
City of Sandy

Economic Opportunities Analysis

September 2023

Prepared for: City of Sandy

DRAFT Report

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Executive Summary

The City of Sandy is working on updating its Comprehensive Plan, the first complete update of the Plan since 1997. Sandy last conducted an EOA in 2015, which concluded that Sandy had a deficit of land for commercial uses and a small surplus of land for industrial uses. In 2017, Sandy addressed the commercial land need deficit through land use efficiency measures (such as re-zoning land to commercial uses) and expanding the UGB to include about 50 net acres of land for employment uses.

The broader update of the Sandy Comprehensive Plan provides the opportunity to re-examine Sandy's employment land needs considering the continued changes in the national and regional economy since 2017, which have implications for economic growth in Sandy.

The primary goals of the EOA are to (1) project the amount of land needed to accommodate the future employment growth within Sandy between 2023 and 2043, (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 Sandy'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 Sandy currently have?

Sandy has 588 total acres in its commercial or industrial plan designations. Of these 588 acres, about 191 acres (32%) are unconstrained and buildable within its UGB. Of Sandy's buildable acres, 138 (72%) are designated for commercial uses and 54 (28%) are designated for industrial uses.

How much growth is Sandy planning for?

Goal 9 requires that cities provide for an adequate supply of commercial and industrial sites consistent with plan policies. To meet this requirement, Sandy needs an estimate of the amount of commercial and industrial land that will be needed over the 2023 to 2043 planning period.

Sandy's employment base is 5,514 employees in 2023. Sandy is forecast to have 8,037 employees by 2043. This is an increase of 2,523 jobs over the planning period.

Most new employment will require commercial and industrial lands, accounting for over 90% of new employment growth (2,339 employees) over the 2023 and 2043 planning period. Sandy will accommodate new government employees (184 of the 2,523 employees) in existing government buildings and areas designated for public use.

How much land will be required for employment?

The forecast for land needed to accommodate employment growth in Sandy shows that the growth of 2,523 new employees will result in demand for about 154 gross acres of commercial and industrial employment lands.

Does Sandy have enough land to accommodate employment growth?

Sandy has sufficient land to accommodate demand for commercial employment in the Sandy UGB, but it does not have sufficient land to accommodate demand for industrial employment.

Based on land demand, Sandy is forecast to have a 52-gross-acre surplus of commercial land and a 9-gross-acre deficit of industrial land.

What are Sandy's growth opportunities?

Sandy's primary competitive advantages are:

- The city's proximity to both outdoor recreation and urban amenities in Greater Portland make Sandy an attractive place to live and grow businesses.
- The city's plans for investment along Pleasant Street could help encourage pedestrian activity, which could have a positive effect on downtown businesses.
- SandyNet (Municipal Broadband) offers access to high-speed internet, which is an increasingly high priority for most businesses. SandyNet could also help attract remote workers who may not work for a business in Sandy but want to live in Sandy, as well as new home-based businesses.
- Sandy's location along Highway 26 and proximity to the Portland region provide opportunities for relatively easy freight movement and allow businesses in Sandy to attract workers from across the region.

These factors make Sandy attractive to residents and businesses that want a high quality of life where they live and work.

The types of businesses that have potential for growth in Sandy include (but are not limited to) manufacturers (particularly food and beverage processing and outdoor equipment manufacturing), professional service companies, service for residents (such as retail, restaurants, medical services, or childcare services), and services for visitors (such as hotels, restaurants, specialty retail, and experiences).

Sandy's average wage of \$37,318 is lower than the average of \$54,802 for Clackamas County. Sandy's potential growth industries generally have above-average wages, except for certain types of services for residents and visitors, such as retail.

What are the key recommendations?

Following are ECONorthwest's recommendations for actions for Sandy based on the analysis and conclusions in this report.

- **Update the Economic Element of the Comprehensive Plan.** The Economy Element has not been updated in more than a decade. The new information in the EOA document provides a refreshed fact base for making future decisions.
- **Align the City's goals for economic development with planning for infrastructure development.** Aside from ensuring that there is sufficient land to support employment growth, one of the most important ways that the City can support economic development is through planning for and developing infrastructure (e.g., roads, water, sanitary sewer, and stormwater systems). We recommend that the City align its goals for economic development with infrastructure development through updates to the City's Capital Improvements Plan.
- **Monitor and replenish the supply of commercial and industrial land on a regular, periodic basis.** The buildable lands inventory identifies the existing development status of employment land in Sandy. While Sandy will not completely update the buildable lands inventory on an annual basis, City staff should still monitor the development status of these employment lands and replenish short-term supply when possible.
- **Sandy will need to address key infrastructure needs in the city.** Sandy will need to address wastewater system deficiencies to support future employment growth. To meet upcoming demand, Sandy has plans to fix aging sewer pipes, upgrade Sandy's existing treatment plant, and expand Sandy's wastewater system capacity, including establishing an alternative discharge location. Sandy's plans for its wastewater system upgrades will allow Sandy to accommodate the types and amounts of growth forecast in this report.
- **Determine whether and how to address the deficit of industrial land.** At the least, Sandy should consider whether there are opportunities to do a UGB land swap, moving industrial land that is difficult or unlikely to develop out of the UGB and bringing in land that is more likely to develop. Sandy should also evaluate whether there are land use efficiency measures, such as opportunity to re-zone land to allow more industrial development. In addition, Sandy might direct some types of industrial uses to commercial areas for manufacturing or other uses that are low odor or low noise and would be compatible with surrounding commercial (and possibly adjacent residential) uses. Finally, Sandy may want to consider a modest UGB expansion to meet its industrial needs, which might be most efficiently done if the City also implements a UGB land swap.
- **Support entrepreneurship and growing small businesses.** Small scale manufacturing sites could provide opportunities to create a business incubator or shared business space. The City should explore how this type of space could support entrepreneurs and small businesses as they start and grow their businesses.

- **Implement the Economic Development Strategy.** The City's Economic Development Strategy identifies the following six goals.
 - Improve systems to ensure broad and durable access to economic opportunity and maintain Sandy's high quality of life.
 - Leverage our investments in technology to maximize economic benefits.
 - Build on our assets in manufacturing to establish Sandy as a destination for metals fabrication and related activities.
 - Cultivate innovation in specialty food and beverage industries and align with the region's robust food storage and processing sector.
 - Invest in hospitality and place-based tourism to make Sandy the most active and vibrant basecamp for Mt. Hood area adventures.
 - Be a leader as both retail hub and heart of East Clackamas County.

These goals align with the potential growth industries and economic advantages and disadvantages identified in the EOA. We recommend the City implement the actions in the Strategy to achieve these goals.

1. Introduction

This report presents an Economic Opportunities Analysis (EOA) for the City of Sandy. The purpose of an EOA is to develop information as a basis for policies that capitalize on Sandy's opportunities and help address the City's challenges. The EOA includes technical analysis to address a range of questions that Sandy faces in managing its commercial and industrial land. For example, the EOA includes an employment forecast that describes how much growth Sandy should plan for from 2023 to 2043 and identifies the amount and type of employment land necessary to accommodate growth in Sandy over that 20-year planning period. The EOA also includes an inventory of commercial and industrial land within Sandy's Urban Growth Boundary (UGB) to provide information about the amount of land available to accommodate employment growth.

This EOA complies with the requirements of Statewide Planning Goal 9, the Goal 9 Administrative 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 uses and other employment uses (OAR 660-009-0025[1]) over the 20-year planning period. This approach could be characterized as a site-based approach that projects land need based on the forecast for employment growth, the City's economic development objectives, and the specific needs of target industries.

Background

The City of Sandy is working on updating its Comprehensive Plan, the first complete update of the Plan since 1997. Sandy last conducted an EOA in 2015, which concluded that Sandy had a deficit of land for commercial uses and a small surplus of land for industrial uses. In 2017, Sandy addressed the commercial land need deficit through land use efficiency measures (such as re-zoning land to commercial uses) and expanding the UGB to include about 50 net acres of land for employment uses.

The broader update of the Sandy Comprehensive Plan provides the opportunity to re-examine Sandy's employment land needs considering the continued changes in the national and regional economy since 2017, which have implications for economic growth in Sandy. The 2023 EOA accounts for recent employment trends and changes in economic conditions.

Sandy wants to develop an Economic Opportunities Analysis (EOA) to describe current conditions in the city and forecast potential future changes in economic activity in Sandy within the context of the Portland Metro region. In addition, the City is engaged in developing an economic development strategic plan as a separate yet parallel project. The EOA provides a factual base about current economic conditions and information necessary for updating the City's economic development Comprehensive Plan policies, as well as developing the economic development strategic plan. The EOA provides information that the City can use to identify and

capitalize on its economic opportunities. It also provides information essential to addressing the City's challenges in managing economic development.

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.

Stakeholder Engagement Process

Development of the EOA was informed by feedback from a Technical Advisory Committee (TAC), composed of City staff and economic development professionals. The TAC met 3 times and discussed:

- **Meeting 1:** the buildable lands inventory and SWOT analysis
- **Meeting 2:** employment forecast, target industries, and land sufficiency
- **Meeting 3:** site needs, EOA report reviews, and economic development policies

Public engagement occurred through the Sandy Comprehensive Plan project via the following.

- **Community Conversations.** To reach a wide spectrum of Sandy community members, project staff and members of the Community Advisory Committee (CAC) facilitated community conversations with local groups, clubs, committees, and organizations in Sandy, including targeted outreach to Spanish speakers and high school students. The discussions focused on what community members value about Sandy today and what could make it a better place in the future.
- **Community Events.** The project team engaged with the community at a variety of community events throughout 2022 and 2023, staffing an *Envision Sandy 2050* booth and conducting targeted outreach through intercept surveys in English and Spanish. Events included:
 - Farmers Markets (May-August, 2022-2023)
 - Longest Day Parkway (June 2022-2023)
 - Sandy Mountain Festival (July 2022-2023)
- **Stakeholder Workshops.** Two day-long workshops conducted with City staff, Community Advisory Committee members, and technical experts to identify natural hazard vulnerabilities in Sandy and develop cross-sector strategies to address those vulnerabilities in the Comprehensive Plan.
- **Surveys and Online Engagement.** Throughout the process, online surveys were conducted to gather community priorities and identify strategies for the future of Sandy. Surveys were provided in both English and Spanish, and paper copies were available at key locations around the city. Running concurrently with outreach through community conversations and community events, the first survey was live for six months in 2022 and received 137 responses. The second survey opened in April 2023 and received 24 responses at the time of writing (*September 2023*).
- **Community Meetings.** In September 2022, the project team held *Future Fest*, a community meeting to unveil the new *Envision Sandy 2050* Vision Statement and provide Sandy community members an opportunity to share their ideas for achieving the vision. The open house format provided an opportunity for Sandy residents and

business owners to engage with their neighbors face-to-face and share ideas for the Comprehensive Plan.

The Comprehensive Plan process also included 6 decision-maker work sessions to ensure that elected and appointed officials were engaged in the process and had the opportunity to provide input and direction.

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

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

Sandy exists as part of the economy of the Portland Metro region, which includes Multnomah, Clackamas, and Washington Counties. It is a relatively small commercial center to the southeast of the Portland Metro area, serving eastern Clackamas County. Sandy is located along Highway 26 and is the largest incorporated city between the Portland Metro and Mt. Hood. Its proximity to the Portland Metro region provides opportunities for the City's residents and access to a larger labor pool for employers, especially from cities on the eastern side of the region. The economic focus of Sandy consists of an industry mix of retail trade, manufacturing, and services such as restaurants, healthcare, education, and government services. Sandy's location within eastern Clackamas County makes it an ideal destination for tourists visiting Mt. Hood and on their way to Central Oregon.

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

Factors that Affect Economic Development¹

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 typical and reasonable focus of economic development policy), as well as through improvements to the wider social and natural environment that strengthen the economy.”²

That definition acknowledges that a community's well-being depends in part on narrower measures of economic well-being (e.g., jobs and income) and on other aspects of quality of life (e.g., the social and natural environment). In practice, cities and regions trying to prepare an economic development strategy typically use a narrower definition of economic development; they take it to mean business development, job growth, and job opportunity. The assumptions are that:

- Business and job growth are contributors to and consistent with economic development, increased income, and increased economic welfare. From the municipal point of view,

¹ 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.

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

investment and the resulting increases in property tax are important outcomes of economic development.

- The evaluation of trade-offs and balancing of policies to decide whether such growth is likely to lead to overall gains in well-being (on average and across all citizens and businesses in a jurisdiction) is something that decision-makers do after an economic strategy has been presented to them for consideration.

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

In that context, a major part of local economic development policy is about local support for business development and job growth; that growth comes from the creation of new firms, the expansion of existing firms, and the relocation or retention of existing firms. Specifically, new small businesses are accounting for a larger share of the job growth in the United States. 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 and is consistent with Sandy's Pioneer spirit. 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. 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 more pay to acquire the labor that is available, the recruiting of labor from other areas, or the use of 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 quality and efficiency of infrastructure and facilities, such as roads, bridges, water and sewer systems, airport and cargo facilities, energy systems, and telecommunications.
- **Access to markets.** Though part of infrastructure, transportation merits special attention. Firms need to move their product (either goods or services) to 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 (i.e., raw lumber) and others may need intermediate materials (i.e., dimensioned lumber).
- **Entrepreneurship.** This input to production may be thought of as good management, or more broadly as a spirit of innovation, optimism, and ambition that distinguishes one firm from another, even though most of their other factor inputs may be quite similar. Entrepreneurial activity, even when unsuccessful, can offer information about the local market that other entrepreneurs can use in starting a new firm. Entrepreneurs are typically willing to take on more risk in uncertain markets, and a strengthened entrepreneurial environment can help to reduce that risk and uncertainty.³ Entrepreneurs also tend to have more mobility than larger firms and are more likely to locate in areas with a strong entrepreneurial environment.⁴ 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

³ 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

⁴ Emil E. Malizia and Edward J. Feser. *Understanding Local Economic Development*. (1999).

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 business to consider locating in 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.

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.⁵ Local governments are well equipped to help foster these networks through supporting economic development tools such as small business assistance centers or incubation centers. Government can also be a key part of a community's innovative culture through the provision of services and regulation of development and business activities that are responsive to the changing needs of business.

How important are these factors?

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

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

No empirical analysis can completely quantify firm location factors because numerous methodological problems make any analysis difficult. For example, some would argue simplistically that firms would prefer locating to a region with a low tax rate to reduce tax expenses. However, the real issue is the value provided by the community for the taxes collected. 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 provide support for new and existing small businesses through policies and programs that support entrepreneurship and innovation. The National League of Cities suggests strategies for local governments, including strong leadership from elected officials; better communication with entrepreneurs, especially regarding the regulatory environment for businesses in the community; and partnerships with colleges, universities, small business

⁵ Nancy Green Leigh and Edward Blakely. *Planning Local Economic Development: Theory and Practice*. 2013.

development centers, mentorship programs, community groups, businesses groups, and financial institutions.⁶

Local governments in Oregon also play a central role in the provision of buildable land through inclusion of 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 not sufficient to guarantee economic development in a community — market conditions must create demand for this land, and local factors of production must be favorable for business activity. In the context of expected economic growth and the perception of a constrained land supply in Sandy, the provision of buildable land has the potential to strongly influence the level and type of economic development in the city of Sandy. The provision of buildable land is one of the most direct ways that Sandy 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 Sandy

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

- **County and local employment growth.** Employment has increased in Clackamas County since 2001, with a gain of about 24,884 employees between 2001 and 2020. The largest increases were in healthcare and social assistance and professional and business services. Jobs in Sandy accounted for about 2% of overall employment in Clackamas County in 2019. Employment in Sandy increased 23% between 2008 and 2019, growing by approximately 695 employees.
- **Increases in regional competitiveness.** The Greater Portland region (which includes Clackamas, Multnomah, and Washington Counties in Oregon and Clark County in Washington) continues to attract companies that operate on a global scale. Developing a skilled workforce and building efficient infrastructure remain critical elements to maintaining the region’s competitive advantages. Industry sectors in computer and electronics, software, climate tech, design and media, food and beverage, apparel and outdoor, and metals and machinery are central to the region’s success.⁷ The increases in economic attractiveness of the Greater Portland region provide opportunities for the development of new businesses in Sandy.
- **Changes in manufacturing and concentration of manufacturing in Oregon.** Sandy’s location in the Portland Metro region, the presence of existing manufacturing businesses, and access to a skilled workforce present opportunity for growth in

⁶ National League of Cities “Supporting Entrepreneurs and Small Businesses” (2012).

⁷ Greater Portland Comprehensive Economic Development Strategy (CEDS). Prepared by Bridge Economic Development. 2021.

manufacturing businesses. In 2019, manufacturing accounted for about 5% of Sandy's total covered employment and had an average wage of \$56,224, higher than the city's average wage of \$37,318.

Between 2008 and 2019, the manufacturing sector in Sandy shrank from 240 to 202 employees, a decrease of 38 employees. In Clackamas County, over the 2008 to 2019 period, manufacturing added 124 jobs (as well as maintaining existing jobs).

- **Increases in automation.** Businesses in both industrial and commercial industries will continue to respond to increases in automated processes, decreasing employment in some types of manufacturing processes and conversely increasing demand for workers with skills in computers and other high-tech sectors. While automation has been a factor in industrial sectors for decades (e.g., manufacturing), recent increases in automation have occurred for commercial industries, such as certain functions of retail or office jobs. Oregon's overall risk of automation is consistent with national trends, with lower and middle-wage jobs at higher risk of being automated. Jobs that are lower risk include those that provide personal services or experiences, such as food service or hospitality. Higher-wage jobs that are also considered at lower risk of automation include jobs that require social intelligence, perception, creativity, or fine motor skills.

Most industrial sectors will continue to hire employees to complete certain tasks, though the types of skills required for these jobs may change as automation increases. Sandy's access to a skilled workforce is an advantage for businesses in Sandy if the educational opportunities in the region continue to align with the needs for industries that locate in Sandy.

- **Importance of small businesses in Sandy's economy.** The average business in Sandy has 10 employees, slightly less than the state average of 11 employees.⁸ The creation of new businesses is vital to Oregon's (and Sandy's) economy as their formations generate new jobs and advance innovations into markets. Sandy's access to a relatively young workforce both within the city and from across the Portland Metro region presents opportunities for small businesses to grow in the city.
- **Changes in the retail sector.** Over the past two decades, the trend toward supercenters and e-commerce has steadily increased. While growth of shopping online, 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 physical, brick-and-mortar stores for certain 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). One emerging retail trend, the convergence of technology and shopping, creates new opportunities for retail businesses to differentiate themselves and engage customers digitally in physical retail locations. While retail businesses that compete with online retailers may become less common in Sandy (and other cities), businesses

⁸ 2019 QCEW data for the State of Oregon

providing experiences (including digital/physical shopping experiences) or goods that cannot be purchased online may grow and expand in Sandy. This presents opportunities for Sandy's retail industry to build on the city's high quality of life, providing experiences for residents and visitors.

- **Continued increase in demand for energy.** In 2022, 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 international market. Energy prices are forecasted to increase over the planning period, which, over the long-term, will likely affect the mode of commuting before it affects workers' willingness to commute. For example, commuters may choose to purchase a more energy-efficient car or carpool. Sandy also provides public transit options via the Sandy Area Metro (SAM), with routes to Gresham and Estacada along with stops throughout Sandy. Very large increases in energy prices may affect workers' willingness to commute to or from Sandy, especially workers living or working the farthest from Sandy or workers with lower-paying jobs. In addition, very large increases in energy prices may make shipping freight long distances less economically feasible, resulting in a slowdown or reversal of offshore manufacturing, especially of large, bulky goods.
- **A tight labor market and increasing labor costs.** In December 2021, the unemployment rate in Clackamas County was 3.3%, slightly lower than Oregon's rate of 3.6% and the national rate of 3.7%. After declining sharply during the COVID-19 pandemic, employment has mostly recovered with the national labor force participation rate slightly below pre-pandemic levels. Economic growth paired with a tight labor market pushed wages upwards with wages increasing nationally by 5.5% as of April 2022 year over year. For Sandy, the tight labor market could make it difficult for businesses to attract talent, especially given the relatively lower wages offered in the city relative to the broader Portland region.
- **Household income and average wages.** Sandy's median household income (\$73,443) is lower than the county (\$80,484) but higher than the state (\$62,818). The average annual wage at private businesses in Sandy was about \$37,318, which was lower than the Clackamas County average of \$54,802 in 2019 and the state average of \$55,019.⁹ While household income data would suggest that some households may have higher disposable incomes to spend on goods and services, the relatively lower wages could make it difficult to attract talent, especially given the tight labor market.
- **Rising housing costs.** The rising cost of living, especially increases in housing costs, can impact the ability of local businesses to attract and retain talent, especially for low and middle-wage jobs. As of June 2022, the median home sales price was \$523,000 in Sandy. The median gross rent in 2019 was \$1,229.¹⁰ Households would need to earn \$120,000 per year to afford the median sales price and \$50,000 per year to afford the median rent.

⁹ Oregon Employment Department, Quarterly Census of Employment and Wages, 2019

¹⁰ 2019 data is based on the 5-year ACS (2015-2019).

Unfortunately, the average annual wage in Sandy is \$37,318 and the median household income is \$73,443.

- **Availability of labor.** Availability of labor depends, in part, on population growth and in-migration. Sandy's population increased by 7,484 people between 2000 and 2021 at an average annual growth rate of 4.2%. Sandy is forecast to grow by 5,885 people between 2020 and 2040.¹¹

The current labor force participation rate is another important consideration in the availability of labor. The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and unemployed. According to the 2015–2019 American Community Survey, Sandy had about 5,846 people in its labor force and Clackamas County had 214,622 people in its labor force. The labor force participation rate in Sandy (69%) was higher than Clackamas County (65%) and Oregon (62%). Nonparticipants in the labor force (the 31% of people not participating in Sandy's labor force) included students 16 years and older, retirees, and unemployed people not actively seeking work. A higher concentration of older residents in an area or a mismatch between the types of jobs available in an area and the types of skills of the labor force can contribute to low labor force participation rates.

Commuting is common for residents and workers in Sandy. Twenty percent of workers at businesses in Sandy live in Sandy. About 12% of workers live in Gresham, 8% in Portland, and 4% around Mount Hood. Businesses in Sandy draw employees from across Multnomah, Clackamas, and Washington Counties. About 87% percent of residents of Sandy commute to work across the region, including 27% who work at businesses in Portland, 11% who work in Gresham, and 2% who work in Beaverton.

- **Education as a determinant of wages.** Sandy's population has a larger share (46%) of residents with some college or an associate's degree (as their highest level of education) than in Clackamas County (35%) and Oregon (34%). About 19% of Sandy's residents have a bachelor's degree or higher in comparison to 37% in Clackamas County and 34% in Oregon. Businesses that need employees with a bachelor's degree or higher may need to recruit employees from outside of the city.
- **Aging of the population and need for replacement workers.** While Sandy has a smaller percentage of residents 60 years and older (17%) relative to Clackamas County (25%) and Oregon (24%), Sandy's population is growing older. Sandy's median age, which was 32.6 in 2000, increased to 36.2 in 2019.¹² By comparison, Clackamas County's median age was 41.5, and Oregon's median age was 39.3 in 2019.¹³

¹¹ Portland State University, College of Urban & Public Affairs: Population Research Center, population forecast, 2020.

¹² 2019 data is based on the 5-year ACS (2015-2019).

¹³ 2019 data is based on the 5-year ACS (2015-2019).

Clackamas County's population is expected to continue aging, with people 60 years and older increasing from 27% of the population in 2020 to 29% of the population in 2040, consistent with statewide trends.¹⁴ As workers retire, businesses need to replace them with new workers. This need for replacement workers will continue to drive need for workers. With a relatively younger workforce, Sandy could be in a good position to replace retiring workers if workforce skills match job openings.

- **Increases in racial and ethnic diversity.** Overall, both the nation and Oregon are becoming more racially and ethnically diverse. Between 2000 and 2019, the Hispanic and Latino population in Oregon increased from 8% to 13%, while it increased in Sandy from 4% to 10%. The population of people of color has increased from 13% to 16% in Oregon since 2000 and from 6% to 9% in Sandy.¹⁵
- **Increase in work from home trends.** The pandemic facilitated a shift in many industries opening up 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. Work from home trends are likely to continue—full time for some workers or with options for a hybrid schedule for others. Sandy's proximity to recreational amenities and the Portland Metro region, along with access to high-speed internet, could make it particularly attractive to people who work from home full time or have a hybrid work arrangement in the Portland Metro region that requires them to be in the office a few times a week.
- **High rates of inflation.** For the last several decades, inflation rates have generally stayed below 3% in the United States of America. Inflation started to increase in 2021 and increased substantially in 2022 to its highest level in 40 years—around 9%. Inflation increased most quickly in June 2022 for energy, motor vehicles, food, and household furnishings.¹⁶ The average hourly earnings for nonfarm employees increased slightly through April 2022, but inflation-adjusted real average hourly earnings declined slightly due to continued inflation.¹⁷ Continued high rates of inflation may slow economic growth, further erode purchasing power, discourage savings, and lead to a national recession. Consumers may start decreasing spending on non-essentials, which could impact parts of Sandy's retail and tourism economy. However, Sandy's proximity to the Portland Metro region may result in the city getting more regional tourists as people choose to vacation locally to avoid high transportation costs.

¹⁴ Portland State University, College of Urban & Public Affairs: Population Research Center, Population Forecast, 2020.

¹⁵ 2019 data is based on the 5-year ACS (2015-2019).

¹⁶ Bureau of Labor Statistics, U.S. Department of Labor, *The Economics Daily*. Consumer prices up 9.1 percent 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).

¹⁷ *New Inflationary Concerns: A US Macroeconomic Update*, IBISWorld, June 03, 2022. <https://www.ibisworld.com/blog/new-inflationary-concerns-us-macroeconomic-update/1/1126/>

Employment Trends in Sandy and Clackamas County

The national economy changed substantially between 2001 and 2022. These changes affected the composition of Oregon’s economy, including Sandy’s economy. At the national level, the most striking change was the shift from manufacturing employment to service-sector employment. The most important shift in Oregon during this period has been the shift from a timber-based economy to a more diverse service-based economy. This section of the EOA focuses on changes in the economy in Clackamas County and Sandy since 2001.

Employment Trends in Clackamas County

Exhibit 1 shows covered employment¹⁸ in Clackamas County for 2001 and 2019. Employment increased by 35,329 jobs, or 26%, over this period. The sectors with the largest increases in numbers of employees were healthcare and social assistance (10,649 jobs), professional and business services (8,562 jobs), construction (4,856 jobs), and accommodation and food services (4,822 jobs). The average annual wage for employment in Clackamas County in 2019 was about \$54,802.¹⁹

Exhibit 1. Covered Employment by Industry, Clackamas County, 2001–2019

Sector	2001	2019	Change 2001 to 2019		
			Difference	Percent	AAGR
Natural Resources and Mining	4,164	5,040	876	21%	1.1%
Construction	9,327	14,183	4,856	52%	2.4%
Manufacturing	18,172	18,296	124	1%	0.0%
Wholesale Trade	10,391	10,937	546	5%	0.3%
Retail trade	17,628	18,843	1,215	7%	0.4%
Transportation, Warehousing & Utilities	4,439	4,077	-362	-8%	-0.5%
Information	1,728	2,304	576	33%	1.6%
Financial Activities	8,294	7,866	-428	-5%	-0.3%
Professional and Business Services	13,301	21,863	8,562	64%	2.8%
Educational Services	1,112	2,026	914	82%	3.4%
Health Care and Social Assistance	12,038	22,687	10,649	88%	3.6%
Arts, Entertainment, and Recreation	1,680	2,655	975	58%	2.6%
Accommodation and Food Services	9,832	14,654	4,822	49%	2.2%
Other Services	5,422	7,388	1,966	36%	1.7%
Unclassified	77	104	n/a	n/a	n/a
Total All Government	16,497	16,509	12	0%	0.0%
Total	134,104	169,433	35,329	26%	1.3%

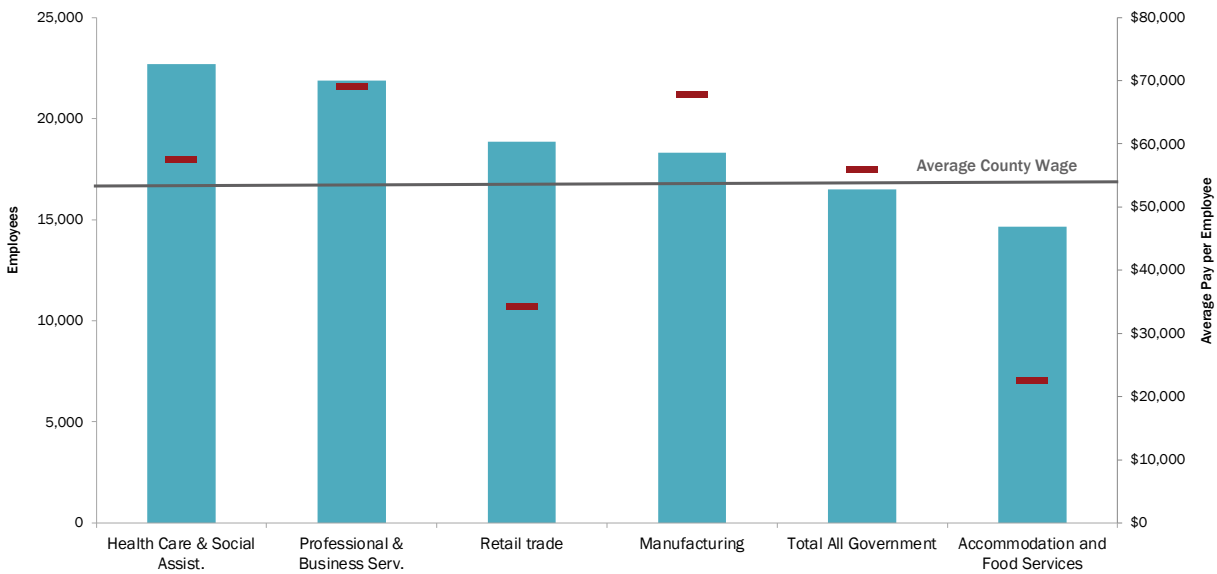
Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2001–2019.

¹⁸ **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.

¹⁹ Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2019.

Exhibit 2 shows covered employment and average wage for the six largest industries in Clackamas County. Jobs in healthcare and social assistance and professional and business services each accounted for approximately 13% of the county’s total covered employment, followed by retail and manufacturing (both 11%). Of these sectors, professional and business services and manufacturing pay above the county wage (\$69,007 and \$67,779, respectively). The healthcare and social services sector pays just above the county average (\$57,632). Jobs in government, construction, wholesale trade, financial activities, information, and other services also paid more per year than the county average, but they accounted for a smaller share of covered employment in the county.

Exhibit 2. Covered Employment and Average Pay by Sector, 6 Largest Sectors Clackamas County, 2019



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2019.

While the COVID-19 pandemic caused high unemployment and pandemic-related job losses in 2020, the economy rebounded in 2021 and into 2022 as vaccines became readily available and business restrictions lifted. Oregon experienced strong job gains in 2021 with employers adding 102,100 jobs over the year.²⁰ However, the job gains have been unevenly distributed throughout the economy. Some sectors such as construction, nondurable goods manufacturing, retail trade, and transportation and warehousing fully recovered from recession losses and reached new, record-high employment levels at the end of 2021. Other sectors, including leisure and

²⁰ Gail Krumenauer, “Job gains amid COVID waves: 2021 year in review.” State of Oregon Employment Department. April 7, 2022.

hospitality and private educational services remained below pre-COVID job levels.²¹ However, job growth is anticipated to be more balanced across industries moving forward.²²

According to the Oregon Office of Economic Analysis (OEA) in their May 2021 economic and revenue forecast, jobs are forecasted to fully recover during the 2021 to 2023 biennium. Job vacancies reached record highs in Clackamas County in 2021.²³ The unemployment rate in Clackamas County in March 2022 was the same as March 2019 at 3.6%, and total nonfarm employment in Clackamas County was above where it was in March 2019.²⁴

Employment in Sandy

Between 2008 and 2019, employment in Sandy increased by about 695 employees (23%), at about a 1.9% average annual growth rate. Retail trade experienced the greatest nominal increase (261 employees) followed by healthcare and social assistance (176 employees), while manufacturing experienced the greatest nominal decrease (38 employees) (Exhibit 3).

Exhibit 3. Change in Covered Employment, Sandy UGB, 2008–2019

Sectors highlighted in blue have wages higher than the city average.

*Average Annual Growth Rate

Sector	Employees		Change in Employment		
	2008	2019	Number	Percent	AAGR
Construction & Agriculture	177	162	(15)	-8%	-0.8%
Manufacturing	240	202	(38)	-16%	-1.6%
Wholesale Trade	44	54	10	23%	1.9%
Retail Trade	717	978	261	36%	2.9%
Transportation and Warehousing	24	128	104	433%	16.4%
Information	96	62	(34)	-35%	-3.9%
Finance and Insurance	83	88	5	6%	0.5%
Real Estate and Rental and Leasing	42	38	(4)	-10%	-0.9%
Professional Services and Management of Companies	86	78	(8)	-9%	-0.9%
Admin. / Support and Waste Mgmt / Remediation Serv.	29	57	28	97%	6.3%
Educational Services	4	18	14	350%	14.7%
Health Care and Social Assistance	278	454	176	63%	4.6%
Recreation, Accommodation, and Food Services	544	632	88	16%	1.4%
Other Services (except Public Administration)	195	300	105	54%	4.0%
Government	499	502	3	1%	0.1%
Total	3,058	3,753	695	23%	1.88%

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2008 and 2019.

²¹ Gail Krumenauer, "Job gains amid COVID waves: 2021 year in review." State of Oregon Employment Department. April 7, 2022.

²² Josh Lehner, "Cyclical Labor Shortage is Gone, Structural Remains." Oregon Office of Economic Analysis. May 4, 2022.

²³ Amy Vander Vilet. "Clackamas County job vacancies reach record high in 2021." State of Oregon Employment Department. April 14, 2022.

²⁴ Oregon Employment Department, Qualityinfo.org

Exhibit 4 shows a summary of covered employment data for the Sandy UGB in 2019. The sectors with the largest number of employees were retail trade (26% of Sandy’s total covered employment); recreation, accommodation, and food service (17%); government (13%); and healthcare and social assistance (12%). The average size for a private business in Sandy was 10 employees per business, slightly lower than the state average of 11 employees.

Exhibit 4. Covered Employment and Average Pay by Sector, Sandy UGB, 2019²⁵

Sector	Establishments	Employees	Average Pay per Employee
Construction & Agriculture	42	162	\$61,677
Manufacturing	22	202	\$56,224
Wholesale Trade	14	54	\$46,708
Retail Trade	46	978	\$35,347
Transportation and Warehousing	11	128	\$28,515
Information	8	62	\$52,915
Finance and Insurance	20	88	\$47,660
Real Estate and Rental and Leasing	18	38	\$34,258
Professional Services and Management of Companies	19	78	\$57,176
Admin. / Support and Waste Mgmt / Remediation Serv.	21	57	\$26,654
Educational Services	5	18	\$15,507
Health Care and Social Assistance	31	454	\$32,550
Recreation, Accomodation, and Food Services	47	632	\$18,829
Other Services (except Public Administration)	72	300	\$30,786
Government	12	502	\$53,815
Total	388	3,753	\$37,318

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2019.

²⁵ The following sectors were combined due to confidentiality of QCEW data: construction and agriculture, forestry, fishing, and hunting, and mining; professional, scientific, and technical services and management of companies; arts, entertainment and recreation and accommodation and food services.

Exhibit 5 shows the employment and average pay per employee for the six largest sectors in Sandy. Average pay in Sandy for all employees (\$37,318) is shown as an orange line across the graph and average pay for individual sectors as short yellow lines. Government, manufacturing, and wholesale trade; information, finance, and real estate; construction; and professional services had above-average wages. The lowest wages were in accommodation and food services.

Exhibit 5. Covered Employment and Average Pay by Sector, Sandy UGB, 2019



Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2019.

Though data are not readily available at the city level to inform the impacts of the COVID-19 pandemic, OED reports that Clackamas County had lower rates of unemployment insurance claims as a share of labor force relative to all Oregon counties.²⁶ In May, following the onset of the pandemic, around 19,035 continued unemployment insurance claims were made in Clackamas County. Of these claims, 3,891 were in the accommodation and food service sector (20% of the county's total claims). Healthcare and social assistance had the next largest share of continued claims at about 14% of the county total, followed by retail trade and manufacturing at 13% and 8%, respectively. As of June 2022, these continued insurance claims were down to under 1,307 claims.

²⁶ Based on information from the Oregon Employment Department as of August 2022. <https://www.qualityinfo.org/covid-19>

Outlook for Growth in Clackamas County

Exhibit 6 shows the Oregon Employment Department’s forecast for employment growth by industry for the Portland Metro region (Clackamas, Multnomah, and Washington Counties) over the 2020 to 2030 period. Employment in the region is forecasted to grow at an average annual growth rate of 1.6%.

The sectors that are projected to lead employment in the region for the 10-year period are leisure and hospitality (adding 40,700 jobs); professional and business services (30,900); private education and health services (28,600); trade, transportation, and utilities (22,400); government (11,800); and manufacturing (10,300). In sum, these sectors are expected to add 144,700 new jobs, or about 83.4% of employment growth in the Portland Metro region. Clackamas County accounts for about 16% of employment in these three counties, and Sandy accounts for about 2% of the county’s employment.

Exhibit 6. Regional Employment Projections, 2020–2030, Portland Metro Region (Clackamas, Multnomah, and Washington Counties)

Industry Sector	2020	2030	Change (2020 to 2030)		
			Number	Percent	AAGR*
Total Private Payroll Employment	825,000	981,600	156,600	19%	1.8%
Natural Resources and Mining	10,200	10,900	700	7%	0.7%
Mining and Logging	600	600	0	0%	0.0%
Construction	55,100	61,800	6,700	12%	1.2%
Manufacturing	99,100	109,400	10,300	10%	1.0%
Durable Goods	75,000	82,700	7,700	10%	1.0%
Wood Product Manufacturing	2,100	2,100	0	0%	0.0%
Nondurable Goods	24,000	26,700	2,700	11%	1.1%
Trade, Transportation, and Utilities	177,700	200,100	22,400	13%	1.2%
Wholesale Trade	46,200	51,600	5,400	12%	1.1%
Retail Trade	87,700	97,100	9,400	11%	1.0%
Transportation, Warehousing, and Utilities	43,700	51,400	7,700	18%	1.6%
Information	21,100	24,900	3,800	18%	1.7%
Financial Activities	61,600	66,700	5,100	8%	0.8%
Professional and Business Services	155,400	186,300	30,900	20%	1.8%
Private Educational and Health Services	140,000	168,600	28,600	20%	1.9%
Health Care and Social Assistance	120,500	145,000	24,500	20%	1.9%
Leisure and Hospitality	72,400	113,100	40,700	56%	4.6%
Accommodation and Food Services	62,500	95,900	33,400	53%	4.4%
Other Services and Private Households	32,400	39,800	7,400	23%	2.1%
Government	112,000	123,800	11,800	11%	1.0%
Federal Government	14,500	14,600	100	1%	0.1%
State Government	8,200	8,800	600	7%	0.7%
Local Government	89,300	100,400	11,100	12%	1.2%
Self-Employment	59,500	64,500	5,000	8%	0.8%
Total employment	996,500	1,169,900	173,400	17%	1.6%

Source: Oregon Employment Department. Employment Projections by Industry 2020-2030.

*Note: AAGR is the Annual Average Growth Rate

Sandy's Competitive Advantage.

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

Sandy's primary competitive advantages are its location along Highway 26, proximity to Mt. Hood and the Portland Metro region, access to a skilled labor force, municipal gigabit broadband access throughout the city, tourism and outdoor recreational opportunities, availability of Class A recycled water, and small-town character. These factors contribute to a high quality of life and make Sandy attractive to residents and businesses.

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

Sandy's advantages for economic development include:

- **Location.** Located to the southeast of the Portland Metro region about 25 miles southeast of Portland, Sandy employers have access to labor in the broader Portland Metro region. Sandy is located 40 minutes from Portland International Airport, 50 minutes from downtown Portland, and 35 minutes from Government Camp, which is the homebase of Mount Hood. Sandy's location just outside the metro region and within eastern Clackamas County makes it an attractive small commercial area for much of eastern Clackamas County, attracting residents from many smaller communities, including Estacada, Eagle Creek, Boring, and the Villages on Mount Hood. Sandy's location can be an advantage, especially for workers who prefer to live in or near Sandy for its quality of life and access to outdoor recreational opportunities but still want access to urban amenities.
- **Transportation.** Sandy is located along Highway 26, which runs east from Portland toward Mount Hood before heading southeast toward Madras. Highway 26 intersects with major I-5 and I-205 as they run through Portland. As a major interstate, I-5 is a preferred route for trucking and distribution between California and Washington, as it is relatively flat. Highway 211 also has a spur route that runs southwest through Clackamas County from Sandy. The Sandy Area Metro (SAM) provides transit opportunities with routes to Gresham and Estacada along with numerous stops throughout Sandy. Sandy's proximity to Portland provides the city with access to an international airport less than 25 miles away.
- **SandyNet (Municipal Broadband).** The City of Sandy developed its own internet service provider (SandyNet) in 2007 due to lack of internet service available on the

private market. The City provides gigabit optical fiber internet connections and VOIP telephone service to any business or residence within city limits for a relatively low price. Access to high-speed internet is an increasingly high priority for most businesses. SandyNet also helps attract remote workers who may not work for a business in Sandy but want to live in Sandy, as well as new home-based businesses.

- **Availability of water and wastewater services.** The City of Sandy is currently making investments into water and wastewater infrastructure, which will equip the City to better meet current demand and increase capacity for future growth. There may be an opportunity for an industrial user such as a data center to leverage Sandy's large amount of available Class A recycled water.
- **Labor market.** Sandy's workforce is relatively younger, with a larger share of residents under 40 years of age than in Clackamas County and Oregon overall. Sandy's labor force participation rate (69%) is slightly higher than the county average (65%). Sandy's workforce is aging, and replacement workers will be needed as people retire, consistent with regional trends.

Although the share of Sandy's working age population with a bachelor's degree or higher (19%) is lower relative to the county average (37%), the city has a higher share (46%) of residents with an associate's degree. Employers have access to workers in various stages of their careers, including students attending colleges and universities within the Portland Metro region.

- **Business-friendly environment.** Sandy has comparatively lower property tax rates than other cities in the Metro area, including Portland, Gresham, Happy Valley, and others. Sandy also has an urban renewal district with funds dedicated to economic development (e.g., façade and tenant improvement grants).
- **Sandy Community Campus.** The Pleasant Street Master Plan, a long-range visioning and infrastructure plan, is intended to promote and encourage the expansion of commercial business in downtown Sandy by investing in improvements along Pleasant Street and creating a pedestrian corridor in the Alt Avenue right-of-way. The Sandy Community Campus, a publicly owned property in the Central Business (C-1) zoning district within the Pleasant Street Master Plan area, currently houses SandyNet. The City is evaluating redevelopment opportunities for the property, which may include development of a community center and parkland.

Stronger linkages promoted by the Pleasant Street Master Plan between important institutions—including the Sandy Public Library, the Sandy Community Campus, and the Sandy Grade School—can help encourage pedestrian activity, which could have a positive effect on downtown businesses.

- **Tourism and access to outdoor recreation.** Sandy attracts visitors for its access to outdoor amenities and recreational opportunities. The city has easy access to skiing, camping, and hiking opportunities at Mt. Hood and the Mt. Hood National Forest, mountain biking at the Sandy Ridge flow trail complex, and fishing and rafting in the

Sandy River. Visitors also come to Sandy to enjoy the scenic views and visit the downtown area. The city hosts events and festivals such as the annual Sandy Mountain Festival in Meinig Memorial Park. Businesses and employees may be attracted to Sandy because of the easy access to outdoor recreation and cultural amenities.

- **Quality of life and population growth.** For many of the reasons that Sandy attracts visitors, it also attracts residents. Sandy is one of the fastest growing cities in Oregon, largely due to a quality of life that attracts employers and their workers to the City. Sandy provides residents with small-town character while providing easy access to Portland and outdoor recreation opportunities.

Sandy's disadvantages for economic development include:

- **Distance from an interstate.** For companies looking to locate in the state, Sandy's location presents challenges, as it is not along an interstate. Sandy is located about 14 miles from I-84, 17 miles from I-205, and about 26 miles from I-5. Sandy'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 warehouse and distribution. Development of smaller scales of these businesses, however, may find Sandy's location as an advantage to serve markets in the region and the state.
- **Traffic and congestion.** Highway 26 and Bluff Road have high levels of congestion, particularly during peak hours when school is in session. The City is currently working on a major road construction project to alleviate the congestion along Bluff Road. The couplet through the City also negatively impacts livability and the business community. While efficient at moving traffic through the city, the couplet enables vehicles to move through at higher rates of speed that, in turn, negatively impacts pedestrian safety, contributes to greater emissions, and makes for a noisy downtown.
- **Housing affordability.** Sandy's housing costs are comparable to other communities in Clackamas County and lower than some communities in the eastern part of the Portland Metro region. Sandy's median home price has escalated over the last ten years, increasing from \$200,000 in 2012 to over \$500,000 in 2022. Home sales prices grew at 15% per year compared with incomes, which grew a little less than 4% per year.²⁷ According to Redfin, the median home sales price in Sandy in June of 2022 was \$523,000, which was lower than the median sales price of Clackamas County overall (\$638,000). While comparatively more affordable than other areas of the county, the high price of homes may make it difficult for businesses to attract and retain workers, especially workers at lower income ranges. These high costs are not unique to Sandy — they are driven in part because housing production is not keeping pace with population growth. However, Sandy in particular has limited affordable housing and has not had a new income-restricted affordable housing project since the early 1990s.

²⁷ Redfin, median sales price, 2012 through June 2022

- **Limited industrial land.** The BLI in Chapter 4 shows that Sandy has 54 acres of buildable industrial land in the UGB. Most of Sandy’s industrial lots are smaller than 5 acres, with only four sites between 5 and 10 acres. Sandy has a limited amount of industrial land, which may limit industrial development.
- **Shortage of childcare providers.** The COVID-19 pandemic took its toll on childcare providers. The City of Sandy has two childcare centers operating as of June 2022, down from four pre-pandemic. A new facility is being constructed on Hood Street to house one of the displaced providers, bringing the number of providers back up to three, but there are not many vacant buildings for additional providers. This is not a Sandy-specific problem, with shortages seen at the state and national level.
- **Need for more healthcare services.** The City of Sandy has limited medical service providers to serve residents. There are currently no pediatricians in Sandy, with the closest providers about 20 minutes away. Most residents must travel to Gresham or Happy Valley to access general and specialized medical services.
- **Limited retail shopping opportunities.** In recent years, Sandy has experienced an increase in restaurants but continues to lack a robust retail environment to serve residents and visitors. Limited retail options could be driving potential consumers to other nearby cities. If Sandy wants to remain the commercial center for east Clackamas County, the city will need to focus on improving its retail options.

Public Facilities and Services²⁸

Provision and costs of public facilities and services can impact a firm’s decision about expanding or locating in a city. One of the primary considerations about developing a site is whether it has infrastructure to or near the site, including water, wastewater, stormwater, and transportation. If infrastructure is not developed to or near the site, the consideration becomes whether infrastructure can be extended in a timely manner and at a financially feasible cost.

This section discusses Sandy’s water system and wastewater system infrastructure at the city level. It answers the question of whether Sandy has or is planning to have sufficient capacity to support the amount and types of development proposed in the EOA.

Water

Overall, Sandy has enough water capacity to accommodate existing and future water needs for industrial and commercial uses. The City has three water sources, including Alder Creek (a small tributary of the Sandy River), Brownell Springs (a city-owned natural spring on Lenhart Butte), and the Portland Water Bureau (Bull Run). The City’s current capacity is fluid

²⁸ Information obtained through an interview on 8/18/22 with Ryan Wood, City of Sandy Public Works Superintendent, and through the City of Sandy’s Public Works website, accessed 8/19/22 <https://www.ci.sandy.or.us/publicworks>

since the City can obtain a minimum of 500,000 gallons per day up to a maximum of 3 million gallons per day from the Portland Water Bureau to supplement its other sources. Currently, Sandy's average demand for water is 1.2 million gallons per day, with a maximum demand in the summer of 2.1 million gallons per day. During the spring, fall, and winter, approximately 50% of the City's supply is purchased from the Portland Water Bureau, with the remainder from Brownell Springs and Alder Creek. During the summer, each source provides approximately one-third of the total supply.

The City launched the Drinking Water Systems Reinvestment Project to ensure Sandy can meet future drinking water needs. This project focuses on repairing water facilities for Alder Creek, building new infrastructure to access Bull Run, and exploring alternative groundwater sources. The primary concern for Sandy's water supply is the need to rebuild or reinvest in the Alder Creek Drinking Water Treatment Plant, which is underperforming. Alder Creek is Sandy's preferred water source, as water purchased from the Portland Water Bureau is more expensive. The Alder Creek project has a 5-year timeline for completion, with costs in the \$40 to \$50 million range depending on technology used. Despite increases in service rates, the City's rates are expected to remain similar to other cities in the region. Sandy's plans for its water system upgrades will allow Sandy to accommodate the types and amounts of growth forecast in this report.

Wastewater

Sandy's wastewater treatment plant was placed into service in 1998 and treats an average of 1.25 million gallons per day during dry weather and up to 4 million gallons per day during wet weather due to infiltration into old sanitary sewer pipes. Treated effluent is discharged to Tickle Creek between November 1 and April 30 when higher winter flows from rain and snow increase the creek's capability to accept treated wastewater. Between May 1 and October 30, the City produces highly treated "recycled water" that a local area nursery uses to supplement their existing irrigation supply.

Despite some improvements to operations over the years, Sandy's wastewater treatment plant needs upgrades to meet both current and future wastewater demands and comply with federal and state requirements. The existing wastewater treatment plant is near capacity, and the sewage pipes are aging, leading to additional problems with rain infiltration. Sandy is working on the Sandy Clean Waters project to address wastewater infrastructure deficiencies. This project is fixing aging sewer pipes, will upgrade Sandy's existing treatment plant, and expand Sandy's wastewater system capacity, including establishing an alternative discharge location (this could include finding another industrial user who needs Class A recycled water). This project is underway and on track for completion in 2026. Sandy's plans for its wastewater system upgrades will allow Sandy to accommodate the types and amounts of growth forecast in this report.

3. Employment Growth and Site Needs

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

Forecast of Employment Growth and Commercial and Industrial Land Demand

Demand for industrial and commercial land will be driven by the expansion and relocation of existing businesses and by the growth of new businesses in Sandy. This employment land demand is driven by local growth independent of broader economic opportunities.

The employment projections in this section build off Sandy's existing employment base, assuming future growth is similar to Sandy's population growth forecast for the 2023 to 2043 period. The employment forecast does not take into account a major change in employment that could result from the location (or relocation) of one or more large employers in the community during the planning period. Such a major change in the community's employment would exceed the growth anticipated by the City's employment forecast and its implied land needs (for employment, but also for housing, parks, and other uses). Major economic events, such as the successful recruitment of a very large employer, are difficult to include in 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 nonretail commercial land:

1. **Establish base employment for the projection.** We start with the estimate of covered employment in Sandy presented in Exhibit 4. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in the city.
2. **Project total employment.** The projection of total employment considers forecasts and factors that may affect employment growth in Sandy 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.

This analysis applies methods established by administrative rule and input received from Sandy's Technical Advisory Committee (TAC).

Employment Base for Projection

The purpose of the employment projection is to model future employment land needs for general employment growth. The forecast of employment growth in Sandy starts with a base of employment on which to build the forecast. Exhibit 7 shows ECONorthwest's estimate of total employment in Sandy in 2019.

To develop the figures, ECONorthwest started with estimated covered employment in the Sandy UGB from confidential Quarterly Census of Employment and Wages (QCEW) data provided by the Oregon Employment Department. Based on this information, Sandy had about 3,753 covered employees in 2019, shown in Exhibit 4.

Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Analysis of data shows that *covered* employment reported by the Oregon Employment Department for Clackamas County is only about 73% of *total* employment reported by the U.S. Department of Commerce.²⁹ We evaluated this ratio for each industrial sector for Clackamas County and used the resulting ratios to determine the number of noncovered employees. This allowed us to determine the total employment in Sandy. Exhibit 7 shows Sandy had an estimated 5,114 *total* employees within its UGB in 2019.

Exhibit 7. Estimated Total Employment by Sector, Sandy UGB, 2019

Sector	Covered Employment	Estimated Total Employment	Covered % of Total
Construction & Agriculture	162	198	82%
Manufacturing	202	220	92%
Wholesale Trade	54	62	88%
Retail Trade	978	1,251	78%
Transportation and Warehousing	128	263	49%
Information	62	85	73%
Finance and Insurance	88	180	49%
Real Estate and Rental and Leasing	38	212	18%
Professional Services and Management of Companies	78	134	58%
Admin. / Support and Waste Mgmt / Remediation Serv.	57	80	72%
Educational Services	18	36	50%
Health Care and Social Assistance	454	532	85%
Recreation, Accommodation, and Food Services	632	813	78%
Other Services (except Public Administration)	300	509	59%
Government	502	539	93%
Total	3,753	5,114	73%

Source: 2019 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department.

²⁹ **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 2023 to 2043 period, requiring an estimate of total employment for Sandy in 2022. The base employment starts with the estimate of 5,114 total jobs in Sandy in 2019, shown in Exhibit 7.

Sandy 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 need.

Exhibit 8 shows the forecast rate options, which includes employment growing at the rate of the PSU population growth rate (1.90%), the OED regional employment growth rate (1.62%),³⁰ or the historic employment growth rate in Sandy between 2008 and 2019 (1.88%). 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 8. Forecast Rate Options for Employment Growth in Sandy UGB, 2023–2043
AAGR is average annual growth rate.

Year	Jobs grow at the rate of...		
	Regional Employment Growth (1.62%)	Historic Employment Growth in Sandy (2008-19) (1.88%)	Population Growth Forecast for the City (2023-43) (1.90%)
2023	5,453	5,509	5,514
2043	7,516	7,994	8,037
Change 2023 to 2043			
Employees	2,063	2,485	2,523
Percent Avg. Annual Growth Rate (AAGR)	38%	45%	46%
	1.62%	1.88%	1.90%

Source: ECONorthwest

³⁰ During the EOA process, ECONorthwest used the OED forecast rates for the 2020-2030 period.

The Sandy TAC selected the forecast based on the population growth rate for Sandy (1.90% average annual growth rate), consistent with the safe harbor in OAR 660-024-0040(9)(a)(B). This safe harbor allows the City to assume that the current number of jobs in the Sandy UGB will grow during the 20-year planning period at a rate equal to the population growth rate provided in the most recent forecast published by Portland State University’s Oregon Population Forecast Program.

Exhibit 9 shows employment growth in Sandy between 2023 and 2043, based on the assumption that the city will grow at an average annual growth rate of 1.90%. Sandy will have 8,037 employees within the UGB by 2043, which is an increase of 2,523 employees (46%) between 2023 and 2043.

Exhibit 9. Employment Growth in Sandy UGB, 2023–2043

Year	Total Employment
2023	5,514
2043	8,037
Change 2023 to 2043	
Employees	2,523
Percent	46%
Avg. Annual Growth Rate (AAGR)	1.90%

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 Sandy will look for a variety of site characteristics, depending on the industry and specific circumstances. We grouped employment into four broad categories of land use based on the North American Industrial Classification System (NAICS): industrial, retail commercial, office and commercial services, and government.³¹

Exhibit 10 shows the expected share of employment by land use type in 2023 and the forecast of employment growth by land use type in 2043 in the Sandy UGB. The results assume that the share of employment in retail commercial will decrease from 24% to 19.5%, consistent with national trends of declining local retail, and that government employment will decrease from 11% to 9.5%, based on the assumption that school, county, and local employment will grow slower than other types of employment. Industrial employment is assumed to increase by 0.5% in share of employment, and office and commercial services are assumed to increase by 5.5% in share of employment.

Exhibit 10. Forecast of Employment Growth by Land Use Type, Sandy UGB, 2023–2043

*Number of Employees

Land Use Type	2023		2043		Change 2023 to 2043
	Employment*	% of Total	Employment*	% of Total	
Industrial	802	15%	1,245	15.5%	443
Retail Commercial	1,349	24%	1,567	19.5%	218
Office & Commercial Services	2,783	50%	4,461	55.5%	1,678
Government	580	11%	764	9.5%	184
Total	5,514	100%	8,037	100%	2,523

Source: ECONorthwest

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

Estimate of Demand for Commercial and Industrial Land

This section shows demand for vacant (including partially vacant) land in Sandy 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.

³¹ 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; healthcare and social assistance; recreation; accommodation and food service; and other services. Government includes all employment at federal, state, local, and other governmental agencies.

Exhibit 11 assumes the following numbers of net employees per acre: industrial will have an average of 8 employees per acre, retail commercial will have an average of 20 employees per acre, and office and commercial services will have an average of 25 employees per acre.³² These employment densities are consistent with Oregon cities similar in size to Sandy. 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.³³ A net-to-gross conversion is expressed as a percentage of gross acres that are in public right-of-way.

Based on empirical evaluation of Sandy’s existing net-to-gross ratios in areas designated for and developed with industrial and commercial uses, ECONorthwest uses a net-to-gross conversion factor of 14% for industrial and commercial.

Using these assumptions, the forecasted growth of 2,523 new employees will result in the following demand for vacant (and partially vacant) employment land: 63 gross acres of industrial land, 13 acres of retail commercial land, and 78 gross acres of office commercial land.

Exhibit 11. Demand for Vacant Land to Accommodate Employment Growth, Sandy UGB, 2023–2043

Land Use Type	New Emp. on Vacant Land	Employees per Net Acre	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	443	8	55	63
Retail Commercial	218	20	11	13
Office & Commercial Services	1,678	25	67	78
Total	2,339	-	133	154

Source: ECONorthwest

³² Government employment is not included when discussing employment land demand since growth in government employment does not result directly in 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.

³³ 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.

Target Industries

The characteristics of Sandy will affect the types of businesses most likely to locate in the city. Attributes that may attract firms are Sandy’s fast-growing population, access to a skilled and educated workforce, municipal broadband, access to Class A recycled water, and quality of life.

Sandy’s existing businesses are concentrated in the industries defined in Exhibit 12. The industries in **green highlight** are industries 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 Sandy), and higher than average city wages have the highest potential for growth.

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

Exhibit 12. Concentration of Industries and Employment, Sandy, 2019

	High Employment (50 employees or more)	Low Employment (at least 10 employees)
High Location Quotient	<ul style="list-style-type: none"> ▪ Fabricated Metal Product Manufacturing ▪ Food and Beverage Stores ▪ Gasoline Stations ▪ General Merchandise Stores ▪ Transit and Ground Passenger Transportation ▪ Amusement, Gambling, and Recreation Industries ▪ Food Services and Drinking Places ▪ Repair and Maintenance ▪ Personal and Laundry Services ▪ Religious, Grantmaking, Civic, Professional, and Similar Organizations 	<ul style="list-style-type: none"> ▪ Plastics and Rubber Products Manufacturing ▪ Machinery Manufacturing ▪ Miscellaneous Store Retailers ▪ Publishing Industries (except internet) ▪ Private households
Low Location Quotient	<ul style="list-style-type: none"> ▪ Specialty Trade Contractors ▪ Credit Intermediation and Related Activities ▪ Professional, Scientific, and Technical Services ▪ Administrative and Support Services ▪ Ambulatory Health Care Services ▪ Nursing and Residential Care Facilities ▪ Social Assistance 	<ul style="list-style-type: none"> ▪ Crop Production ▪ Construction of Buildings ▪ Food Manufacturing ▪ Merchant Wholesalers, Durable Goods ▪ Merchant Wholesalers, nondurable Goods ▪ Wholesale Electronic Markets and Agents and Brokers ▪ Electronics and appliance Stores ▪ Building Material and Garden Equipment and Supplies Dealers ▪ Health and Personal Care Stores ▪ Sporting Goods, Hobby, Musical Instrument, and Book Stores ▪ Motion Pictures and Sound Recording Industries ▪ Insurance Carriers and Related Activities ▪ Real Estate ▪ Management of Companies and Enterprises ▪ Educational Services ▪ Accommodation

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2019.
 Note: Green highlighting indicates higher than Sandy’s average wage.

Potential Growth Industries

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

Given the current employment base, which is composed of small-sized businesses, it is reasonable to assume that much of the city's business growth will come from small-sized businesses. This growth will either come from businesses already in Sandy or new businesses that start in or relocate to Sandy from within the Portland Metro region or from outside of the region. As Sandy encourages business growth, the City should consider how industries support its goals for higher-wage jobs. The industries identified as having potential for growth in Sandy are:

- **Manufacturing.** As automation continues to change manufacturing industries, Sandy's target manufacturing industries will also evolve. Based on existing businesses in Sandy, these industries may include fabricated metal product manufacturing.
 - **Industries that use Class A recycled water.** The City has high amounts of Class A recycled water, which is a necessary input for certain businesses such as data centers. A data center could provide benefits to the City, including increased property taxes, water cleaning services, and jobs. The City could also expand its partnership with neighboring plant nurseries to use Class A recycled water.
 - **Repair and Maintenance.** This subsector includes repair and maintenance of automotive, electronics and precision equipment, commercial and industrial machinery and equipment, and personal and household goods.
 - **Food and Beverage Processing.** Food and beverage processing and cold storage could fit in well with the nearby agriculture production, as long as it does not require unusually large amounts of water or wastewater service.
 - **Outdoor Equipment Manufacturing.** This City is close to many outdoor recreation opportunities. The City could leverage this proximity to grow outdoor equipment manufacturing businesses.
- **Professional Services.** Sandy's location near the Portland region, the presence of SandyNet that provides faster than usual internet connections throughout the City, and other amenities that contribute to a high quality of life could make Sandy an attractive location for professional services such as software development, accounting, attorneys, back-office services, and research and development.
- **Services for visitors.** Sandy is near Mount Hood National Forest and the Sandy and Clackamas Rivers. These natural areas provide access to a range of outdoor recreational

activities. Visitors that stop in Sandy create demand for services such as hotels, restaurants, retail, and experiences available in or near Sandy.

- **Services for residents.** As Sandy's population or the population of the outlying areas in Clackamas County grow, demand for services for residents will grow. These services include retail, restaurants, medical services, childcare services, and other services. These types of services present opportunities for entrepreneurship and small business development in Sandy.

Site Needs for Potential Growth Industries

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

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, Sandy 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 medium-sized businesses. For the most part, Sandy’s potential growth industries require sites with minimal topographic constraints, smaller than two acres and up to 25 acres. Industrial businesses need access to arterial streets and highways with no freight movement through neighborhoods. Exhibit 13 shows the typical site needs for manufacturing businesses in Oregon.

Exhibit 13. Industrial Development Competitiveness Matrix, Business Oregon

Industry Sector	Site size (Acres)	Site Topography (Slope)	Trip Generation (ADT/Acre)	Site Access		Telecommunications (major communications dependency)
				Max distance in miles to interstate or major arterial	Railroad or Port Access	
Regionally to Nationally Scaled Clean-Tech Manufacturer	5-100+	0-5%	40 - 60	10	Preferred	Required
Heavy Industrial/ Manufacturing	10-100+	0-5%	40 - 60	10	Preferred	Preferred
General Manufacturing	5-15+	0-5%	40 - 50	20	Preferred	Required
Food Processing	5-25+	0-5%	50 - 60	30	Preferred	Preferred
Regional (multistate) Distribution Center	20-100+	0-5%	40 - 80	5 Only Interstate highway or equivalent	Preferred	Preferred
Warehouse/Distribution (local)	10-25	0-5%	40 - 80	5 Only Interstate highway or equivalent	Preferred	Preferred
Call Center / Business Services	5-15	0 to 12%	170 - 180	Not applicable	Preferred	Required
Advanced Manufacturing & Assembly	5-25+	0-7%	40 - 60	15	Not Required	Required
Business Park and R&D Campus	20 - 100+	0-7%	60 to 150	N/A	Preferred	Required
UVA Manufacturing / Research	10-25+	0-7%	40 - 80	N/A	Not Required	Required
Data Center	10-25+	0-7%	20 - 30	30	Avoid / Not Required	Required
Rural Industrial	5-25+	0-5%	40 - 50	N/A	N/A	Preferred

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 the vast majority of cases and have become industry standards.

For the most part, the size of sites needed by most potential growth industries will range from space in an existing building, to sites with minimal topographic constraints of one acre or less, to sites of 25 acres for manufacturing businesses. In a few instances, such as in industrial or business parks, sites larger than 25 acres may be necessary to meet the needs of businesses or developments to support businesses. Manufacturing and other industrial businesses likely to locate in Sandy will have a range of space needs, ranging from:

- **Small-scale manufacturing space.** Businesses would be in an industrial building with many other users. These businesses will need direct access to arterial streets and highways. This type of space could be used to establish a business incubator or shared workspace for growing and supporting businesses.
- **Space in an existing building.** The majority of businesses that work with Business Oregon on site selection request space in existing buildings, either in vacant buildings or in buildings with other manufacturers.
- **Small manufacturing site.** Some manufacturers may want to develop a building on a small site, such as a site 1 to 5 acres in size. These businesses will need easy access to arterial streets and may prefer to locate near other manufacturers.
- **Midsized manufacturing.** Some midsized manufacturers may prefer to locate in a building with one or two other businesses. Other manufacturers may prefer to locate in newly developed buildings on sites from five to 15 acres in size. These businesses will need direct access to arterial streets and highways and may need greater access to water and wastewater.
- **Large manufacturing space.** Some larger manufacturers may prefer newly developed buildings on sites larger than 15 acres, often in buildings specifically built by the company who will occupy the building. These businesses will need direct access to arterial streets and highways and may need greater access to water and wastewater.

Commercial businesses, including service and hospitality, require high-visibility locations near other businesses and neighborhoods. Professional and commercial service businesses have a variety of space needs, ranging from:

- **Space in an existing building.** Businesses would be located as one of many firms within the building.
- **Space in a building dominated by one firm.** This could potentially be with manufacturing or other industrial space in the building.
- **Land for construction of a building designed for the firm.** Some firms will need a custom-built building. In this case, the firm will likely need land ranging from 1 to 5 acres in size.

Some of these sites could be in the West Sandy Concept Plan Area. The West Sandy Concept Plan is an ongoing planning process that will provide high-level design concepts for the area. Properties within the Plan area are currently zoned commercial.

4. Buildable Lands Inventory

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

This chapter presents results of the commercial and industrial buildable lands inventory for the Sandy UGB. The results are based on analyses of City of Sandy, Clackamas 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 buildable lands inventory.

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 provides a summary of the results of the commercial and industrial buildable lands inventory for the Sandy UGB in both tabular and map formats. **Appendix B presents more details on the methodology for developing the inventory.**

Land Base

The land base for the Sandy employment Buildable Lands Inventory (BLI) includes all tax lots in the Urban Growth Boundary (UGB) in plan designations that allow for employment. Some tax lots in these plan designations are in zones that do not currently permit commercial or industrial development, such as Single-Family Residential (SFR), Parks & Open Space (POS), and High Density Residential (R-3). These tax lots were still designated as eligible for development due to development status being applied based on the comprehensive plan designation. These are products of a comprehensive plan/zoning conflict. Tax lots that fall under this conflict remain under consideration as eligible for development due to a BLI's focus on future planning over current planning.

Exhibit 14 shows the land base by plan designation in the UGB. Of specific note here are the two tax lots zoned as POS. Because these tax lots fell under the Commercial plan designation, they were designated as being eligible for commercial or industrial development. However, because these tax lots are owned by the City of Sandy, they were ultimately given the development status of "Public," and thus do not count towards the City's buildable land. These are the Centennial Plaza and Veteran's Memorial Square sites (tax lot numbers 24E13DB00800 and 24E13DB01200).

Exhibit 14. Employment Land Base by Plan Designation, Sandy UGB, 2022

Plan Designation/Zone	Number of taxlots	Percent	Total taxlot acreage	Percent (total acreage)
Commercial	364	83%	384	65%
Central Business District (C-1)	231	53%	54	9%
General Commercial (C-2)	130	30%	329	56%
Parks & Open Space (POS)	2	0%	0	0%
SFR - Single Family Residential (SFR)	1	0%	0	0%
Industrial	65	15%	195	33%
Industrial Park (I-1)	17	4%	39	7%
Light Industrial (I-2)	33	8%	76	13%
General Industrial (I-3)	14	3%	80	14%
High Density Residential (R-3)	1	0%	0	0%
Village Commercial	7	2%	9	2%
Village Commercial (C-3)	7	2%	9	2%
Total	436	100%	588	100%

Source: ECONorthwest analysis, City of Sandy, Clackamas County

Buildable Area Status

Exhibit 15 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 15. Employment Acres by Classification and Plan Designation, Sandy UGB, 2022

Plan Designation/Zone	Total Acres	Committed Acres	Constrained Acres	Buildable Acres Unconstrained Vacant & Partially Vacant
Commercial	384	168	84	132
Central Business District (C-1)	54	48	6	1
General Commercial (C-2)	329	120	78	131
Industrial	195	92	49	54
Industrial Park (I-1)	39	26	9	4
Light Industrial (I-2)	76	57	11	8
General Industrial (I-3)	80	9	29	42
Village Commercial	9	3	1	6
Village Commercial (C-3)	9	3	1	6
Total	588	263	134	191

Source: ECONorthwest analysis, City of Sandy, Clackamas County Note: The POS, SFR, and R3 zones are not shown because they accounted for only fractions of an acre and no buildable acreage. Additionally, values are rounded to the nearest whole number. Therefore, value sums may appear to be off by a value of one.

Development Constraints

The buildable lands inventory identifies the following conditions as constraints that prohibit development: FEMA 100-Year Floodplains and Regulatory Floodway, landslide susceptibility, slopes greater than 15%, 50-foot buffer on all streams, BPA easement, and flood and slope hazards (FSH) overlay. These constraints are shown on Exhibit 16.

Exhibit 17 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 16. Development Constraints, Sandy UGB, 2022
 Source: ECONorthwest analysis, City of Sandy, Clackamas County

Sandy Buildable Lands Inventory Constraints

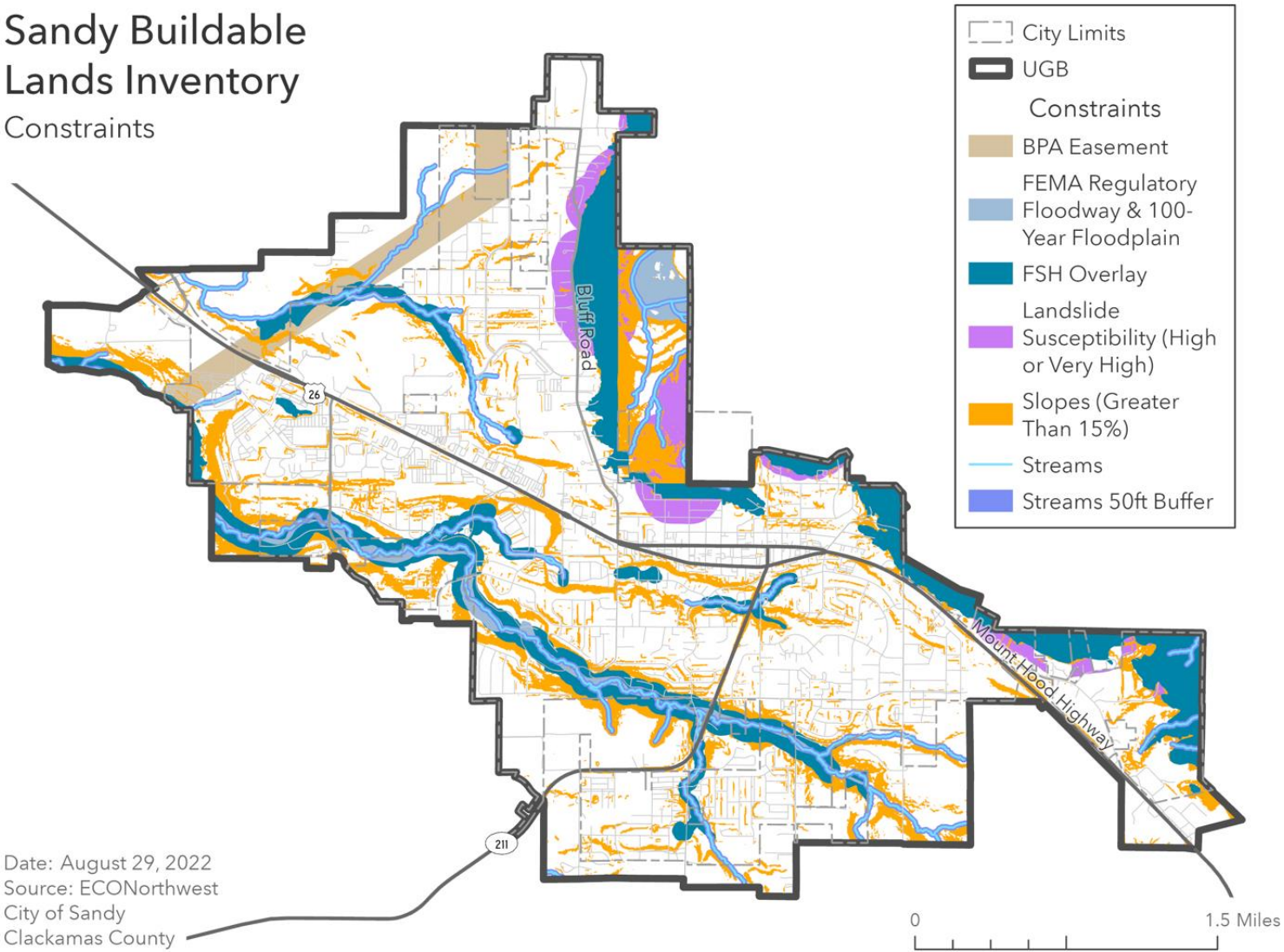
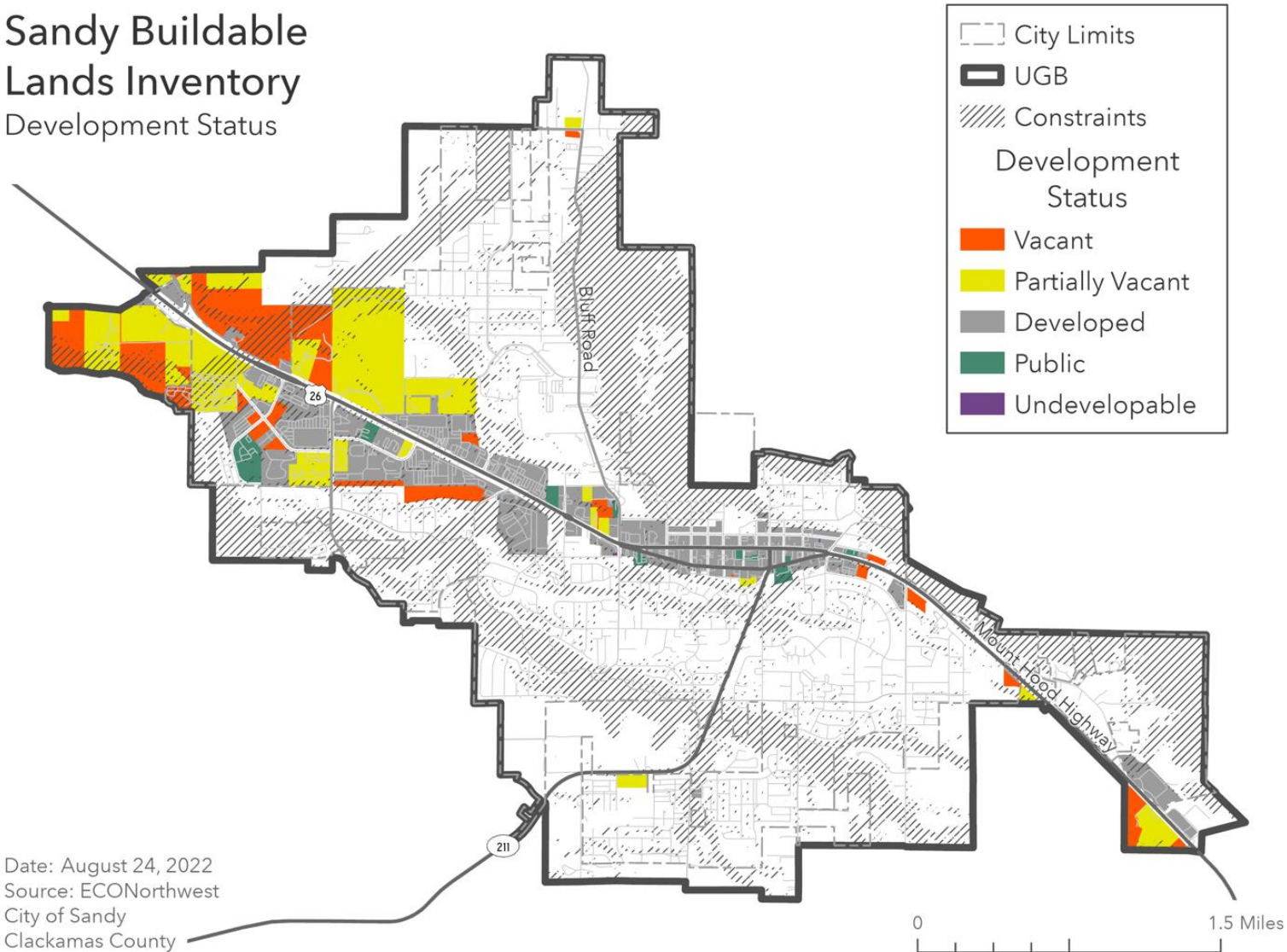


Exhibit 17. Development Status with Constraints, Sandy UGB, 2022
Source: ECONorthwest analysis, City of Sandy, Clackamas County

Sandy Buildable Lands Inventory Development Status



Vacant Buildable Land

Exhibit 18 shows buildable acres (i.e., acres in tax lots after constraints are deducted) for vacant and partially vacant land by plan designation.

Note that tax lots shown as partially vacant in the map in Exhibit 17 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 17.

Exhibit 18. Buildable Acres in Vacant/Partially Vacant Tax Lots by Plan Designations, Sandy UGB, 2022

Plan Designation/Zone	Total Buildable Acres	Buildable Acres on Vacant Lots	Buildable Acres on Partially Vacant Lots
Commercial	132	51	81
Central Business (C-1)	1	-	1
General Commercial (C-2)	131	51	81
Industrial	54	23	30
Industrial Park (I-1)	4	4	-
Light Industrial (I-2)	8	2	5
Heavy Industrial (I-3)	42	17	25
Village Commercial	6	2	3
Village Commercial (C-3)	6	2	3
Total	191	76	115

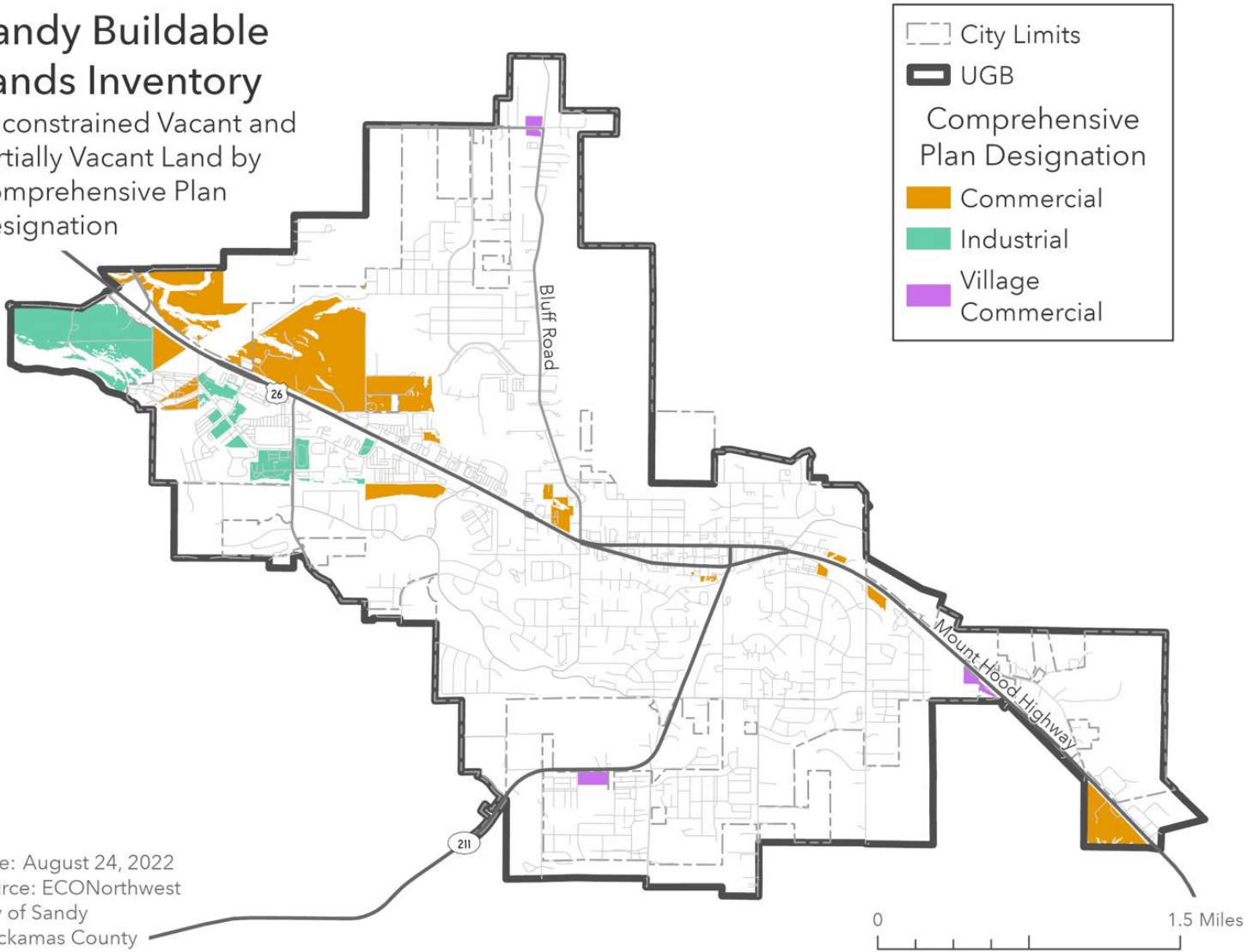
Source: ECONorthwest analysis, City of Sandy, Clackamas County Note: The POS, SFR, and R3 zones are not shown because they contained no buildable acres. Additionally, values are rounded to the nearest whole number. Therefore, value sums may appear to be off by a value of one.

Exhibit 19 shows Sandy's buildable vacant and partially vacant residential land by plan designation.

Exhibit 19. Buildable Employment Land by Plan Designation with Development Constraints, Sandy UGB, 2022
 Source: ECONorthwest analysis, City of Sandy, Clackamas County

Sandy Buildable Lands Inventory

Unconstrained Vacant and Partially Vacant Land by Comprehensive Plan Designation



Date: August 24, 2022
 Source: ECONorthwest
 City of Sandy
 Clackamas County

Exhibit 20 shows the size of lots by plan designations for buildable employment land. Sandy has 9 lots that are smaller than 0.5 acres (with 3 acres of land); 43 lots between 0.5 and 2 acres (42 acres of land); 6 lots between 2 and 5 acres in size (23 acres of land); 7 lots between 5 and 10 acres in size (49 acres of land); 2 lots between 10 and 25 acres in size (26 acres of land); and 1 lot between 25 and 50 acres in size (48 acres of land).

Exhibit 20. Taxlot Size by Plan Designation, Buildable Acres, Sandy UGB, 2022

Plan Designation/Zone	Buildable Site 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	
Commercial	2	10	11	12	23	26	48	132
Central Business (C-1)	0	1	0	0	0	0	0	1
General Commercial (C-2)	2	9	11	12	23	26	48	131
Industrial	1	6	9	11	27	0	0	54
Industrial Park (I-1)	0	3	1	0	0	0	0	4
Light Industrial (I-2)	0	3	4	0	0	0	0	8
Heavy Industrial (I-3)	1	0	4	11	27	0	0	42
Village Commercial	0	2	3	0	0	0	0	6
Village Commercial (C-3)	0	2	3	0	0	0	0	6
Acreage Subtotal	3	18	24	23	49	26	48	191
Commercial	6	14	8	3	3	2	1	37
Central Business (C-1)	0	1	0	0	0	0	0	1
General Commercial (C-2)	6	13	8	3	3	2	1	36
Industrial	3	8	7	3	4	0	0	25
Industrial Park (I-1)	0	4	1	0	0	0	0	5
Light Industrial (I-2)	1	4	3	0	0	0	0	8
Heavy Industrial (I-3)	2	0	3	3	4	0	0	12
Village Commercial	0	3	3	0	0	0	0	6
Village Commercial (C-3)	0	3	3	0	0	0	0	6
Lot Subtotal	9	25	18	6	7	2	1	68

Source: ECONorthwest analysis, City of Sandy, Clackamas County

5. Land Sufficiency and Conclusions

This chapter presents conclusions about Sandy’s employment land sufficiency for the 2023–2043 period, as well as recommendations for the City to consider for meeting its economic growth needs throughout the planning period.

Land Sufficiency

Exhibit 21 shows commercial and industrial land sufficiency within the Sandy UGB. It shows:

- **Vacant unconstrained land within the UGB.** This land is identified and discussed in detail in the Vacant Buildable Land section of this report. Utilizing data from that section, Exhibit 21 shows that Sandy has 54 gross acres of industrial land and 142 gross acres of commercial land.
- **Demand for commercial and industrial land.** The Estimate of Demand for Commercial and Industrial Land section of this report describes the methodology used to identify demand. Based on assumptions described in that section, Sandy will need a total of 63 gross acres for industrial uses and 91 gross acres for commercial uses over the 2023-2043 period (Exhibit 11).
- **Land Sufficiency.** When subtracting the demand for land from the supply of vacant unconstrained land, Exhibit 21 shows that Sandy has:
 - A 9-acre deficit of industrial land
 - A 52-acre surplus of commercial land. It is possible that some of this land may be used for development of affordable housing as allowed by Senate Bill 8.

Exhibit 21. Comparison of the Capacity of Unconstrained Vacant Land with Employment Land Demand by Land Use Type, Sandy UGB, 2023–2043

General Plan Designation	Land Supply (Suitable Gross Acres)	Land Demand (Gross Acres)	Land Sufficiency (Gross Acres)
Industrial	54	63	(9)
Commercial	142	91	52

Source: ECONorthwest

Note: It is possible that some of the commercial land may be used for development of affordable housing as allowed by Senate Bill 8.³⁴

The target industries identified are a combination of manufacturing and industrial businesses and retail and commercial services for residents and visitors (see Potential Growth Industries). The site needs generally show that these businesses in Sandy will need sites that range from space in an existing building, to sites with minimal topographic constraints of one acre or less, to sites of 25 acres for manufacturing businesses. In a few instances, sites larger than 25 acres may be desired (see Site Needs for Potential Growth Industries).

Exhibit 20 shows that Sandy has 9 sites (75 acres) from 5 to 25 acres. Three of these sites are designated commercial and 4 sites are designated industrial. Sandy has 1 site (48 acres) that is between 25 and 50 acres in size within the commercial designation. Some businesses will need sites smaller than 5 acres for development. Sandy has many sites smaller than 5 acres (68 acres). In addition, development of sites larger than 5 acres is likely to result in dividing of land into smaller sites.

Based on this information and the analysis in Exhibit 21, we conclude that Sandy has enough land within the UGB to accommodate expected commercial growth but does not have enough land to accommodate expected industrial growth. In addition, Sandy has a limited number of industrial sites larger than 5 acres, which may limit midsized industrial development. The Commercial zones allow some manufacturing, assembly, processing, and production as long as they do not produce significant levels of noise or odor. Sandy has six commercial sites (123

³⁴ SB 8 requires local governments to approve the development of certain affordable housing and not require a zone change or conditional use permit on land zoned to allow commercial uses, to allow religious assembly, or as public lands. Qualifying land may be owned by a public body or a religious nonprofit. The bill applies to property zoned to allow for industrial uses only if the property is publicly owned, adjacent to lands zoned for residential uses or schools, and not specifically designated for heavy industrial uses. These requirements do not apply to land that a local government determines lacks adequate infrastructure or on property that contains a slope of 25% or greater, is within a 100-year floodplain, or is constrained by state land use regulations based on natural disasters and hazards or natural resources. Local governments may still impose development requirements based on siting and design standards and building permits. SB 8 also includes a statewide density bonus for affordable housing in areas zoned for residential use. A local government may reduce the density or height of a development as necessary to address a health, safety, or habitability issue (including fire safety) or to comply with a protective measure adopted pursuant to a statewide land use planning goal. SB 8 was signed into law on June 23, 2021, and the bill goes into effect on January 1, 2022. To read the full text of Senate Bill 8, use the link below.

<https://olis.oregonlegislature.gov/liz/2021R1/Downloads/MeasureDocument/SB8>

acres of land) larger than 5 acres, which provide additional opportunity for development of midsized and possibly larger manufacturing, as long as they meet the requirements about odor and noise.

Conclusions

The conclusions about commercial and industrial land sufficiency are:

- **Sandy is forecasted to grow in both the commercial and industrial employment sectors.** Sandy is planning for growth of 2,523 new jobs in the city over the 2023 to 2043 period. About 443 of the jobs will be industrial, 1,678 of the jobs will be in office and commercial services, and 218 in retail. Growth of these jobs will result in demand for about 91 gross acres of commercial land and 63 gross acres of industrial land.
- **Sandy has enough employment land to accommodate commercial growth.** Exhibit 21 shows that Sandy has enough land for commercial employment growth over the next 20 years, with a surplus of 52 acres. For its target industries, Sandy will have need for commercial sites ranging from space in existing buildings to custom built buildings on sites from 1 to 5 acres.
- **Sandy has a deficit of land for industrial development.** Exhibit 21 shows that Sandy has a deficit of about 9 gross acres of land for industrial uses. Some of this deficit can be met on commercial land, assuming the manufacturing or production use does not produce significant levels of noise or odor. Sandy has few opportunities for midsized and larger industrial opportunities, which may create barriers to growth of manufacturing and related uses.

This deficit can be accommodated through increases in land use efficiency within the existing UGB, expansion of the UGB for more industrial land, or both. In particular, Sandy may want to consider a UGB “land swap” for industrial land, which would allow the City to remove some industrial land from the UGB and add new land into the UGB. The best land to consider for a land swap is land with substantial physical constraints that make development more difficult or land where the owner does not want to develop in the reasonably foreseeable future.

- **Sandy wages are lower than the regional average.** Sandy’s average wage of \$37,318 is lower than the average of \$54,802 for Clackamas County. Sandy’s potential growth industries generally have above-average wages, except for certain types of services for residents and visitors, such as retail.
- **Sandy will need to address key infrastructure needs in the city.** Sandy will need to address wastewater system deficiencies to support future employment growth. To meet upcoming demand, Sandy has plans to fix aging sewer pipes, upgrade Sandy’s existing treatment plant, and expand Sandy’s wastewater system capacity, including establishing an alternative discharge location. Sandy’s plans for its wastewater system upgrades will allow Sandy to accommodate the types and amounts of growth forecast in this report.

Recommended Actions

Following are ECONorthwest's recommendations for actions for Sandy based on the analysis and conclusions in this report.

- **Update the Economic Element of the Comprehensive Plan.** The Economy Element has not been updated in more than a decade. The new information in the EOA document provides a refreshed fact base for making future decisions.
- **Align the City's goals for economic development with planning for infrastructure development.** Aside from ensuring that there is sufficient land to support employment growth, one of the most important ways that the City can support economic development is through planning for and developing infrastructure (e.g., roads, water, sanitary sewer, and stormwater systems). We recommend that the City align its goals for economic development with infrastructure development through updates to the City's Capital Improvements Plan.
- **Monitor and replenish the supply of commercial and industrial land on a regular, periodic basis.** The buildable lands inventory identifies the existing development status of employment land in Sandy. While Sandy will not completely update the buildable lands inventory on an annual basis, City staff should still monitor the development status of these employment lands and replenish short-term supply when possible.
- **Determine whether and how to address the deficit of industrial land.** At the least, Sandy should consider whether there are opportunities to do a UGB land swap, moving industrial land that is difficult or unlikely to develop out of the UGB and bringing in land that is more likely to develop. Sandy should also evaluate whether there are land use efficiency measures, such as opportunity to re-zone land to allow more industrial development. In addition, Sandy might direct some types of industrial uses to commercial areas for manufacturing or other uses that are low odor or low noise and would be compatible with surrounding commercial (and possibly adjacent residential) uses. Finally, Sandy may want to consider a modest UGB expansion to meet its industrial needs, which might be most efficiently done if the City also implements a UGB land swap.
- **Support entrepreneurship and growing small businesses.** Small-scale manufacturing sites could provide opportunities to create a business incubator or shared business space. The City should explore how this type of space could support entrepreneurs and small businesses as they start and grow their businesses.
- **Implement the Economic Development Strategy.** The City's Economic Development Strategy identifies the following six goals.
 - Improve systems to ensure broad and durable access to economic opportunity and maintain Sandy's high quality of life.
 - Leverage our investments in technology to maximize economic benefits.

- Build on our assets in manufacturing to establish Sandy as a destination for metals fabrication and related activities.
- Cultivate innovation in specialty food and beverage industries and align with the region's robust food storage and processing sector.
- Invest in hospitality and place-based tourism to make Sandy the most active and vibrant basecamp for Mt. Hood area adventures.
- Be a leader as both retail hub and heart of East Clackamas County.

These goals align with the potential growth industries and economic advantages and disadvantages identified in the EOA. We recommend the City implement the actions in the Strategy to achieve these goals.

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. During the development of this document, the effects of the global COVID-19 pandemic continued to evolve, as the worst of the effects of the pandemic on the labor force resolved.

National Trends

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

- **Economic growth was interrupted by the effects of the COVID-19 pandemic but is expected to continue from 2022 through 2031.** The Congressional Budget Office (CBO) estimates that by mid-2022 real GDP growth and employment growth will surpass pre-pandemic levels. While the CBO states the economy is stronger than previously forecasted, goods supply and services trail demand and are contributing to inflationary pressures.
- **As the U.S. economy recovers from the COVID-19 pandemic, inflation has increased significantly.** In March 2022, the personal consumption expenditures (PCE) price index increased 6.6% year-over-year.³⁵ Excluding food and energy, which are more volatile, the PCE price index rose 5.2%. The average hourly earnings for nonfarm employees increased slightly through April 2022 but inflation-adjusted real average hourly earnings declined slightly due to continued inflation.³⁶

The exact drivers of the rise in inflation are the subject of ongoing debate. Supply chain disruptions triggered by the pandemic have dramatically increased shipping rates, which in turn has led to higher prices for goods and services.³⁷ Exacerbating this trend is pent-up demand among households, many of which received three direct assistance payments from the federal government in 2020 and 2021. Lastly, the expansion in the money supply generated by the Federal Reserve's monetary policy has also been cited as

³⁵ U.S. Department of Commerce, Bureau of Economic Analysis. Personal Consumption Expenditures Price Index. March 2022.

³⁶ *New Inflationary Concerns: A US Macroeconomic Update*, IBISWorld, June 03, 2022.

<https://www.ibisworld.com/blog/new-inflationary-concerns-us-macroeconomic-update/1/1126/>

³⁷ Martin, F. M. (October 2021). What Are the Risks for Future Inflation? Federal Reserve Bank of St. Louis, *On The Economy Blog*.

a contributor to inflation.³⁸ The Federal Open Market Committee increased lending rates several times in 2022 and expects to continue to raise rates again in 2022.

- **After declining sharply during the COVID-19 pandemic, employment has mostly recovered, and employers now face a tight labor market.** As of April 2022, the unemployment rate was 3.6%, which is about the same as pre-pandemic levels in February 2020.³⁹ Despite the addition of over 500,000 jobs each month during the first quarter of 2022,⁴⁰ the labor force participation rate remains slightly below pre-pandemic levels,⁴¹ suggesting there are those who do not yet feel the need to or have the ability to return to work. In April 2022, wages increased year-over-year by 5.5%,⁴² faster growth than in recent pre-pandemic years but a smaller rise than the increase in inflation over the same period.
- **The aging of the baby boomer generation accompanied by increases in life expectancy.** Over the forecast period, the interest rate on 10-year Treasury notes is projected to rise gradually, reaching 3.2% in 2031.⁴³ As the baby boomer generation continues to retire, the number of Social Security recipients is expected to increase from almost 65 million in 2020 to over 88 million in 2045, a 36% increase. But due to lower birth rate replacement generations, the number of covered workers is only expected to increase 10% over the same time period, from over 178 million to almost 197 million in 2045. In 2020, there are 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.⁴⁴
- **Baby boomers are retiring sooner as a result of the COVID-19 pandemic.** In the third quarter of 2021, about half of U.S. adults age 55 and older had retired, up from 48% in the third quarter of 2019.⁴⁵ This trend can be seen in Oregon, where the annual number of retirements among workers age 60 and older increased dramatically in 2020 and 2021.⁴⁶ However, there is evidence to suggest that these retirements are temporary and

³⁸ Martin, F.M. (April 2022). 2021: The Year of High Inflation. Federal Reserve Bank of St. Louis, *On The Economy Blog*.

³⁹ Bureau of Labor Statistics. (2022). *The Employment Situation – April 2022*.

<https://www.bls.gov/news.release/pdf/empsit.pdf>

⁴⁰ White House Council of Economic Advisers. (2022). *The Employment Situation in April*.

<https://www.whitehouse.gov/cea/written-materials/2022/05/06/the-employment-situation-in-april-2/>

⁴¹ Bureau of Labor Statistics. (2022). *The Employment Situation – April 2022*.

<https://www.bls.gov/news.release/pdf/empsit.pdf>

⁴² Bureau of Labor Statistics. (2022). *The Employment Situation – April 2022*.

<https://www.bls.gov/news.release/pdf/empsit.pdf>

⁴³ Congressional Budget Office. *An Update to the Budget and Economic Outlook: 2021 to 2031, July 2021*.

<https://www.cbo.gov/publication/57339>

⁴⁴ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2021 <https://www.ssa.gov/OACT/TR/2021/tr2021.pdf>

⁴⁵ Pew Research Center. *Amid the pandemic, a rising share of older U.S. adults are now retired*. November 2021.

⁴⁶ Oregon Office of Economic Analysis. (2021). *Older Workers and Retirements*.

that some of these workers will return to the labor force as the economy recovers from the impacts of the pandemic, consistent with pre-pandemic trends.⁴⁷

- **Need for replacement workers.** The need for workers to replace retiring baby boomers will outpace job growth. Between 2018 and 2028, the Bureau of Labor Statistics (BLS) estimates that total employment in the United States will grow by about 8.4 million jobs. Over this same period, BLS forecasts an annual average of 19.7 million occupational openings, indicating that the number of job openings per year exceeds expected employment growth. About 78% of annual job openings are in occupations that do not require postsecondary education.⁴⁸
- **The importance of education as a determinant of wages and household income.** According to BLS, a majority of the fastest-growing occupations will require an academic degree, and on average, they will yield higher incomes than occupations that do not require a degree. The fastest-growing occupations requiring an academic degree will be nurse practitioners, agents and business managers, occupational therapy assistants, statisticians, physical therapist assistants, and information security analysts.⁴⁹ Of the top 10 fastest-growing occupations, the top three do not require an academic degree—from 2020 to 2030, the fastest-growing occupations are projected to be motion picture projectionists, wind turbine service technicians, ushers and lobby attendants, nurse practitioners, and solar photovoltaic installers.

However, because 2020 serves as the base year for these projections, many occupations are expected to experience cyclical recoveries in the first few years of the decade as they return to their long-term growth patterns. For example, motion picture projectionists are concentrated in an industry that experienced significant yet temporary employment losses in 2020. To account for this, the BLS has also listed the fastest-growing occupations from 2020-2030 that do not include occupations with above-average cyclical recovery. These occupations include wind turbine service technicians, nurse practitioners, solar photovoltaic installers, statisticians, physical therapist assistants, and information security analysts. However, the two occupations that do not require college degrees—wind turbine service technicians and home health and personal care aids—had lower median annual wages in 2020 than the occupations necessitating a college degree.

Three sectors are projected to decline from 2020 to 2030.⁵⁰ These include the federal government, retail trade, and utilities. The BLS estimates that retail trade will decrease by 586,800 positions, possibly due to the rise of e-commerce. Conversely, this shift in

⁴⁷ Pew Research Center. (2021). *Amid the pandemic, a rising share of older U.S. adults are now retired.*

⁴⁸ Bureau of Labor Statistics. (2019). *Occupational Employment Projections 2018-2028.*
<https://www.bls.gov/news.release/pdf/ecopro.pdf> .

⁴⁹ Bureau of Labor Statistics. (2021). *Occupational Employment Projections to 2020-2030*
<https://www.bls.gov/news.release/pdf/ecopro.pdf>.

⁵⁰ Bureau of Labor Statistics. (2021). *Occupational Employment Projections to 2020-2030*
<https://www.bls.gov/news.release/pdf/ecopro.pdf>

shopper preference is increasing occupations in transportation and warehousing. Retail positions typically have lower pay than occupations requiring an academic degree. The national median income for people over the age of 25 in 2019 was about \$48,464. Workers without a high school diploma earned \$19,708 less than the median income, while those with a high school diploma earned \$10,504 less than the median income. Workers with some college education earned \$6,760 less than the median income, and workers with a bachelor's degree earned \$13,832 more than the median income. Workers in Oregon experience the same patterns as the nation, but pay is generally lower in Oregon than the national average.

- **Increases in labor productivity.** Productivity, as measured by output per hour of labor input, increased in most sectors between 2000 and 2010, peaking in 2007. However, productivity increases were interrupted by the recession. After productivity decreases from 2007 to 2009, many industries saw large productivity increases from 2009 to 2010. Industries with the fastest productivity growth were information technology–related industries. These included wireless telecommunications carriers, computer and peripheral equipment manufacturing, electronics and appliance stores, and commercial equipment manufacturing wholesalers.⁵¹

Since 2010, labor productivity has increased across a handful of large sectors but has also decreased in others. In wholesale trade, productivity – measured in output per hour – increased by 19% from 2009 to 2017. Retail trade gained even more productivity, showing a 25% increase over this same period. Food services, however, has remained stagnant since 2009, fluctuating over the nine-year period and shrinking by 0.01% over this time frame. Additionally, the Bureau of Labor Statistics reports multifactor productivity in manufacturing has been slowing down 0.3% per year over the 2004 to 2016 period. Much of this, they note, is due to slowdown in the manufacturing of semiconductors, other electrical component manufacturing, and computer and peripheral equipment manufacturing.⁵²

- **The importance of entrepreneurship and growth in small businesses.** According to the 2021 Small Business Profile from the U.S. Small Business Office of Advocacy, small businesses account for over 99 percent of total businesses in the United States, and their employees account for nearly 47% of American workers.⁵³ Women and people of color make up 43% and 19%, respectively, of small business owners.⁵⁴ The National League of Cities suggests ways that local governments can attract entrepreneurs and increase the number of small businesses, including strong leadership from elected officials; better

⁵¹ Brill, M.R., & Rowe, S.T. (March 2013). Industry Labor Productivity Trends from 2000 to 2010. Bureau of Labor Statistics, *Spotlight on Statistics*.

⁵² Brill, M., Chanksy, B., & Kim, J. (July 2018). Multifactor productivity slowdown in US manufacturing. *Monthly Labor Review*, U.S. Bureau of Labor Statistics.

⁵³ Small businesses are defined by the US Small Business Office of Advocacy as having between zero and 500 employees.

⁵⁴ U.S. Small Business Office of Advocacy. (2021). 2021 Small Business Profile. <https://cdn.advocacy.sba.gov/wp-content/uploads/2021/08/30143723/Small-Business-Economic-Profile-US.pdf>

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, businesses groups, and financial institutions.⁵⁵

Increases in automation across sectors. Automation is a long-running trend in employment, with increases in automation (and corresponding increases in productivity) over the last century and longer. The pace of automation is increasing, and the types of jobs likely to be automated over the next 20 years (or longer) are broadening. Lower-paying jobs are more likely to be automated, with the potential for automation of more than 80% of jobs paying less than \$20 per hour over the next 20 years. About 30% of jobs paying \$20 to \$40 per hour, and 4% of jobs paying \$40 or more per hour, are at risk of being automated over the next 20 years.⁵⁶

Low to middle-skilled jobs that require interpersonal interaction, flexibility, adaptability, and problem solving will likely persist into the future, as will occupations in technologically lagging sectors (e.g., production of restaurant meals, cleaning services, hair care, security/protective services, and personal fitness).⁵⁷ This includes occupations such as (1) recreational therapists, (2) first-line supervisors of mechanics, installers, and repairers, (3) emergency management directors, (4) mental health and substance abuse social workers, (5) audiologists, (6) occupational therapists, (7) orthotists and prosthetists, (8) health-care social workers, (9) oral and maxillofacial surgeons, and (10) first-line supervisors of firefighting and prevention workers.

Occupations in the service and agricultural or manufacturing industry are most at risk of automation because of the manual nature of the work.^{58,59,60} This includes occupations such as (1) telemarketers, (2) title examiners, abstractors, and searchers, (3) hand sewers, (4) mathematical technicians, (5) insurance underwriters, (6) watch repairers, (7) cargo and freight agents, (8) tax preparers, (9) photographic process workers and processing machine operators, and (10) accounts clerks.⁶¹

- **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

⁵⁵ National League of Cities. (2012). Supporting Entrepreneurs and Small Businesses.

⁵⁶ Executive Office of the President. (2016). Artificial Intelligence, Automation, and the Economy.

⁵⁷ Autor, D.H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. *Journal of Economic Perspectives*, 29(3), 3–30.

⁵⁸ Frey, C.B., & Osborne, M.A. (2013). The Future of Employment: How Susceptible Are Jobs to Computerisation? Oxford Martin School, University of Oxford.

⁵⁹ Otekhile, C.A., & Zeleny, M. (2016). Self Service Technologies: A Cause of Unemployment. *International Journal of Entrepreneurial Knowledge*, 4(1). DOI: 10.1515/ijek-2016-0005.

⁶⁰ PwC. (n.d.). Will robots really steal our jobs? An international analysis of the potential long-term impact of automation. 2019.

⁶¹ Frey, C.B., & Osborne, M.A. (2013). The Future of Employment: How Susceptible Are Jobs to Computerisation? Oxford Martin School, University of Oxford.

store) have increased steadily, pulling the industry in two different directions. On the one hand, the trend toward warehouse/supercenters is increasing the average scale of retail operations, increasing market concentrations, reducing business dynamism, and shifting retail activity toward more populated areas. On the other hand, the trend toward e-commerce generates “smaller [retailers], less market concentration, more geographical dispersion, and higher productivity.”⁶² Since 2012, e-commerce sales grew from 5% of total retail sales to 14.5% (Q4 2021). Total e-commerce sales for 2021 were about \$870.8 billion, an increase of 14.2% from 2020.⁶³

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, and despite the highly publicized closures of brick-and-mortar stores, physical retail is likely to remain an important part of the retail sector. In fact, retail sales at brick-and-mortar stores accounted for 85.5% of all retail sales in the Q4 of 2021.⁶⁴

Modern consumers are increasingly price sensitive, less brand loyal, and (since the advent of internet) able to substitute between retailers easily. To compete, retailers must be nimble, adept in recognizing the changing needs of their consumers, and quick to differentiate themselves from their competitors.

- **Opportunities for local retail and service.** The types of retail and related services that remain will likely be sales of goods that people prefer to purchase in person or that are difficult to ship and return (e.g., large furniture), specialty goods, groceries and personal goods that are needed immediately, restaurants, and experiences (e.g., entertainment or social experiences). According to the Urban Land Institute, new trends in the retail and service sector are beginning to emerge, including the convergence of technology and shopping as businesses focus on brand awareness and customer engagement via digital channels in the physical retail space.⁶⁵
- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. High-quality natural resources continue to be important in some states, especially in the western United States. Increases in the population and in

⁶² Ali Hortaçsu and Chad Syverson. (2015). The Ongoing Evolution of US Retail: A Format Tug-of-War. *Journal of Economic Perspectives*, 29(4), 89–112, p. 109.

⁶³ U.S. Census Bureau, Monthly Retail Trade, Latest Quarterly E-Commerce Report. Retrieved from: https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf

⁶⁴ U.S. Census Bureau, Monthly Retail Trade, Latest Quarterly E-Commerce Report. Retrieved from: https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf.

⁶⁵ Diane Hoskins. “Three Trends Shaping Retail’s Great Transformation.” *Urban Land Institute*, September 3, 2019. <https://urbanland.uli.org/economy-markets-trends/three-trends-shaping-retails-great-transformation/>

household incomes, plus changes in tastes and preferences, have dramatically increased demand for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such amenities contribute to a region's quality of life and play an important role in attracting both households and firms.⁶⁶

- **Continued increase in demand for energy.** Energy prices were unusually high in early 2022. Total energy consumption will increase because population growth and economic growth will outpace efficiency gains in energy consumption. Energy consumption is expected to grow primarily from industrial and, to a lesser extent, commercial users. Residential and transportation energy consumption are forecasted to decrease or remain flat through about 2040 and possibly grow slightly through 2050. Electric vehicles are expected to continue to gain market share, but petroleum-powered vehicles are expected to continue to account for a substantial amount of vehicle sales through 2050. The share of electric vehicles is expected to grow from less than 3% in 2021 to 13% in 2050. Energy consumption by type of fuel is expected to change over the planning period. By 2050, the United States will continue to shift from crude oil toward natural gas and renewables.⁶⁷
- **High rates of inflation.** For the last several decades, inflation rates have generally stayed below 3% in the United States of America. Inflation started to increase in 2021 and has accelerated in 2022, increasing to 9.06% in June 2022, to its highest levels in about 40 years. Inflation increased most quickly in June 2022 for energy, motor vehicles, food, and household furnishings.⁶⁸ Continued high rates of inflation may slow economic growth, further erode purchasing power, discourage savings, and lead to a national recession.
- **Impact of rising energy prices on commuting patterns.** As energy prices increase over the planning period, energy consumption for transportation will decrease. These increasing energy prices may decrease willingness to commute long distances, though with expected increases in fuel economy, it could be that people commute farther while consuming less energy.⁶⁹ Moreover, lower-income households tend to have fewer options for commuting and are more likely to have jobs that require them to commute. From 2019 to 2035, the U.S. Energy Information Administration estimates in its forecast that the decline in transportation energy consumption as a result of increasing fuel

⁶⁶ For a more thorough discussion of relevant research, see, for example, Power, T.M. and R.N. Barrett. 2001. *Post-Cowboy Economics: Pay and Prosperity in the New American West*. Island Press, and Kim, K.-K., D.W. Marcouiller, and S.C. Deller. 2005. "Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes." *Growth and Change* 36 (2): 273-297.

⁶⁷ Energy Information Administration, 2019, *Annual Energy Outlook 2019 with Projections to 2050*, U.S. Department of Energy, January 2019. <https://www.eia.gov/outlooks/aeo/pdf/aeo2019.pdf>. Note, the cited growth rates are shown in the interactive tables and can be viewed here: <https://www.eia.gov/outlooks/aeo/data/browser/>.

⁶⁸ Bureau of Labor Statistics, U.S. Department of Labor, *The Economics Daily*, Consumer prices up 9.1 percent 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).

⁶⁹ Energy Information Administration, 2019, *Annual Energy Outlook 2019 with Projections to 2050*, U.S. Department of Energy, January 2019.

economy more than offsets the total growth in vehicle miles traveled (VMT). VMT for passenger vehicles is forecasted to increase through 2050.

- **Potential impacts of global climate change.** The consensus among the scientific community that global climate change is occurring expounds important ecological, social, and economic consequences over the next decade and beyond.⁷⁰ Extensive research shows that Oregon and other western states have already experienced noticeable changes in climate and that more change will occur in the future.⁷¹

In the Pacific Northwest, climate change is likely to (1) increase average annual temperatures, (2) increase the number and duration of heat waves, (3) increase the amount of precipitation falling as rain during the year, (4) increase the intensity of rainfall events, (5) increase sea level, (6) increase wildfire frequency, and (7) increase forest vulnerability to tree disease.⁷² These changes are also likely to reduce winter snowpack and shift the timing of spring runoff earlier in the year.⁷³

The Oregon Climate Change Research Institute (OCCRI) evaluated potential scenarios for “Climate Change Influence on Natural Hazards in Oregon Counties” in 2018. OCCRI specifically focused on counties in the Gorge and Eastern Oregon and evaluated the potential increased or decreased risk for natural hazards such as heat waves, cold waves, heavy rains, river flooding, drought, wildfire, poor air quality, windstorms, dust storms, increased invasive species, and loss of wetland ecosystems. Across the eight counties evaluated, the hazards most likely to increase with the effects of climate change are heat waves, heavy rains, river flooding, wildfires, increased invasive species, and loss of wetland ecosystems.⁷⁴

These anticipated changes point toward some of the ways that climate change is likely to impact ecological systems and the goods and services they provide. There is considerable uncertainty about how long it would take for some of the impacts to

⁷⁰ U.S. Global Change Research Program. *National Climate Assessment*. 2018. <https://nca2018.globalchange.gov/>

⁷¹ Oregon Global Warming Commission. *2020 Biennial Report to the Legislature*. 2020. <https://www.keeporegoncool.org/reports/>

⁷² U.S. Global Change Research Program. *National Climate Assessment*. “Chapter 24: Northwest.” 2018. <https://nca2018.globalchange.gov/chapter/24/>

⁷³ Mote, P., Salathe, E., Duliere, V., & Jump, E. (2008). *Scenarios of Future Climate for the Pacific Northwest*. Climate Impacts Group, University of Washington. March. <http://ceses.washington.edu/db/pdf/moteetal2008scenarios628.pdf>; Littell, J.S., McGuire Elsner, M., Whitely Binder, L.C., and Snover, A.K. (eds). (2009). “The Washington Climate Change Impacts Assessment: Evaluating Washington’s Future in a Changing Climate - Executive Summary.” *In The Washington Climate Change Impacts Assessment: Evaluating Washington’s Future in a Changing Climate*, Climate Impacts Group, University of Washington. www.cses.washington.edu/db/pdf/wacciaexecsummary638.pdf; Madsen, T., & Figdor, E. (2007). *When it Rains, it Pours: Global Warming and the Rising Frequency of Extreme Precipitation in the United States*. Environment America Research & Policy Center and Frontier Group.; Mote, P.W. (2006). Climate-driven variability and trends in mountain snowpack in western North America. *Journal of Climate*, 19(23), 6209-6220.

⁷⁴ Mote, P.W., Abatzoglou, J., Dello, K.D., Hegewisch, K., & Rupp, D.E. (2019). Fourth Oregon Climate Assessment Report. Oregon Climate Change Research Institute. ocri.net/ocar4/; Oregon Climate Change Research Institute. *Climate Change Influence on Natural Hazards in Eight Oregon Counties*. August 2018. https://www.oregon.gov/lcd/CL/Documents/OCCRI_PDM16_AllCountyOverview2018.pdf

materialize and the magnitude of the associated economic consequences. Assuming climate change proceeds as today's models predict, the Pacific Northwest will experience the following potential economic impacts:⁷⁵

- *Potential impact on agriculture and forestry.* Climate change may impact Oregon's agriculture through changes in growing season, temperature ranges, and water availability.⁷⁶ Climate change may impact Oregon's forestry through an increase in wildfires, a decrease in the rate of tree growth, a change in the mix of tree species, and increases in diseases and pests that damage trees.⁷⁷
- *Potential impact on tourism and recreation.* Impacts on tourism and recreation may range from (1) decreases in snow-based recreation if snowpack in the Cascades decreases, (2) negative impacts to tourism along the Oregon Coast as a result of damage and beach erosion from rising sea levels,⁷⁸ (3) negative impacts on availability of summer river recreation (e.g., river rafting or sports fishing) as a result of lower summer river flows, and (4) negative impacts on the availability of water for domestic and business uses.

Short-term national trends will also affect economic growth in the region, but these trends are difficult to predict. At times, they may run counter to the long-term trends described above. The most prevalent example is the recession and subsequent recovery triggered by the global COVID-19 pandemic. While the unemployment rate rose quickly to a high of 14.7% in April 2020, it has since gradually declined to 3.6% as of March 2022, close to the pre-pandemic (February 2020) rate⁷⁹. However, employment in some industries that were most severely impacted by the pandemic, such as leisure and hospitality, have not yet fully returned to pre-pandemic levels. Nonetheless, this report takes a long-run perspective on economic conditions (as the Goal 9 requirements intend) and does not attempt to predict the impacts of short-run macroeconomic trends on employment of economic activity.

⁷⁵ The issue of global climate change is complex and there is a substantial amount of uncertainty about climate change. This discussion is not intended to describe all potential impacts of climate change but to present a few ways that climate change may impact the economy of cities in Oregon and the Pacific Northwest.

⁷⁶ Resource Innovations & Institute for a Sustainable Environment. (2005). The Economic Impacts of Climate Change in Oregon: A Preliminary Assessment.

https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/2299/Consensus_report.pdf?sequence=1

⁷⁷ Climate Leadership Initiative & Institute for Sustainable Environment. (2007). Economic Impacts of Climate Change on Forest Resources in Oregon: A Preliminary Analysis.

⁷⁸ Resource Innovations & Institute for a Sustainable Environment. (2005). The Economic Impacts of Climate Change in Oregon: A Preliminary Assessment.

https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/2299/Consensus_report.pdf?sequence=1

⁷⁹ The Employment Situation – March 2022. News Release, Bureau of Labor Statistics. Retrieved from:

<https://www.bls.gov/news.release/pdf/empsit.pdf>.

State Trends

Short-Term Trends

According to the Oregon Office of Economic Analysis (OEA), Oregon's economy is following the trends affecting the national economy: fast growth (with continued recovery from the COVID-19 pandemic recession), high demand for labor, and high inflation. The biggest economic challenges are supply chain issues, resulting from strong consumer demand and problems that started with the COVID-19 pandemic.⁸⁰

The biggest risk to the economic outlook is persistently high inflation. In early 2021, higher inflation was tied to reopening the economy and semiconductor shortages in the automobile industry. Over the last year, pressure from inflation has broadened and is more persistent than originally expected. In addition, the tight labor market is putting upward pressure on wages, with the average wage in Oregon up 17% since March 2020. Businesses are passing most of the cost increases (from increases in costs for goods and labor) onto consumers, who are showing a willingness to pay higher prices. As a result, business incomes remain high.⁸¹

The Oregon economy has added back most of the jobs lost during the COVID-19 pandemic, with an expectation that the remaining lost jobs will be regained by fall 2022. The labor market remains tight for several reasons; for instance, employees are quitting jobs at record rates or are not returning to the workforce because they are caring for sick family members or have childcare challenges.⁸²

The outlook for growth is a continuation of growth of the entire economy, with faster growth of selected sectors. Leisure and hospitality are still 12% below pre-pandemic employment and expected to have strong growth through 2023. Professional and business services, healthcare, and transportation and warehousing are also expected to have strong growth through 2023. Demand for housing will drive growth in the construction industry. Growth in high-tech manufacturing will continue, supported by demand for automobiles, computers, and other electronics. However, growth in high-tech manufacturing has not translated into more employment due to increases in productivity. And the industry is set to grow nationally, with some investments in Oregon but with investments in other states as well.⁸³

⁸⁰ Office of Economic Analysis. (2022). Oregon Economic and Revenue Forecast, March 2022. Vol. XLII, No. 1. <https://www.oregon.gov/das/OEA/Documents/forecast0322.pdf>

⁸¹ Office of Economic Analysis. (2022). Oregon Economic and Revenue Forecast, March 2022. Vol. XLII, No. 1. <https://www.oregon.gov/das/OEA/Documents/forecast0322.pdf>

⁸² Office of Economic Analysis. (2022). Oregon Economic and Revenue Forecast, March 2022. Vol. XLII, No. 1. <https://www.oregon.gov/das/OEA/Documents/forecast0322.pdf>

⁸³ Office of Economic Analysis. (2022). Oregon Economic and Revenue Forecast, March 2022. Vol. XLII, No. 1. <https://www.oregon.gov/das/OEA/Documents/forecast0322.pdf>

Oregon has underbuilt about 111,000 housing units in recent decades, which contributes to the high demand for housing and low vacancy rates.⁸⁴ Housing starts in 2021 reached approximately 21,200 units, as opposed to 18,100 in 2020 and 20,700 in 2019. However, as the affordability crunch leads to a decrease in home sales, the Oregon Economic and Revenue Forecast points to a decline in housing starts in 2023 of 4%.⁸⁵

Oregon's economic health is dependent on the export market, which was also affected by the COVID-19 pandemic. The value of Oregon exports in 2020 was \$24.977 billion. In 2020, the countries that Oregon exported the most to were China (38% of total Oregon exports), Canada (11%), Vietnam (6%), South Korea (6%), Japan (6%), and Malaysia (6%).⁸⁶ Strains on the relationship between the United States and China could impact Oregon's economy. Additionally, China's public debt burden poses a threat not only to the state and region but also to the global economy.⁸⁷

Long-Term Trends

State, regional, and local trends will also affect economic development in Sandy over the next 20 years. The most important of these trends includes continued in-migration from other states, distribution of population and employment across the state, and change in the types of industries in Oregon.

- **Continued in-migration from other states.** Oregon will continue to experience in-migration (more people moving *to* Oregon than *from* Oregon) from other states, especially California and Washington. From 2010-2020, Oregon's population increased by 406,491, 77% of which was from people moving into Oregon (net migration).⁸⁸ The average annual increase in population from net migration over the same time period was about 31,412. During the early to mid-1990s, Oregon's net migration was highest, reaching over 60,000 in 1991, with another smaller peak of almost 42,100 in 2006. In 2020, net migration reached just over 26,028 persons.⁸⁹
- **Increasing ethnic diversity.** Oregon's population has continued to get more ethnically and racially diverse, with the Latino population growing from 12% of the population in 2010 to 13% of the population in 2019.⁹⁰ The population of people of color grew from

⁸⁴ Office of Economic Analysis. (2022). Oregon Economic and Revenue Forecast, March 2022. Vol. XLII, No. 1. <https://www.oregon.gov/das/OEA/Documents/forecast0322.pdf>

⁸⁵ Office of Economic Analysis. (2022). Oregon Economic and Revenue Forecast, September 2022. Vol. XLII, No. 3. <https://www.oregon.gov/das/OEA/Documents/forecast0922.pdf>

⁸⁶ United States Census Bureau. State Exports from Oregon, 2017-2020.

⁸⁷ Office of Economic Analysis. Oregon Economic and Revenue Forecast, December 2019. Vol. XXXIX, No. 4, p. 14. <https://www.oregon.gov/das/OEA/Documents/forecast1219.pdf>.

⁸⁸ Oregon Office of Economic Analysis, Oregon Economic and Revenue Forecast, March 2022. Vol. XLII, No. 1, p. 58.

⁸⁹ Oregon Office of Economic Analysis, Oregon Economic and Revenue Forecast, March 2022. Vol. XLII, No. 1, p. 58.

⁹⁰ U.S. Census Bureau, American Community Survey 2019 5-year estimates, Tables B02001 and B03002, 2010 Decennial Census P003001 and P005001.

13.3% of the population to 16% of the population over the same period. The share of Latino and people of color populations increased in Sandy since 2000 as well.

- **Forecast of job growth.** Total nonfarm employment in Oregon is forecasted to increase 10% from 1.82 million in 2020 to just over 2 million in 2025. The OEA forecasts total private nonfarm employment in Oregon to increase 11% from 1.54 million in 2020 to 1.71 million in 2025.⁹¹
- **Manufacturing is an important part of Oregon's economy.** The manufacturing sector has long been a crucial component of Oregon's economy. Since 2010, employment in manufacturing has grown 12% compared to the nation's 7%.⁹² However, as a result of the COVID-19 pandemic, employment in the sector has declined 8% compared with a 4% decline across the nation.⁹³

Manufacturing remains an important piece of Oregon's economy and the sector is evolving. Only a few decades ago, Oregon's manufacturing economy was dependent on forestry and wood products. But between 1990 and 2018, annual average employment in wood product manufacturing dropped by 22,600 jobs or 46%.⁹⁴

Growth in Oregon's electronic component manufacturing, however, has filled the gap left by the decline in wood manufacturing. In 2018, there were a total of 37,900 jobs in Oregon's electronic component manufacturing (i.e., manufacturing of computer chips, computers and related equipment, and communications equipment), making it Oregon's largest manufacturing industry. Employment in this industry is over six times more concentrated in Oregon than it is nationally and is driving much of the growth in Oregon manufacturing.⁹⁵

Continued growth, spurred by electronic component manufacturing, is expected in the future for Oregon's manufacturing sector. Although Oregon's economy is shifting, the state's roots in forestry and wood product manufacturing remain important, particularly for rural areas. Douglas County, for example, had 8.3% of its total employment and 10.7% of its total payroll in wood product manufacturing in 2018.⁹⁶

⁹¹ Oregon Office of Economic Analysis, Oregon Economic and Revenue Forecast, March 2022. Vol. XLII, No. 1, p. 35.

⁹² Oregon Employment Department (2021). Made in Oregon: A Profile of the State's Manufacturing Sector. <https://www.qualityinfo.org/-/made-in-oregon-a-profile-of-the-state-s-manufacturing-sector>

⁹³ Oregon Employment Department (2021). Made in Oregon: A Profile of the State's Manufacturing Sector. <https://www.qualityinfo.org/-/made-in-oregon-a-profile-of-the-state-s-manufacturing-sector>.

⁹⁴ Oregon Employment Department (2021). Made in Oregon: A Profile of the State's Manufacturing Sector. <https://www.qualityinfo.org/-/made-in-oregon-a-profile-of-the-state-s-manufacturing-sector>.

⁹⁵ Oregon Employment Department (2021). Made in Oregon: A Profile of the State's Manufacturing Sector. <https://www.qualityinfo.org/-/made-in-oregon-a-profile-of-the-state-s-manufacturing-sector>.

⁹⁶ Oregon Employment Department (2021). Made in Oregon: A Profile of the State's Manufacturing Sector. <https://www.qualityinfo.org/-/made-in-oregon-a-profile-of-the-state-s-manufacturing-sector>.

- **Advancements in technology and increases in automation of jobs.**⁹⁷ In decades past, automation was focused on manufacturing. In the coming decades, jobs at risk for automation will tend to be those without “computerization bottlenecks” or jobs that do not require social intelligence, perception, creativity, or fine motor skills. Jobs in industries lacking a customer service component, such as those in transportation and material moving, are also at greater risk. Most researchers agree that “less-educated workers in low-skill, lower-wage jobs featuring routine tasks are those most likely to be displaced by automation.”⁹⁸ Oregon’s overall risk of automation is similar to the nation’s, with lower and middle-wage jobs at higher risk.

In 2017, 144,200 jobs in Oregon were found to be at risk of automation and 93% of jobs in food preparation and serving were found to be at risk.⁹⁹ However, automation risk does not imply automation certainty. For example, consumer preferences for personalized and genuine experiences/interactions will likely slow job automation, particularly in the food services and hospitality sectors. In addition, there is a notable difference between task automation and full automation of jobs. One research study speculates that only 5% of jobs are fully automated and that the “activities most susceptible to automation involve physical activities in highly structured and predictable environments, as well as the collection and processing of data.”¹⁰⁰

- **Income and wages continue to increase.** Despite Oregon’s income and wages falling below the average among states, Oregon wages are at their highest point relative to other states since the recession in the early 1980s, mainly due to the wage growth over the last two to three years. In 2019, the average annual wage in Oregon was \$55,023 and the median household income was \$67,058 (compared to national average wages of \$59,209 in 2019 and national household income of \$65,712).¹⁰¹ Total personal income (all classes of income, minus Social Security contributions) in Oregon is expected to increase by 78%, from \$221.2 billion in 2019 to \$395.4 billion in 2030 (in nominal dollars).¹⁰² Per

⁹⁷ Portland Business Alliance. (2017). Automation and the Future of Work. <https://portlandalliance.com/assets/pdfs/2017-VOI-Automation-summary.pdf>

⁹⁸ Marcus Casey and Sarah Nzau. (2019). Searching for clarity: How much will automation impact the middle class? Brookings.

⁹⁹ Portland Business Alliance. (2017). Automation and the Future of Work. <https://portlandalliance.com/assets/pdfs/2017-VOI-Automation-summary.pdf>

¹⁰⁰ McKinsey & Company. (2017). A Future that Works: Automation, Employment, and Productivity.

¹⁰¹ Average annual wages are for “total, all industries,” which includes private and public employers. Oregon Quarterly Census of Employment and Wages, 2019. Retrieved from: <https://www.qualityinfo.org>; Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2019; Total, U.S. Census American Community Survey 1-Year Estimates, 2019, Table B19013.

¹⁰² Oregon Office of Economic Analysis. Oregon Economic and Revenue Forecast, March 2022. Vol. XLII, No. 1, page 37.

capita income is expected to increase by 64% over the same time period, from \$52,500 in 2019 to \$86,200 in 2030 (in nominal dollars).¹⁰³

- **Small businesses continue to account for a large share of employment in Oregon.** Between 1994 and 2018, employment in Oregon small businesses grew by 30% — exceeding the national average growth rate.¹⁰⁴

In 2018, small businesses (those with 100 or fewer employees) accounted for 95% of all businesses and 40% of all private-sector employment in Oregon. Said differently, most businesses in Oregon are small (in fact, 76% of all businesses have fewer than 10 employees), but the largest share of Oregon’s employees work for large businesses (those with more than 100 employees).¹⁰⁵ The average annualized payroll per employee for small businesses was \$43,949 in 2019, which is considerably less than that for large businesses (\$64,335) and the statewide average for all businesses (\$53,253).¹⁰⁶

Younger workers are important for the continued growth of small businesses across the nation. More than one-third of millennials (those born between 1980 and 1999) are self-employed, with approximately one-half to two-thirds interested in becoming an entrepreneur. According to the Kauffman Indicators of Entrepreneurship, in 2020, about 78.09% of start-ups nationwide were still active after one year.¹⁰⁷ On average, start-ups nationwide created approximately 5.03 jobs in their first year (when normalized by population).¹⁰⁸ In Oregon, only 78% of start-ups survive the first year and just 4.85 jobs were created on average.¹⁰⁹ It is typically the case that start-ups are important for job creation on a longer-time horizon, well beyond their first year, as “fewer than half of all start-ups in America are still in business after five years.”¹¹⁰

- **Entrepreneurship in Oregon.** The creation of new businesses is vital to Oregon’s economy, as their formation helps to generate new jobs and advance new ideas and

¹⁰³ Oregon Office of Economic Analysis. Oregon Economic and Revenue Forecast, March 2022. Vol. XLII, No. 1, page 37.

¹⁰⁴ U.S. Small Business Office of Advocacy. (2021). 2021 Small Business Profile. <https://cdn.advocacy.sba.gov/wp-content/uploads/2021/08/30143123/Small-Business-Economic-Profile-OR.pdf>

¹⁰⁵ U.S Census Bureau, 2019 Statistics of U.S. Businesses, Annual Data, Enterprise Employment Size, U.S and States. <https://www.census.gov/data/tables/2019/econ/susb/2019-susb-annual.html>.

¹⁰⁶ U.S Census Bureau, 2019 Statistics of U.S. Businesses, Annual Data, Enterprise Employment Size, U.S and States. <https://www.census.gov/data/tables/2019/econ/susb/2019-susb-annual.html>.

¹⁰⁷ Kauffman Foundation. *Kauffman Indicators of Entrepreneurship*. Indicators: Startup Early Job Creation and Startup Early Survival Rate. Information retrieved on January 26, 2022. <https://indicators.kauffman.org/indicator/startup-early-survival-rate>.

¹⁰⁸ Kauffman Foundation. *Kauffman Indicators of Entrepreneurship*. Indicators: Startup Early Job Creation and Startup Early Survival Rate. Information retrieved on January 26, 2022. <https://indicators.kauffman.org/indicator/startup-early-survival-rate>.

¹⁰⁹ Kauffman Foundation. *Kauffman Indicators of Entrepreneurship*. State Profiles: Oregon Early-Stage Entrepreneurship. <https://indicators.kauffman.org/state/oregon>.

¹¹⁰ Nish Acharya. “Small Business Are Having A Bigger Impact on Job Creation Than Large Corporations.” Forbes, May 5, 2019. <https://www.forbes.com/sites/nishacharya/2019/05/05/who-is-creating-jobs-in-america/#5c74c156597d>.

innovations into markets. Start-ups can also produce more efficient products and services to better serve local communities. According to the Kauffman Early-Stage Entrepreneurship (KESE) Index, Oregon ranked 25th in the country in 2020 for its Early-Stage Entrepreneurship activity, a measurement comprised of four statistics: rate of new entrepreneurs, opportunity share of new entrepreneurs, start-up density, and start-up early survival rate.¹¹¹ This ranking is higher than Oregon's 2017 rank of 30th. Oregon's rate of new entrepreneurs (the percent of adults that became an entrepreneur in a given month) was in steady decline post-recession, but since 2012, has gradually declined until 2019 where it dropped to 0.26%. In 2020, the rate increased to 0.29%, still well below Oregon's prerecession peak of 0.43% in 2000.

Moreover, in January 2021, the Oregon Office of Economic Analysis reported new business applications in Oregon were increasing since shelter in place orders were lifted.¹¹² However, as of December 2021, new business filings have slowed while active business licenses have maintained some growth.¹¹³ Though this measurement of economic activity does not constitute a full understanding of how well entrepreneurship is performing, it does provide an encouraging signal.

¹¹¹ Kauffman Foundation. *Kauffman Indicators of Entrepreneurship*. Early-Stage Entrepreneurship. The Kauffman Index, Oregon. <https://indicators.kauffman.org/>.

¹¹² Josh Lehner. "So Far Fewer Business Closures than Expected." Oregon Office of Economic Analysis, March 2, 2021. <https://oregoneconomicanalysis.com/2021/03/02/so-far-fewer-business-closures-than-expected/>

¹¹³ Oregon Secretary of State. (February 2022). *Oregon Business Statistics*. <https://sos.oregon.gov/business/Documents/business-reports-current/0222.pdf>

Regional and Local Trends

Throughout this section of Appendix A, Sandy is compared to Clackamas County and the State of Oregon. These comparisons are to provide context for changes in Sandy’s socioeconomic characteristics.

Availability of Labor

The availability of trained workers in Sandy 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 Sandy 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 2021, an increase of almost 850,000 people or 1.1% each year.

Between 2000 and 2021, Sandy’s population increased by 7,484 people at an average annual rate of 4.2% (Exhibit 22), exceeding both Clackamas County’s and Oregon’s growth rates during the same time (1.1% and 1.1%, respectively).

Exhibit 22. Population Growth, Sandy, Clackamas County, and Oregon, 2000–2021

Source: U.S. Census Bureau, 2000, and 2010. Portland State University Population Estimates, 2021.

Geography	2000	2010	2021	Change, 2000-2021		
				Number	Percent	AAGR
Sandy	5,385	8,420	12,869	7,484	139%	4.2%
Clackamas County	338,391	381,775	425,316	86,925	26%	1.1%
Oregon	3,421,399	3,844,195	4,266,560	845,161	25%	1.1%

Age Distribution

By 2060, the population of people 65 years and older in the United States is projected to nearly double from 52 million in 2018 to 95 million.¹¹⁴ The economic effects of this demographic change include a slowing of the growth of the labor force, the need for workers to replace retirees, the aging of the workforce for seniors that continue working after age 65, an increase in the demand for health-care services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.¹¹⁵

¹¹⁴ Mather, M., Scommegna, P., & Kilduff, L. (2019). Fact Sheet: Aging in the United States.

<https://www.prb.org/aging-unitedstates-fact-sheet/>

¹¹⁵ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2017, The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal

Exhibit 23 through Exhibit 26 show the following trends:

- Sandy has a younger population than Clackamas County and the state overall. In 2019, only 17% of Sandy residents were 60 years and older (Exhibit 25). Sandy is growing across all age groups, but the increase in median age between 2000 and 2019 suggests that Sandy is attracting or retaining older adults.¹¹⁶
- Clackamas County’s population is expected to continue aging, with people 60 years and older increasing slightly from 27% of the population in 2020 to 29% in 2040. This is consistent with statewide trends. Clackamas County may continue to attract those in their late adult years (i.e., 60 years and older) over the planning period. While the share of retirees in these respective areas may increase over the next 20 years, the share of youth (i.e., under 20 years old) or people in their early adult lives (i.e., 20 to 39 years old) is likely to decrease. As the working population continues to exit the labor force later in life, those approaching retirement will provide a valuable source of skilled labor and experience to younger generations entering the workforce.

Sandy’s median age increased between 2000 and 2019 but remains less than both the county and state.¹¹⁷

Sandy’s increase in median age of 3.7 years is similar to Clackamas County’s change of 4 years and Oregon’s change of 3 years.

Exhibit 23. Median Age, Sandy, Clackamas County, and Oregon, 2000 to 2015–2019

Source: U.S. Census Bureau, 2000 Decennial Census, Table P013; American Community Survey 2015–2019 5-Year Estimates, Table B01002.

2000	32.5 Sandy	37.5 Clackamas County	36.3 Oregon
2015-19	36.2 Sandy	41.5 Clackamas County	39.3 Oregon

Disability Insurance Trust Funds, July 13, 2017. The Budget and Economic Outlook: Fiscal Years 2018 to 2028, April 2018.

¹¹⁶ 2019 data is based on the 5-year ACS (2015-2019).

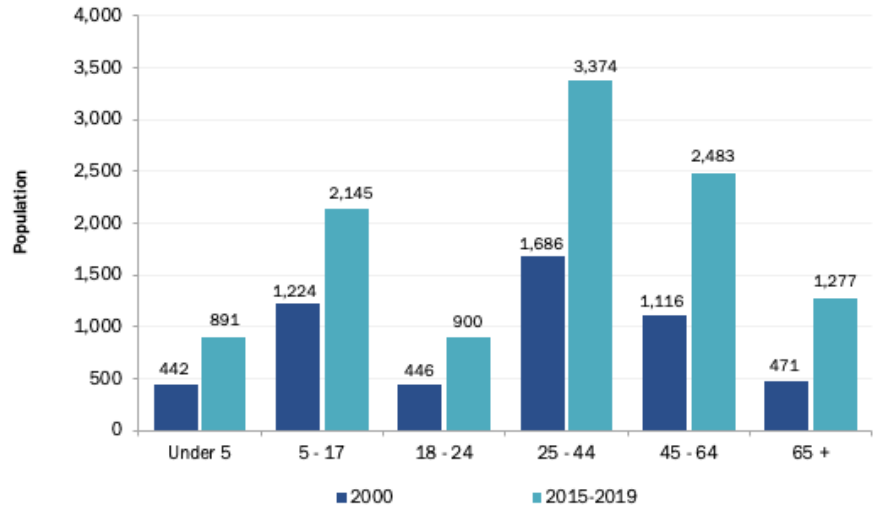
¹¹⁷ 2019 data is based on the 5-year ACS (2015-2019).

Between 2000 and 2019, Sandy's largest nominal population increases were for those aged 25-44 years and 45-64 years.¹¹⁸

Statewide, the highest percent increase was for those aged 65 and over, followed by those aged 45-64 years.

Exhibit 24. Sandy Population Change by Age Group, 2000 to 2015-2019

Source: U.S. Census Bureau, 2000 Summary File; American Community Survey 2015-2019 5-Year Estimates, Table B01001.



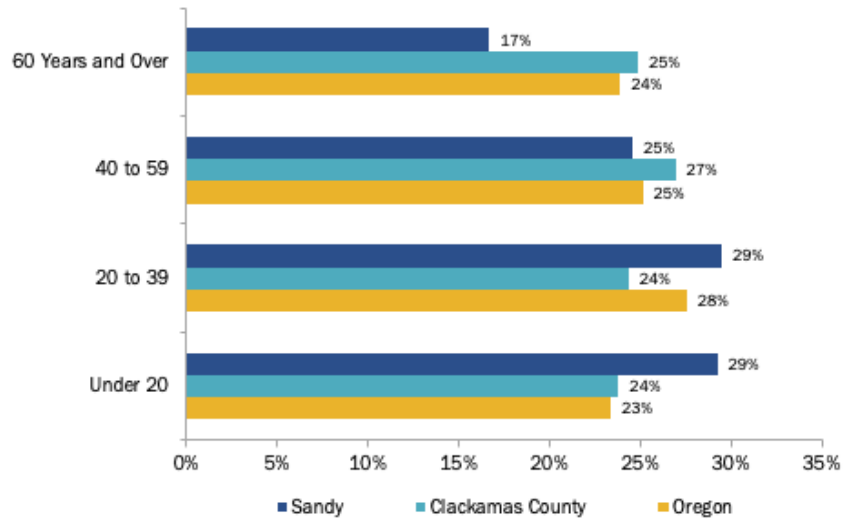
Seventeen percent of Sandy residents were over 60 years of age.

The proportion of Sandy's older residents was lower than that of both the state and Clackamas County.

Conversely, the proportion of Sandy residents 39 years of age and younger was higher relative to Clackamas County and Oregon.

Exhibit 25. Population Distribution by Age, Sandy, Clackamas County, and Oregon, 2015-2019

Source: U.S. Census Bureau, American Community Survey, 2015-2019 5-Year Estimates, Table B01001.



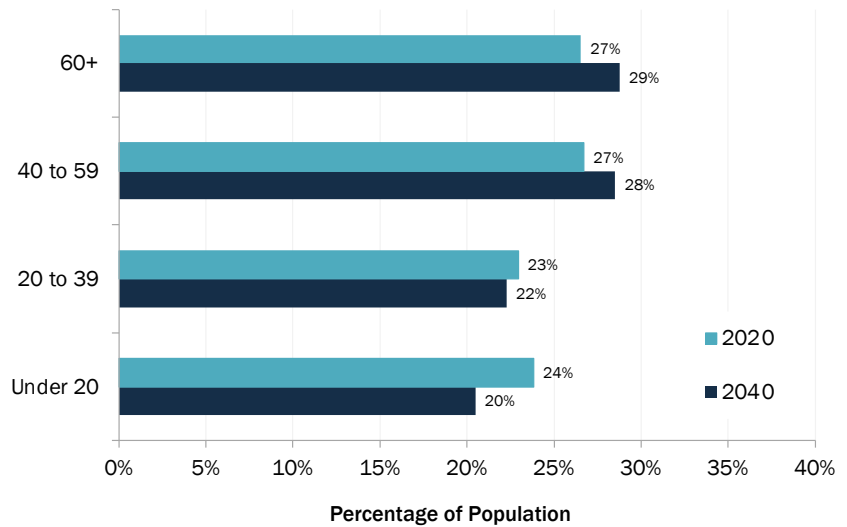
¹¹⁸ 2019 data is based on the 5-year ACS (2015-2019).

By 2040, Clackamas County will have a larger share of residents 40 years and older than it does today.

The share of residents 60 years and older will account for 29% of Clackamas County's population, compared to 27% in 2020. Similarly, the share of residents between the ages of 40 and 59 will increase from 27% to 28%.

Exhibit 26. Population Growth by Age Group, Clackamas County, 2020–2040

Source: Portland State University, College of Urban & Public Affairs: Population Research Center, Population Forecast, 2020.



Race and Ethnicity

Sandy, like Oregon overall, is becoming more racially and ethnically diverse. Both Hispanics and Latinos and people of color increased in Sandy between 2000 and 2019.¹¹⁹ Hispanics and Latinos increased from 4% to 10% of the population, while people of color increased from 6% to 9%. Similar to the city, people of color in Clackamas County increased slightly from 9% to 12%, and Hispanics and Latinos grew from 5% to 9%. Despite the increase, Sandy is still less ethnically diverse than the state, but providing culturally specific services to Spanish-speaking community members can help improve their participation in the workforce and economy.

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 Sandy results in small sample sizes, and thus the margin of error is considerable for the estimate of these populations.

Exhibit 27 and Exhibit 28 **Error! Reference source not found.** show the change in the share of Hispanic and Latino and people of color in Sandy, compared to Clackamas County and Oregon, between 2000 and 2019.¹²⁰ The groups with the largest share of people of color in 2019 included those that identified as Asian or two or more races, each representing 2% and 4% of Sandy’s total population respectively.¹²¹

¹¹⁹ 2019 data is based on the 5-year ACS (2015-2019).

¹²⁰ 2019 data is based on the 5-year ACS (2015-2019).

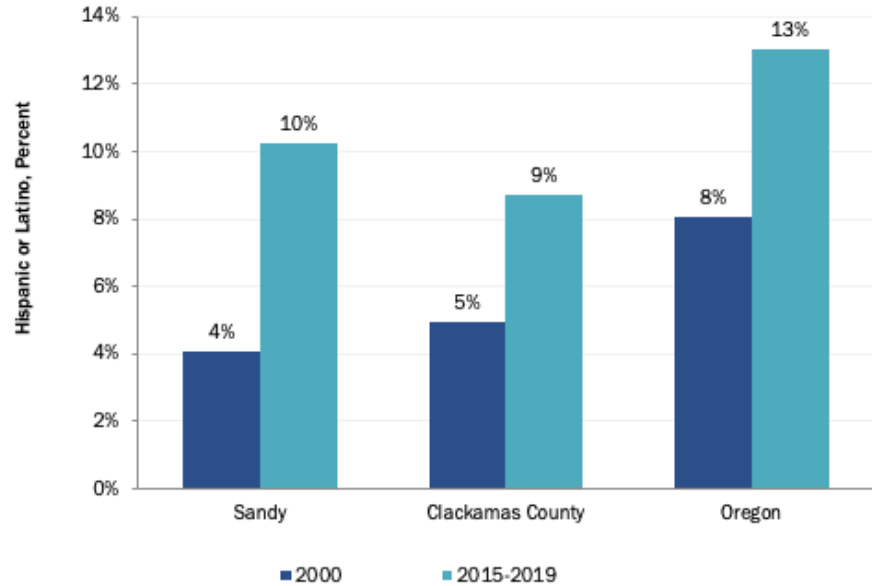
¹²¹ “Some other race alone” also includes individuals who identify as American Indian or Alaska Native or Native Hawaiian and other Pacific Islander.

Sandy’s Hispanic/Latino population increased between 2000 and 2019 from 4% to 10%.¹²²

Clackamas and Sandy are less ethnically diverse than the state overall, even with their increases over the period.

Exhibit 27. Hispanic or Latino Population as a Percentage of the Total Population, Sandy, Clackamas County, and Oregon, 2000, 2015–2019 (5-year ACS)

Source: U.S. Census Bureau, 2000 Decennial Census, Table P008; 2015–2019 American Community Survey, 5-Year Estimates, Table B03002.



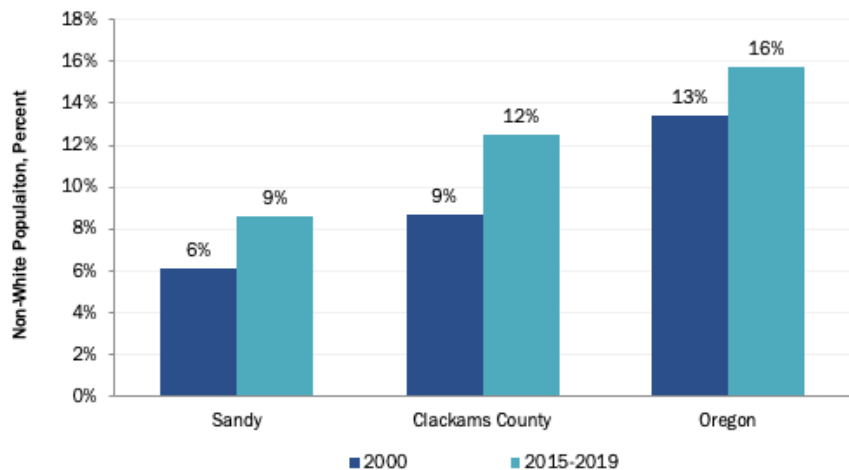
People of color in Sandy increased between 2000 and 2019.¹²³

Sandy and Clackamas County are less racially diverse than the state. In 2019,¹²⁴ the share of people of color in both Sandy and Clackamas County was 9% and 12%, respectively, compared to 16% statewide.

During this time period, Asian or two or more races were the largest nonwhite groups representing 2% and 4%, respectively.

Exhibit 28. Population of People of Color as a Percentage of the Total Population, Sandy, Clackamas County, and Oregon, 2000, 2015–2019 (5-year ACS)

Source: U.S. Census Bureau, 2000 Decennial Census Table P007; 2015–2019 American Community Survey, 2015–2019 5-Year Estimates, Table B02001.



¹²² 2019 data is based on the 5-year ACS (2015-2019).

¹²³ 2019 data is based on the 5-year ACS (2015-2019).

¹²⁴ 2019 data is based on the 5-year ACS (2015-2019).

Income

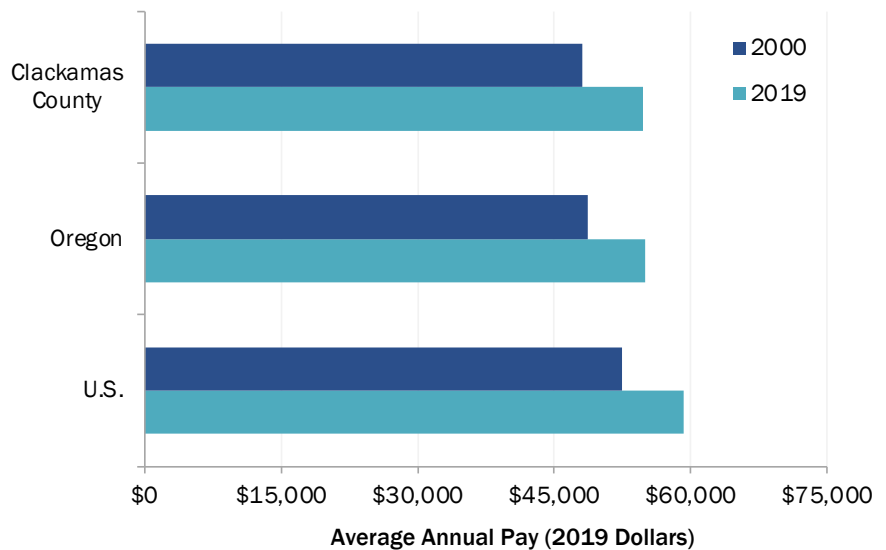
Income and wages affect business decisions for locating in a city. Areas with higher wages may be less attractive for industries that rely on low-wage workers. Sandy’s median household income (\$73,443) was below the county median (\$80,484). In 2019, average wages at private businesses in Sandy (\$37,318) were also below the county average (\$54,802).

Between 2000 and 2019, Clackamas County’s average wages increased as did average wages across the state and the nation. When adjusted for inflation, average annual wages grew by 14% in Clackamas County and 13% in both Oregon and across the nation.

From 2000 to 2019, average annual wages rose in Clackamas County, Oregon, and the nation.

In 2019, average annual wages were \$54,802 in Clackamas County, \$55,019 in Oregon, and \$59,209 in the U.S. overall.

Exhibit 29. Average Annual Wage, Covered Employment, Clackamas County, Oregon, and U.S., 2000 to 2020, Inflation-Adjusted 2020 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 Sandy was 9.6% below Clackamas County’s median household income but 14.5% above Oregon’s.

Exhibit 30. Median Household Income (MHI),¹²⁵ 2015–2019
Source: U.S. Census Bureau, American Community Survey 2015–2019 5-Year Estimates, Table B19013.

\$73,443	\$80,484	\$62,818
Sandy	Clackamas County	Oregon

¹²⁵ The Census calculated household income based on the income of all individuals 15 years old and over in the household, whether they are related or not.

Sandy's median family income was below Clackamas County's by 20% but above Oregon's by 5%.

Exhibit 31. Median Family Income,¹²⁶ 2015–2019

Source: U.S. Census Bureau, American Community Survey 2015–2019 5-Year Estimates, Table B19113.

\$80,847	\$97,130	\$76,946
Sandy	Clackamas County	Oregon

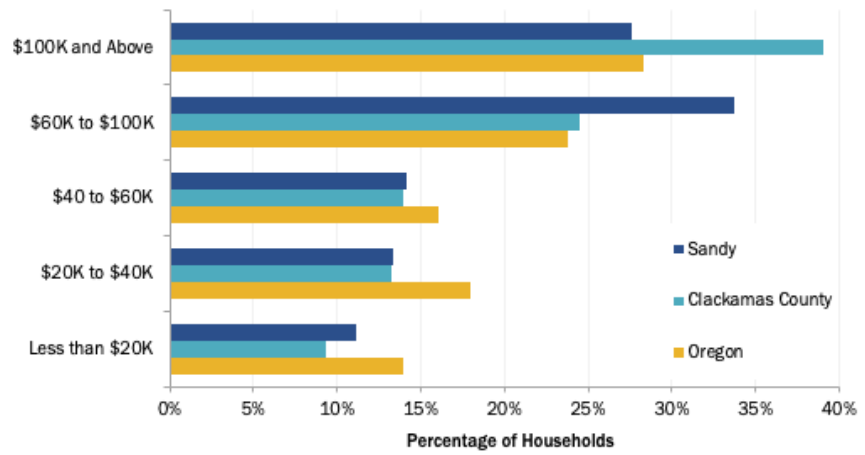
About 24% of Sandy households earned less than \$40,000 annually, similar to Clackamas County and lower than Oregon overall.

Over the same period, 28% of Sandy households earned over \$100,000 annually, which is equal to Oregon but less than Clackamas County.

Sandy had the largest proportion of households earning between \$60,000 and \$100,000 (34%).

Exhibit 32. Household Income by Income Group, Sandy, Clackamas County, and Oregon, 2015–2019, Inflation-Adjusted 2019 Dollars

Source: U.S. Census Bureau, American Community Survey 2015–2019 5-Year Estimates, Table B19001.



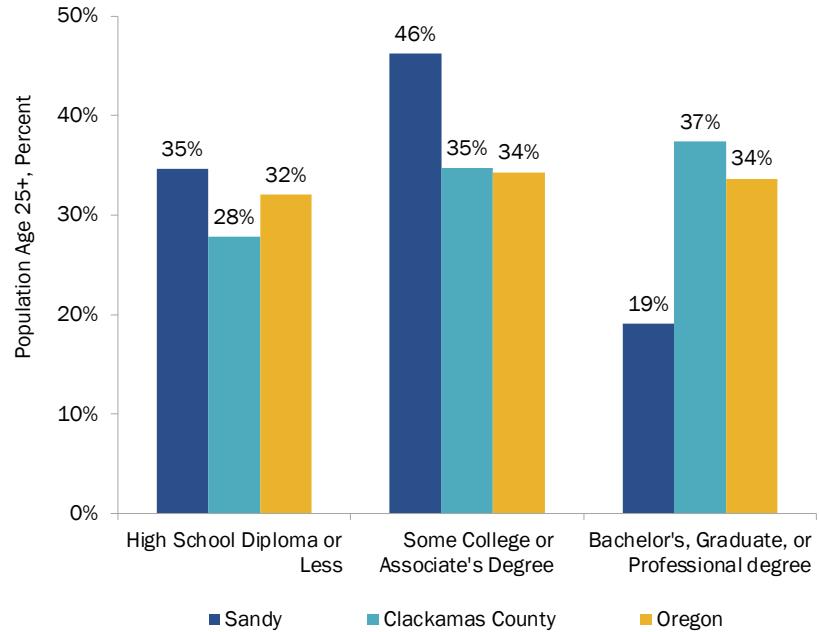
¹²⁶ The Census calculated family income based on the income of the head of household, as identified in the response to the Census forms, and income of all individuals 15 years old and over in the household who were related to the head of household by birth, marriage, or adoption.

Educational Attainment

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

The share of Sandy residents who have a bachelor's degree or a professional degree falls below both the state and Clackamas County.

Exhibit 33. Educational Attainment for the Population 25 Years and Over, Sandy, Clackamas County, and Oregon, 2015–2019
Source: U.S. Census Bureau, American Community Survey 2015–2019 5-Year Estimates, Table B15003.



Labor Force Participation and Unemployment

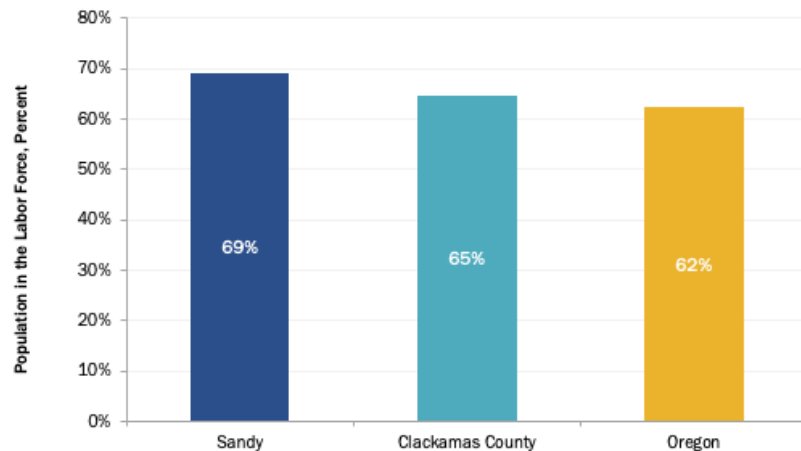
The current labor force participation rate is an important consideration in the availability of labor. The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both employed and unemployed people. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2015–2019 American Community Survey, Clackamas County had 214,622 people in its labor force during that period and Sandy had 5,846 people in its labor force.

In 2019, the Oregon Office of Economic Analysis reported that the most common reason for difficulty in filling jobs included a lack of applications (29% of employers' difficulties), unfavorable working conditions (23%), a lack of qualified candidates (16%), a lack of soft skills (8%), a lack of work experience (7%), and low wages (7%).¹²⁷ These statistics indicate a mismatch between the types of jobs that employers are demanding and the skills that potential employees can provide.

Sandy has a higher labor force participation rate (69%) relative to Clackamas County (65%) and Oregon overall (62%).

Exhibit 34. Labor Force Participation Rate, Sandy, Clackamas County, and Oregon, 2015–2019

Source: U.S. Census Bureau, American Community Survey 2015–2019 5-Year Estimates, Table B23001.



¹²⁷ Oregon's Current Workforce Gaps: Hiring Challenges for Unfilled Job Vacancies, May 2019. Employer-Provided Reasons for Difficulty Filling Vacancies in Oregon, 2018. p. 20.

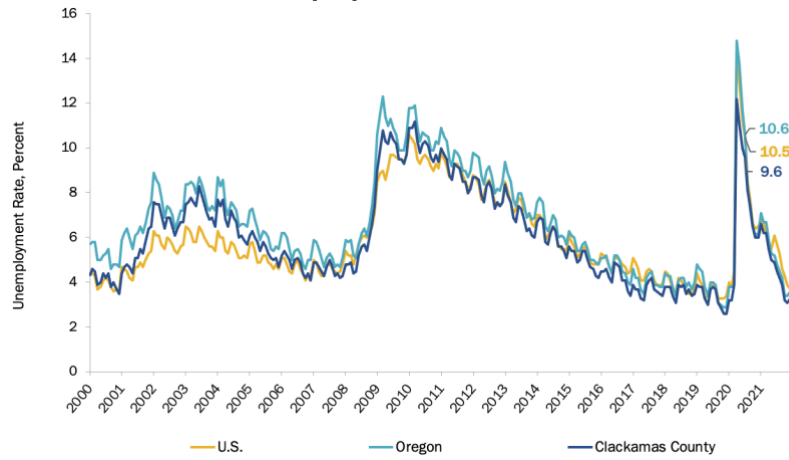
<https://www.qualityinfo.org/documents/10182/13336/Oregon%27s+Current+Workforce+Gaps>.

The unemployment rates in Sandy, Clackamas County, Oregon and the nation have declined since the Great Recession. However, following the pandemic, unemployment rates for the month of May 2020 exceeded the peak rate experienced during the Great Recession.

The unemployment rate for December 2021 in Clackamas County (3.3%) was slightly lower than that of the state (3.6%) and nation (3.7%).

Exhibit 35. Unemployment Rate, Clackamas County, Oregon, and the U.S., 2000–December 2021

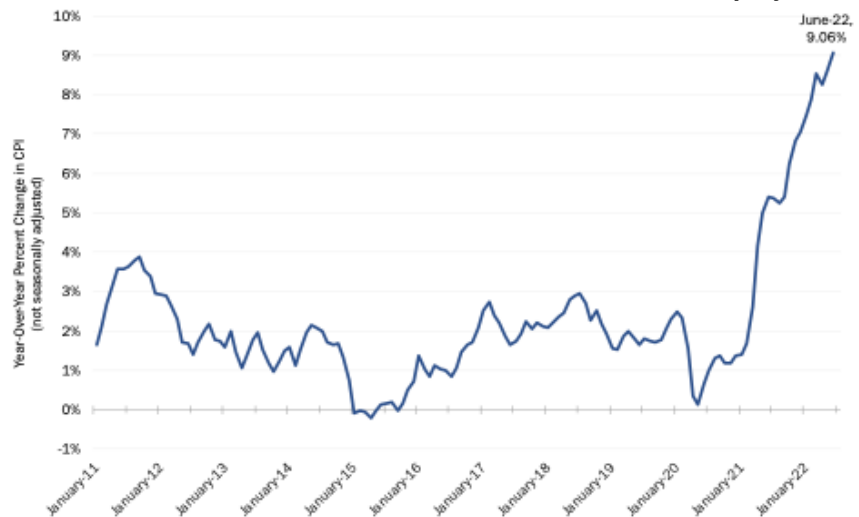
Source: Bureau of Labor Statistics, Local Area Unemployment Statistics and Labor Force Statistics. Not seasonally adjusted.



The annual inflation rate in the U.S. declined steadily following the Great Recession until 2015. From 2016-2018, inflation increased steadily to nearly 2.5% before declining in 2019 and 2020. In 2021, inflation increased to 9.1% in June 2022.

Exhibit 36. Annual Inflation Rate, All Urban Consumers, City Average, U.S., 2010-2021

Source: Bureau of Labor Statistics, Consumer Price Index. Not seasonally adjusted.



Commuting Patterns

Commuting plays an important role in Sandy's economy because employers in the area are able to access workers from cities across Clackamas County and the Portland region.

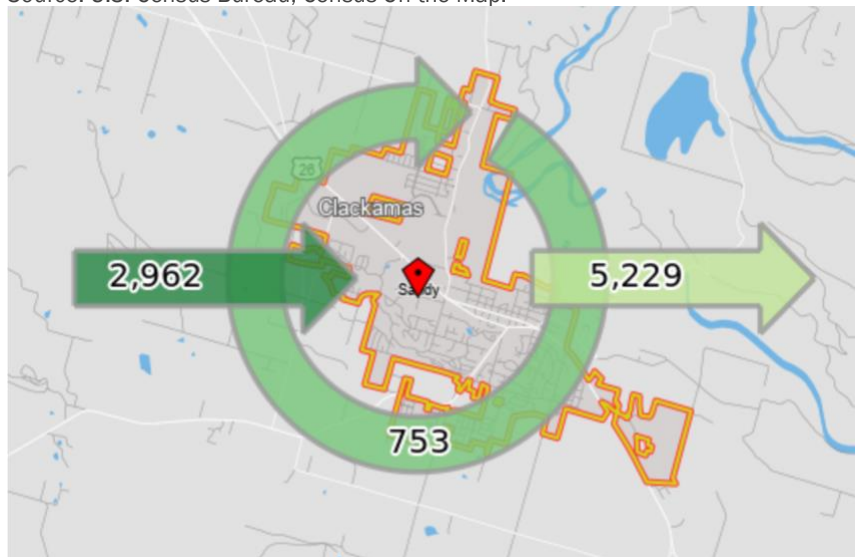
Exhibit 37 shows that nearly 3,000 people commute into Sandy for work while 5,200 commute out of Sandy for work. About 750 people both live and work in Sandy. Exhibit 38 demonstrates that 20% of people who work in Sandy also live in Sandy, while 12% commute from Gresham and 8% from Portland. Further, Exhibit 39 shows that 27% of people who live in Sandy commute to Portland while 13% remain in Sandy and 11% commute to Gresham.

Sandy is part of an interconnected regional economy.

Fewer people both live and work in Sandy than commute into or out of the city for work.

Exhibit 37. Commuting Flows, Sandy, 2019

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



About 20% of all people who are employed at businesses in Sandy also lived in Sandy.

Exhibit 38. Places Where Sandy Workers Lived,¹²⁸ 2019

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

20%
Sandy

12%
Gresham

8%
Portland

4%
Mount Hood

¹²⁸ In 2019, 3,715 people worked at businesses in Sandy, with 20% (753) of workers both living and working in Sandy.

About 13% of residents who live in Sandy also worked in Sandy.

27% of Sandy residents commute to Portland for work.

Exhibit 39. Places Where Sandy Residents Were Employed,¹²⁹ 2019

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



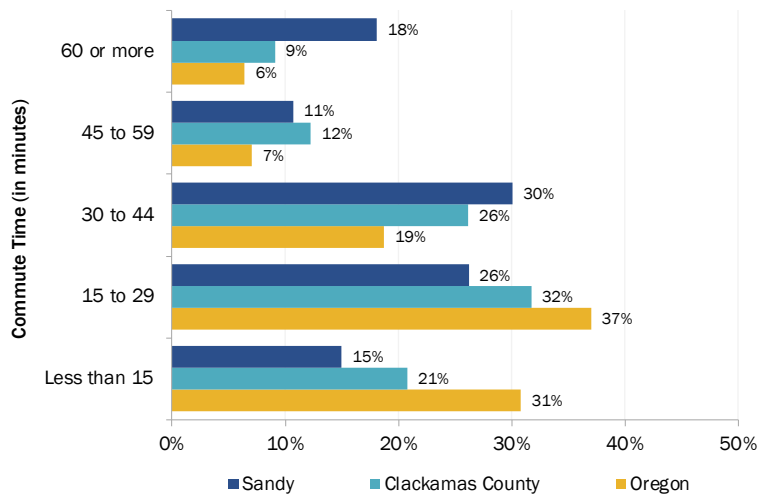
In 2019, about 15% of Sandy residents had a commute of less than 15 minutes, compared to 21% of Clackamas County’s residents and 31% of Oregon residents.¹³⁰ In general, Sandy residents had a much higher rate of long commutes over 60 minutes, with 18% of workers traveling longer than an hour compared to 9% of Clackamas County residents and 6% across Oregon.

Most Sandy residents (85%) have a commute time over 15 minutes. This is relatively consistent with Clackamas County, where 79% of residents have a commute time of this length.

Sandy residents were much more likely to have a commute over 60 minutes (18%) than residents of the county (9%) or state (6%).

Exhibit 40. Commute Time by Place of Residence, Sandy, Clackamas County, and Oregon, 2015–2019

Source: U.S. Census Bureau, American Community Survey 2015–2019 5-Year Estimates, Table B08303.



¹²⁹ In 2019, 5,982 residents in Sandy worked, with 13% of Sandy residents (753) both living and working in Sandy.

¹³⁰ 2019 data is based on the 5-year ACS (2015-2019).

Tourism in the Portland Region and Clackamas County

Dean Runyan Associates provides state, regional, and county statistics on travel. The following information is from Dean Runyan Associates' TravelStats dashboard created for Travel Oregon. This section of Appendix A includes information on Clackamas County.¹³¹

Broadly, travelers to Clackamas County accounted for about 2.3 million overnight trips in 2021, or 31% of all Portland region overnight travel that year. Clackamas County received \$523.8 million from direct travel spending in 2021 with the largest spending categories in food service, retail sales, and accommodations.

Direct travel spending in Clackamas County increased 14% from 2010 to 2021.

The Portland region's direct travel spending increased by 3% over the same period.

Exhibit 41. Direct Travel Spending (\$ millions), 2010 and 2021
Source: Dean Runyan Associates, Oregon Travel Impacts, 2010 and 2021.

2010	\$3,639.0	\$460.1
	Portland Region	Clackamas County
2021	\$3,764.7	\$523.8
	Portland Region	Clackamas County

The area of largest visitor spending for purchased commodities in 2021 in Clackamas County was food service.

Exhibit 42. Largest Visitor Spending Categories (\$ millions), Clackamas County, 2021
Source: Dean Runyan Associates, Oregon Travel Impacts

\$154.6	\$99.4	\$70.7
Food Service	Retail Sales	Accommodations

The industry with the most employment generated by travel spending in Clackamas County in 2021 was in the accommodations and food services industry.

Exhibit 43. Largest Industry Employment Generated by Travel Spending, Clackamas County, 2021
Source: Dean Runyan Associates, Oregon Travel Impacts.

4,200 jobs	977 jobs	504 jobs
Accommodations & Food Services	Arts, Entertainment, and Recreation	Retail

The number of overnight visitors to Clackamas County has decreased from 2,312,377 in 2010 to 2,262,024 in 2021, a decrease of 50,353 overnight stays (or 2%). These numbers are likely due to impacts from the COVID-19 pandemic, including reduced travel and difficulty in data collection.

¹³¹ Travel Oregon. "Oregon Travel Impacts dashboard" Dean Runyan Associates. Retrieved July 18, 2022, from <https://www.travelstats.com/impacts/oregon>

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 Sandy 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 Sandy UGB. The results (shown in Chapter 4) are based on analyses of the City of Sandy, Clackamas 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 Sandy 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 Sandy UGB, 2) it is inside a tax lot (as defined by Clackamas County), and 3) if its current zoning/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 of the tax lots in the Clackamas UGB with the appropriate comprehensive plan designations: commercial, light industrial, and village-commercial. Exhibit 46 shows a map of the specific designations that were 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 definition above) into one of five mutually exclusive categories based on buildable area status:

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

ECONorthwest identified buildable land and classified buildable area status using a rule-based methodology. The rules are described below in Exhibit 44.

Exhibit 44. Rules for Buildable Area Status Classification

Development Status	Definition	Statutory Authority
Vacant Land	<p>A tax lot:</p> <ul style="list-style-type: none"> (a) Equal to or larger than one-half acre not currently containing permanent buildings or improvements; or (b) Equal to or larger than five acres where less than one-half acre is occupied by permanent buildings or improvements. <p>For the purpose of criteria (a) above, lands with improvement values of \$0 are considered vacant.</p>	OAR 660-009-005(14)
Partially Vacant Land	Partially vacant tax lots are those between one and five acres occupied by a use that could still be further developed based on the zoning. This determination was based on a visual assessment and City staff verification.	No statutory definition
Developed Land	<p>OAR 660-009-005(1) defines developed land as “Non-vacant land that is likely to be redeveloped during the planning period.”</p> <p>Lands not classified as vacant, partially vacant, undevelopable, or public or exempt are considered developed.</p>	OAR 660-009-005(1)

Development Status	Definition	Statutory Authority
Public Land	Lands in public or semipublic ownership are considered unavailable for commercial or industrial development. This includes lands in Federal, State, County, or City ownership as well as lands owned by churches and other semipublic organizations. Public lands will be identified using the Clackamas County Assessment property tax exemption codes.	No statutory definition
Undevelopable	Vacant tax lots less than one-half acre in size are considered undevelopable.	No statutory definition

Step 3: Identify Constraints

As shown in Exhibit 45, the BLI included development constraints consistent with guidance in OAR 660-009-0005(2).

Exhibit 45. Constraints to Be Included in BLI

Constraint	Statutory Authority	Threshold	Source
Goal 5 Natural Resource Constraints			
Streams with 50 ft. Buffer	OAR 660-009-0005(2)	Identified by City staff	City of Sandy
Natural Hazard Constraints			
Regulatory Floodway	OAR 660-009-0005(2)	Lands within FEMA FIRM identified floodway	FEMA via National Map
100-Year Floodplain	OAR 660-009-0005(2)	Lands within FEMA FIRM 100-year floodplain	FEMA via National Map
Steep Slopes	OAR 660-009-0005(2)	Slopes greater than 15%	Oregon Department of Geology and Mining Industries
Landslide Susceptibility	OAR 660-009-0005(2)	High or Very High Landslide Susceptibility	Oregon Department of Geology and Mining Industries
BPA Easement	OAR 660-009-0005(2)	Lands within the BPA Easement area	City of Sandy
Flood and Slope Hazards (FSH) Overlay	OAR 660-009-0005(2)	Lands within the FSH Overlay	City of Sandy

These areas were evaluated as prohibitive constraints (unbuildable). All constraints were merged into a single constraint file, which was then used to identify the area of each tax lot that

is constrained. These areas were deducted from lands that are identified as vacant or partially vacant.

Step 4: Verify Inventory Results

ECONorthwest used a 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. The final verification is reviewed by stakeholders, most especially by members of the Technical Advisory Committee (TAC).

Step 5: Tabulate and Map Results

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

Exhibit 46. Comprehensive Plan Designations and Zones Included in the Commercial and Industrial
BLI, Sandy UGB, 2022

Source: ECONorthwest analysis, City of Sandy, Clackamas County

Sandy Buildable Lands Inventory

Comprehensive Plan
Designations

Date: August 24, 2022
Source: ECONorthwest
City of Sandy
Clackamas County

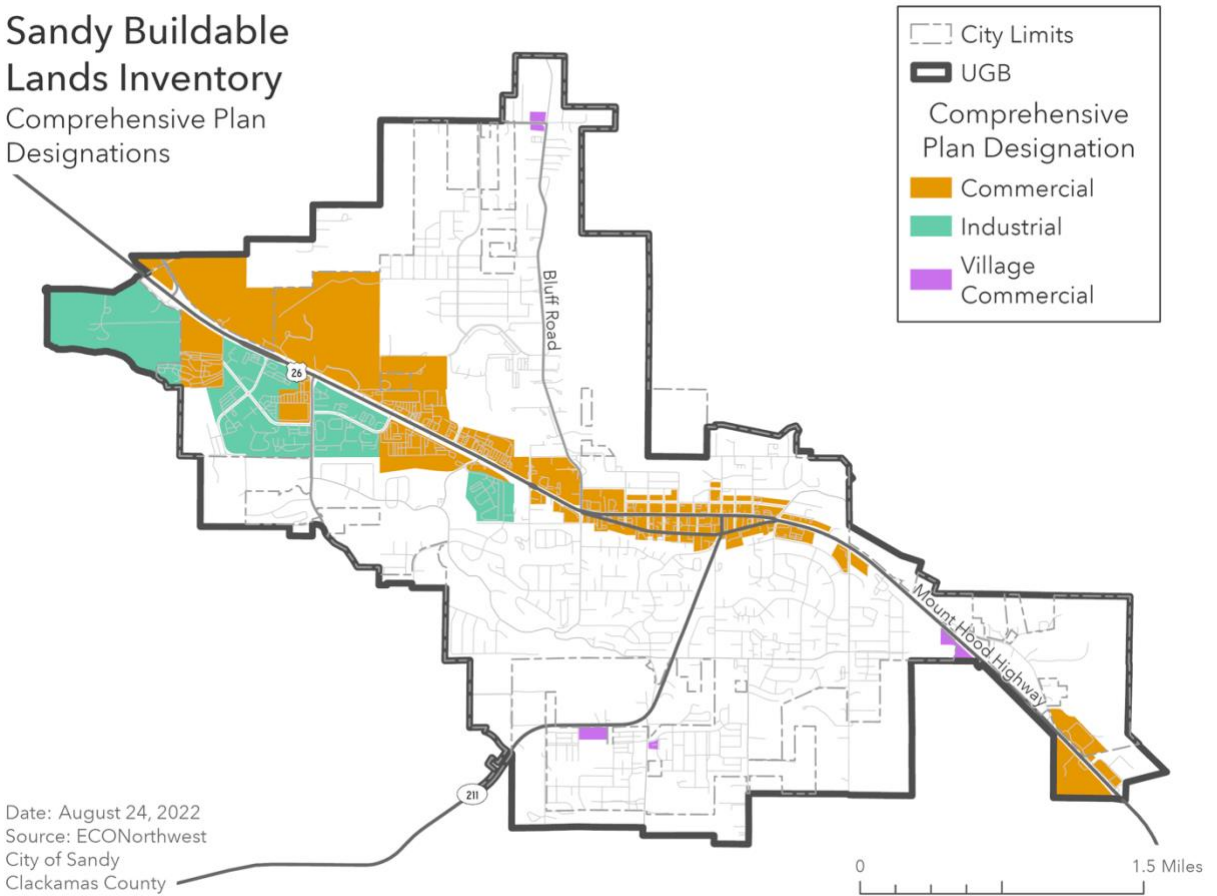


Exhibit 47. Employment Land Development Constraints by Constraint Type, Sandy UGB, 2022
 Source: ECONorthwest analysis, City of Sandy, Clackamas County

Sandy Buildable Lands Inventory Constraints

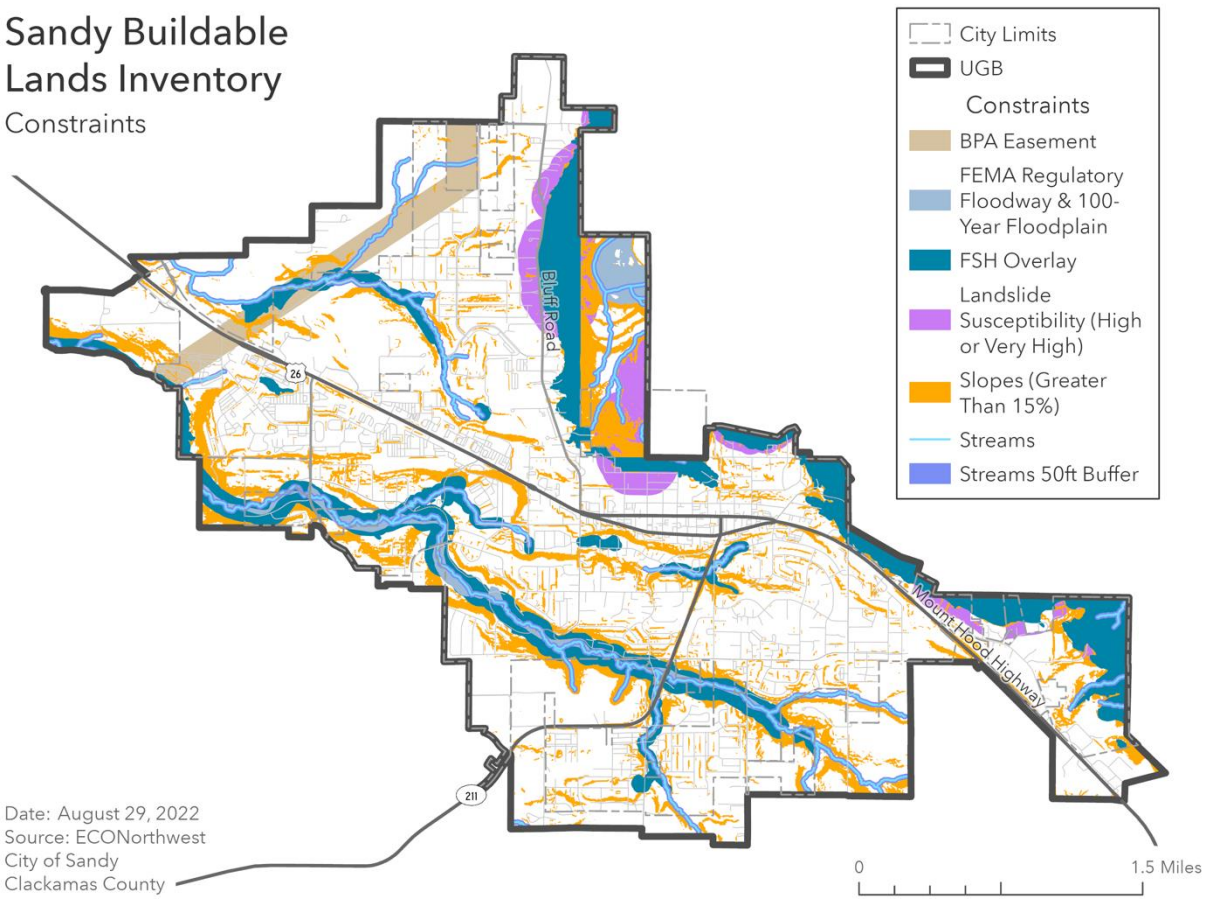


Exhibit 48. Buildable Employment Land by Plan Designation with Development Constraints, Sandy UGB, 2022

Source: ECONorthwest analysis, City of Sandy, Clackamas County

Sandy Buildable Lands Inventory

Unconstrained Vacant and Partially Vacant Land by Comprehensive Plan Designation

Date: August 24, 2022
Source: ECONorthwest
City of Sandy
Clackamas County

