 29 shows commercial land sufficiency within the Prineville UGB. It shows:

- ◆ **Vacant unconstrained land within the UGB.** This land is identified and discussed in detail in Chapter 4. Exhibit 24 shows that Prineville has 113 gross acres of commercial land.
- ◆ **Demand for commercial and industrial land.** The Estimate of Demand for Commercial section of this report describes the methodology used to identify demand. Based on assumptions described in that section, Prineville will need a total of 84 gross acres for commercial uses over the 2025–2045 period (Exhibit 12).
- ◆ **Commercial Land Sufficiency.** When subtracting the demand for land from the supply of vacant unconstrained land, Exhibit 29 shows that Prineville has enough land for commercial uses, with a 29-acre surplus of commercial land.

Exhibit 29. Comparison of the Capacity of Unconstrained Vacant Land with Commercial Land Demand, Prineville UGB, 2025–2045

General Plan Designation	Land Supply (Gross Acres)	Land Demand (Gross Acres)	Land Sufficiency (Gross Acres)
Commercial & Retail Services, excluding Information	113	84	29

Source: ECOnorthwest

Industrial Land Sufficiency

Prineville identified the following industrial uses as target industries: biomass facility, data centers, and manufacturing (in particular, wood product and plastics and rubber manufacturing). Exhibit 14 provides a projection of industrial land demand based on industrial employment distribution in Prineville by size of site. Based on that forecast, Exhibit 30 shows:

- ◆ **Estimate of sites needed by size of site.** Prineville needs a total of 55 sites, with the majority of sites (80% or 44 sites) smaller than 10 acres. Prineville will need 2 sites between 10 and 25 acres and 9 sites larger than 50 acres.
- ◆ **Estimate of existing buildable sites.** Exhibit 26 shows buildable sites by site size, which are used in Exhibit 30.
- ◆ **Comparison of needed and buildable sites.** Prineville has enough buildable sites in all size classes except for sites 50 acres and larger. Prineville has need for 2 additional sites larger than 50 acres, at an average size of 251.7 acres (see average site size in Exhibit 13). As a result, Prineville has a need for 503 additional acres of buildable land for large industrial uses in two sites.

Exhibit 30. Comparison of the Capacity of Unconstrained Vacant Land with Employment Land Demand by Land Use Type, Prineville UGB, 2025–2045

	Employees by TOTAL Parcel Size						Total
	Less than 2 acres	2 - 5 Acres	5 - 10 Acres	10 - 25 Acres	25 - 50 Acres	50+ Acres	
Estimated Sites Needed	24	13	7	2	-	9	55
Buildable Sites	54	35	9	3	5	7	113
Comparison of Sites Needed and Existing Sites	30	22	2	1	5	(2)	
Does Prineville have enough sites for growth?	Yes	Yes	Yes	Yes	NA	No	
Estimated Unmet Land Need (acres)	-	-	-	-	-	503	503

Source: ECONorthwest



Site Needs for a Biomass Facility

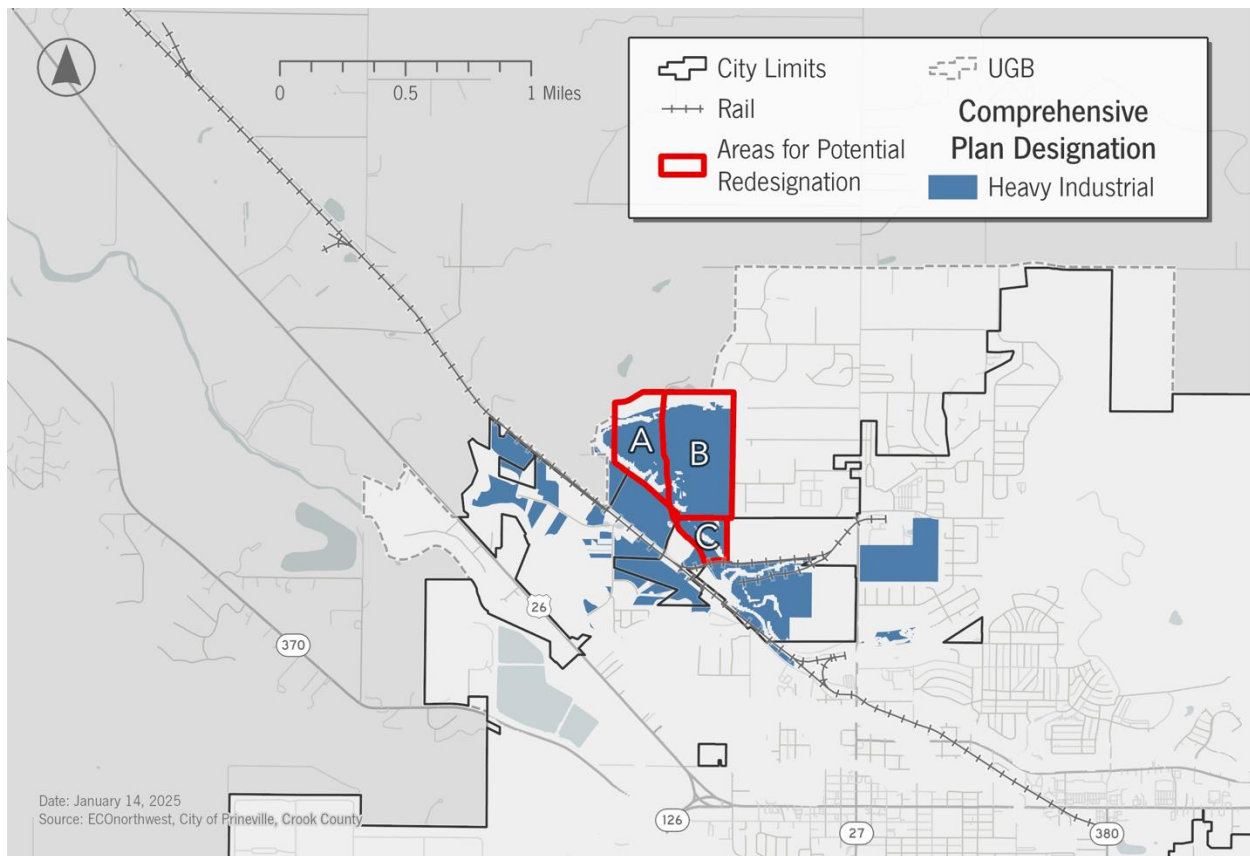
Exhibit 17 shows the site needs for a biomass facility, including the need for a site of 200 acres or larger to accommodate the biomass facility and its operations, in a location with access to the Prineville Railway. Exhibit 30 concludes that Prineville has a deficit of 2 industrial sites of 252 acres in size, one of which would accommodate the biomass facility.

Exhibit 31 shows industrial land in the north part of Prineville, near the Prineville Railway. All of this land is designated Heavy Industrial, at 237 acres. Of that land, 114 acres are on sites smaller than 10 acres (41 sites). Exhibit 27 shows that the City plans to rezone three areas (shown in red outline in Exhibit 31), totaling about 109 acres. Aside from land that the City plans to rezone, there are no parcels in Heavy Industrial larger than 25 acres and not enough land to meet the identified 252-acre land need (even on multiple parcels).

Based on the inventory of buildable land, the site needs for a biomass facility, the forecast for land need by size of site, Prineville does not have enough industrial land within the UGB that is accessible to the Prineville Railway and reasonably capable of being served by City water and sewer. That is true even before the City rezones the areas shown in Exhibit 27. Prineville does not have a large enough industrial site within the UGB near the Prineville Railway to accommodate the site needs of the biomass facility.



Exhibit 31. Industrial Land near the Prineville Railway, Prineville UGB, 2024



Source: ECOnorthwest analysis, City of Prineville, Crook County

Conclusions

The conclusions about commercial and industrial land sufficiency are:

- ◆ **Prineville’s economy has changed substantially since the last EOA was completed.** Since 2008, Prineville added 946 jobs, many of which are related to the expansion of the data centers. The growth in data centers is a driving factor in increasing average wages in Crook County from nearly \$34,700 in 2008 to more than \$70,200 in 2022. In addition, Prineville expanded or altered its UGB six times between 2012 and 2017, primarily for data center development and expansion, all in the southern part of the City in areas with Light Industrial zoning.
- ◆ **Prineville is forecasted to grow in both the commercial and industrial employment sectors.** Prineville is planning for growth of 2,697 new jobs in the city over the 2025 to 2045 period. About 1,361 of the jobs will be in commercial and retail services and 1,198 of the jobs will be industrial.
- ◆ **Prineville has enough employment land to accommodate commercial growth.** Exhibit 29 shows that Prineville has enough land for commercial employment growth over the next 20 years, with a surplus of 68 acres. For its target industries, Prineville will have



need for commercial sites ranging from space in existing buildings to custom-built buildings on sites from 1 to 5 acres, which can be accommodated on existing buildable land within the UGB.

- ◆ **Prineville has a large amount of employment on large sites.** Prineville has a large amount of employment (43% of employment) on sites larger than 50 acres. These large sites have an average size of 251.7 acres and are in use by businesses like Meta and Apple. The Site Needs for Target Industries section describes the site needs for the two 50+ acre sites. One of these sites is for a proposed biomass facility, which the City is actively working on developing.
- ◆ **Prineville has a deficit of large industrial sites and will need to consider a UGB expansion to accommodate the need for a large site for a biomass facility.** Prineville has a deficit of sites larger than 50 acres for industrial development. Prineville needs two sites more than it has within the UGB, averaging 251.7 acres. The sites needs for a biomass facility (Exhibit 17) are for a site not found within the Prineville UGB.
- ◆ **Prineville will need to expand its UGB to accommodate growth of a biomass facility.** The site needs for a biomass facility cannot be met within the existing Prineville UGB. The City does not have a sufficiently large site in an area with City of Prineville Railway access that can also be served by City water and sewer systems. In order to accommodate growth of a biomass facility, the City will need to expand its UGB.

A biomass facility could offer the City offer several benefits. Economically, it would diversify the city's industrial base, creating direct jobs in construction and operations while supporting local forestry and agricultural industries by providing a market for waste materials. Environmentally, the facility would promote sustainability by using renewable biomass sources, reducing reliance on fossil fuels, mitigating wildfire risks through forest thinning and improve air quality from reduction in wildfires. A biomass facility would also provide a stable energy source to meet the growing energy demands of local industries, including Prineville's data centers, while contributing to Oregon's renewable energy goals. In 2023, Oregon Governor Tina Kotek wrote a letter supporting this project, noting that the project would be "a key piece of infrastructure that will support local power needs and resilience as well as the economic use of forest biomass from forest restoration projects."

- ◆ **Prineville may rezone some Heavy Industrial land.** The EOA identified three Heavy Industrial sites that are unsuited for Heavy Industrial uses because they are adjacent to developing residential areas, separated topographically from the lower industrial properties, and divided by an irrigation canal restricting access. If the City re-zones some or all of these sites, the City may want to determine whether it needs to replenish its buildable land supply to ensure it is able to meet future employment land needs.



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

The economic trends discussed in this appendix are based on long-term trends that are generally expected to continue on national, state, and regional scales.

National and State Trends

Economic development in Prineville over the next 20 years will occur in the context of long-run national and state trends. The most important of these trends are as follows:

- ◆ **Slower labor force growth will be offset by increased productivity gains.** According to the Oregon Office of Economic Analysis (OEA), economic growth is determined by two key factors: the number of workers and their productivity levels. While Oregon’s labor force growth is slowing due to low birth rates and pandemic-related migration changes, this will be offset by increased productivity gains as businesses seek to operate more efficiently in a tight labor market.
 - Employment in Oregon is expected to increase but at a slower rate than it has in the past. The OEA forecasts that total nonfarm employment in Oregon will increase by 5.1% from 1.95 million in 2022 to 2.05 million in 2027. Similarly, total *private* nonfarm employment is projected to grow by 5.4% from 1.65 million in 2022 to 1.74 million in 2027.²⁸
 - Nationally, growth in productivity (as measured by output per hour of labor input) was slower between 2005 and 2018, averaging an annual rate of 1.3%, compared to 2.1% over the longer period from 1947 to 2018.²⁹ However, productivity experienced a rebound, rising in 2019-2020 before dipping in 2021-2022, then increasing by 5% in Q3 2023.³⁰ In Oregon specifically, productivity grew by nearly 3% per year from 2019-2022.³¹

Looking ahead, Oregon’s economic growth over the next decade is anticipated to be driven by faster productivity gains. These gains are expected to stem from an increase in start-ups, increased federal

²⁸ Oregon Economic Analysis, Oregon Economic and Revenue Forecast, March 2024. Vol. XLIV, No. 1. Release date February 2024, <https://www.oregon.gov/das/oea/Documents/OEA-Forecast-0324.pdf>

²⁹ Bureau of Labor Statistics, Monthly Labor Review, April 2021

³⁰ Bureau of Labor Statistics News Release, December 2023
<https://www.bls.gov/news.release/pdf/prod2.pdf>

³¹ Josh Lehner, Oregon Office of Economic Analysis, Bureau of Labor Statistics
<https://oregoneconomicanalysis.com/2023/08/25/state-productivity-and-labor-growth-graph-of-the-week/>



investment, and the transformative potential of generative artificial intelligence (AI) technologies, which will help offset the impact of a slower-growing labor force.³²

- ◆ **Manufacturing remains an important part of Oregon's economy.** Between 2010 and 2019, Oregon added 34,000 manufacturing jobs, an increase of 21%. Despite a decrease of about 5,500 jobs (3%) between 2019 and 2022, manufacturing remains a crucial component of Oregon's economy.³³

Oregon's manufacturing sector grew slightly faster than the national average between 2010 and 2022, with 9.9% growth compared with the national average of 8.4%. The sectors with the largest shares of manufacturing employment in Oregon are computer and electronics components, food manufacturing, wood products, and fabricated metals and machinery.³⁴

- ◆ **Shifts in Oregon's high-growth industries.** Looking ahead, the state's traditionally strong timber and high-tech industries are expected to experience slower job growth in the future. While the semiconductor industry will benefit from the CHIPS Act investments, employment gains are expected to lag productivity increases.^{35, 36} Similarly, the timber sector is expected to remain under pressure from both market-based conditions and federal regulations. However, investments like the Economic Development Administration's \$41.4 million Build Back Better grant to the Oregon Mass Timber Coalition are expected to benefit the industry and potentially drive job growth.³⁷

Despite slowing employment growth in the high-tech and timber industries, many of the state's other larger industries like management of companies, food/beverage manufacturing, published software, and health care are expected to perform well over the next decade. Other opportunities will come in industries where Oregon has less employment currently. These industries, like consulting, computer system design, financial investment, and scientific R&D, are expected to grow quickly in the decade ahead.³⁸

- ◆ **Increases in automation across sectors.** Automation has been a long-running trend in employment, leading to productivity gains across sectors. Additionally, the enhancement of artificial intelligence (AI) is expanding automation possibilities beyond routine tasks to jobs previously thought impervious, such as office and cognitive roles (however, complete job replacement due to AI is expected to be minimal, with task

³² Oregon Economic Analysis, Oregon Economic and Revenue Forecast, March 2024. Vol. XLIV, No. 1.

³³ Oregon Employment Department Covered Employment and Wages, 2010 to 2022

³⁴ Oregon Employment Department, Made in Oregon: A Profile of the State's Manufacturing Sector, August 2022.

³⁵ Oregon Economic Analysis, Oregon Economic and Revenue Forecast, March 2024. Vol. XLIV, No. 1.

³⁶ The federal CHIPS Act (2022) was passed to spur investment in advanced manufacturing, including supply chain improvements and research and development. Because of Oregon's prominent semiconductor industry, the State has taken a proactive approach by initiating a coordinated strategy for pursuing and leveraging CHIPS funds.

³⁷ Oregon Mass Timber Coalition, <https://www.masstimbercoalition.org/>

³⁸ Oregon Economic Analysis, Oregon Economic and Revenue Forecast, March 2024. Vol. XLIV, No. 1.



efficiencies and a shifting of tasks within jobs as more likely outcomes).^{39, 40} The U.S. Government Accountability Office (GAO) reports that automation could be widespread, with anywhere from 9% to 47% of jobs being automated in the future according to academic research.⁴¹

The GAO identified that jobs requiring a blend of soft skills (management, interpersonal), process skills, and technical expertise face lower automation risks. Most of the top 20 in-demand jobs share this mixed skill set trait, including nurse practitioners, statisticians, occupational therapy assistants, home health aides, physical therapist assistants, medical managers, physician assistants, information security analysts, and data scientists, among others.⁴² Lower-wage jobs are the most likely to be automated. The GAO reported that over 80% of jobs paying less than \$20 per hour are susceptible to automation over the next two decades. About 30% of jobs paying \$20 to \$40 per hour and 4% of jobs paying \$40 or more per hour were also identified as at risk.⁴³

Oregon's automation trajectory mirrors national trends, with lower and middle-wage jobs facing higher automation potential. The state's tight labor market may further drive productivity and efficiency gains bolstered by AI's transformative potential.

- ◆ **Growth of data centers in Central and Eastern Oregon.** The U.S. data center market has grown substantially, with the International Data Corporation forecasting the global AI software market to grow from \$64 billion in 2022 to nearly \$251 billion in 2027.⁴⁴ Over the past decade, there has been a significant shift from on-premises data centers to cloud-based solutions, leading to the development of large-scale hyperscale data centers. Rapid digitization has driven ever-increasing data traffic, necessitating more robust and scalable data center infrastructure, including significant investment in centers in Central and Eastern Oregon. The rise of AI and machine learning is driving significant changes in data centers, including increased use of GPUs and liquid cooling to manage heat from power-intensive applications. Currently, data centers also face high demand for power, which has driven innovations in energy efficiency and the adoption of renewable energy sources. Looking ahead, the market is expected to continue expanding, with a greater emphasis on sustainability through adopting more energy-efficient technologies and renewable energy sources to reduce environmental impact.⁴⁵

³⁹ BLS, Growth Trends for Selected Occupations Considered at Risk from Automation, July 2022, <https://www.bls.gov/opub/mlr/2022/article/growth-trends-for-selected-occupations-considered-at-risk-from-automation.htm>

⁴⁰ Manhattan Strategy Group, Job Automation Risk and the Future of Skills: Skills and Competency Change in the U.S. Workforce, May 2023, <https://www.dol.gov/sites/dolgov/files/OASP/evaluation/pdf/FutureofSkillsLitScan-20230515.pdf>

⁴¹ Government Accountability Office, Workforce Automation, August 2022, <https://www.gao.gov/assets/gao-22-105159.pdf>

⁴² Government Accountability Office, Workforce Automation, August 2022.

⁴³ Executive Office of the President. (2016). Artificial Intelligence, Automation, and the Economy.

⁴⁴ CBRE, North America Data Center Trends H2 2023, March 2024. <https://www.cbre.com/insights/reports/north-america-data-center-trends-h2-2023>

⁴⁵ CBRE, North American Data Center Trends H2 2023, March 2024.



The presence of data centers can have both positive and negative impacts on local jurisdictions. On the positive side, data centers create direct employment opportunities in construction, maintenance, and operations, as well as indirect jobs in the local service economy. The development of data centers often leads to upgrades in local power, water, and internet infrastructure, benefiting the broader community. Increased economic activity from data centers can also boost local tax revenues, which can be used for public services and community development.⁴⁶ However, data centers also consume large amounts of electricity and water, which can strain local resources and contribute to environmental issues such as increased greenhouse gas emissions and water usage. Data centers' high demand for power and water can also lead to increased utility costs for local residents and businesses.⁴⁷

- ◆ **The aging of the baby boomer generation and the need for replacement workers.** As the baby boomer generation continues to retire, the number of Social Security recipients is expected to increase from over 65 million in 2022 to over 86 million in 2045, a 32% increase. In 2022, there were 36 Social Security beneficiaries per 100 covered workers. But by 2045, there will be 45 beneficiaries per 100 covered workers. This will increase the percent of the federal budget dedicated to Social Security and Medicare.⁴⁸

While the Bureau of Labor Statistics projects total U.S. employment to grow by 4.7 million jobs from 2022 to 2032, this job growth is unlikely to be sufficient to replace all the baby boomer retirees leaving the workforce during that period. The BLS estimates there will be 18.6 million annual job openings arising from the need to replace retiring workers and workers changing occupations, in addition to openings from newly created positions.⁴⁹ The sectors expected to grow the fastest are health care support, computer and mathematical occupations, healthcare practitioners, and community and social service.⁵⁰

- ◆ **Growth of entrepreneurship and small businesses.** The creation of new businesses plays a vital role in driving Oregon's economic growth. Start-ups generate employment opportunities, introduce innovative products and services, and help better serve local communities. According to the 2023 Small Business Profile from the U.S. Small Business Administration Office of Advocacy, small businesses (defined as having between zero and 500 employees) account for 99.9% of total businesses in the United States and employ 46% of the American workforce. Oregon's performance in early-

⁴⁶ PWC, prepared for the Data Center Coalition, Economic, Environmental, and Social Impacts of Data Centers in the United States, September 2023. <https://bit.ly/3PgOnmQ>

⁴⁷ Alex Baumhardt, OPB, Energy Demand from Data Centers Growing Faster than West Can Supply, Experts Say, August 2024. <https://www.opb.org/article/2024/08/26/fast-growing-energy-demand-data-centers-pose-challenges-west/>

⁴⁸ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2023 <https://www.ssa.gov/oact/TR/2023/tr2023.pdf>

⁴⁹ Bureau of Labor Force Occupational Separations and Openings, 2022-2032 <https://www.bls.gov/emp/tables/occupational-separations-and-openings.htm>

⁵⁰ Bureau of Labor Statistics Employment Projections – 2022-2032, September 2023 <https://www.bls.gov/news.release/pdf/ecopro.pdf>



stage entrepreneurship activity, as measured by the Kauffman Early-Stage Entrepreneurship (KESE) Index, ranked 25th in the country in 2020.^{51, 52}

Start-up activity had been trending down for decades in Oregon and across the nation leading up to the pandemic, but since the pandemic, new business formation has increased and appears to be maintaining this higher rate.⁵³ In terms of outlook for start-ups, several key factors are at play. High inflation, rising interest rates, and recession risks, along with tighter venture capital and banking lending conditions, will likely slow new business formation. However, several favorable factors could mitigate these impacts and support continued strength in entrepreneurship and small business formation in Oregon. These include increased personal savings and home equity levels, which are common funding sources for new businesses, along with the shift toward remote work opportunities and the large millennial generation entering their prime entrepreneurial years (late 30s and early 40s, according to Census Bureau research).⁵⁴

- ◆ **Continued transformation of retail.** In the last two decades, retail sales by e-commerce and warehouse clubs/supercenters (a lower-cost model to the traditional department store) have increased steadily. Online retail purchases increased from about 6% of all retail purchases in 2014 to about 16% of retail purchases in 2023.⁵⁵ Ultimately, the growth in online shopping and the increasing dominance of large supercenters has made it difficult for small and medium-sized retail firms (offering a narrower selection of goods) to compete. Declining net profits and increased competitive pressures have led many well-known retailers (e.g., JCPenney, Macy's, Sears) to declare bankruptcy or to scale back their operations.

In the future, the importance of e-commerce will likely continue to grow. However, despite the highly publicized closures of brick-and-mortar stores, physical retail is likely to remain an important part of the retail sector as well. Since modern consumers are increasingly price sensitive, less brand loyal, and (since the advent of the Internet) able to substitute between retailers easily, retailers must be responsive to the changing needs of their customers if they are to remain competitive.

The types of brick-and-mortar retail and related services that are likely to remain viable are those offering goods that consumers prefer to purchase in person or goods that are difficult to ship and return, such as large furniture items. Additionally, retailers specializing in groceries, personal goods that are

⁵¹ Kauffman Foundation. *Kauffman Indicators of Entrepreneurship*. Early-Stage Entrepreneurship. The Kauffman Index, Oregon. <https://indicators.kauffman.org/>.

⁵² This index comprises four statistics: the rate of new entrepreneurs, the opportunity share of new entrepreneurs, start-up density, and start-up early survival rate.

⁵³ Josh Lehner. "Strong Startup Activity Continues," Oregon Office of Economic Analysis, May 3, 2023. Retrieved from <https://oregoneconomicanalysis.com/2023/05/03/strong-start-up-activity-continues/>

⁵⁴ Josh Lehner. "Strong Startup Activity Continues" Oregon Office of Economic Analysis, May 3, 2023. Retrieved from <https://oregoneconomicanalysis.com/2023/05/03/strong-start-up-activity-continues/>

⁵⁵ U.S. Census Bureau News, Quarterly Retail E-Commerce Sales, 4th Quarter 2023 https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf



needed immediately, restaurants, and experiential offerings like entertainment or social activities are expected to maintain their presence. According to the Urban Land Institute, large retailers such as Macy's, Nordstrom, Kohl's, and Ikea are experimenting with downsizing storefronts to operate spaces that can be flexible to changing consumer needs. These locally scaled shops feature in-person merchandise and services that are in demand for modern consumers: curated inventory, tailored services, and e-commerce fulfillment.⁵⁶

- ◆ **Changing places where work is being done.** The COVID-19 pandemic accelerated the trend of remote work. According to the Bureau of Labor Statistics' American Time Use Survey, the share of employees working from home rose from 24% in 2019 to 34% in 2022.⁵⁷ However, the ability to work remotely is not equally distributed. Those most likely to have remote work opportunities tend to have higher educational attainment, be white or Asian, and be over 25 years old.⁵⁸ This uneven access to remote work raises equity concerns, as certain demographic groups may be disadvantaged in accessing these flexible work arrangements.

Remote work trends have consequences for downtown health and recovery. OEA found that downtown recoveries are not driven by regional economic changes but rather are impacted by the strength of three components: workers, residents, and visitors.⁵⁹ If a significant portion of previous downtown workers are now working remotely from other locations, downtowns need to capture or bolster resident and visitor spending to counteract this shift.

- ◆ **Continued increase in demand for energy, even as the sources supplying that energy shift.** The 2022 Inflation Reduction Act aims to drive increased investments in climate and energy projects across the United States.⁶⁰ As a result of the renewable energy investments and subsidies introduced by this legislation, the nation's energy consumption pattern is anticipated to undergo a shift over the coming years. There is an expected move away from traditional fossil fuels like crude oil and natural gas toward renewable energy sources.⁶¹

However, this shift is not expected to reduce overall energy consumption. From 2022 to 2050, the U.S. Energy Information Administration (EIA) estimates that total energy consumption will rise due to population growth and economic expansion outpacing efficiency gains. This increasing demand is anticipated to

⁵⁶ Holly Dutton. "More Retailers Are Rolling Out Small-Format Stores" *Urban Land Institute*, January 8, 2024. <https://urbanland.uli.org/economy-markets-trends/more-retailers-are-rolling-out-small-format-stores>

⁵⁷ BLS, American Time Use Survey, 2023, <https://www.bls.gov/news.release/atus.nr0.htm#:~:text=On%20average%2C%20those%20who%20work%20to%2034%20percent%20in%202022.>

⁵⁸ Ben Casselman, Emma Goldberg, and Ella Koeze. "Who still works from home?" *New York Times*, March 8, 2024.

⁵⁹ Oregon Office of Economic Analysis, Downtown Recoveries 2023 Update, <https://oregoneconomicanalysis.com/2023/07/18/downtown-recoveries-2023-update/>

⁶⁰ Energy Information Administration, Inflation Reduction Act of 2022.

⁶¹ Energy Information Administration, Inflation Reduction Act of 2022.



be driven primarily by the industrial sector and, to a lesser extent, transportation.

- ◆ **Impact of rising energy prices on commuting patterns.** As energy prices increase over the planning period, transportation energy consumption is expected to shift to electric or fuel-efficient vehicles.⁶² The share of electric vehicles is expected to grow from less than 6% in 2022 to 19% in 2050.⁶³ The EIA estimates an 8% increase in transportation energy consumption, partially attributable to increasing vehicle miles traveled (VMT) that offset efficiency upgrades. With expected increases in fuel economy, people may commute farther while consuming less energy. VMT for passenger vehicles is forecasted to increase between 12% and 33% through 2050. Lower-income households may face financial barriers to efficiency upgrades and tend to have longer commutes, which may force them to face the brunt of rising energy prices.
- ◆ **High rates of inflation.** For the last several decades, inflation rates have generally stayed below 3% in the United States. Inflation started to increase in 2021, reaching 9.1% in 2022, the highest level in about 40 years.⁶⁴ In 2023 the annual inflation rate was 3.4%, a marked reduction from the 2022 inflation rate.⁶⁵ Continued high rates of inflation may slow economic growth, further erode purchasing power, discourage savings, and lead to a national recession.
- ◆ **Income gains in Oregon.** Oregon's economic growth in the past decade has led to improvements in the state's income and wage levels relative to the rest of the nation. Notably, Oregon's median household income has surpassed the national level for the first time in over 50 years.⁶⁶ Higher incomes can have positive impacts on an economy through improved standards of living and higher consumer spending, increased tax revenue potential, and talent attraction and retention, among others.
- ◆ **Potential impacts of global climate change.** Oregon and the Pacific Northwest have been experiencing the impacts of global climate change over the past 30 years, exacerbated by extreme events such as the 2020 Labor Day fires that burned over 840,000 acres in Oregon and the June 2021 heat dome that caused temperatures to soar to 111°F in Eugene and 116°F in Portland.⁶⁷ According to the National Oceanic and Atmospheric Administration (NOAA), between 1980 and 2023, the U.S. experienced an average of 8.5 weather-related disasters per year where overall damages/costs reached or exceeded \$1 billion (adjusted for inflation). However, the number of such events has increased in the last five years, with an average of 20.4

⁶² Energy Information Administration, 2023, *Annual Energy Outlook 2023 with Projections to 2050*, U.S. Department of Energy, March 2023.

⁶³ Energy Information Administration, 2019, *Annual Energy Outlook 2019 with Projections to 2050*, U.S. Department of Energy, January 2019.

⁶⁴ Bureau of Labor Statistics, U.S. Department of Labor, *The Economics Daily*, Consumer prices up 9.1% over the year ended June 2022, largest increase in 40 years at <https://www.bls.gov/opub/ted/2022/consumer-prices-up-9-1-percent-over-the-year-ended-june-2022-largest-increase-in-40-years.htm> (visited July 25, 2022).

⁶⁵ Bureau of Labor Statistics, U.S. Department of Labor, *The Economics Daily*, Consumer Price Index: 2023 in Review, <https://www.bls.gov/opub/ted/2024/consumer-price-index-2023-in-review.htm>

⁶⁶ Oregon Economic Analysis, Oregon Economic and Revenue Forecast, March 2024. Vol. XLIV, No. 1.

⁶⁷ <https://www.ncei.noaa.gov/access/monitoring/monthly-report/national/202106/supplemental/page-6>.



events per year.⁶⁸ The Pacific Northwest is not only experiencing an increased frequency and severity of extreme weather events but also long-term climatic changes. These long-term changes include:

- **Increased average annual day and nighttime temperatures.** If greenhouse gas (GHG) emissions continue at the current rate, temperatures in Oregon are projected to rise approximately 5°F by the 2050s and 8.2°F by the 2080s.⁶⁹ These higher overall temperatures can have consequences, including increased mortality rates, the spread of diseases, and the forced migration of plants and animals as ecosystems undergo changes. Vegetation may become stressed and die, leading to an accumulation of fuel loads that heighten the risk of wildfires. Some areas that were once forestlands are transitioning into shrublands after being affected by forest fires.
- **Reduced snowpack and increased drought conditions.** As temperatures increase, snowpack is anticipated to decrease, reducing stream levels and water availability in the summer months.⁷⁰ Drought conditions can reduce surface water availability, reduce hydropower generation, and reduce recreational activities.⁷¹
- **Increased risk of high heat events.** Climate change increases the likelihood of experiencing high heat events like the June 2021 extreme heat wave that resulted in temperatures ranging from 110°F to 120°F in Oregon and Washington. This heat event caused approximately 159 deaths in Washington and more than 100 deaths in Oregon.^{72, 73}
- **Increased risk of wildfire.** Changing precipitation patterns and drought conditions are increasing fuel loads in wildland areas, increasing the risk of wildfires throughout the Pacific Northwest. Wildfire intensity, duration, and size has increased.
- **More days of poor air quality from wildfire smoke.** In 2021, people in Deschutes County, Klamath County, and Jackson County experienced 83

⁶⁸ <https://www.ncei.noaa.gov/access/billions/#:~:text=Menu-Overview,376%20events%20exceeds%20%242.655%20trillion.>

⁶⁹ Fleishman, E., editor. 2023. Sixth Oregon Climate Assessment. Oregon Climate Change Research Institute, Oregon State University, Corvallis, Oregon. <https://blogs.oregonstate.edu/occri/oregon-climate-assessments>.

⁷⁰ WASHINGTON Assessment work. TBD.

⁷¹ Bumbaco, K.A., C.L. Raymond, L.W. O'Neill, A. Mehta, D.J. Hoekema. 2023. *2022 Pacific Northwest Water Year Impacts Assessment*. A collaboration between the Office of the Washington State Climatologist, Climate Impacts Group, Oregon State Climatologist, Idaho Department of Water Resources, and NOAA National Integrated Drought Information System. <https://doi.org/10.6069/T5Q5-TT59>

⁷² Joan A. Casey, Robbie M. Parks, Tim A. Bruckner, Alison Gemmill, and Ralph Catalano, 2023: *Excess Injury Mortality in Washington State During the 2021 Heat Wave*. American Journal of Public Health 113, 657_660, <https://doi.org/10.2105/AJPH.2023.307269>

⁷³ Vital Statistics Report. Oregon: Oregon Health Authority, Public Health Division, Center for Health Statistics. Prepared September 2021; data are preliminary and subject to change.



days of air quality at or above unhealthy levels for sensitive groups due to wildfire smoke.⁷⁴

- **More floods and atmospheric rivers.** The University of Washington's Climate Impact Group forecasts that the Pacific Northwest will experience slightly more precipitation in the fall, winter, and spring and less in the summer.⁷⁵ Extreme precipitation events are more likely to produce flooding, erosion, and landslides. These changes can threaten salmon and other species. Adaptation to extreme events could require expensive upgrades to stormwater systems.

Climate change will have a wide range of impacts on industries and communities throughout the Pacific Northwest. While some industries are more resilient to climate change, others that require predictable delivery of water, such as agriculture and hydropower, are more vulnerable to climate change. Climate change and extreme weather events also impact human health and disrupt travel. Land use decisions, in part, determine the risk that homes, businesses, schools, hospitals, and other buildings face from climate change. Development patterns in at-risk areas like tsunami zones, floodplains, wetlands, wildland-urban interfaces, and other hazardous locations will impact the economic vitality and resilience of communities as climate change accelerates.

- **Agriculture.** Climate change impacts the quality and quantity of agricultural products. For example, exposure to cold weather during dormancy is important for fruit set and quality in many perennial crops. Exposure to cold weather may increase in northern areas of the Pacific Northwest and decrease in southern areas.⁷⁶ A study by the Washington State Department of Agriculture found that a drought in 2015 caused \$633 to \$773 million in agricultural losses.⁷⁷ Drought and shifting precipitation patterns represent major threats, as drought reduces feed on rangelands for livestock and decreases water available for irrigation.
- **Aquatic/Fishing.** Marine heatwaves impact fresh and saltwater habitats and species. In 2021, algal blooms exacerbated by increased temperatures resulted in a \$641.1 million (in 2022 dollars) loss of commercial fishing revenue.⁷⁸ Tribes are often disproportionately impacted, accounting for half

⁷⁴ Barnack, A. Wildfire Smoke Trends and the Air Quality Index. Oregon: Department of Environmental Quality, Laboratory and Environmental Assessment Division [cited 2023 May 5]. 24 p. Available from: <https://www.oregon.gov/deq/wildfires/Documents/WildfireSmokeTrendsReport.pdf>.

⁷⁵ <https://express.adobe.com/page/C5CQaxjHUMGQ7/>

⁷⁶ Noorazar, H., L. Kalcsits, V.P. Jones, M.S. Jones, and K. Rajagopalan, 2022: Climate change and chill accumulation: Implications for tree fruit production in cold-winter regions. *Climatic Change*, 171 (3), 34. <https://doi.org/10.1007/s10584-022-03339-6>

⁷⁷ Raymond, C.L, T.P. Nadreau, M. Rogers, Z. Kearl. 2022. Biophysical Climate Risks and Economic Impacts for Washington State. Report prepared for the Washington State legislature. Climate Impacts Group, University of Washington, Seattle.

⁷⁸ Bellquist, L., V. Saccomanno, B.X. Semmens, M. Gleason, and J. Wilson, 2021: *The rise in climate change-induced federal fishery disasters in the United States*. PeerJ, 9, e11186. <https://doi.org/10.7717/peerj.11186>



of fishery loss requests and experiencing losses from Dungeness crab fisheries.^{79, 80}

- **Forestry.** Forest plants and animals vulnerable to temperature and drought stresses are undergoing climate-induced die-offs. Five fir species in Oregon, Washington, and Northern California are experiencing severe mortality dubbed "Firmageddon."⁸¹ Species at the edges of their ranges are expected to succumb first and may shift to higher elevations or northward. Die-offs include Douglas fir, a primary commercial timber species. Die-offs and stressed trees face higher risks of pest infestations and increase the risk of wildfires.
- **Human health.** With many Pacific Northwest households lacking air conditioning, higher summer temperatures and extreme heat events endanger vulnerable groups like older adults, low-income residents, those with disabilities, and individuals living alone who face heightened risks of heatstroke and death.
- **Tourism, Recreation, and Service Industries.** The Northwest tourism and recreation industry employs about 588,000 people and supports almost \$60 billion (in 2022 dollars) in annual expenditures.⁸² Climate impacts will vary as decreased snowpack will make trails and camping accessible later in the fall and earlier in the spring; however, increased extreme events from atmospheric rivers may increase maintenance costs due to flooding and erosion. Higher temperatures will increase demand for water-based recreation; however, droughts may decrease lake, reservoir, and river levels during peak recreation season.
- **Infrastructure.** Water, sewer, roads, utilities, and other infrastructure face risks if not designed to withstand climate change and extreme events. During the June 2021 heat dome, roads buckled near Everett, WA, and a Portland streetcar cable melted.⁸³ Damaged power lines can lead to wildfires (a problem utility companies have started to mitigate by preemptively shutting down power when windy and dry conditions occur).⁸⁴ Rural

⁷⁹ Bellquist, L., V. Saccomanno, B.X. Semmens, M. Gleason, and J. Wilson, 2021: *The rise in climate change-induced federal fishery disasters in the United States*. PeerJ, 9, e11186.
<https://doi.org/10.7717/peerj.11186>

⁸⁰ Schlinger, C., O. Conroy-Ben, C. Cooley, N. Cooley, M. Cruz, D. Dotson, J. Doyle, M.J. Eggers, P. Hardison, M. Hatch, C. Hogue, K. Jacobson Hedin, C. Jones, K. Lanphier, D. Marks-Marino, D. Mosley, F. Olsen Jr., and M. Peacock, 2021: Ch. 4.2. Water. In: *Status of Tribes and Climate Change Report*. Marks-Marino, D., Ed. Institute for Tribal Environmental Professionals, Flagstaff, AZ, 98–141.
<http://nau.edu/stacc2021>

⁸¹ <https://www.seattletimes.com/seattle-news/climate-change-is-hastening-the-demise-of-pacific-northwest-forests/>

⁸² Mojica, J., K. Cousins, and T. Madsen, 2021: *Economic Analysis of Outdoor Recreation in Oregon*. Earth Economics, Tacoma, WA.

https://static1.squarespace.com/static/561dcdc6e4b039470e9afc00/t/5ffe3084ce56a6552b7a3c71/1610494115376/EconomicAnalysisofOutdoorRecreationinOregon_OTC-EarthEconomics_SmallRes.pdf

⁸³ <https://www.npr.org/2021/06/29/1011269025/photos-the-pacific-northwest-heatwave-is-melting-power-cables-and-buckling-roads>

⁸⁴ EPI, 2023: *Wildfire-Grid Risk, Power Talk*. Boise State University, Energy Policy Institute.
<https://www.boisestate.edu/epi/upcomingevents/>



communities relying on single water sources may be in jeopardy as droughts reduce groundwater aquifers or surface water availability. Sea level rise and flooding also threaten septic wastewater treatment systems. Atmospheric rivers and flooding can damage highways and streets through inundation and landslides, temporarily halting travel access to jobs, schools, health care, grocery stores, etc., necessitating expensive repairs and long detours. Additionally, the Pacific Northwest's hydropower dependency means the region may see fluctuations in electricity availability and costs as altered snowpack and precipitation patterns make the water supply less predictable.

Regional and Local Trends

This section of Appendix A compares Prineville to Crook County and the State of Oregon to provide context for changes in Prineville's socioeconomic characteristics. To enhance readability, information based on the 2018-2022 ACS is described as 2022 data.

Availability of Labor

The availability of trained workers in Prineville will impact the 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 Prineville 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 3.4 million people in 2000 to 4.3 million people in 2023, an increase of roughly 875,000 people or 1.0% each year.

Between 2000 and 2023, Prineville's population increased by 4,240 people at an average annual rate of 2.0% (Exhibit 32), exceeding both Crook County's and Oregon's growth rates during the same time (1.4% and 1.0%, respectively).

Exhibit 32. Population Growth, Prineville, Crook County, and Oregon, 2000–2023

	Population			Change, 2000 - 2023		
	2000	2010	2023	Number	Percent	AAGR
Prineville	7,358	9,253	11,598	4,240	58%	2.0%
Crook County	19,182	27,280	26,583	7,401	39%	1.4%
Oregon	3,421,436	3,831,074	4,296,626	875,190	26%	1.0%

Source: U.S. Census Bureau, 2000 and 2010. Portland State University Population Estimates, 2023.

AAGR refers to average annual growth rate



AGE DISTRIBUTION

The number of people ages 65 and older in the United States is projected to increase from 58 million in 2022 to 82 million by 2050 (a 47% increase).⁸⁵ The economic effects of this demographic change include a slowdown of labor force growth, the need for workers to replace retirees, an aging workforce as seniors continue working after age 65, an increased demand for health care services, and a larger portion of the federal budget dedicated to Social Security and Medicare.⁸⁶

Exhibit 33 through Exhibit 36 show the following trends:

- ◆ While Crook County has a relatively high median age, Prineville's median age is just above that of the state overall. In 2022, 27% of Prineville residents were 60 years and older compared to 33% at the county level (Exhibit 35). Overall, Prineville's age distribution is similar to the state of Oregon. Prineville is growing significantly across older age groups. The increase in median age between 2000 and 2022 suggests that Prineville is attracting or retaining older adults.
- ◆ The share of Crook County's population age 60 and over is projected to decrease from 34% in 2022 to 27% in 2047. Crook County's population distribution is projected to become more balanced by 2047 despite the increase of older residents (60 and over) in Prineville. This is a positive projection for the county, suggesting a decrease in the dependency ratio or burden on the labor force. A balance of skilled labor and experienced mentorship with younger workers entering the workforce is optimal.

Prineville's median age increased between 2000 and 2022 but remained lower than the county.

Prineville's increase in median age of 7.8 years is comparable to Crook County's change of 8.4 years and greater than Oregon's change of 3.6 years.

Exhibit 33. Median Age, Prineville, Crook County, and Oregon, 2000 to 2018–2022

Source: U.S. Census Bureau, 2000 Decennial Census, Table P013; American Community Survey 2018–2022 5-Year Estimates, Table B01002.

2000	32.9	38.6	36.3
	Prineville	Crook County	Oregon
2022	40.7	47	39.9
	Prineville	Crook County	Oregon

⁸⁵ Mather, M. & Scommegna, P. (2024). Fact Sheet: Aging in the United States. <https://www.prb.org/aging-unitedstates-fact-sheet/>

⁸⁶ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2022. The 2022 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, June 2, 2022. The Budget and Economic Outlook: Fiscal Years 2024 to 2034, February 2024.



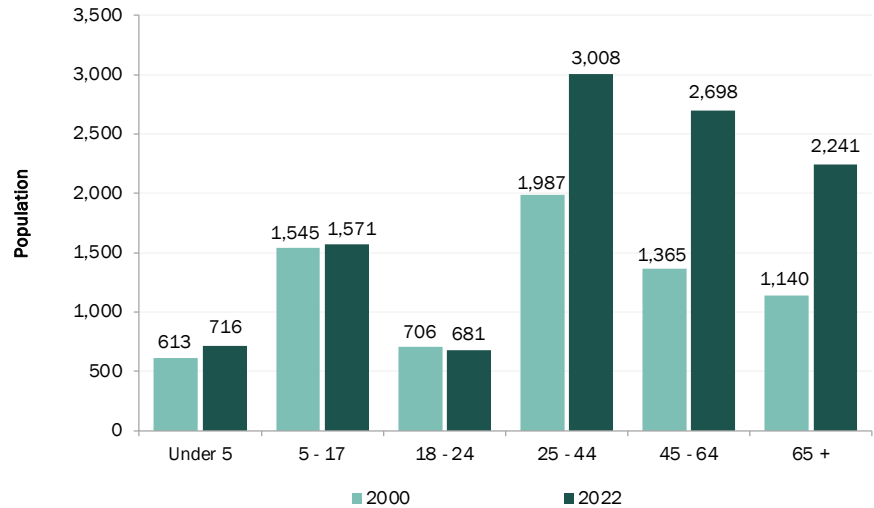
From 2000 to 2022, the population ages 45 to 64 in Prineville experienced the largest nominal increase among all age groups.

This age group also saw the highest percentage increase (98%) during this period.

The age group between 25 and 44 remains the largest age group overall.

Exhibit 34. Prineville Population Change by Age Group, 2000 to 2018–2022

Source: U.S. Census Bureau, 2000 Summary File P012; American Community Survey 2018-2022 5-Year Estimates, Table B01001.



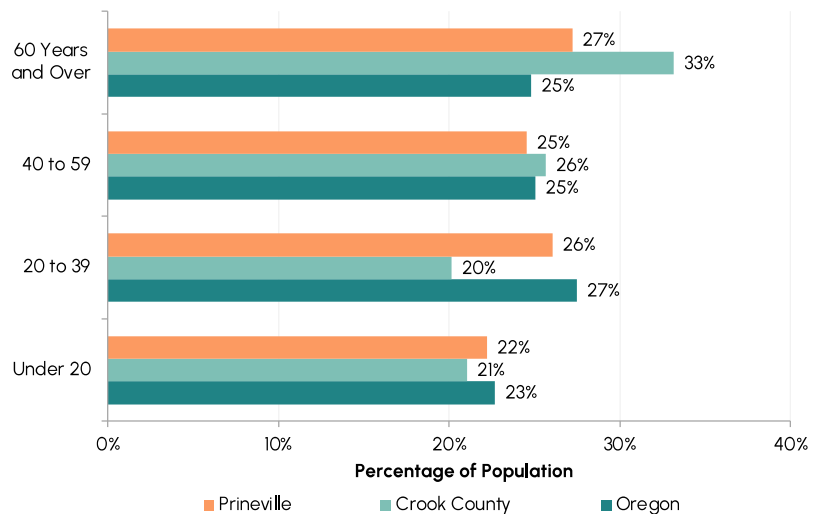
Twenty-seven percent of Prineville residents were 60 years of age and older.

The proportion of Prineville’s older residents was lower than that of Crook County but comparable to the state.

Conversely, the proportion of Prineville residents 39 years of age and younger was higher relative to Crook County but still comparable to state levels.

Exhibit 35. Population Distribution by Age, Prineville, Crook County, and Oregon, 2018–2022

Source: U.S. Census Bureau, American Community Survey, 2018–2022 5-Year Estimates, Table B01001.

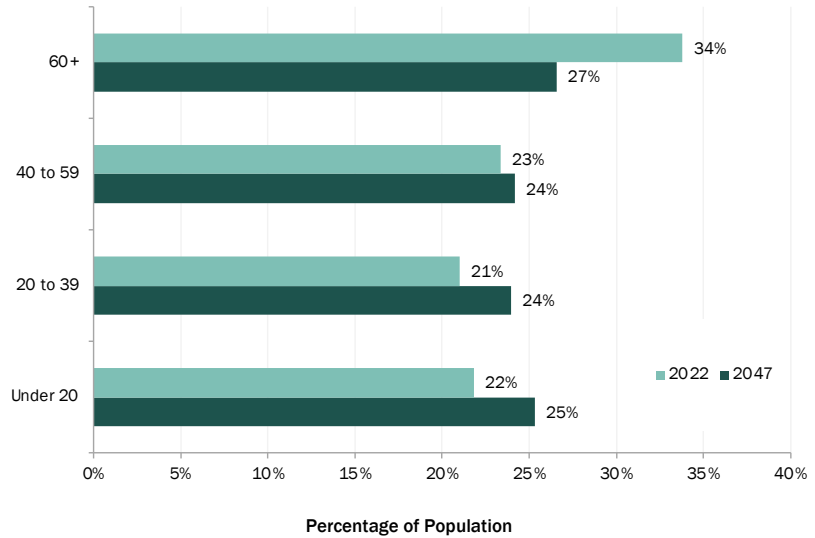


By 2047, Crook County is projected to have a smaller share of residents 60 years and older than it does today.

The share of residents 60 years and older will account for 27% of Crook County’s population in 2044, compared to 34% in 2022. On the other hand, the share of residents younger than 39 will increase from 43% in 2022 to 49% in 2047.

Exhibit 36. Population Share by Age Group, Crook County, 2022–2047

Source: Portland State University, College of Urban & Public Affairs: Population Research Center, Population Forecast, 2024.



RACE AND ETHNICITY

Prineville and Crook County are becoming more racially and ethnically diverse, though less so than Oregon overall. From 2000 to 2022, the share of the Hispanic/Latino population in Prineville grew from 7% to 11% of the total population, and the share of people of color increased from 8% to 12%. In Crook County, the share of people of color rose from 7% to 10% of the total population, while the share of the Hispanic/Latino population grew from 6% to 8%.

Statewide, Hispanic and Latino Oregonians have employment rates that are average or slightly above average compared to the overall population in recent decades. However, their higher employment rates are primarily concentrated in low- and middle-wage occupations such as agriculture, building maintenance, production, construction, food preparation, and transportation and material moving.⁸⁷ Providing culturally specific services, particularly for Spanish speakers, can help improve workforce participation and economic contributions from these growing demographic groups. Such services may also facilitate the entry of Hispanic and Latino workers into higher-wage industries, enabling greater economic opportunities for these communities (if they wish to pursue them).

⁸⁷ Lehner, Josh. “Oregon’s Growing Hispanic and Latino Population.” Oregon Office of Economic Analysis, 21 June 2023. <https://oregoneconomicanalysis.com/2023/06/21/oregons-growing-hispanic-and-latino-population/>



The population of people of color 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 Prineville results in small sample sizes, and thus people of color are combined into one category rather than showing individual races. The margin of error is considerable for the estimate of these populations.

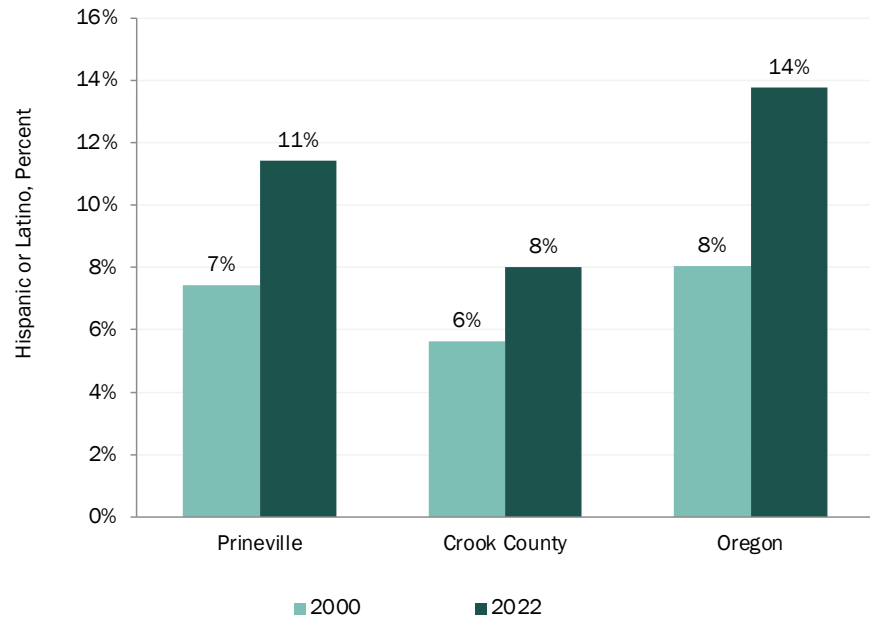
Exhibit 37 and Exhibit 38 show the change in the share of Hispanic/Latino residents and people of color in Prineville, compared to Crook County and Oregon, between 2000 and 2022. In 2022, people of color represented 12% and 10% of Prineville’s and Crook County’s total populations, respectively.

The share of Prineville residents that identified as Hispanic/Latino increased between 2000 and 2022 from 7% to 11%.

Crook County and Prineville are less ethnically diverse than the state overall.

Exhibit 37. Hispanic or Latino Population as a Percentage of the Total Population, Prineville, Crook County, and Oregon, 2000, 2018–2022

Source: U.S. Census Bureau, 2000 Decennial Census, Table P008; 2018–2022 American Community Survey, 5-Year Estimates, Table B03002.

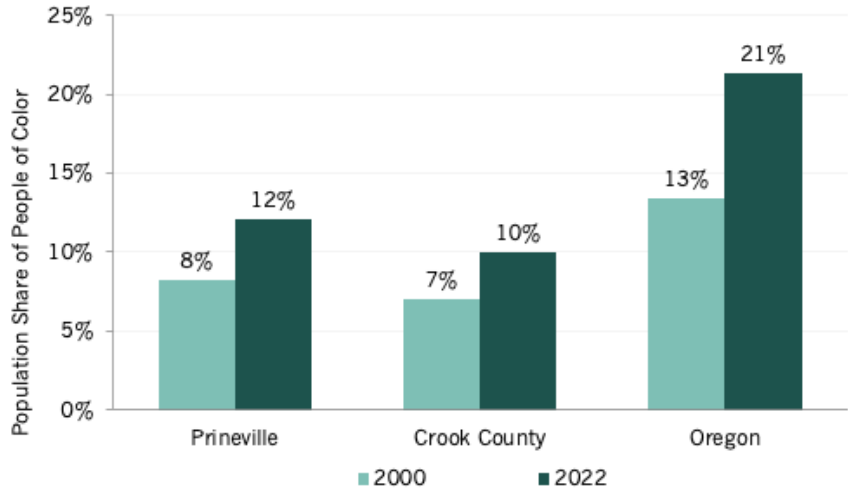


The share of people of color in Prineville increased between 2000 and 2022.

Prineville and Crook County are less racially diverse than the state. In 2022, the share of people of color in Prineville and Crook County was 12% and 10%, respectively, compared to 21% statewide.

Exhibit 38. Population of People of Color as a Percentage of the Total Population, Prineville, Crook County, and Oregon, 2000, 2018–2022

Source: U.S. Census Bureau, 2000 Decennial Census Table P007; 2018–2022 American Community Survey, 5-Year Estimates, Table B02001.



INCOME AND WAGES

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. Prineville’s median household income (\$63,904) was below the county median (\$74,969). However, 2022 average wages at private businesses in Prineville (\$72,095) were above the county average (\$57,388). This discrepancy is likely a reflection of data analysis methods; high-earning industries in Prineville, such as information, finance and insurance, would contribute to a higher average income but not impact the median household income as strongly.

Between 2002 and 2022, Crook County’s average wages increased, as did average wages across the state and the nation. Adjusted for inflation, average annual wages grew by 25% in Crook County, while wages grew by 21% in Oregon and 17% across the nation.

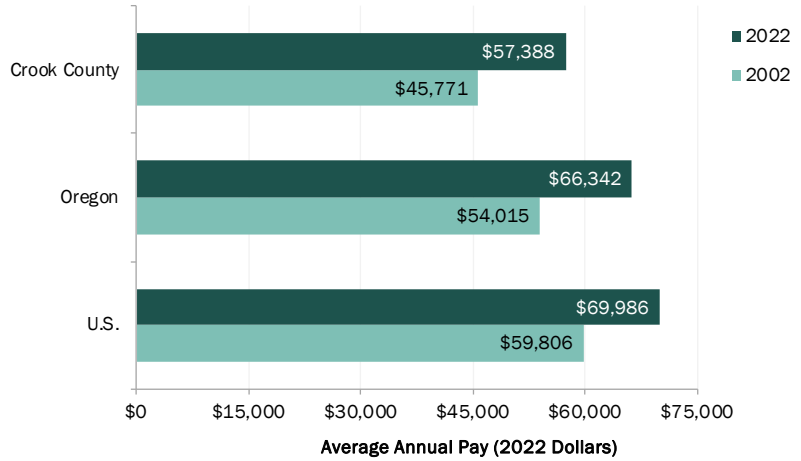
From 2002 to 2022, average annual wages in Crook County increased 25%, compared to 21% in Oregon and 17% nationwide (adjusted for inflation).

In 2022, the average annual wage in Crook County was \$57,388, lower than the state average of \$66,342 and the national average of \$69,986.

Not adjusted for inflation, Crook County's annual average wage more than doubled, increasing by \$29,252 (103%), while the state's grew by \$32,626 (97%) and the nation's grew by \$33,222 (90%).

Exhibit 39. Average Annual Wage, Covered Employment, Crook County, Oregon, and U.S., 2002 to 2022, Inflation-Adjusted 2022 Dollars

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages; State of Oregon Employment Department, Employment and Wages by Industry (QCEW).



The median household income in Prineville was 15% below Crook County's median household income and 17% below Oregon's.

Exhibit 40. Median Household Income (MHI),⁸⁸ 2018–2022

Source: U.S. Census Bureau, American Community Survey 2018–2022 5-Year Estimates, Table B19013.

\$63,904	\$74,969	\$76,632
Prineville	Crook County	Oregon

Prineville's median family income was 17% below Crook County's median family income and 24% below Oregon's.

Exhibit 41. Median Family Income,⁸⁹ 2018–2022

Source: U.S. Census Bureau, American Community Survey 2018–2022 5-Year Estimates, Table B19113.

\$71,370	\$85,708	\$94,277
Prineville	Crook County	Oregon

⁸⁸ The Census calculated household income based on the income of all individuals 15 years old and over in the household, whether they were related or not.

⁸⁹ 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 were related to the head of household by birth, marriage, or adoption.

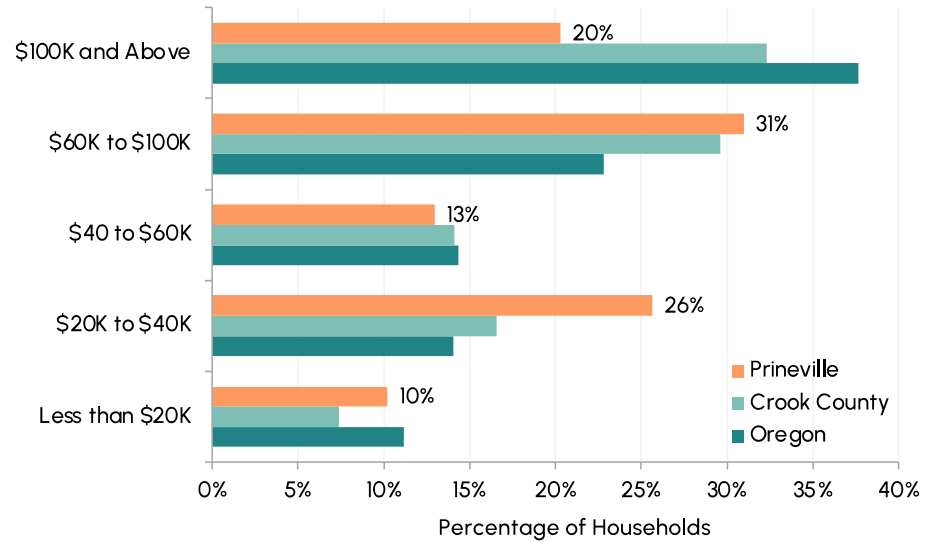


About 36% of Prineville households earned less than \$40,000 annually.

About 20% of Prineville households earned over \$100,000 annually.

Exhibit 42. Household Income by Income Group, Prineville, Crook County, and Oregon, 2018–2022, Inflation-Adjusted 2022 Dollars

Source: U.S. Census Bureau, American Community Survey 2018–2022 5-Year Estimates, Table B19001.



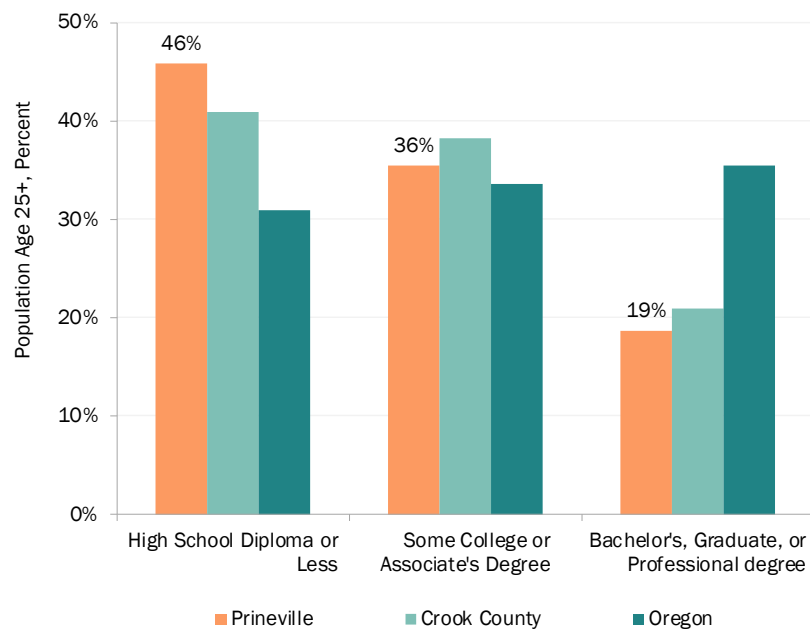
EDUCATIONAL ATTAINMENT

The educational level of a community's workforce is a crucial factor that influences the quality of labor available. Many businesses require access to employees with relevant education and training to meet their staffing needs. A community with a highly educated population is better positioned to attract and retain companies seeking skilled workers.

About 19% of Prineville's residents have a bachelor's, graduate, or professional degree, which is a slightly lower share than the county and a much lower share than the state.

Exhibit 43. Educational Attainment for the Population 25 Years and Over, Prineville, Crook County, and Oregon, 2018–2022

Source: U.S. Census Bureau, American Community Survey 2018–2022 5-Year Estimates, Table B15003.



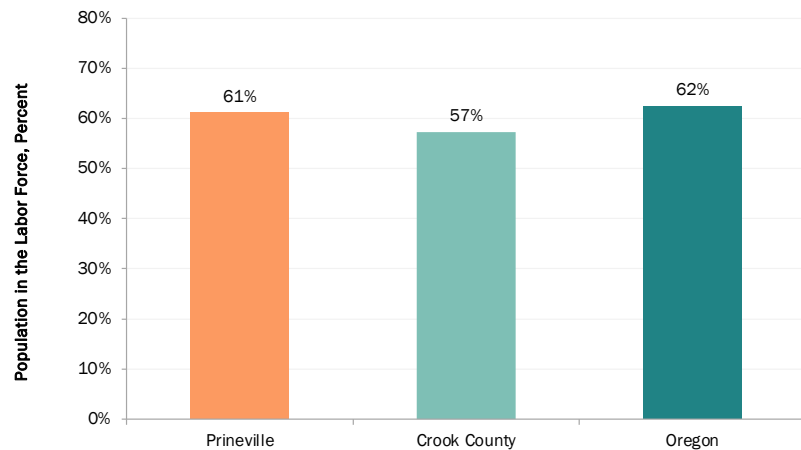
LABOR FORCE PARTICIPATION AND UNEMPLOYMENT

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 employed and unemployed people. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2018–2022 American Community Survey, Crook County had 11,781 people in its labor force and Prineville had 5,413 people in its labor force.

Prineville has a higher labor force participation rate (61%) relative to Crook County (57%) but slightly lower than Oregon overall (62%).

Exhibit 44. Labor Force Participation Rate, Prineville, Crook County, and Oregon, 2018–2022

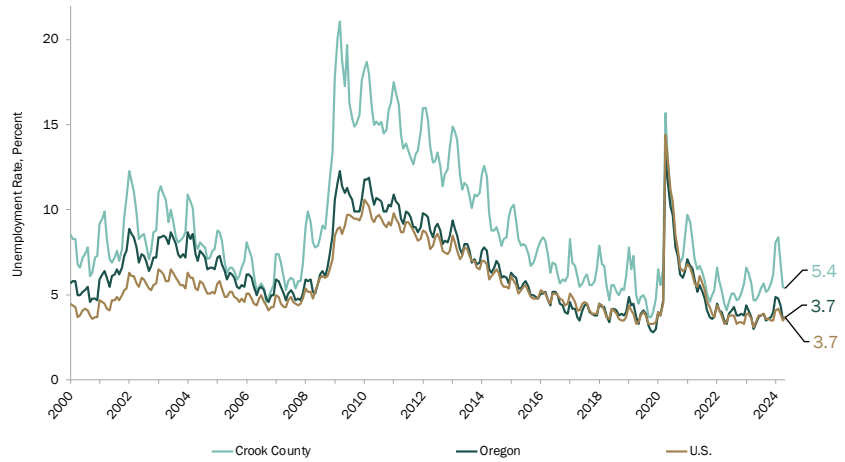
Source: U.S. Census Bureau, American Community Survey 2018–2022 5-Year Estimates, Table B23001.



Crook County's unemployment rate was 5.4% in May 2024, which was higher than the state of Oregon and the U.S. (3.7%).

Exhibit 45. Unemployment Rate, Crook County, Oregon, and the U.S., 2000–2024

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics, and Labor Force Statistics. Not seasonally adjusted.



COMMUTING PATTERNS

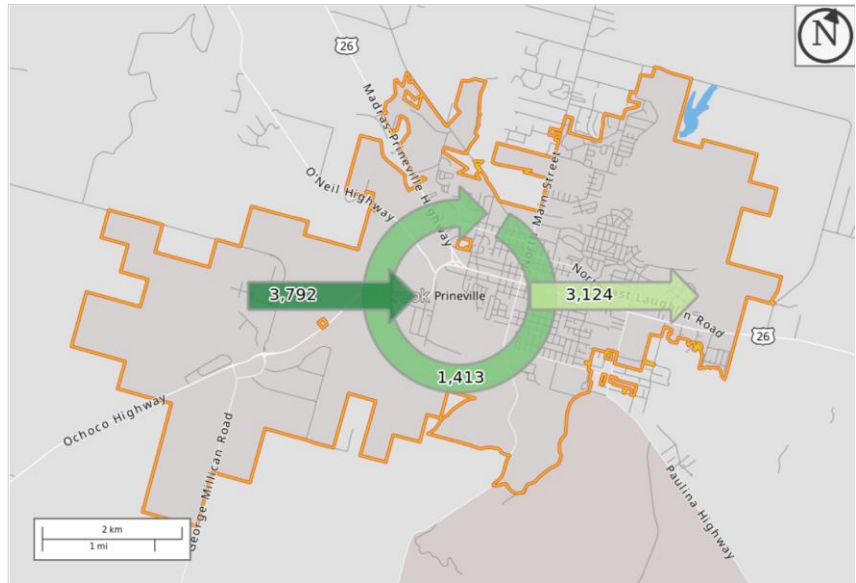
The ability for employers in Prineville to draw from a labor pool that extends into neighboring areas in Crook County and across the state is a significant factor contributing to the local economy. This access to a broader workforce through commuting allows businesses in Prineville to find suitable candidates for available positions, even if the local population alone may not provide enough qualified workers.

Prineville is part of an interconnected regional economy.

More than 3,700 people commuted into Prineville for work, while 3,124 commuted out of Prineville for work. About 1,400 people both lived and worked in Prineville.

Exhibit 46. Commuting Flows, Prineville, 2021

Source: U.S. Census Bureau, Census On the Map.



27% of all people who were employed at businesses in Prineville also lived in Prineville.

About 31% of residents who lived in Prineville also worked in Prineville

16% of Prineville residents commuted to

Exhibit 47. Places Where Prineville Workers Lived,⁹⁰ 2021

Source: U.S. Census Bureau, Census On the Map.

27%	9%	9%
Prineville	Bend	Redmond

Exhibit 48. Places Where Prineville Residents Were Employed,⁹¹ 2021

Source: U.S. Census Bureau, Census On the Map.

31%	16%	11%	6%
Prineville	Bend	Redmond	Portland

⁹⁰ In 2021, 5,205 people worked at businesses in Prineville, with 27% (1,413) of workers both living and working in Prineville.

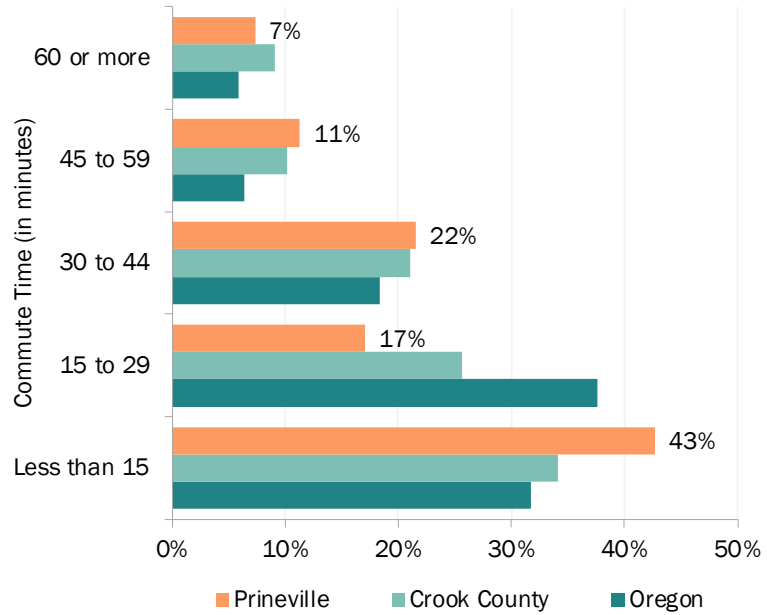
⁹¹ In 2021, 4,537 residents in Prineville worked, with 31% of Prineville residents (1,413) both living and working in Prineville.

About 43% of Prineville residents had a commute time of less than 15 minutes.

Only 18% of Prineville residents commuted 45 minutes or longer to get to work.

Exhibit 49. Commute Time by Place of Residence, Prineville, Crook County, and Oregon, 2018–2022

Source: U.S. Census Bureau, American Community Survey 2018–2022 5-Year Estimates, Table B08303.



Tourism in the Portland Region and Columbia County

Tourism plays a crucial role in local economies by supporting businesses, creating jobs, and generating tax revenue. Dean Runyan Associates, a travel industry research firm, provides tourism data through Travel Oregon's TravelStats dashboard.⁹² According to the dashboard, Crook County welcomed 704,780 overnight visitors in 2023. These tourists contributed \$56.1 million in direct travel spending in 2023, accounting for over 4% of direct travel spending in Central Oregon.

⁹² Travel Oregon. "Oregon Travel Impacts dashboard" Dean Runyan Associates. Retrieved March 27, 2024, from <https://www.travelstats.com/impacts/oregon>



Direct travel spending in Crook County increased 168% from 2003 to 2023.

Central Oregon’s direct travel spending increased by 69% over the same period.

In 2023, the category that saw the highest level of visitor spending in Crook County was Accommodations, followed by Food Service and Food Stores.

The industry with the most employment generated by travel spending in Crook County in 2023 was Accommodations and Food Services.

Exhibit 50. Direct Travel Spending (\$ millions), 2003 and 2023

Source: Dean Runyan Associates, Oregon Travel Impacts, 2003-2023p.

2003	\$401.0 Central Oregon	\$20.9 Crook County
2023	\$1,293.0 Central Oregon	\$56.1 Crook County

Exhibit 51. Largest Visitor Spending Categories (\$ millions), Crook County, 2023

Source: Dean Runyan Associates, Oregon Travel Impacts, 2003-2023p

\$17.4 Accommodations	\$12.4 Food Service	\$7.0 Food Stores
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Exhibit 52. Largest Industry Employment Generated by Travel Spending, Crook County, 2023

Source: Dean Runyan Associates, Oregon Travel Impacts, 2003-2023p

360 jobs Accommodations & Food Services	210 jobs Arts, Entertainment, and Recreation	90 jobs Retail
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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 Prineville 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 methods and definitions used to develop the commercial and industrial buildable lands inventory for the Prineville UGB. The results (shown in Chapter 4) are based on analyses of the City of Prineville, Crook 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 Buildable Lands Inventory (BLI) for Prineville 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 Prineville UGB, (2) it is inside a tax lot (as defined by Crook County), and (3) its comprehensive plan designation allows employment uses. 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 estimate buildable land by plan designation.

Inventory Steps

The five steps in the BLI are:

1. Generate UGB “land base”
2. Classify lands by buildable area status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results



Step 1: Generate UGB “Land Base”

The commercial and industrial inventory used all tax lots within the Prineville UGB with the appropriate types of comprehensive plan designations that fall under those land use categories:

- ◆ Core Commercial
- ◆ Outlying Commercial
- ◆ Light Industrial
- ◆ Heavy Industrial
- ◆ Airport
- ◆ Mixed Use

Exhibit 56 below shows a map of these designations used in the BLI.

Step 2: Classify Lands by Buildable Area Status

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

- ◆ Vacant land
- ◆ Partially vacant land
- ◆ Public land
- ◆ Developed land

ECONorthwest identified buildable land and classified buildable area status using a rule-based methodology. The rules are described in Exhibit 53, and the development status designations of the BLI land base are visualized in map format below in Exhibit 57.

Exhibit 53. Rules for Buildable Area Status Classification

DEVELOPMENT STATUS	DEFINITION	STATUTORY AUTHORITY
Vacant Land	<p>A tax lot:</p> <p>(a) Equal to or larger than one-half acre not currently containing permanent buildings or improvements; or</p> <p>(b) Equal to or larger than five acres where less than one-half acre is occupied by permanent buildings or improvements</p> <p>For the purpose of criteria (a) above, lands with improvement values of \$0 will be considered vacant.</p>	OAR 660-009-0005(14)



Partially Vacant Land	Partially vacant tax lots are those equal to or larger than one acre where more than one-half acre is occupied by permanent buildings or improvements and could still be further developed based on the zoning. This determination was based on a visual assessment by ECOnorthwest and City staff.	No statutory definition
Public	Lands in public are considered unavailable for commercial or industrial development. This includes lands in Federal, State, County, City, school district, Port, or other public ownership. Public lands will be identified using the Crook County assessment property tax exemption codes. We also include cemeteries in this group, as they are not likely to develop over the planning period.	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, or public are considered developed.	OAR 660-009-0005(1)

Step 3: Identify Constraints

As shown in Exhibit 54, the BLI included development constraints consistent with guidance in OAR 660-009-0005(2).

Exhibit 54. Constraints to Be Included in BLI

DEVELOPMENT STATUS	STATUTORY AUTHORITY	THRESHOLD	SOURCE
Goal 5 Natural Resource Constraints			
Natural Features Overlay District	OAR 660-009-0005(2)	Lands within the City's NFOD, which includes wetlands and wetland setbacks (25ft to 100ft), dry washes and dry wash setbacks (50ft), surface water impact, water courses, rimrock setbacks (200ft and 500ft), and scenic resources.	City of Prineville
Natural Hazard Constraints			
FEMA Regulatory Floodway and 100-Year Floodplains	OAR 660-009-0005(2)	Lands within FEMA-defined regulatory floodway or 100-year floodplains	FEMA via National Flood Hazard Layer Interactive Viewer

Landslide Hazards	OAR 660-009-0005(2)	Lands categorized as High or Very High Landslide Susceptibility within the Oregon Statewide Landslide Information Database	Oregon Department of Geology and Mining Industries
Steep Slopes	OAR 660-009-0005(2)	Slopes greater than 15%	Oregon Department of Forestry

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. Exhibit 58 below shows a map of the individual constraints.

Step 4: Verify Inventory Results

ECONorthwest used a multistep 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.

Step 5: Tabulate and Map Results

The results of the commercial and industrial BLI are presented in tabular and maps in the remainder of Appendix B. These maps separately show the existing comprehensive plan designation maps, individual constraints used, the land base by development status with aggregated constraints represented, and unconstrained vacant and partially vacant lands by plan designation.

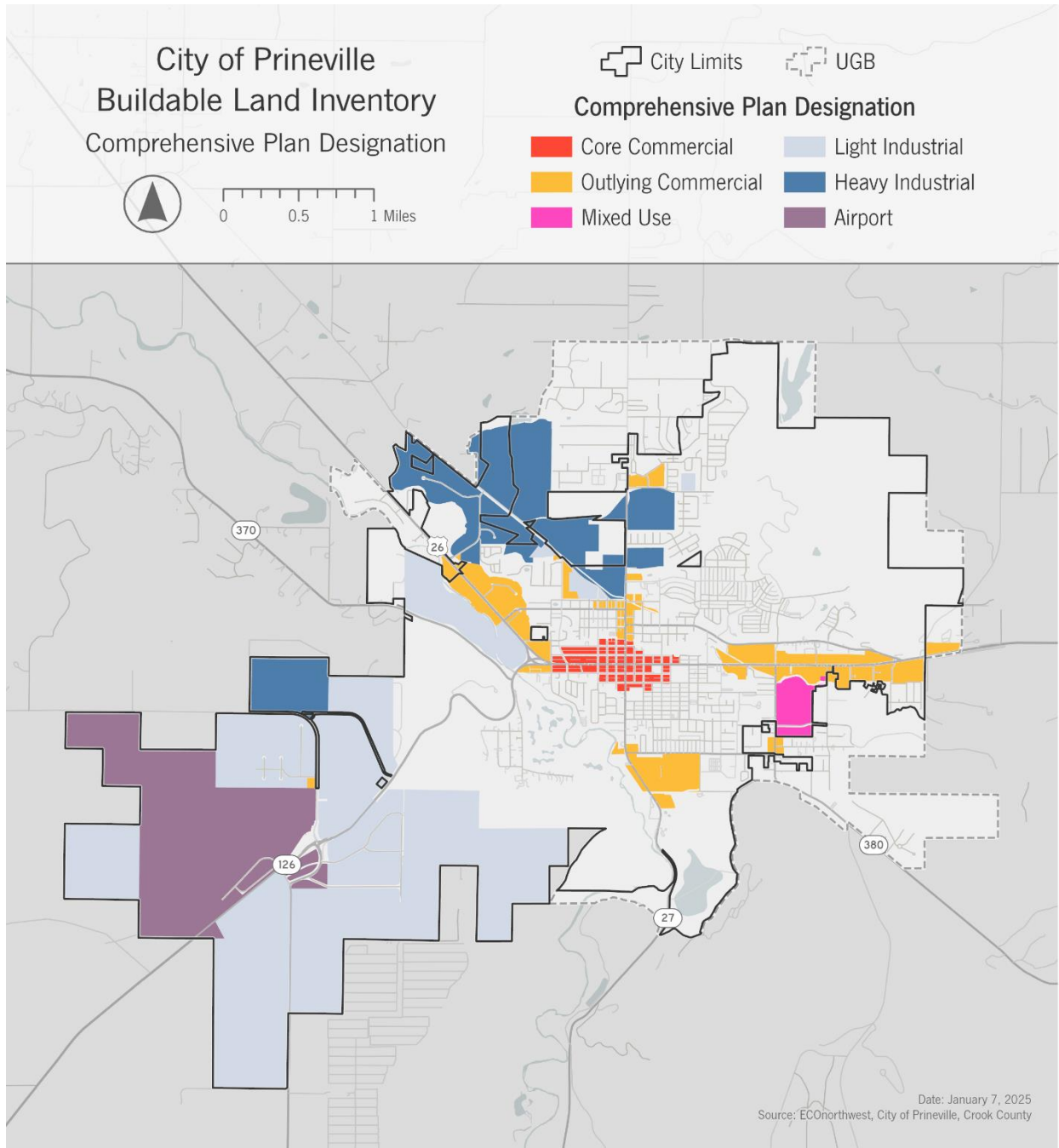
Exhibit 55. Buildable Acres in Vacant/Partially Vacant Tax Lots by Plan Designations, Prineville UGB, 2024

Plan Designation	Total Buildable Acres	Share of Buildable Acres	Buildable Acres on Vacant Lots	Buildable Acres on Partially Vacant Lots
Outlying Commercial	61	4%	36	24
Light Industrial	1,225	78%	913	312
Heavy Industrial	237	15%	135	102
Mixed Use	53	3%	32	20
Airport	5	0.3%	-	5
Total	1,580	100%	1,116	464

Source: ECOnorthwest analysis, City of Prineville, Crook County

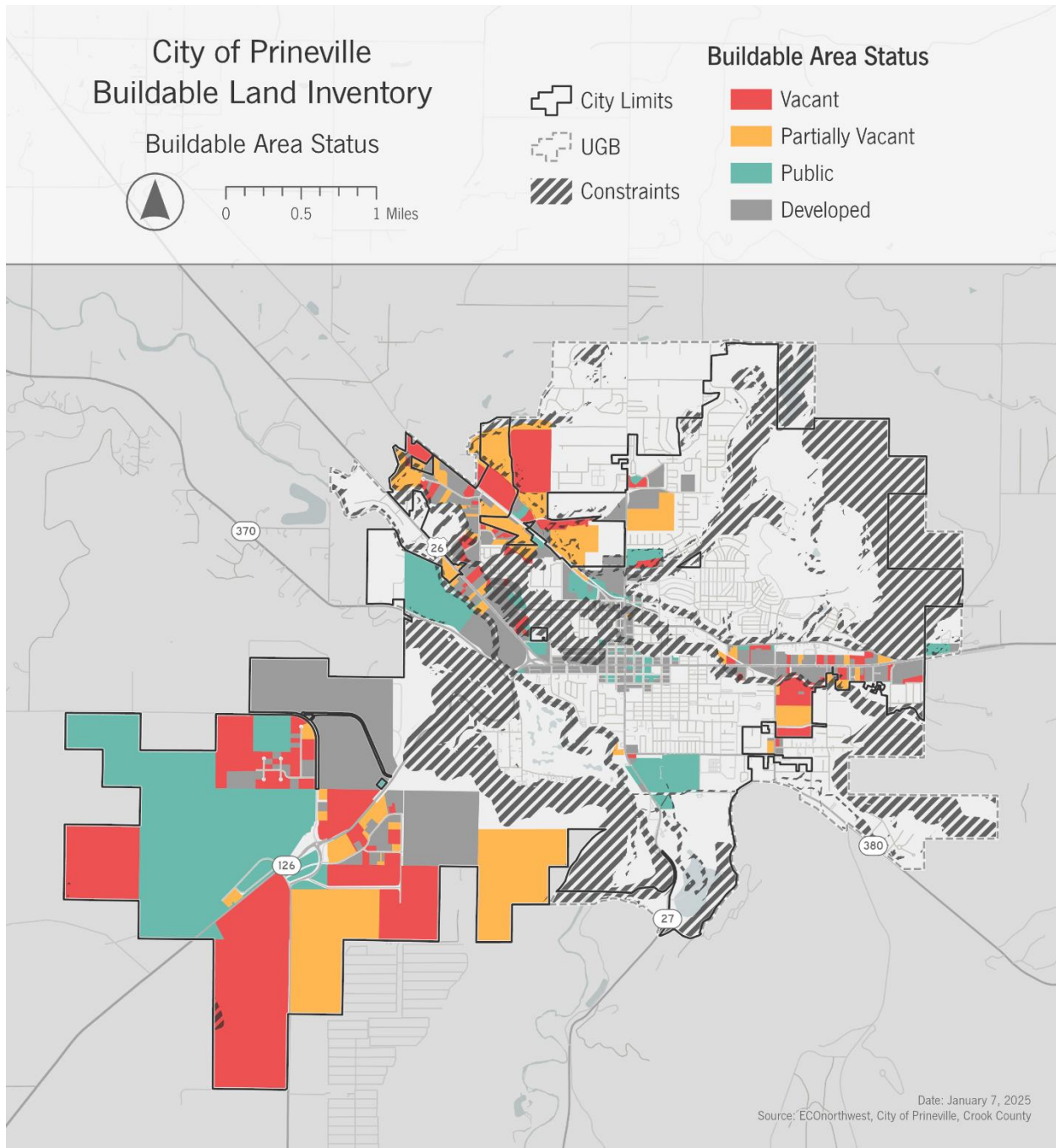


Exhibit 56. Comprehensive Plan Designations Included in the Employment Land Base, Prineville UGB, 2024



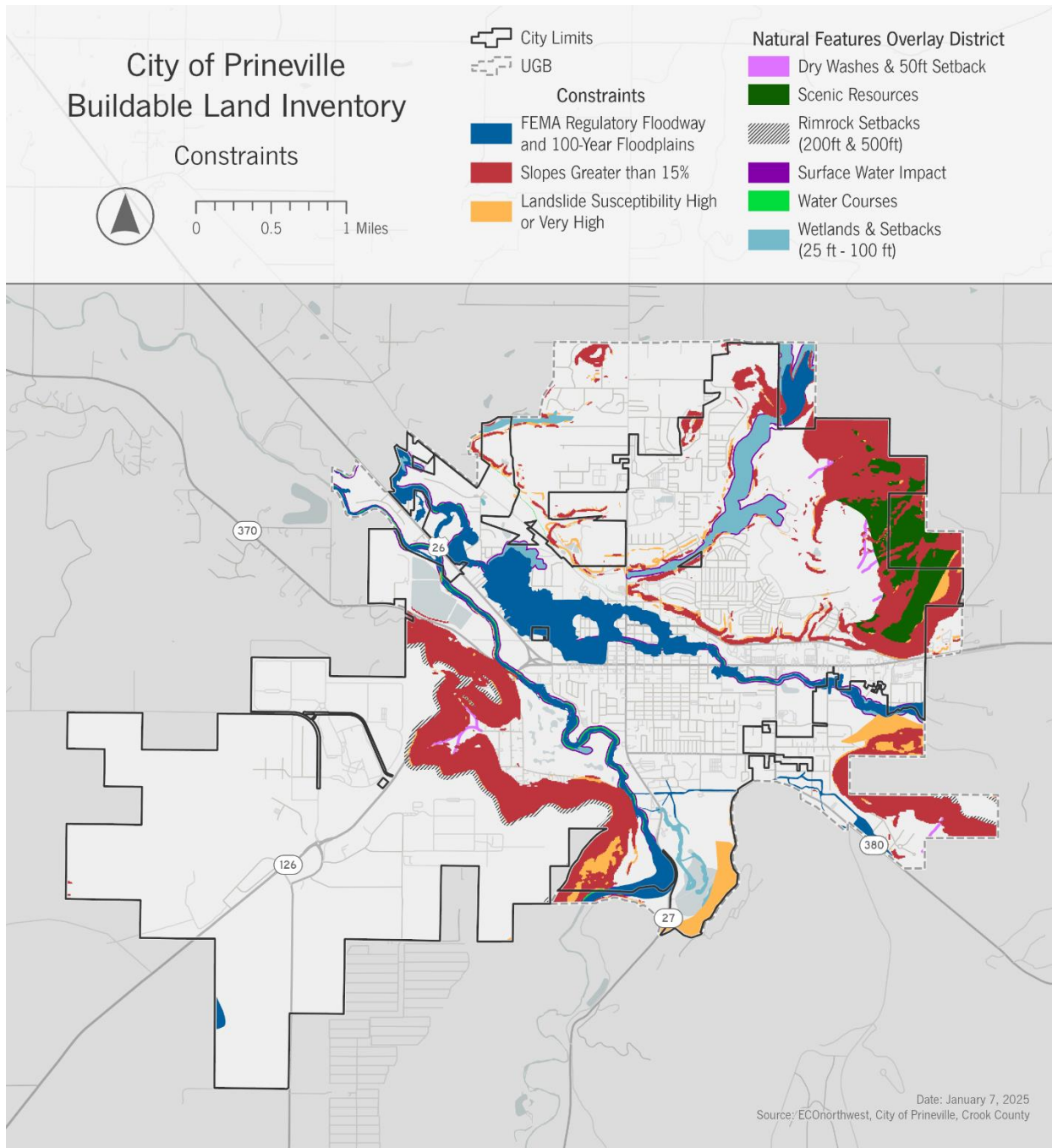
Source: EConorthwest analysis, City of Prineville, Crook County

Exhibit 57. Buildable Area Status with Constraints, Prineville UGB, 2024



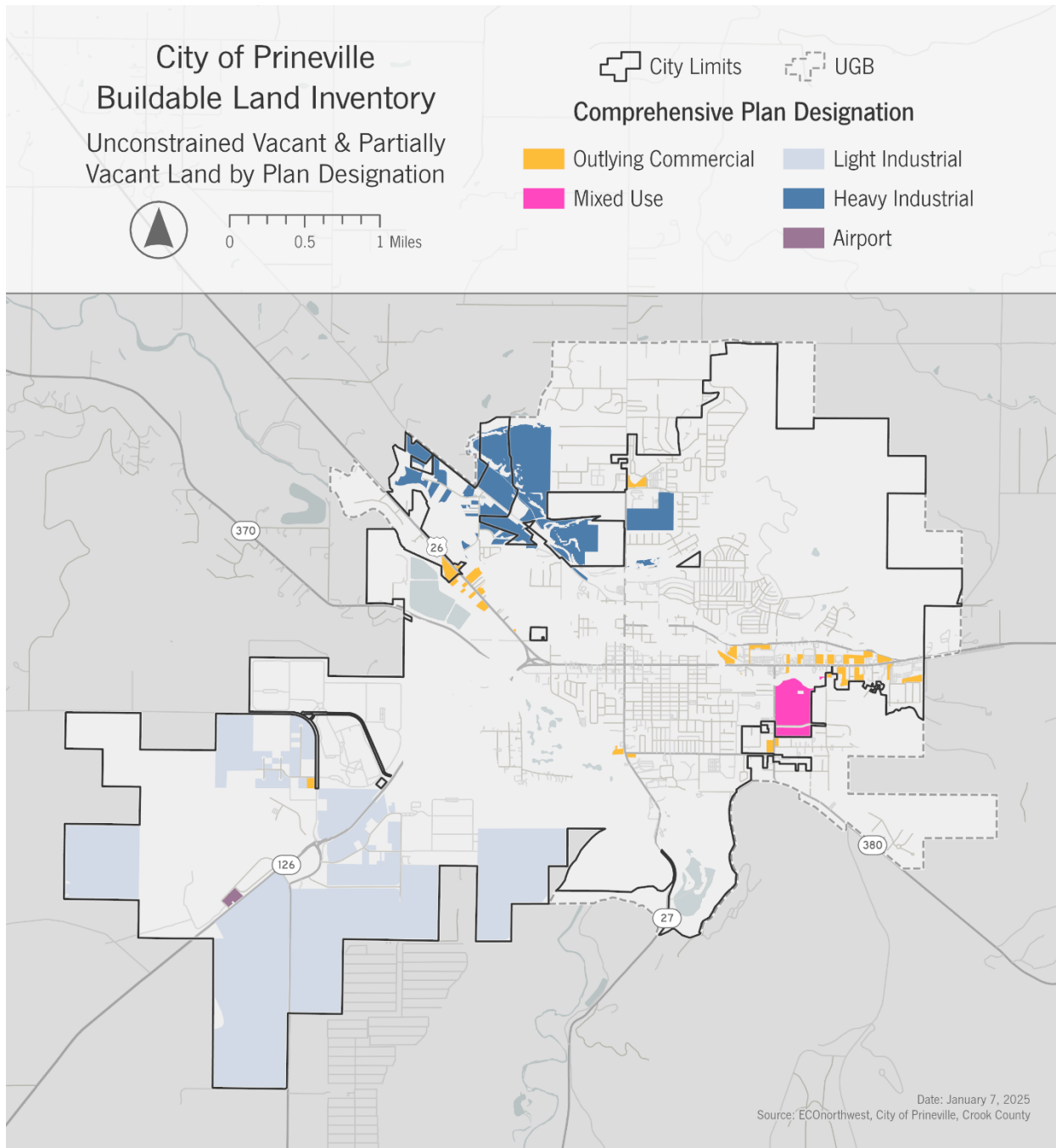
Source: ECONorthwest analysis, Prineville, Crook County

Exhibit 58. Development Constraints, Prineville UGB, 2024



Source: ECONorthwest analysis, City of Prineville, Crook County

Exhibit 59. Buildable Employment Land by Plan Designation, Prineville UGB, 2024



Source: EConorthwest analysis, City of Prineville, Crook County

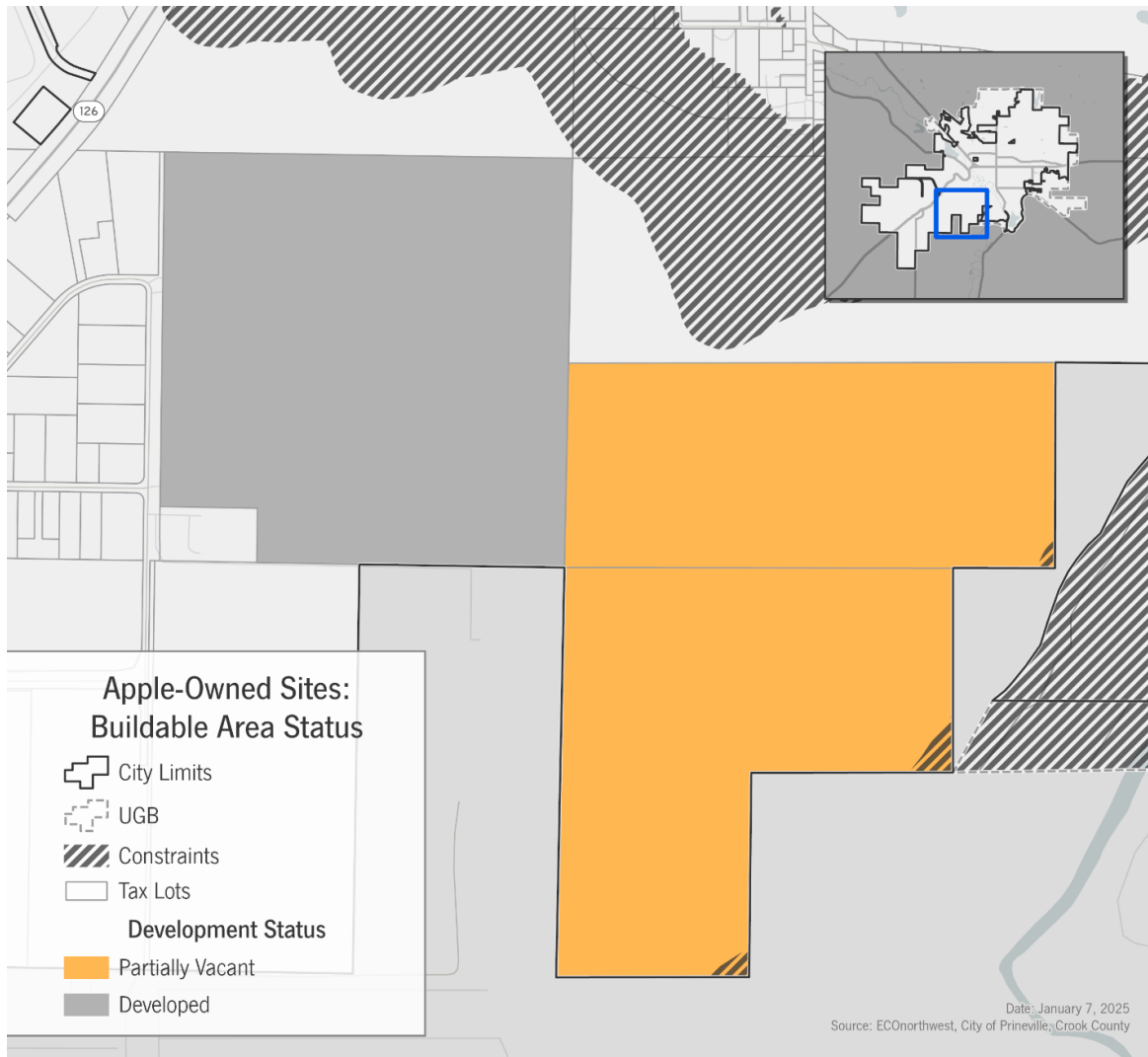
Analysis of Large Existing Sites in Prineville

As part of the analysis of land need, it was important to understand development patterns for large sites in Prineville. The City has a number of large employers with sites larger than 100 acres, where there are multiple parcels adjacent to each other, which include land that is vacant or partially vacant. These are three of the seven buildable sites larger than 50 acres (in Exhibit 26) in common ownership. This section provides information about these larger sites, to explain the need for and average site size of sites over 50 acres.

Exhibit 60 shows the site owned by Apple, which owns 364 acres of land in 3 tax lots. Of this land, about 182 acres are developed and 180 acres are unconstrained and partially vacant, which Apple expects to develop in the future. This land is plan designated as Light Industrial.



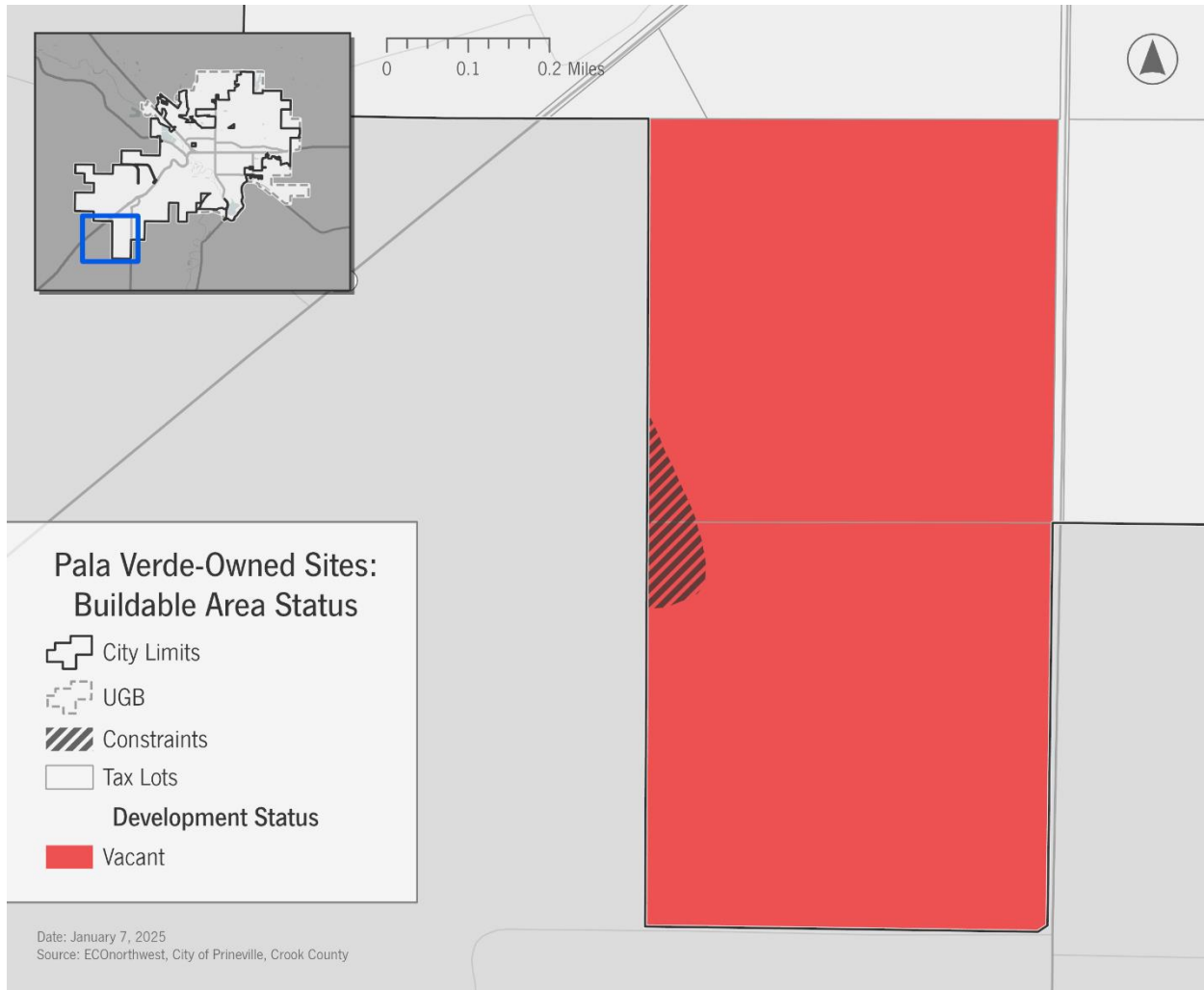
Exhibit 60. Apple Inc. Site



Source: ECONorthwest analysis, City of Prineville, Crook County

Exhibit 61 shows the site owned by Pala Verde LLC, which owns 318 acres of land in 2 tax lots. Of this land, about 311 acres are unconstrained and vacant. This land is plan designated as Light Industrial and expected to develop (most likely for data center use) in the next five to ten years (or sooner).

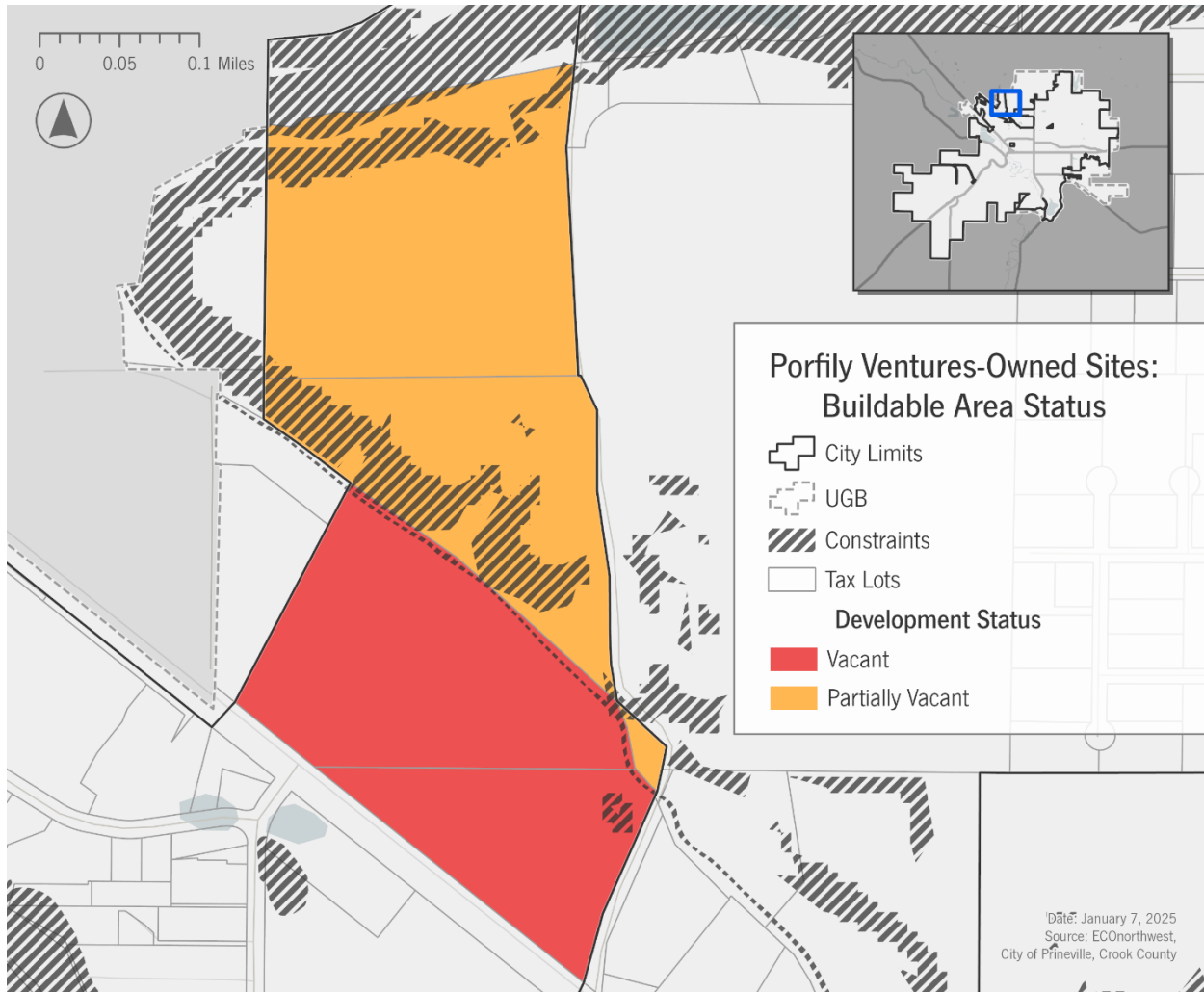
Exhibit 61. Pala Verde LLC Site



Source: ECOnorthwest analysis, City of Prineville, Crook County

Exhibit 62 shows the sites owned by Porfily Ventures, which owns a total of 64 acres of land in 4 tax lots. Of this land, about 2 acres are developed and 51 acres are unconstrained and partially vacant. The two northern tax lots are plan designated as Heavy Industrial, while the two southern lots are designated as Light Industrial.

Exhibit 62. Porfily Ventures-Owned Sites



Source: ECOnorthwest analysis, City of Prineville, Crook County