
Economic Opportunities Analysis for Burns and Hines in Harney County



June 2019

Prepared for:

Harney County
City of Burns
City of Hines

FINAL REPORT

ECONorthwest
ECONOMICS • FINANCE • PLANNING

KOIN Center
222 SW Columbia Street
Suite 1600
Portland, OR 97201
503.222.6060

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<p>Advisory Committee Pete Runnels, Harney County Judge Mark Owens, Harney County Commissioner Denise Rose, Harney County Economic Development Lola Johnson, Harney County Chamber Director Merle Reid, Harney County Planning Commission</p>	<p>Mindy Clemens, City of Burns Planning Commission Curt Blackburn, Local Real Estate Broker Tracy Kennedy, Burns-Paiute Tribe Community Economic Development Coordinator Susan Christensen, GEODC Scott Fairley, Business Oregon</p>
<p>State of Oregon Phil Stenbeck, Regional Representative, DCLD</p>	<p>Kirstin Greene, Economic Development Specialist, DLCD</p>
<p>Harney County Brandon McMullen, Planning Director</p>	<p>City of Burns Dauna Wensenk, City Manager City of Hines Kirby Letham, City Administrator</p>
<p>Consulting Staff Beth Goodman, Project Director, ECONorthwest</p>	<p>Margaret Raimann, Associate, ECONorthwest</p>

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

Brandon McMullen
 Harney County Planning Director
 450 N. Buena Vista #11
 Burns, OR 97720
 541-573-6655
Brandon.mcmullen@co.harney.or.us

Beth Goodman
 ECONorthwest
 222 SW Columbia, Suite 1600
 Portland, OR 97201
 503-222-6060
goodman@econw.com

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Summary

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

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

How much buildable employment land do Burns and Hines currently have?

Exhibit 1 shows commercial and industrial land in the Burns and Hines UGBs with development capacity (lands classified vacant or partially vacant). The results show Burns has about 386 unconstrained buildable acres within the UGB and Hines has about 438 unconstrained buildable acres.

Exhibit 1. Employment acres by plan designation, Burns and Hines UGBs, 2018

Plan Designation	Total Buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant lots
City of Burns Designations			
Commercial General	75	69	6
Light Industrial	19	14	5
Heavy Industrial	81	65	16
Industrial/ Energy Development	22	22	0
County Designations			
Rural Commercial	35	3	32
Farm & Range Use-160 AC	154	154	0
Total	386	328	59
City of Hines Designations			
Commercial	186	171	15
Industrial	143	105	38
Exclusive Farm Use	0	0	0
County Designations			
Rural Commercial	15	8	7
Farm & Range Use-160 AC	94	64	30
Farm & Range Use-80 AC	0	0	0
Total	438	348	90

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

How much growth are Burns and Hines 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, Burns and Hines need an estimate of the amount of commercial and industrial land that will be needed over the 2019–2039 planning period. Exhibit 2 presents the forecast of employment growth by land use type in Burns and Hines from 2019 to 2039.

- Burns’ employment base was 2,177 employees in 2019. The forecast shows that by 2039, Burns will have 2,657 employees, an increase of 480 jobs over the planning period.
- Hines’ employment base was 674 employees in 2019. The forecast shows that by 2039, Hines will have 822 employees, an increase of 149 jobs over the planning period.

Exhibit 2. Forecast of employment growth by land use type, Burns and Hines UGBs, 2019–2039

Land Use Type	2019		2039		Change 2019 to 2039
	Employment	% of Total	Employment	% of Total	
Burns UGB					
Industrial	135	6%	266	10%	131
Retail Commercial	166	8%	266	10%	100
Office & Commercial Services	381	18%	611	23%	230
Government	1,495	69%	1,514	57%	19
Total	2,177	100%	2,657	100%	480
Hines UGB					
Industrial	103	15%	132	16%	29
Retail Commercial	134	20%	173	21%	39
Office & Commercial Services	265	39%	329	40%	64
Government	172	26%	189	23%	17
Total	674	100%	822	100%	149

Source: ECONorthwest

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

How much land will be required for employment?

The forecasts for land needed to accommodate employment growth in each City are as follows:

- In Burns, the forecast growth of 480 new employees will result in demand for about 41 gross acres of vacant employment land.
- In Hines, the forecast growth of 13 new employees will result in demand for about 12 gross acre of vacant employment land.

Do Burns and Hines have enough land to accommodate employment growth?

Exhibit 3 compares the supply of suitable employment land with the demand for employment land in the Burns and Hines UGBs.

Exhibit 3. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, Burns and Hines UGBs, 2019–2039

Land Use Type	Land Supply (Suitable Gross Acres)	Land Demand (Gross Acres)	Land Sufficiency (Deficit)
Burns UGB			
Industrial	122	15	107
Commercial	110	27	84
Farm & Range Use-16	154	-	154
<i>Total</i>	386	41	345
Hines UGB			
Industrial	143	3	140
Commercial	201	8	192
Farm & Range Use-160	94	-	94
<i>Total</i>	438	12	426

Source: ECONorthwest

What types of business do the cities in Harney County want to attract?

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

Given the current employment base, which is composed of small-sized businesses, it is reasonable to assume that much of the cities’ business growth will come from small-sized businesses. This growth will either come from businesses already in Harney County or new businesses that start or relocate to Harney County from within or outside of the Eastern Oregon region.

The industries identified as having potential for growth in Harney County are:

- **Warehousing and distribution.** Burns’ and Hines’ locations, access to state highways, and inventory of industrial land provide opportunities for warehousing and distribution. Two U.S. highways run through Harney County—Highway 20 and Highway 395—and they connect north of Burns. These highways provide a north–south connection to Washington, California, and Nevada markets along a relatively flat corridor (Highway 395), as well as an east–west connection to Central Oregon and Idaho. Warehouse and distribution companies that are more likely to locate in Harney

County are those who need a central location that provides access to Oregon and its neighboring states but do not need to be centrally located on any one state and do not need to be located on an interstate highway. Despite good access to transportation corridors, the major barriers to these businesses locating in Harney County are its remote location and limited workforce.

- **Natural resources and energy services support.** Harney County has opportunity for growth in natural resources industries, such as value-added agriculture products and processing. These industries include wood products manufacturing, agricultural and forestry support activities, crop production, and animal production. Opportunities for processing juniper could help to use overgrown juniper in forests in Harney County while providing opportunities for businesses to process it into lumber or other wood products. Harney County's opportunities in the Rural Renewable Energy Development zone could also incent businesses to process juniper for biomass production or other renewable energy sources (e.g., wind, solar, etc.).
- **Manufacturing.** Harney County has opportunities for growth in other types of manufacturing (beyond natural resource and energy services). These types of manufacturing include secondary wood products manufacturing, food and beverage manufacturing (especially those that do not have significant wastewater effluent), and other types of manufacturing.
- **Professional and technical services.** Burns and Hines lack businesses that specialize in engineering, architectural, appraisal, and other contracting or maintenance services. The limited availability of these services can increase the cost of business to maintain their properties, as they have to hire businesses located elsewhere in the State. This also leads to slower responses regarding building maintenance issues and delays in construction. Improved broadband connectivity may attract businesses that provide these services, as many can operate as a home occupancy.
- **Services for visitors.** Harney County is a popular destination for hunting, biking, hiking, running, and bird watching. Both Burns and Hines have accommodations, but they could attract more visitors. Harney County has many scenic areas for visitors to enjoy and increasing efforts to attract visitors to stop in Burns and Hines could bring more service-sector jobs to the Cities.
- **Services for residents.** As Harney County's population grows, demand for services for residents will grow, including retail, restaurant, personal services (like hairdressers), financial, medical, and other services. Additionally, the demand for child-care services will increase to meet the need for families in Harney County. These types of services present opportunities for entrepreneurship and microenterprise development in Harney County and its cities.
- **Housing for seniors.** Housing for seniors with services (i.e., medical services or housekeeping services) may be an important type of service to support Harney County's aging population. An aging population in Harney County will also increase the need for in-home caregivers, presenting another opportunity for entrepreneurs and microenterprise development.

What are the recommendations to support economic development in Harney County?

The following are recommendations for actions that can be taken together that apply to Harney County, the City of Burns, and the City of Hines:

- **Identify opportunities to diversify Harney County's economic base.** Diversifying Harney County's economy will require coordinating economic development efforts with the County and Cities, as well as with local and regional economic development organizations listed below. We make this recommendation to the County and Cities to continue working together on this issue because it will take resources (staff and financial resources) that can be pooled together among the County and Cities. The County and Cities should consider the following actions:
 - *Identify champions for economic development.* Pursuing economic development will require champions for economic development. They could be led by a countywide economic development specialist, but each City will also need champions to move forward and create support for economic development efforts. The champions could be an elected or appointed official or city staff.
 - *Update the economic development strategy.* Diversifying Harney County's economic base will require deliberate effort (led by the economic development champions) and would benefit from updating the economic development strategy that the County completed in 2012. The strategy should focus on specific and achievable actions that the County and Cities can take within the next five years (some of which are suggested in this report) and should have a broader focus than land use, considering issues such as workforce development and collaborating with businesses to support business growth. The strategy should have actions that address countywide issues as well as actions for each community.
 - *Coordinate and market opportunities for growth in Harney County.* A key part of the economic development strategy will be coordinating local economic development champions and stakeholders with regional and state partners on economic development, including Greater Eastern Oregon Development Corporation (GEODC), Harney County Economic Development (HCED), Business Oregon, the Department of Land Conservation and Development (DLCD), and other state agencies that are part of the Greater Eastern Oregon Regional Solutions Team. For example, the Cities should work with Business Oregon to ensure that vacant sites are listed on the Oregon Prospector website and that Business Oregon staff are aware of key development opportunities in the Cities.

- **Support development of vacant and potentially redevelopable sites through working with landowners to ensure that sites are adequately serviced with municipal infrastructure.** Aside from ensuring that there is sufficient land to support employment growth, one of the most important ways that the Cities can support economic development is through planning for and developing infrastructure (e.g., roads, water, sanitary sewer, and stormwater systems). We recommend that both Burns and Hines align their goals for economic development with infrastructure development through updates to each city’s Capital Improvements Plans.
 - Burns and Hines should both coordinate with the County to develop on sites within the UGB but outside of town limits. Development of these areas should occur at urban levels of density, ensuring that land is used efficiently.
 - Burns and Hines should both meet with landowners of key development sites to assess whether the landowners are willing to develop or sell their land. For key development or redevelopment sites, the Cities can work with landowners to make land development ready, most notably by planning for infrastructure extensions to provide services to the sites.
 - Burns and Hines should both continue to seek support for infrastructure development from organizations such as GEODC, Business Oregon, Oregon Department of Transportation (ODOT), U.S. Department of Agriculture, U.S. Economic Development Administration, and other sources of funding.
- **Coordinate with partners on economic development.** Harney County, the City of Burns, and the City of Hines have existing collaborative partnerships with public agencies, including the Harney County Chamber of Commerce, HCED, GEODC, Eastern Oregon University Small Business Development Center, ODOT, DLCD, Regional Solutions, and Business Oregon. The communities should continue to build on these relationships with key partners to improve infrastructure and expand on existing resources. The Regional Solutions Team can help the communities coordinate with state agencies and help ensure the communities have access to grants and loans to support infrastructure development.
- **Work with partners to market Harney County, the City of Burns, and the City of Hines as places to do business.** The County and Cities should work with their partners to attract and grow businesses. For example, the Counties and Cities should work with Business Oregon to ensure that vacant sites are listed on the Oregon Prospector website and that Business Oregon staff are aware of key development opportunities in Harney County.
- **Support entrepreneurs and small businesses.** Cities can provide support by allowing home occupations or working closely with small businesses, specifically those with 15 or fewer employees, to ensure they have the help they need through the planning process. Burns and Hines could identify opportunities to more directly support small businesses by working with partners such as small business development centers to provide shared workspace (such as a small amount of office space at a public building). Ensuring that internet connections are reliable and have sufficient communication speeds will allow

businesses to operate remotely across the internet. The County should also work with the Cities to ensure that these opportunities are made available to all community members, including culturally specific services to historically underrepresented community members such as Native American and Spanish speaking community members. More broadly, the Cities can coordinate with the County and other regional or state partners to establish small business development centers to connect entrepreneurs and small-business owners with needed services, resources, and other business assistance.

- **Address workforce issues.** A key challenge for businesses in Harney County is attracting reliable and sober workers. One approach to addressing this issue is teaching life skills to young people at the high school level or providing post-high school training via a nonprofit organization. In addition, businesses in Harney County will need workers who are semiskilled and skilled. Trade skills and other training is offered by community colleges. Harney County is not fully served by a community college and may not have the capacity for teaching life skills. Making these types of training available and easily accessible in the County will require a substantial, ongoing effort. The County and Cities can work together to identify champions of these efforts, working with the school district and tapping resources from across Central and Eastern Oregon.

Providing life skill-based education in Harney County schools can also lead to more entrepreneurial ventures and the development of microenterprises, including those related to residential and visitor services (e.g., restaurants, grocery stores, etc.). Providing resources for entrepreneurs that help fill skill gaps related to running a business can help more entrepreneurs succeed. While some resources are available at the regional or state level, entrepreneurs need on-site support in the local area, as they have little time to travel for business support services.

Other factors in attracting the needed workforce in Harney County are access to adequate workforce housing and ensuring quality child care is available. The County and Cities should work with development partners to plan for housing that is affordable at all income levels, specifically focused on incomes of workers in Harney County. The County and Cities may have opportunities to support development of child-care facilities.

- **Support development of communication infrastructure.** Harney County has limited cell phone and internet connections. The lack of communication infrastructure is a substantial barrier to business growth in Harney County. The County should continue to work with the Cities and key partners, such as Business Oregon, to support development of new communication infrastructure, ensuring there is reliable and faster internet connections. The State may have grants to support development of broadband internet in rural areas.

- **Address housing issues.** Access to workforce housing is a barrier to attracting workers to Harney County and its cities. The County is currently working with Oregon Housing and Community Services on a pilot project to address workforce housing issues, including housing need, existing inventory, and funding sources to address the gap in investment for workforce housing. A key finding in this study is that the main barrier to development of new workforce housing is the lack of developers interested in delivering new housing in Harney County. A next step in assessing need for housing may be for Burns and Hines to conduct a housing needs analysis (HNA). One purpose of completing an HNA would be to update the cities' Housing Elements in their Comprehensive Plan to enable the cities to make needed changes to zoning and plan designations, as well as implementing other housing policies to support development of workforce housing. In addition, the HNA will help to identify need for the amount and types of housing in the Burns UGB and Hines UGB.

The conclusions and recommendations about commercial- and industrial-land sufficiency for Burns are:

- **Burns is forecast to grow in both commercial- and industrial-employment sectors.** Burns is planning for 461 new jobs (excluding government jobs) in the City over the 2019 to 2039 period. About 131 of the jobs will be in industrial land uses, 230 in office and commercial services, and 100 in retail. Growth of these jobs will result in demand for about 15 gross acres of industrial land and 27 gross acres of commercial land.
- **Burns has enough employment land to accommodate growth.** Exhibit 35 shows Burns has enough land for employment growth over the next twenty years, with a 107-acre surplus of industrial land and an 84-acre surplus for commercial land.
- **Burns will need to address key infrastructure needs in the City, especially for development of industrial land.** Lack of infrastructure (including water, wastewater, and transportation) to service industrial land is a barrier to the development of industrial land and can be a barrier to the development of commercial land. The City will need to work with landowners and developers to develop infrastructure to serve key industrial sites. One approach could be reviewing industrial land on a site-by-site basis to identify infrastructure deficits and align these needs with the capital improvement plan and other master-plan updates, such as water and wastewater.

Additionally, the City can work with Business Oregon to determine how to prepare sites for the Shovel Ready Certification Program, which involves working with Business Oregon to produce a plan for delivering needed infrastructure. A first step in this process is listing potential sites on Oregon Prospector, such as the 40-acre County-owned site zoned for industrial/energy development.

- **Most new businesses will be relatively small and will require small and midsized sites.** Burns' businesses are generally small, averaging about 6 employees per business. Businesses with 9 or fewer employees account for 44% of private employment. Growth of small businesses presents key opportunities for economic growth in Burns. Burns has about 56 sites smaller than one acre and 30 sites between one and five acres. In addition, Burns has 7 sites between five and twenty acres and 4 sites larger than twenty acres. Some of these sites (specifically, larger sites) may subdivide into smaller sites.
- **Update the Economy Element of the comprehensive plan.** The Economy Element has not been updated in more than a decade. We recommend that the Planning Commission and City Council review the existing policies, and after making additional necessary revisions to the policies, adopt revised goals, objectives, and implementation strategies into the Economy Element.
- **Identify opportunities for infill development or redevelopment.** Burns' downtown area is generally built out, with few areas with vacant land. Burns can build on the inventory of redevelopment potential that the Community Response Team developed for businesses on Broadway Avenue to identify opportunities for infill and redevelopment in downtown. Redevelopment could involve the substantial renovation of, change in use of, or demolition of existing buildings, as well as the building of newer, more productive buildings. Infill development may include the expansion of existing buildings or building new structures adjacent to existing buildings. In both cases, new development that increases capacity for business activity is an opportunity.

The ongoing brownfields project will identify a few sites in Burns that are suspected brownfields, and it will assess pollution and contamination on those sites. If the sites are brownfields and contamination is remediated, these sites provide opportunity for redevelopment for commercial, industrial, or residential uses.

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

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

The conclusions and recommendations about commercial- and industrial-land sufficiency for Hines are:

- **Hines is forecast to grow in both commercial- and industrial-employment sectors.** Hines is planning for 132 new jobs (excluding government jobs) in the City over the 2019 to 2039 period. About 29 of the jobs will be in industrial land uses, 64 in office and commercial services, and 39 in retail. Growth of these jobs will result in demand for about 3 gross acres of industrial land and 8 gross acres of commercial land.
- **Hines has enough employment land to accommodate growth.** Exhibit 36 shows Hines has enough land for employment growth over the next twenty years, with a 140-acre surplus of industrial land and a 192-acre surplus of commercial land.
- **Hines will need to address key infrastructure needs in the City, especially for the development of industrial land.** Lack of infrastructure (including water, wastewater, and transportation) to service industrial land is a barrier to development of industrial land and can be a barrier to development of commercial land. The City will need to work with landowners and developers to develop infrastructure to serve key industrial sites. One approach could be reviewing industrial land on a site-by-site basis to identify infrastructure deficits and align these needs with the capital improvement plan and other master-plan updates, such as water and wastewater.

Additionally, the City can work with Business Oregon to determine how to prepare sites for the Shovel Ready Certification Program, which involves working with Business Oregon to produce a plan for delivering needed infrastructure. A first step in this process is listing potential sites (that are for sale or lease) on Oregon Prospector.

- **Most new businesses will be relatively small and will require small and mid-sized sites.** Hines' businesses are generally small, averaging about 6 employees per business. Businesses with 9 or fewer employees account for 12% of private employment. Growth of small businesses presents key opportunities for economic growth in Hines. Hines has about 35 sites smaller than one acre and 35 sites between one and five acres. In addition, Hines has 30 sites between five and twenty acres and 7 sites larger than twenty acres. Some of these sites (specifically, larger sites) may subdivide into smaller sites.
- **Update the Economy Element of the comprehensive plan.** The Economy Element has not been updated since the 1980s. We recommend that the Planning Commission and City Council review the existing policies, and after making additional necessary revisions to the policies, adopt revised goals, objectives, and implementation strategies into the Economy Element.

- **Identify opportunities for infill development or redevelopment.** Hines is focusing redevelopment on its industrial land, especially the old mill site. The upcoming brownfields project should assess this site (assuming it is selected as a site for assessment) and provide recommendations for the cleanup and remediation of contamination and pollution, if any. Additionally, redevelopment of the site is likely to require the demolition of obsolete buildings and the removal of old equipment. Once the sites are ready for development, these areas will provide opportunities for new development on sites with direct access to Highway 20.

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

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

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1. Introduction

Harney County, the City of Burns, and the City of Hines collaborated to develop a regional Economic Opportunities Analysis (EOA). The purpose of the EOA is to provide information that will be useful in economic development and that will provide a basis for updating the Economic Element in Burns' and Hines' comprehensive plans. The geographic focus of the EOAs is the Burns and Hines Urban Growth Boundaries (UGBs). The EOA also considers economic development opportunities in unincorporated Harney County but does not present an EOA for unincorporated areas of the County.

The EOA provides information about economic trends affecting Harney County and the Cities, forecasts growth and land needs for employment within Burns and Hines, inventories buildable commercial and industrial land within Burns and Hines and describes the economic development potential in the Cities. The focus of the EOA is employment growth and land-use planning within the Burns and Hines UGBs. The EOA provides additional information that may be useful for broader economic development planning across the County.

The EOA was funded through a grant with the Oregon Department of Land Conservation and Development (DLCD). The State contracted with ECONorthwest to develop the EOA through working directly with staff members, decision makers, and stakeholders in Harney County.

This EOA complies with the requirements of statewide planning Goal 9, the Goal 9 administrative rules (OAR 660 Division 9), and the court decisions that have interpreted them. Goal 9 requires cities to state objectives for economic development (OAR 660-009-0020[1][a]) and to identify the characteristics of sites needed to accommodate industrial and other employment uses (OAR 660-009-0025[1]) over the twenty-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

Harney County last evaluated economic trends in an economic development strategic plan in 2012, and Harney County Economic Development (HCED) convened a Community Response Team (CRT) in 2018 to update the "Strengths, Weaknesses, Opportunities, Threats" (SWOT) section of the plan. This group, which meets regularly to discuss issues facing the Harney County community, specifically reviewed issues of economic development related to housing, workforce, and small business development for the updated SWOT analysis.

At a regional level, the Greater Eastern Oregon Development Corporation (GEODC) updated the Comprehensive Economic Development Strategy (CEDS), which includes Harney County, in 2014. While a CEDS provides a basis for a regional economic development strategy, it does not provide a detailed analysis of economic opportunities and commercial- and industrial-land conditions for Burns and Hines. Burns' economic development policies were updated in 2009 as part of a partial EOA update, while Hines' policies were not updated since the adoption of the comprehensive plan in 1979. The work and coordination of the CRT and HCED has helped Harney County identify the changing opportunities and barriers to economic development in recent years. In 2017, HCED contracted with Greg Smith & Company LLC to provide ongoing economic development services. Representative Smith works as the director of HCED, and along with a local representative from Harney County, he helps the County to implement its goals and policies. Specifically, HCED assists with business recruitment and retention; helps link businesses with resources, funding, and finance tools; and develops long-range strategies for economic development. The EOA helps the County and Cities align these issues with the inventory of commercial and industrial land and site needs for the potential growth industries.

The purpose of this project was to present this specific information about the communities with the intention of developing a factual base to provide the County and its cities with information about current economic conditions. This report provides information necessary for updating each City's economic development comprehensive plan policies. This report identifies opportunities to meet the cities' economic development objectives and develop comprehensive plan policies and implementation strategies that capitalize on their comparative advantages and address areas of economic weakness.

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

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

- *GEODC Comprehensive Economic Development Strategy, 2014–2019*
- *Harney County Economic Development Strategic Plan, September 2012*
- *Community Response Team SWOT Analysis: 2017–2018*

Framework for an Economic Opportunities Analysis

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

1. *Economic Opportunities Analysis (OAR 660-009-0015)*. The Economic Opportunities Analysis (EOA) requires communities to identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on information about national, state, regional, county or local trends, as well as the number of sites by type reasonably expected to be needed to accommodate projected employment growth based on the site characteristics typical of expected uses. Additionally, the EOA requires communities to include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use, and it requires communities to estimate the types and amounts of industrial and other employment uses likely to occur in the planning area. Local governments are also encouraged to assess community economic development potential through a visioning or some other public input-based process in conjunction with state agencies.
2. *Industrial and commercial development policies (OAR 660-009-0020)*. Cities are required to develop commercial and industrial development policies based on the EOA. Local comprehensive plans must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community. Local comprehensive plans must also include policies that require the city or county to designate an adequate number of employment sites of suitable sizes, types, and locations. The plan must also include policies to provide necessary public facilities and transportation facilities for the planning area.
3. *Designation of lands for industrial and commercial uses (OAR 660-009-0025)*. Cities and counties must adopt measures to implement policies adopted pursuant to OAR 660-009-0020. Appropriate implementation measures include amendments to plan and zone map designations, land-use regulations, public facility plans, and transportation system plans. More specifically, plans must identify the approximate number, acreage, and characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies, and they must designate serviceable land suitable to meet identified site needs.

Organization of This Report

This report is organized as follows:

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

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

Harney County and its cities, Burns and Hines, exist as part of the economy of Eastern Oregon. Burns and Hines are the economic center of Harney County, providing urban amenities (such as stores, medical services, or personal financial services) to the residents of the cities and outlying rural areas. The economic focus of the County is in agricultural products (top crop products of hay, field and grass seed, and wheat for grain),¹ retail trade, leisure and hospitality, and other service sectors. In 2012, the County produced an economic development strategic plan and identified opportunities to develop a more resilient economy, including an emphasis on value-added agricultural products and recreational opportunities.²

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

Factors that Affect Economic Development³

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

“Economic development is the process of improving a community’s well-being through job creation, business growth, and income growth (factors that are typical and reasonable focus of economic development policy), as well as through improvements to the wider social and natural environment that strengthen the economy.”⁴

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:

¹ U.S. Department of Agriculture, *Census of Agriculture, Harney County Profile*, 2012.

² Harney County Economic Development Office, *Harney County Economic Development Strategic Plan*, September 2012.

³ The information in this section is based on previous Goal 9 studies conducted by ECONorthwest, as well as Moore, Meck, and Ebenhoh’s (2006) *An Economic Development Toolbox: Strategies and Methods*.

⁴ T. Moore, S. Meck, and J. Ebenhoh, *An Economic Development Toolbox: Strategies and Methods*, American Planning Association, Planning Advisory Service Report Number 541, October 2006.

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

That logic is consistent with the tenet of the Oregon land-use planning program: 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, rather 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.⁵ This shift toward a focus on entrepreneurship, innovation, and small businesses presents additional options for local support for economic development beyond firm attraction and retention. Thus, key questions for economic development policy are (1) What are the factors that influence business and job growth, and (2) What is the relative importance of each? This document addresses that question in depth.

What factors matter?

Why do firms locate where they do? There is no single answer—different firms choose their locations for different reasons. Key determinants of a location decision are a firm's *factors of production*. For example, a firm that spends a large portion of total costs on unskilled labor will be drawn to locations where labor is relatively inexpensive. A firm with large energy demands will give more weight to locations where energy is relatively inexpensive. In general, firms choose locations they believe will allow them to maximize net revenues: if the demand for goods and services is held roughly constant, then revenue maximization is approximated by cost minimization.

⁵ According to the 2018 Small Business Profile from the U.S. Small Business Office of Advocacy, small businesses account for over 99% of total businesses in the United States, and their employees account for nearly 50% of American workers. <https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf>

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

- **Labor.** Labor is often the most important factor of production. Other things 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 more pay either for acquiring labor that is available or recruiting labor from other areas or using the less-productive labor that is available locally.
- **Land.** Demand for land depends on the type of firm. Manufacturing firms need more space and tend to prefer suburban locations, where land is relatively less expensive and less difficult to develop. Warehousing and distribution firms need to locate close to interstate highways.
- **Local infrastructure.** An important role of government is to increase economic capacity by improving quality and efficiency of infrastructure and facilities, such as roads, bridges, water and sewer systems, airport and cargo facilities, energy systems, and telecommunications.
- **Access to markets.** Though part of infrastructure, transportation merits special attention. Firms need to move their product (either goods or services) to the market, and they rely on access to different modes of transportation to do this.
- **Materials.** Firms producing goods, and even firms producing services, need various materials to develop products that they can sell. Some firms need natural resources (i.e., raw lumber) and others may need intermediate materials (i.e., dimensioned lumber).
- **Entrepreneurship.** This input to production may be thought of as good management or even more broadly as a spirit of innovation, optimism, and ambition that distinguishes one firm from another, even though most of their other factor inputs may be quite similar. Entrepreneurial activity, even when unsuccessful, can offer information about the local market that other entrepreneurs can use in starting a new firm. Entrepreneurs are typically willing to take on more risk in uncertain markets, and a strengthened entrepreneurial environment can help to reduce that risk and uncertainty.⁶ Entrepreneurs also tend to have more mobility than larger firms and are more likely to locate in areas with a strong entrepreneurial environment.⁷ 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.

⁶ T. Conroy and S. 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

⁷ E. E. Malizia and E. J. Feser, *Understanding Local Economic Development*, 1999.

The supply, cost, and quality of any of these factors depend on market factors—on conditions of supply and demand locally, nationally, and even globally. But they also depend on public policy. In general, public policy can affect these factors of production through:

- **Regulation.** Regulations protect the health and safety of a community and help maintain the quality of life. Overly burdensome regulations, however, can be disincentives for businesses to locate in a community. Simplified bureaucracies and straightforward regulations can reduce the burden on businesses and help them react quickly in a competitive marketplace.
- **Taxes.** Firms tend to seek locations where they can optimize their after-tax profits. Tax rates are not a primary location factor—they matter only after businesses have made decisions based on labor, transportation, raw materials, and capital costs. The costs of these production factors are usually similar within a region. Therefore, differences in tax levels across communities within a region are more important in the location decision than are differences in tax levels between regions.
- **Financial incentives.** Governments can offer firms incentives to encourage growth. Most types of financial incentives have had little significant effect on firm location between regions. For manufacturing industries with significant equipment costs, however, property or investment tax credit or abatement incentives can play a significant role in location decisions. Incentives are more effective at redirecting growth within a region than they are at providing a competitive advantage between regions.

This discussion may make it appear that a location decision is based entirely on a 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.⁸ 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 of different locational factors. They have used statistical models, surveys, and case studies to examine detailed data on the key factors that enter the business location decision.

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

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

⁸ N. G. Leigh and E. Blakely, *Planning Local Economic Development: Theory and Practice*, 2013.

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

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

The location decisions of businesses are primarily based on the availability and cost of labor, transportation, raw materials, and capital. The availability and cost of these production factors are usually similar within a region. Most economic development strategies available to local governments, however, only indirectly affect the cost of these primary location factors. Local governments can most easily affect tax rates, public services, and regulatory policies. Economists generally agree that these factors do affect economic development, but the effects on economic development are modest. Thus, most of the strategies available to local governments have only a modest effect on the level and type of economic development in the community.

Local governments can provide support for new and existing small businesses through policies and programs that support entrepreneurship and innovation. The National League of Cities suggests strategies for local governments, including strong leadership from elected officials; better communication with entrepreneurs, especially about the regulatory environment for businesses in the community; and partnerships with colleges, universities, small business development centers, mentorship programs, community groups, businesses groups, and financial institutions.⁹

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

⁹ National League of Cities, *Supporting Entrepreneurs and Small Businesses*, 2012. <https://www.nlc.org/supporting-entrepreneurs-and-small-business>

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

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

- **Mixed recovery from the national recession.** Incomes in Harney County are below statewide averages and employment has decreased since the early 2000s. Additionally, the unemployment rate in Harney County has declined since the recession, but it has remained higher than the statewide average.
 - Harney County's household income is lower than the State median, and Burns' household income is lower than the County while Hines' household income is higher than the County. In the 2012–2016 period, Burns' median household income was \$36,396, about 6% lower than Harney County's median household income of \$38,431. In the same time period, Hines' median household income was \$42,333, about 9% higher than the County's median household income.
 - The unemployment rate in Harney County has declined since the recession, consistent with the patterns of Oregon and nationwide changes in employment. Unemployment rates for 2017 in Harney County and across Oregon and the nation are below their respective 2000 rates, and Harney County's rate has been consistently higher than Oregon and the United States since 2000. In 2017, the unemployment rate in Harney County was about 6.3%, higher than Oregon's rate of 4.1% and the national rate of 4.4%.
 - Employment has declined in Harney County since 2001, with a loss of about 166 employees between 2001 and 2017. The largest decreases were in retail and government sectors. Employment in natural resources and mining, as well as wholesale trade, increased by about 58 and 42 employees, respectively. However, the majority of this decrease occurred prior to 2006. Between 2006 and 2017, employment in Harney County increased by about 78 employees.
- **Recent growth in agriculture and service-sector businesses.** Employment in agricultural industries increased in Harney County between 2006 and 2017 by about 87 employees. Service-sector industries, such as health care, social assistance, and private education, also increased by about 18 employees in Harney County. An increase in health-care employment is likely related to the increase in the County's population over the age of 60, as they often require increased medical care.
- **Availability of trained and skilled labor.** Availability of labor depends, in part, on population growth and in-migration. Harney County's population decreased by 240 people between 2000 and 2017, at an average annual growth rate of -0.2%. Most of the decrease in population occurred between 2000 and 2010, with a net out-migration of 205 people. In comparison, Oregon's employment grew at an average annual growth rate of 1.1% between 2000 and 2017, with 66% of population coming from in-migration.

The 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, including employed and unemployed workers. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2012–2016 American Community Survey, Burns had more than 1,200 people in its labor force, Hines had more than 650, and Harney County had over 3,400. The participation rates in Burns (52%), Hines (60%), and Harney County (58%) were all lower than Oregon (60%) in the 2012–2016 period. Nonparticipants in the labor force (the 42% of people not participating in Harney County’s labor force) include students 16 years and older, retirees, and unemployed people not actively seeking work. A higher concentration of older residents in an area, or a mismatch of the types of jobs available in an area and the types of skills of the labor force, can contribute to low labor force participation rates.

Commuting and educational attainment also play important roles in availability of labor. Businesses in Burns and Hines draw employees from across Harney County as well as Baker, Grant, Lake, and Malheur Counties. Harney County residents have a similar level of educational attainment relative to Oregon, reporting some college or an associate’s degree. County residents, though, tend to have lower levels of bachelor’s or professional degree attainment relative to the State.

The issue for finding workers in Harney County is less about whether workers are educated enough or have the necessary skills, rather, it is about whether workers lack the “soft skills” that businesses need for a dependable and productive workforce, such as being reliable and sober. This is a common issue across Oregon, but it is an especially acute problem in rural areas.

- **Increased diversity.** Overall, Oregon, along with Harney County, is becoming more racially and ethnically diverse. Between 2000 and 2012–2016, the Hispanic and Latino population in Oregon increased from 8% to 12%, and it increased in Harney County from 4% to 5%. The nonwhite population in Oregon increased from 13% to 15% and remained about the same in Harney County, at about 8%. While Harney County is less ethnically and racially diverse than the State, providing culturally specific services to Native American and Spanish-speaking community members can help improve their participation in the workforce and economy.
- **Ageing of the population.** The City of Burns, the City of Hines, and Harney County have a larger percentage of residents 60 years and older relative to Oregon. Burns’ median age, which was 38.7 in 2000, increased to 46 by the 2012–2016 period. Hines’ median age, which was 39.6 in 2000, increased at a slower rate to 40.7 by the 2012–2016 period. In comparison, Oregon’s median age was 36.3 in 2000 and increased to 39.1 by the 2012–2016 period.

Harney County's population is expected to continue to age, with people 60 years and older increasing from 32% of the population in 2016 to 38% of the population in 2035, consistent with statewide trends. Burns and Hines may continue to attract midlife and older workers over the planning period. While Burns' and Hines' share of retirees may increase over the next twenty years, availability of people nearing retirement (e.g., 55 to 70 years old) is likely to increase. People in this age group are continuing to work until later in life, and they may boost the skilled labor pool, providing opportunities to support business growth in Burns and Hines.

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

- **Importance of small businesses**¹⁰ Small businesses, with 100 or fewer employees, account for 66% of private-sector employment in Oregon. Workers of small businesses typically have had lower wages than the State average. The average size for a private business in Harney County is 5 employees per business, compared to the State average of 11 employees per private business. Businesses with 50 or fewer employees account for roughly 91% of private employment in Harney County. Businesses with 9 or fewer employees account for 46% of private employment and 4 or fewer account for 21% of private employment. Growth of small businesses presents key opportunities for economic growth in Harney County.

While many small-business owners operate in Harney County because they prefer its remote location, this factor also presents a challenge via access to a limited market and difficulty in efficiently transporting supplies or products in and out of the County. Because of the County's remote location, development of new businesses in Harney County will likely form out of entrepreneurs and microenterprises (businesses with less than 10 employees). These businesses could be a part of industries that serve visitors or residents, such as child care.

- **Importance of high-quality natural resources.** Agricultural industries in Harney County have been, and continue to be, a large part of the Eastern Oregon economy, including Harney County. According to the U.S. Census of Agriculture, in 2012, Harney County's largest crop in both acres and sales was hay. The average size of farms in Oregon was 460 acres, while the average size in Harney County was 3,029 acres. The average farm size in both Oregon and Harney County increased between 2007 and 2012, while the overall number of farms decreased.

¹⁰ There are many definitions for "small business," but for the purposes of evaluating opportunities and recommendations for Harney County, the City of Burns, and the City of Hines, ECONorthwest generally considered small businesses to be those with 15 or fewer employees. Microenterprises have a more commonly accepted definition of 10 or fewer employees, which we also reference in the analysis.

The average economic output per farm in Harney County was \$28,565, and the most common agricultural products were hay and cattle.¹¹ The age of farm owners is also a factor in changing agricultural industries. The average age of a principal farm operator in Harney County was 58 years old in 2012, an increase from 56 years old in 2007. The average age in Oregon in 2012 was slightly higher at 60 years old. Retirement of farmers may create a future barrier to economic growth in the County if farming decreases, because there are no replacements for retiring farmers.

In addition to changes in future farm ownership, agricultural industries in Eastern Oregon are also transitioning to a New Natural Resource Economy (NNRE), which includes habitat restoration, renewable energy, and agritourism or ecotourism.¹² For example, emerging innovations in processing juniper for wood products or using the biomass for fuel production, present an opportunity to address issues of overgrown juniper in areas of Harney County

Another type of natural resource in Harney County is the natural environment and surrounding beauty of the forest and high desert. Most notably, Harney County has important wildlife resources, such as the Malheur Wildlife Refuge and Harney Basin, which attracts visitors to the County for the Migratory Bird Festival. The Steens Mountains, Alvord Desert, and other natural areas also attract visitors for opportunities in outdoor recreation such as hiking, biking, hunting, and night-sky viewing. These natural resources are key to attracting tourism to the County.

- **Increases in energy prices.** In 2017, lower energy prices have decreased the costs of commuting. Over the long term, if energy prices increase, these higher prices will likely affect the mode of commuting before affecting workers' willingness to commute. For example, commuters may choose to purchase a more energy-efficient car or carpool. In Harney County, the options for modes of commuting are more limited than in urban areas with access to transit, bike, and pedestrian infrastructure. Very large increases in energy prices may affect workers' willingness to commute, especially workers living the furthest from Burns and Hines 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 off-shore manufacturing, especially of large, bulky goods.

¹¹ "Average economic output" is the "net cash farm income per farm." U.S. Department of Agriculture, Census of Agriculture, 2012.

¹² University of Oregon Community Service Center, *Supporting Eastern Oregon's New Natural Resource Economy*, August 2017.

Employment Trends in Harney County

The economy of the nation changed substantially between 1980 and 2017. These changes affected the composition of Oregon's economy, including the economies of Harney County, the City of Burns, and the City of Hines. 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 was the shift from a timber-based economy to a more diverse economy, with the greatest employment in services.

This section focuses on changes in the economy in Harney County since 2001. Employment in Harney County decreased overall between 2001 and 2017 but had a modest increase postrecession. Employment in natural resources continued to grow since 2001, along with other service-oriented sectors, such as health care and leisure and hospitality.

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

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

Even with this shift, high-quality natural resources are an essential part of Oregon's economy. In areas of Eastern Oregon, the New Natural Resource Economy (NNRE)¹³ emerged. NNRE includes business that specialize in habitat restoration, renewable energy, and agritourism or ecotourism.¹⁴ NNRE businesses contribute to the innovation and strengthening of the entrepreneurial environment in Eastern Oregon. For example, as NNRE businesses value both economic and environmental resiliency, some businesses have developed new uses for natural resources, such as native plant nurseries that also serve habitat restoration functions, or farmers' reuse of production waste from distilleries or breweries, such as spent grain.¹⁵

¹³ University of Oregon Community Service Center, *Supporting Eastern Oregon's New Natural Resource Economy*, August 2017.

¹⁴ University of Oregon Community Service Center, "Supporting Eastern Oregon's New Natural Resource Economy Executive Summary," p. 2, August 2017.

¹⁵ University of Oregon Community Service Center, "Supporting Eastern Oregon's New Natural Resource Economy," August 2017.

Exhibit 4 shows covered employment¹⁶ in Harney County for 2001 and 2017. Employment decreased by 166 jobs, or 7%, over this period. The sectors with the largest increases in numbers of employees were natural resources and mining, wholesale trade, and other services. Sectors that shrank in employment size include retail trade, financial activities, professional and business services, and transportation, warehousing, and utilities. The average wage for employment in Harney County in 2017 was about \$36,661.

Exhibit 4. Covered Employment by Industry, Harney County, 2001–2017

Sector	2001	2017	Change 2001 to 2017		
			Difference	Percent	AAGR
Natural Resources and Mining	151	209	58	38%	2.1%
Construction	81	105	24	30%	1.6%
Manufacturing	236	ND	--	--	--
Wholesale trade	15	57	42	280%	8.7%
Retail trade	333	300	-33	-10%	-0.7%
Transportation, Warehousing & Utilities	51	50	-1	-2%	-0.1%
Information	26	ND	--	--	--
Financial Activities	61	50	-11	-18%	-1.2%
Professional and Business Services	64	61	-3	-5%	-0.3%
Education and Health Services	161	174	13	8%	0.5%
Leisure and Hospitality	226	239	13	6%	0.4%
Other Services	56	85	29	52%	2.6%
Government	1,079	1,044	-35	-3%	-0.2%
Total	2,540	2,374	-166	-7%	-0.4%

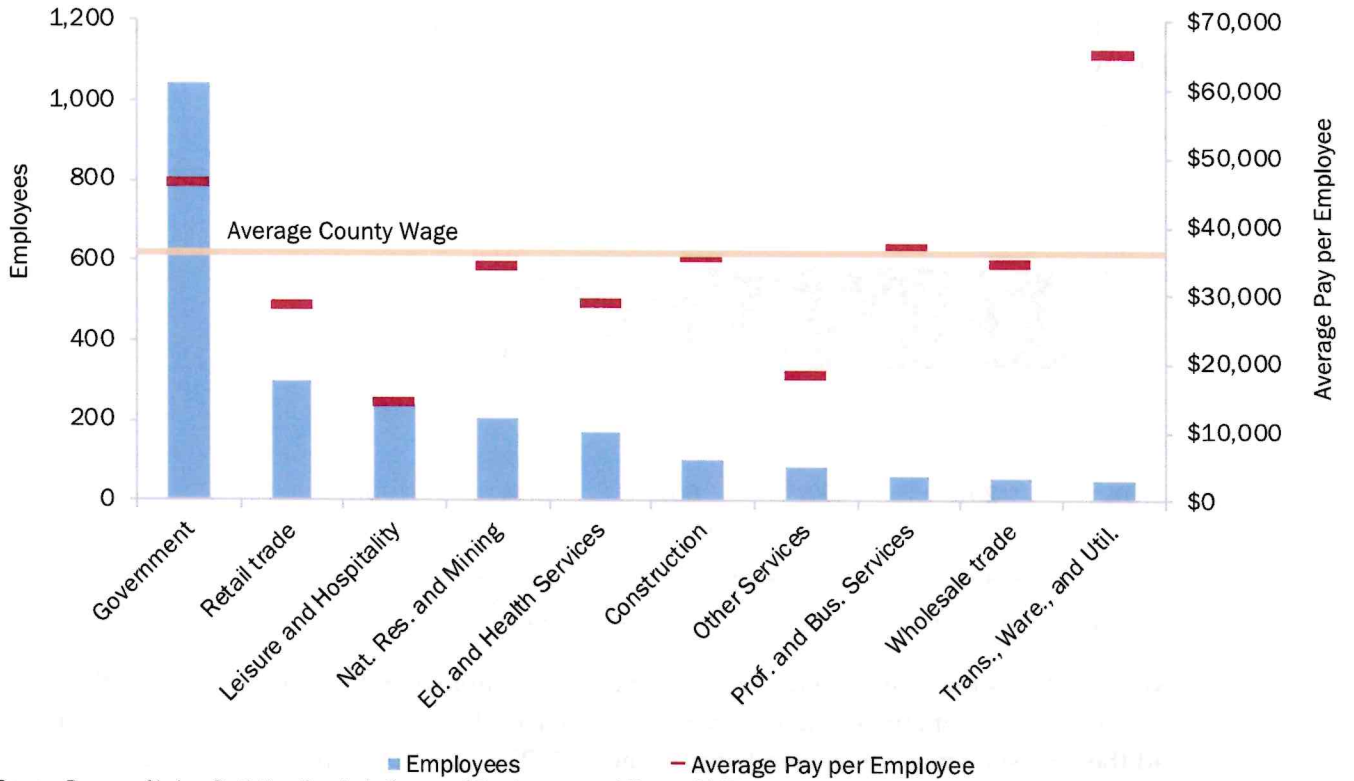
Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2001–2017.

Note: "ND" stands for "Not Disclosed" and indicates that the data has been suppressed by the BLS due to confidentiality constraints. The total amount of not-disclosed employment is shown in the table.

Exhibit 5 shows covered employment and average wage for the ten largest industries in Harney County. Jobs in government, which account for about 44% of the County's covered employment, pay more per year than the County average (\$46,346 compared to \$36,661). Jobs in natural resources and mining, construction, professional and business services, and wholesale trade pay the approximate wage of the 2017 County annual average. Retail trade, leisure and hospitality, education and health services, and other services pay below the 2017 County average, while transportation, warehousing, and utilities pay well above the County average.

¹⁶ "Covered employment" includes employees covered by unemployment insurance. Examples of workers not included in covered employment are sole proprietors, some types of contractors (often referred to as "1099 employees"), or some railroad workers. Covered employment data is from the Oregon Employment Department.

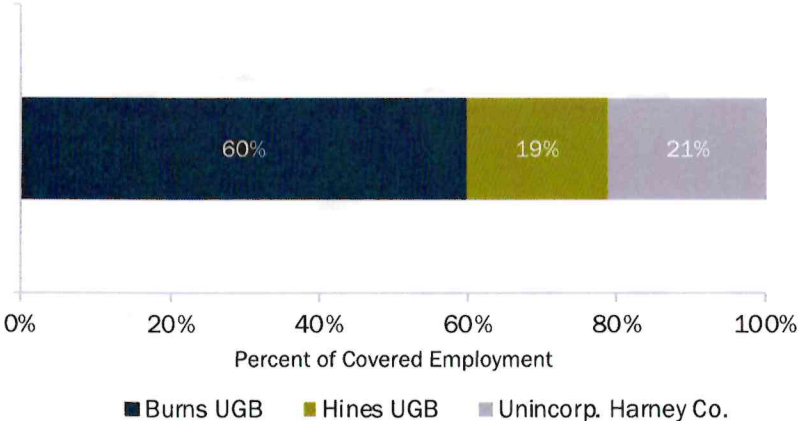
Exhibit 5. Covered Employment and Average Pay by Sector, 10 Largest Sectors, Harney County, 2017



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

Exhibit 6 shows the share of covered employment in Harney County, the City of Burns, and the City of Hines in 2017. Burns has the largest share of covered employment in Harney County at 60%. Hines has 19% of the County’s employment and the remaining 21% is in unincorporated Harney County.

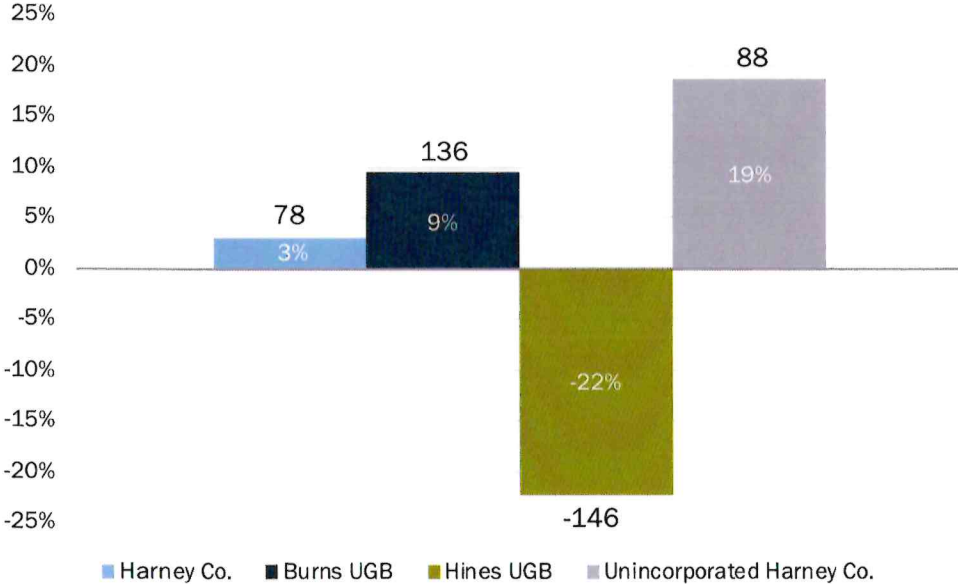
Exhibit 6. Share of Covered Employment in Harney County, 2017



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

Exhibit 7 shows the change in the location of covered employment in Harney County, the City of Burns, the City of Hines, and unincorporated Harney County between 2006 and 2017. Hines had the largest decrease in covered employment at -22%. Employment in Burns and unincorporated Harney County increased by 9% and 19%, respectively. In Harney County overall, employment increased by 3% between 2006 and 2017.

Exhibit 7. Change in the Location of Covered Employment in Harney County, Burns UGB, and Hines UGB, 2006–2017



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

Exhibit 8 shows a summary of covered employment data for the City of Burns in 2017. The sectors with the greatest number of employees were local government (44%), retail trade (13%), and health care, social assistance, and private education (9%). These sectors accounted for 1,042 jobs or 66% of Burns' employment.

Exhibit 8. Covered Employment and Average Pay by Sector, Burns UGB, 2017¹⁷

Sector/Industry	Establishments	Employees	Payroll	Average Pay / Employee
Agriculture, Forestry, Fishing and Hunting	5	14	\$ 606,662	\$ 43,333
Utilities, Transportation and Warehousing	8	29	\$ 1,586,733	\$ 54,715
Construction	16	108	\$ 4,756,176	\$ 44,039
Manufacturing and Wholesale Trade	4	41	\$ 1,520,978	\$ 37,097
Retail Trade	17	198	\$ 5,969,575	\$ 30,149
Information	3	11	\$ 445,882	\$ 40,535
Finance and Insurance; Real Estate/Rental/Leasing	10	43	\$ 1,537,966	\$ 35,767
Professional, Scientific, and Technical Services	7	31	\$ 1,252,341	\$ 40,398
Administrative and Support and Waste Mgmt/Remed. Serv.	5	5	\$ 51,483	\$ 10,297
Health Care and Social Assist.; Private Education	16	142	\$ 4,149,455	\$ 29,222
Arts, Entertnmnt, and Recrtn; Accommod. and Food Serv.	19	117	\$ 1,393,652	\$ 11,912
Other Services	22	45	\$ 701,776	\$ 15,595
Federal Government	2	10	\$ 500,136	\$ 50,014
State Government	5	85	\$ 4,608,992	\$ 54,223
Local Government	17	702	\$ 28,870,906	\$ 41,127
Total	156	1,581	\$ 57,952,713	\$ 36,656

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

The average size for a private business in Burns is 6 employees per business, compared to the State average of 11 employees per private business. Businesses with 50 or fewer employees account for roughly 91% of private employment in Burns. Businesses with 9 or fewer employees account for 44% of private employment and 4 or fewer account for 18% of private employment.

¹⁷ The following sectors were combined due to confidentiality of QCEW data: utilities, transportation, and warehousing; manufacturing and wholesale trade; finance, insurance, real estate, and rental and leasing; health care, social assistance, and private education; arts, entertainment, recreation, and accommodation and food services.

Exhibit 9 shows the employment and average pay per employee for sectors in Burns. Average pay for all employees (\$36,656) is shown as a light-brown line across the graph and average pay for individual sectors as short red lines. The figure shows that government and industrial sectors have above average wages. The lowest wages are in leisure activities, which includes arts, entertainment, recreation, and accommodation and food services. The highest employment is in local government, which includes employment at the Harney County School District and the Harney District Hospital.

Between 2006 and 2017 employment in industrial sectors in Burns increased by about 50 employees, retail trade decreased by about 20 employees, and office and commercial services employment decreased slightly by about 10 employees. Government employment also increased by about 116 employees.

Exhibit 9. Covered Employment and Average Pay by Sector, Burns UGB, 2017¹⁸



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

¹⁸ The following sectors are combined in the chart: “FIRE” includes finance, insurance, and real estate; “Information and Other Services” includes informational, professional, scientific, and technical services, in addition to administrative support, waste management, remediation, and other services (except public administration); “Leisure Activities” includes arts, entertainment, recreation, and food and accommodation services; and “Industrial sectors” includes agriculture, forestry, fishing and hunting, utilities, transportation, warehousing, construction, manufacturing, and wholesale trade.

Exhibit 10 shows a summary of covered employment data for the City of Hines in 2017. The sectors with the greatest number of employees were industrial sectors (19%), leisure activities (19%), and retail trade (16%). These sectors accounted for 278 jobs or 55% of Hines' employment.

Exhibit 10. Covered Employment and Average Pay by Sector, Hines UGB, 2017¹⁹

Sector/Industry	Establishments	Employees	Payroll	Average Pay / Employee
Industrial	14	101	\$ 4,743,838	\$ 46,969
Retail Trade	8	80	\$ 2,249,980	\$ 28,125
Office and Other Services	22	61	\$ 1,436,283	\$ 23,546
Leisure Activities	8	97	\$ 1,534,894	\$ 15,824
Federal Government	4	74	\$ 4,529,631	\$ 61,211
State Government	2	14	\$ 1,002,731	\$ 71,624
Local Government	5	81	\$ 2,944,837	\$ 36,356
Total	63	508	\$ 18,442,194	\$ 36,304

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

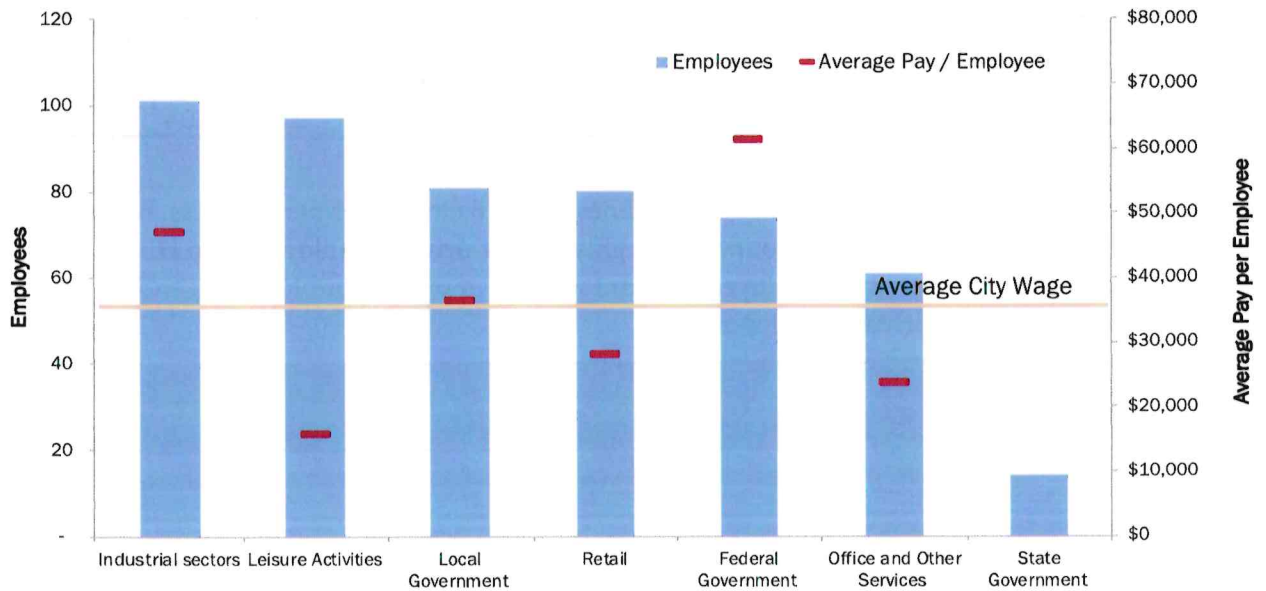
The average size for a private business in Hines is also 6 employees per business. Businesses with 50 or fewer employees account for roughly 84% of private employment in Hines. Businesses with 9 or fewer employees account for 12% of private employment, and 4 or fewer account for 18% of private employment.

¹⁹ The following sectors were combined due to confidentiality of QCEW data: "Industrial" includes agriculture, forestry, fishing and hunting, utilities, construction, and wholesale trade; "Office and Other Services" includes real estate, rental and leasing, informational, professional, scientific, and technical services, in addition to administrative support, waste management, remediation, health care, social assistance, and other services (except public administration); and "Leisure Activities" includes arts, entertainment, recreation, and accommodation and food services.

Exhibit 11 shows the employment and average pay per employee for sectors in Burns. Average pay for all employees (\$36,304) is shown as a light-brown line across the graph and average pay for individual sectors as short red lines. The figure shows that industrial sectors and government sectors have above average wages. The lowest wages are in leisure activities, retail, and office and other services.

Between 2006 and 2017, employment in Hines decreased overall. Employment in industrial sectors decreased by about 178 employees, retail trade increased slightly by about 10 employees, and office and other commercial services decreased by about 16 employees. Government employment increased by about 37 employees.

Exhibit 11. Covered Employment and Average Pay by Sector, Hines UGB, 2017²⁰



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

²⁰ The following sectors were combined due to confidentiality of QCEW data: "Industrial sectors" includes agriculture, forestry, fishing and hunting, utilities, construction, and wholesale trade; "Office and Other Services" includes real estate, rental and leasing, informational, professional, scientific, and technical services, in addition to administrative support, waste management, remediation, health care, social assistance, and other services (except public administration); and "Leisure Activities" includes arts, entertainment, recreation, and accommodation and food services.

Outlook for Growth in Harney County

Exhibit 12 shows the Oregon Employment Department's forecast for employment growth by industry for Oregon's six eastern counties (Baker, Grant, Harney, Malheur, Union, and Wallowa) over the 2017 to 2027 period. Employment in the region is forecasted to grow at an average annual growth rate of 0.7%.

The sectors that will lead employment in the region for the ten-year period are private educational and business services (650 jobs); leisure and hospitality (520 jobs); construction (320 jobs); manufacturing (290 jobs); trade, transportation, and utilities (240 jobs); and natural resources and mining (160 jobs). In sum, these sectors are expected to add 2,190 new jobs, or about 77% of employment growth in the six-county Eastern Oregon region.

Harney County accounts for about 6% of employment in these six counties. Harney County's employment in federal government accounts for about 18% of all employment in the Eastern Oregon counties. This large share of employment in Harney County is mostly at the Bureau of Land Management (Malheur National Wildlife Refuge, Steens Mountain) and the U.S. Forest Service (Malheur National Forest).

Exhibit 12. Regional Employment Projections, 2017–2027, Eastern Oregon Counties (Baker, Grant, Harney, Malheur, Union, and Wallowa)

Industry Sector	2017	2027	Change 2017 - 2027		
			Number	Percent	AAGR
Total private	27,750	30,150	2,400	9%	0.8%
Natural resources and mining	2,830	2,990	160	6%	0.6%
Mining and logging	390	400	10	3%	0.3%
Construction	1,290	1,610	320	25%	2.2%
Manufacturing	3,200	3,490	290	9%	0.9%
Trade, transportation, and utilities	7,420	7,670	250	3%	0.3%
Wholesale trade and retail trade	6,090	6,330	240	4%	0.4%
Transportation, warehousing, and utilities	1,330	1,340	10	1%	0.1%
Information	440	410	-30	-7%	-0.7%
Financial activities	920	960	40	4%	0.4%
Professional and business services	1,500	1,610	110	7%	0.7%
Private educational and health services	5,240	5,890	650	12%	1.2%
Leisure and hospitality	3,480	4,000	520	15%	1.4%
Other services	1,430	1,520	90	6%	0.6%
Government	9,340	9,580	240	3%	0.3%
Federal government	1,250	1,250	0	0%	0.0%
State government	1,980	2,040	60	3%	0.3%
Local government	6,110	6,290	180	3%	0.3%
Local education	3,730	3,830	100	3%	0.3%
Self-employment	1,870	2,070	200	11%	1.0%
Total payroll employment	38,960	41,800	2,840	7%	0.7%

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

Harney County's Strengths, Weaknesses, Opportunities, and Threats

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

There is little that local jurisdictions can do to influence national and state conditions that affect economic development, though they can influence local factors that affect economic development. Harney County's primary competitive advantages are land, recreational opportunities, and quality of life. These factors make Harney County attractive to residents and businesses that want a high quality of life where they live and work.

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

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

Strengths

Harney County

The strengths that apply to the whole County include:

- **Natural resources and renewable energy resources.** Farming and ranching remain large industries in Harney County. Hay has a relatively high crop value for Harney County, which is a good environment for many crops (hay, alfalfa, hemp) and livestock. Harney County also has potential for renewable energy resources, including geothermal, solar, and wind power.

- **Attractions and services for visitors.** A large share of Harney County’s land is located on federal land, which provides many opportunities for outdoor recreational activities such as hiking, hunting, camping, biking, and bird watching. The Harney County Chamber of Commerce describes the “7 Wonders of Harney County” as the Steens Mountains, the Alvord Desert, the Malheur Wildlife Refuge, and the Malheur National Forest, in addition to the hot springs, diamond craters, and star gazing.²¹ Visitors are also drawn to special events that take place throughout the year in Harney County, including the Migratory Bird Festival, the Skull Gravel Grind Bike Race, and the Harney County Fair and Rodeo.
- **Transportation.** Harney County has access to both a north–south and east–west U.S. Highway—Highway 395 and Highway 20. Highway 396 is a suitable option for moving goods and supplies, as it is not congested and has a reasonable grade. It provides options to reach markets in California and Nevada, while Highway 20 reaches markets to the east in Idaho and to the west in Bend and Western Oregon.
- **Partnerships within and across the region.** Economic development partnerships, such as the Greater Eastern Oregon Development Corporation (GEODC) and Harney County Economic Development (HCED), offer opportunities to foster economic and business growth across Harney County. HCED’s Community Response Team helps to regularly identify issues across economic and community development needs and works through an action plan to implement countywide goals. Other partners for economic and community development include Business Oregon, the Department of Land Conservation and Development (DLCD), and other state agencies.
- **Bureau of Land Management District Office.** The Bureau of Land Management (BLM) has a district office located south of the Hines UGB along Highway 20. While not included in the employment forecasts for the Burns and Hines UGBs, employment at the BLM is part of government employment in Harney County, which offers higher-than-average wages.
- **Burns Paiute Tribe.** The Burns Paiute Tribe is a primary employer in Harney County, including a large share of employees who are nontribal members. As a large employer in the County providing well-paying jobs, the Burns-Paiute Tribe is a key partner in these growth efforts
- **Airport.** The Burns Municipal Airport is owned by the City of Burns but is located about five miles outside of its UGB. The airport provides services such as a 24-hour terminal, self-service fuel, and a flight school, but no passenger air service.²²
- **Quality of life.** Residents of Harney County enjoy living in a place with access to land, outdoor activities, and a small-town character. They value access to services such as health care and schools.

²¹ Harney County Chamber of Commerce. <https://harneycounty.com/>

²² <http://www.ci.burns.or.us/airport.html>

Burns

The strengths that apply to the City of Burns include:

- **Entrepreneurial environment.** Business owners value the supportive environment for starting and growing their business in Burns. While they face challenges of a limited customer base, the City's remote location results in little competition.
- **Treasure Valley Community College Burns Outreach Center.** The Treasure Valley Community College has an outreach center located in Burns near the high school. This location provides opportunities for high school students to learn new skills, as well as providing options for continuing adult education.
- **Water.** The City of Burns operates five groundwater wells. These wells have an approximate pumping capacity of over 4,000 gallons per minute. This water flow capacity imposes no strain on Burns' water supply to serving residents. Burns also completed the construction of a new 2,000,000-gallon water storage tank in the last several years. This increase in storage capacity, in addition to the City's water line connection to Hines in case of emergencies, supports Burns' ability to accommodate future population and business growth.²³
- **Services for residents.** Burns has basic amenities available to residents, including service-sector businesses (grocery store and restaurants), banks, County services, parks, schools, and a hospital. Residents value the services available at the Harney District Hospital, which brings specialists into Burns part time. The hospital also provides buses that will transport people who need medical care to a larger hospital.
- **Services for visitors.** Burns provides services for visitors, including restaurants, hotels and other accommodations, gas stations, and a grocery store. Visitors can also learn about Harney County's history at the Harney County Historical Society and Museum in Burns.
- **Livability.** Generally, property is inexpensive in Burns and workers can commute to and from work with no traffic congestion. Residents value the small-town character of Burns and feel connected to their community. They also value the opportunity to easily access the diverse natural areas—from forest to high desert—within a relatively short distance.

²³ Based on interview with City of Burns staff.

Hines

The strengths that apply to the City of Hines include:

- **Location.** Hines' location along U.S. Highway 20 attracts more traffic to commercial areas in the City, providing a major intersection with Burns-Izee Road at the southern boundary of Hines. Most of Hines is also not located in a floodplain area, which creates little constraint on new development.
- **Wastewater.** The City of Hines does not have a wastewater treatment plant, using lagoons to treat their wastewater through UV light. Approximately 130,000 gallons of wastewater is pumped into their lagoon system daily. Three lagoons make up the City's wastewater system. Two ten-acre lagoons serve as primary basins for holding wastewater, and these are tied together by a channel to ensure their volume levels are approximately equivalent. The third lagoon, approximately fourteen acres in size, is an older one that was constructed in the mid-to-late 90s. It is used to catch any excess overflow from the two primary lagoons.

Infiltration is an issue for their wastewater system, particularly during wet weather months. Heavy rain events and snowpack melt can also lead to infiltration. However, infiltration is not pervasive in general, and overall, Hines' wastewater infrastructure is in good condition.²⁴

- **Support for new businesses.** The Hines City Council has been supportive of new businesses and open to economic growth. They are willing to work with potential new business owners, to the extent possible, to determine how to locate in Hines.
- **Services for visitors.** Hines, similar to Burns, provides services for visitors, including restaurants, retail stores, gas stations, and overnight accommodations.
- **Services for residents.** Hines provides commercial services for residents, including larger stores and other retail services. Hines also has a middle school, post office, and parks.

²⁴ Based on interview with City of Hines staff.

Weaknesses

Harney County

The weaknesses that apply to the whole County include:

- **Remote location.** While many residents choose to live in Harney County because of its remote location, this also presents a barrier for businesses to transport goods and supplies quickly. The remote location limits the number of visitors likely to come to Harney County, given the relatively limited services for visitors (such as overnight accommodations).
- **Lack of adequate workforce.** Employers find difficulty in accessing a skilled, reliable workforce. Barriers to hiring and retaining employees include lack of skills needed for the job, work ethic, and sobriety of workers. Students who graduate from high school in Harney County often leave the County for higher education opportunities (including technical education), as the options in Harney County are limited. Many of these students do not return and find jobs elsewhere outside of the County.
- **Broadband connectivity.** Access to reliable internet in Harney County is not possible for many residents, as providers do not have enough infrastructure in place to meet the demand for access and speed. The lack of reliable internet access disrupts business activities when the internet connections fail. The County has conducted a broadband feasibility study to identify necessary infrastructure to install fiber-optic infrastructure to bring reliable broadband internet to Harney County.
- **Housing availability.** Overall, the condition of housing in the County is a key barrier in attracting new workers to businesses or agencies with existing jobs that need to locate in the County. The lack of rental housing also creates a strain on attracting workers, especially for low- and middle-income workers. A key barrier in increasing available housing is the lack of developers interested in delivering new housing in Harney County.
- **Inspection and permitting process.** Barriers to starting and running a business in Harney County include the speed of inspection and permitting processes. The lack of access to local inspectors for commercial construction leads to bringing in inspectors from outside of Harney County. The speed of this process creates a strain on new business owners.
- **Limitations of transportation infrastructure.** Moving large amount of goods and supplies in and out of Harney County is difficult with no rail or major interstate access. This creates a barrier for certain companies looking to locate in Harney County.
- **Access to supplies.** Business owners note that another barrier to running a business in Harney County is the speed of receiving needed supplies. Ordering special parts, for example, takes much longer than if the business was located in a more urban area. Some businesses attempt to purchase supplies locally, but certain parts and supplies are not available in the County.

Burns

The weaknesses that apply to the City of Burns include:

- **Wastewater.** Burns does not have a wastewater treatment plant; alternatively, it has a lagoon system where wastewater is UV-treated. Overall, the City's collections system is in relatively poor condition. Infiltration and inflow are the primary issues, despite Burns' generally adequate treatment capacity. However, an early wastewater system evaluation shows Burns approaches their maximum wastewater capacity during normal years. In a given year where Burns experiences an excess of wet weather events, their lagoon system may overflow.²⁵
- **Workforce availability.** Employers in Burns faces challenges in finding skilled, reliable workers. Barriers to hiring and retaining employees include irregular availability and sobriety of workers. As more workers retire and continue to live in Burns, an aging workforce also presents a barrier to finding new workers in Burns.
- **Staff capacity and resources for economic development.** Similar to other small cities, Burns cannot dedicate full-time staff to economic development efforts. This means that staff work with other local and regional partners, including Harney County Economic Development, to implement economic development goals.
- **Lack of a strategy for historical buildings.** Burns has numerous historical buildings but lacks a cohesive strategy for taking advantage of the historical buildings. Burns could attract more residents and visitors through rehabilitation of historical buildings, especially those in commercial areas. Recent efforts related to historic preservation in Burns could help in these rehabilitation efforts.

²⁵ Based on interview with City of Burns staff.

Hines

The weaknesses that apply to the City of Hines include:

- **Commercial building condition.** Hines residents note that some ill-maintained properties in Hines make the City less attractive for visitors and new businesses looking to locate in Hines. Efforts to rehabilitate and improve the appearance of these buildings may attract more visitors and businesses to Hines. Additionally, an old mill site could potentially be an opportunity for new development, but it is a brownfield site and would require clean up. The City is working on a brownfield study to determine the status of the site.
- **Water.** Hines draws their water from three permanent wells. They have a fourth groundwater well for emergencies, and Hines has an agreement with the City of Burns to use Burns' mobile generator in the case of a power outage or other emergency. The capacity of Hines' three permanent wells is about 2,400 gallons pumped per minute. Water is currently stored in two reservoirs, one 250,000-gallon elevated steel tank and one 600,000-gallon bolted steel reservoir tank. This allows for 850,000 gallons of storage; however, Hines' master plan calls for 1.4 million gallons of needed storage. Moreover, the plan notes the City's existing water storage facilities are in poor condition and will need to be improved to serve residents reliably.

Needed improvements to the water system include the replacement of pump motors and pump station buildings for groundwater wells; installation of well transducers to measure the depth of water in the wells; and the installation of a backup generator and security fencing.²⁶

- **Seasonality of jobs.** There are more jobs in the summer in Hines and fewer available in the winter. While employers have difficulty finding an adequate workforce, other challenges include a mismatch of skills and youth leaving the community because of the lack of jobs.

²⁶ Based on interview with City of Hines staff.

Opportunities

Harney County

The opportunities that apply to the whole County include:

- **Highway connections.** U.S. Highway 395 provides a north–south connection to California and Nevada. It connects in Harney County (north of Burns) with Highway 20 and is relatively flat and less congested than I-5. U.S. Highway 20 provides an east–west connection through Burns and Hines. It connects to U.S. Highway 26 near the Oregon–Idaho border.
- **Connections with Idaho and Nevada.** Harney County is connected to Boise via Highway 20, which links to Highway 26 and eventually I-84. This creates opportunities for shipping goods and materials to and from Boise, as Burns and Hines are located about 190 miles from Boise via this route. Harney County is connected with northern Nevada via Highway 395.
- **Broadband connectivity.** As noted in the previous section, internet access in Harney County is unreliable. The lack of communications infrastructure creates barriers for new and existing businesses to connect with customers, suppliers, and other contacts necessary to run their business. The Phase 1 Broadband Feasibility Report and Phase 2 Action Plan identify the barriers and opportunities to developing broadband access in Harney County. These include establishing a nonprofit entity to apply for grant opportunities and manage the new network, as well as steps to develop needed infrastructure.
- **Support for small businesses, microenterprises, and entrepreneurs.** Since many residents of Harney County are attracted to the lifestyle and quality of life of the area, the County can promote these features for entrepreneurs who can work remotely and small businesses with 15 or fewer employees. Other businesses that are likely to locate in Harney County will be microenterprises that would employ less than 10 people and can help to provide necessary services for visitors and residents, such as restaurants, in-home care for seniors, or child-care services. Providing support services for these microenterprises, as well as entrepreneurs, is important to help remove barriers to starting a business with limited access to capital or other resources.
- **Access to natural resources and recreation.** The natural resources and recreational opportunities in areas such as the Malheur Wildlife Refuge and National Forest, the Alvord Desert, and other surrounding areas provide opportunities to grow tourism, support agricultural activities, and support development of renewable energy sources. The Oregon State University Agricultural Extension Services is one partnership that can continue to help businesses in Harney County capitalize on innovative solutions to agriculture and natural resource management, especially related to reducing water usage, which is increasingly important in the County.

- **Workforce housing.** Harney County is currently part of a GEODC project with funding from Oregon Housing and Community Services. The purpose of the project is to evaluate housing stock and condition. This project may help to identify opportunities to rehabilitate housing in Harney County to help attract more workers to jobs in the County.
- **Biomass removal and processing.** The Malheur National Forest and other surrounding forested areas are overgrown with species that take over the ecosystem, such as western juniper. Efforts to remove the invasive species would result in large amounts of biomass. Leaders in Harney County are interested in the success of the new Red Rock facility in Lake County, as it might present an opportunity for biomass processing in Harney County.
- **Low seismic activity.** Harney County's low seismic activity presents opportunities for emergency preparedness for the Cascadia Earthquake. The Oregon Lottery had looked at Harney County as a potential site for off-site backup systems because of the area's low seismic activity. This feature of Harney County could attract similar businesses that need land for similar uses (e.g., data centers) or for State resources for emergency preparedness.
- **Enterprise zone.** An enterprise zone covers the Burns and Hines UGBs. It was designated in 2016 and terminates in 2024. Enterprise zones assist eligible local businesses by exempting them from paying local property taxes. Enterprise zones exempt businesses from local property taxes on new investments for a specified amount of time. This enterprise zone in Harney County is specifically designated for long-term rural facility and hotel or resort incentives. Qualified investments include a new building/structure, structural modifications or additions, or newly installed machinery and equipment—but not land, previously used property value, and miscellaneous personal items. Eligible businesses include manufacturers, processors, and shippers. Retail, construction, financial, and certain other defined activities are ineligible.²⁷

²⁷ <https://www.oregon4biz.com/Oregon-Business/Tax-Incentives/Enterprise-Zones/>

Burns

The opportunities that apply to the City of Burns include:

- **Renewable energy.** The City of Burns has an industrial investment zone called the Rural Renewable Energy Development (RRED) zone. It offers incentives to encourage investments related to renewable energy, including wind, geothermal, solar, biomass, or other unconventional forms of energy to generate electricity or produce, distribute, or store a variety of biofuels. Most of the sites in the RRED zone are available for businesses to locate in Burns.
- **Redevelopment of downtown.** The Community Response Team completed an inventory of buildings along the main commercial corridor on Broadway Avenue (U.S. Highway 20). The City identified about 14 vacancies (either vacant lots or buildings with vacancies) of about 50 properties in the corridor. Many are historical buildings that are available for purchase or renovation. Improvements to these properties could attract more businesses and visitors to Downtown Burns. Additionally, continuing work on brownfields studies would help to eventually remediate and allow new uses on brownfield sites, as well as implementing the enterprise zone to provide tax incentives to attract new businesses.
- **Engage in workforce development.** The Treasure Valley Community College Burns Outreach Center offers a limited number of classes to high school students and continuing adult students. Expanding the courses and training programs available would help to keep some students in Burns (and Harney County overall). These students would be more likely to stay, learn skills, and fill jobs that require those skills. Another opportunity for further training is through expanding opportunities with the Eastern Oregon Agricultural Research Center (EOARC). It is a cooperative research effort between Oregon State University and the USDA-Agricultural Research Service that integrates research regarding beef cattle, rangeland, wildlife, watershed, and forest management.
- **Improve infrastructure.** Opportunities to improve infrastructure in Burns include providing access to adequate, good-tasting water; managing wastewater with sufficient treatment capacity; improving electric infrastructure (e.g., 250 KV available, but likely not enough for data warehousing); and focusing on providing natural gas access.

Hines

The opportunities that apply to the City of Hines include:

- **Redevelopment and amenity improvements.** Residents of Hines noted the need to revitalize existing commercial and industrial areas to improve the physical appearance of the City. Opportunities include implementing the enterprise zone to provide tax incentives to attract new businesses; revitalizing industrial areas, such as the old mill area; enforcing ordinances and code around nuisances such as maintenance of properties; and improving parks to provide better amenities for new residents.
- **Improve coordination of local economic development.** Within limited resources available to the County and the City of Hines to carry out economic development, it is important to foster partnerships with regional organizations as well as with local community members. Establishing a citizen committee to work on economic development issues, especially local improvements, could help build capacity for economic and community development in Hines.
- **Improve infrastructure.** Opportunities to improve infrastructure in Hines include upgrading and maintaining the water system and the expansion of broadband. These improvements would benefit existing and new businesses, including telecommuters who rely on access to reliable internet connections.
- **Support and attract new business.** Land in Hines is relatively inexpensive, and the City has land (including large sites) available for larger businesses to locate in Hines. Support for small businesses is also an opportunity in Hines through the development of spaces that foster collaboration, such as a business incubator or shared coworking spaces.
- **Services for visitors.** Harney County attracts many visitors to the options for outdoor recreation, and visitors drive through Hines to travel to these natural areas. Opportunities for visitor services include overnight accommodations, retail, and other service-oriented businesses.

Threats

Threats are typically factors at a regional, state, national, or global level. The threats affecting Harney County, the City of Burns, and the City of Hines are:

- **Drought and forest fires.** Forest fires and floods are a concern for communities in Oregon, and the risk of these natural hazards is likely to increase as a result of climate change.²⁸ They pose a physical, financial, and social threat to residents and businesses in Harney County. Tourism-based businesses in Harney County rely on visitors in the summer months, when forest fires tend to occur. This could not only have an effect on the tourism industry overall, but also specific events that attract a large number of visitors. The timing of a forest fire could lead to the cancelation of those tourist-focused events. Forest fires also cause poor air quality, which can detract visitors and decrease quality of life for residents. Other potential natural hazards that will likely increase in Harney County as a result of climate change include drought, increased invasive species, and loss of wetland ecosystems.²⁹

With lower snowpack in the mountains in recent years and limited access to groundwater in Harney County, droughts are also an increasing threat to businesses and residents. This is especially critical for agricultural industries that rely on regular access to water sources.

- **Access to water for irrigation.** The majority of agricultural land in Harney County is for export or is dedicated to beef cattle production and growing hay to support local ranching activities. Over 60% of the County's farms are smaller than 500 acres and primarily support quality of life, rather than serving as the primary household income source. Both categories of farms depend on access to water for domestic use, irrigation, and stock watering. Groundwater is the largest and most reliable source of water for farms. Due to concerns about groundwater depletion, in 2016, the State imposed a moratorium on new permits for groundwater withdrawals within the Greater Harney Valley Basin and began studying the basin to determine what long-term measures may be needed to protect groundwater resources for the future. The study is still underway, and final outcomes may include curtailment of groundwater withdrawals in some areas of the basin, holding water withdrawals at current levels, and potentially allowing expansion of new permits in some parts of the basin. Should they occur, curtailments would impact the viability of some farms, potentially resulting in declines in the value of agricultural production in the County and some households leaving the basin.

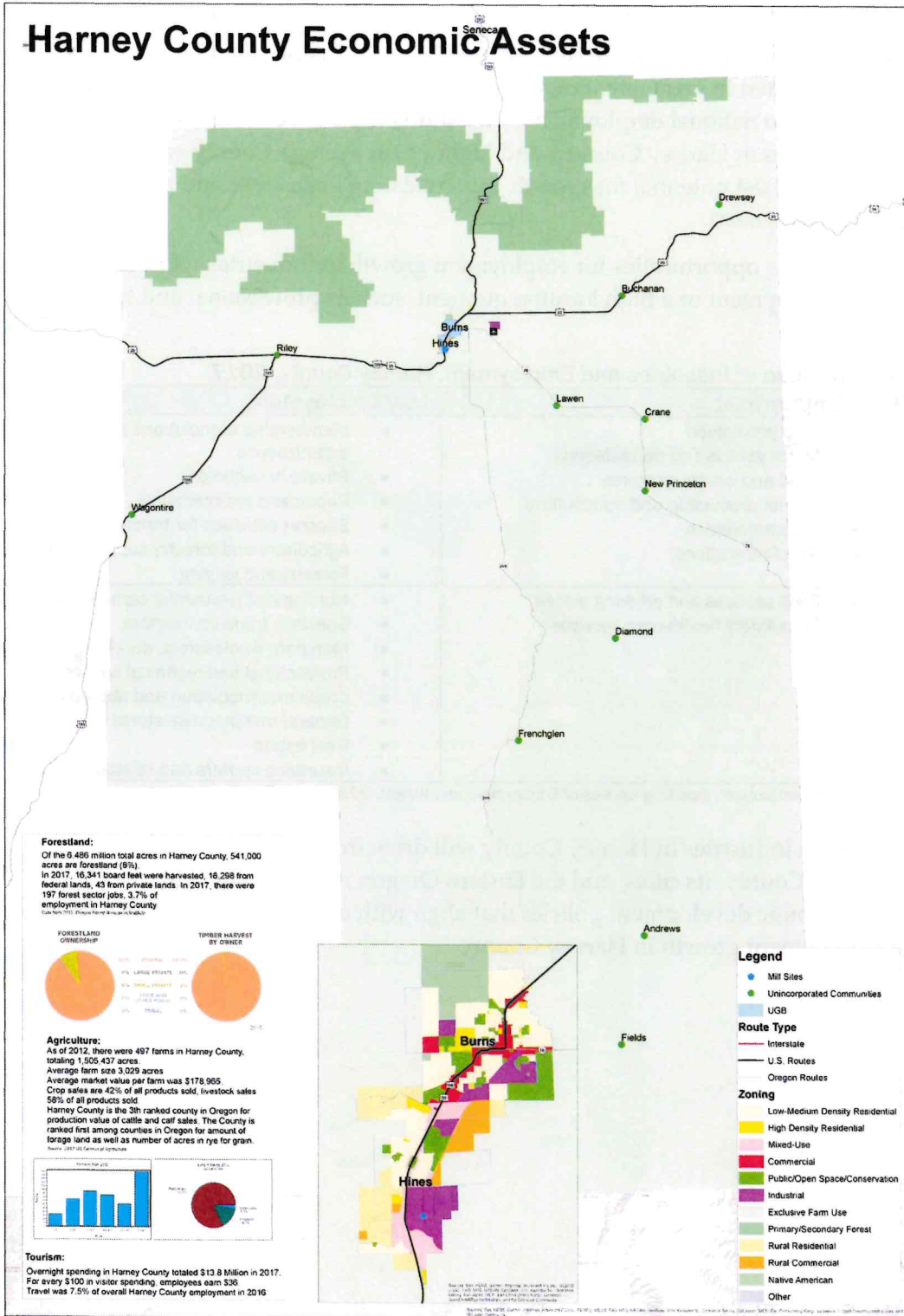
²⁸ Oregon Climate Change Research Institute. *Climate Change Influence on Natural Hazards in Oregon Counties*. August 2018 and *Fourth Oregon Climate Assessment Report*. January 2019.

²⁹ Ibid.

- **Aging population.** The difficulty in finding available workforce in Burns and Hines is partly due to the aging population. As workers in the Cities retire, or new residents locate in Burns and Hines after retirement, the need for skilled, educated workers will increase.
- **Potential for decline in the State and National economies.** Changes in the State and National economies are beyond local control and directly affect Harney County's regional economy. National recessions generally have a greater effect on Oregon and in rural Oregon, with higher job losses and longer recovery periods than the national average.

Countywide Assets

Additional assets in Harney County are presented in the map below, compiled by the Department of Land Conservation and Development.



Target Industries

The characteristics of Harney County will affect the types of businesses most likely to locate in the cities. Harney County’s attributes that may attract firms are land and resource availability, recreational opportunities, and quality of life.

Harney County’s existing businesses are concentrated in the industries defined in Exhibit 13. The industries highlighted in green are industries with a high location quotient (i.e., highly specialized compared to national employment in the industry), high employment (i.e., have more than 50 employees in Harney County), and higher than average County wages. These industries have the highest potential for growth, given existing businesses and the higher concentration of employment.

Harney County also has opportunities for employment growth in industries without a concentration of employment or a high location quotient, such as professional and technical services.

Exhibit 13. Concentration of Industries and Employment, Harney County, 2017.

	High Employment	Low Employment
High Location Quotient	<ul style="list-style-type: none"> • Crop production • Motor vehicle and parts dealers • Food and beverage stores • Animal production and aquaculture • Accommodation • Gasoline stations 	<ul style="list-style-type: none"> • Membership associations and organizations • Private households • Repair and maintenance • Support activities for transportation • Agriculture and forestry support activities • Forestry and logging
Low Location Quotient	<ul style="list-style-type: none"> • Food services and drinking places • Ambulatory health-care services 	<ul style="list-style-type: none"> • Nursing and residential care facilities • Specialty trade contractors • Merchant wholesalers, durable goods • Professional and technical services • Credit intermediation and related activities • General merchandise stores • Real estate • Insurance carriers and related activities

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

The potential growth industries in Harney County will draw from existing industry concentration in the County, its cities, and the Eastern Oregon region, along with the County’s and each city’s economic development policies that align with changing or emerging industries and result in employment growth in Harney County.

Potential Growth Industries

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

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

The industries identified as having potential for growth in Harney County are:

- **Warehousing and distribution.** Burns' and Hines' locations, access to state highways, and inventory of industrial land provide opportunities for warehousing and distribution. Two U.S. Highways run through Harney County—Highway 20 and Highway 395—and they connect north of Burns. These highways provide a north–south connection to Washington, California, and Nevada markets along a relatively flat corridor (Highway 395), as well as an east–west connection to Central Oregon and Idaho. Warehouse and distribution companies that are more likely to locate in Harney County are those who need a central location that provides access to Oregon and its neighboring states. These companies do not need to be centrally located in any one state and do not need to be located on an interstate highway. Despite good access to transportation corridors, the major barriers to these businesses locating in Harney County are its remote location and limited workforce.
- **Natural resources and energy services support.** Harney County has opportunity for growth in natural resources industries, such as value-added agriculture products and processing. These industries include wood products manufacturing, agricultural and forestry support activities, crop production, and animal production. Opportunities for processing juniper could help to use overgrown juniper in forests in Harney County while providing opportunities for businesses to process it into lumber or other wood products. Harney County's opportunities in the Rural Renewables Energy Development zone could also incent businesses to process juniper for biomass production or support for other renewable energy sources (e.g., wind, solar, etc.).
- **Manufacturing.** Harney County has opportunities for growth in other types of manufacturing (beyond natural resource and energy services). These types of manufacturing include secondary wood products manufacturing, food and beverage manufacturing (especially those that do not have significant wastewater effluent), and other types of manufacturing.

- **Professional and technical services.** Burns and Hines lack businesses that specialize in engineering, architectural, appraisal, and other contracting or maintenance services. The limited availability of these services can increase costs for business to maintain their properties, as they have to hire businesses located elsewhere in the State. This also leads to slow response to maintenance issues in a building or delays in construction. Improved broadband connectivity may attract businesses that provide these services, as many can operate as a home occupancy.
- **Services for visitors.** Harney County is a popular destination for hunting, biking, hiking, running, and bird watching. Both Burns and Hines have accommodations but could attract more visitors. Harney County has many scenic areas for visitors to enjoy and increasing efforts to attract visitors to stop in Burns and Hines could bring more service-sector jobs to the Cities.
- **Services for residents.** As Harney County's population grows, demand for residential services will grow. These services include retail stores, restaurants, personal services (like hairdressers), financial services, medical services, and other services. Additionally, the demand for child-care services will increase to meet the need for families in Harney County. These types of services present opportunities for entrepreneurship and microenterprise development in Harney County and its cities.
- **Housing for seniors.** Housing for seniors with services (i.e., medical services or housekeeping services) may be an important type of services to support Harney County's aging population. An aging population in Harney County will also increase the need for in-home caregivers, presenting another opportunity for entrepreneurs and microenterprise development.

3. Employment Growth and Site Needs

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

Forecast of Employment Growth and Commercial and Industrial Land Demand

Demand for industrial and nonretail commercial land will be driven by the expansion and relocation of existing businesses, as well as the growth of new businesses in Burns and Hines. This employment land demand is driven by local growth independent of broader economic opportunities, including the growth of target industries.

The employment projections in this section build off of Burns' and Hines' existing employment base, assuming future growth is similar to Harney County's long-term historical employment growth rates. The employment forecast does not take into account a major change in employment that could result from the location (or relocation) of one or more large employers in the community during the planning period. Such a major change in the community's employment would exceed the growth anticipated by the city's employment forecast and its implied land needs (for employment, but also for housing, parks, and other uses). Major economic events, such as the successful recruitment of a very large employer, are difficult to include in a study of this nature. The implications, however, are relatively predictable: more demand for land (of all types) and public services.

Projecting demand for industrial and nonretail commercial land has four major steps:

1. **Establish base employment for the projection.** We start with the estimate of covered employment in Burns and Hines presented in Exhibit 8 and Exhibit 10. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in each City.
2. **Project total employment.** The projection of total employment considers forecasts and factors that may affect employment growth in Burns and Hines over the twenty-year planning period.
3. **Allocate employment.** This step involves allocating types of employment to different land use types.
4. **Estimate land demand.** This step estimates general employment land demand based on employment growth and assumptions about future employment densities.

The remainder of this section follows this outline to estimate employment growth and commercial- and industrial-land demand for Burns and Hines.

Employment Base for Projection

The purpose of the employment projection is to model future employment land need for general employment growth. The forecast of employment growth in Burns and Hines starts with a base of employment growth on which to build the forecast. Exhibit 14 and Exhibit 15 show ECONorthwest's estimate of total employment in Burns and Hines in 2017.

To develop the figures, ECONorthwest started with an estimate of covered employment in the Burns and Hines UGBs confidential Quarterly Census of Employment and Wages (QCEW) data provided by the Oregon Employment Department. Based on this information, Burns had about 1,581 covered employees in 2017 and Hines had about 508 employees in 2017.

Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Analysis of data shows that *covered* employment reported by the Oregon Employment Department for Harney County is only about 72% of *total* employment reported by the U.S. Department of Commerce.³⁰ We evaluated this ratio for each industrial sector for Harney County and used the resulting ratios to determine the number of noncovered employees. This allowed us to determine the total employment in Burns and Hines. Exhibit 14 shows Burns had an estimated 2,144 *total* employees within its UGB in 2017, and Exhibit 15 shows Hines had an estimated 668 *total* employees.

³⁰ **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.

Exhibit 14. Estimated total employment by sector, Burns UGB, 2017

	Covered Employment	Estimated Total Employment	Covered % of Total
Agriculture, Forestry, Fishing and Hunting	14	14	100%
Utilities, Transportation and Warehousing	29	40	73%
Construction	108	150	72%
Manufacturing and Wholesale Trade	41	61	67%
Retail Trade	198	325	61%
Information	11	15	73%
Finance and Insurance; Real Estate/Rental/Leasing	43	150	29%
Professional, Scientific, and Technical Services	31	70	44%
Administrative and Support and Waste Mgmt./Remed. Serv.	5	13	38%
Health Care and Social Assist.; Private Education	142	232	61%
Arts, Entertnmt, and Recrtn; Accommod. and Food Serv.	117	155	75%
Other Services	45	112	40%
Government	797	797	100%
Total Non-Farm Employment	1,581	2,134	74%

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

Exhibit 15. Estimated total employment by sector, Hines UGB, 2017

	Covered Employment	Estimated Total Employment	Covered % of Total
Industrial	101	101	100%
Retail	80	131	61%
Office and Other Services	61	131	47%
Leisure Activities	97	129	75%
Government	169	169	100%
Total Non-Farm Employment	508	661	77%

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

Employment Projection

The employment forecast covers the 2019 to 2039 period, requiring an estimate of total employment for Burns and Hines in 2019. The cities in Harney County do not have an existing employment forecast, and there is no required method for employment forecasting. The regional employment projection for Eastern Oregon for the 2017 to 2027 period, which includes Harney County, shows that employment will grow at an average annual growth rate of 0.7%.³¹

Exhibit 16 and Exhibit 17 show employment growth in Burns and Hines between 2019 and 2039, based on the assumption that each City will grow at an average annual growth rate of 1.0%. The basis for the forecast is two-fold: (1) the Cities have the employment land base large enough to support this amount of growth (and more) and (2) the Cities are focusing efforts on economic development and growing jobs in the Cities. Examples of the County’s and Cities’ policy focusing on economic development are (1) hiring State Representative Greg Smith as the director of Harney County Economic Development (HCED), (2) getting involved in HCED’s Community Response Team, and (3) participating in projects such as a grant for assessment of brownfields sites in Harney County. These and other efforts demonstrate the County’s and the Cities’ aspirations for growing the economy, including jobs, at a faster pace than the region.

Exhibit 16 and Exhibit 17 show that Burns will have 2,490 employees within the UGB by 2039, which is an increase of 326 employees (15%) between 2019 and 2039. Hines will have 772 employees within the UGB by 2039, an increase in 102 employees in the 2019–2039 period.

Exhibit 16. Employment growth in Burns UGB, 2019–2039

Year	Total Employment
2019	2,177
2039	2,657
Change 2019 to 2039	
Employees	480
Percent	22%
AAGR	1.0%

Source: ECONorthwest

Exhibit 17. Employment growth in Hines UGB, 2019–2039

Year	Total Employment
2019	674
2039	822
Change 2019 to 2039	
Employees	148
Percent	22%
AAGR	1.0%

Source: ECONorthwest

³¹ Oregon Employment Department, “Regional Employment Projections by Industry & Occupation, 2017– 2027,” Eastern Oregon Six-County Region (Baker, Grant, Harney, Malheur, Union, and Wallowa Counties). <https://www.qualityinfo.org/eastern-oregon>.

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 Burns or Hines 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.

Exhibit 18 and Exhibit 19 show the expected share of employment by land use type in 2019 and the forecast of employment growth by land use type in 2039 in the Burns and Hines UGBs. For each land use type, we assumed that the share of industrial, retail commercial, and office and commercial services will increase, while the share of government employment will decrease slightly as the number of government employees will likely remain steady between 2019 and 2039.

Exhibit 18. Forecast of employment growth by land use type, Burns UGB, 2019–2039

Land Use Type	2019		2039		Change 2019 to 2039
	Employment	% of Total	Employment	% of Total	
Industrial	135	6%	266	10%	131
Retail Commercial	166	8%	266	10%	100
Office & Commercial Services	381	18%	611	23%	230
Government	1,495	69%	1,514	57%	19
Total	2,177	100%	2,657	100%	480

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.

Exhibit 19. Forecast of employment growth by land use type, Hines UGB, 2019–2039

Land Use Type	2019		2039		Change 2019 to 2039
	Employment	% of Total	Employment	% of Total	
Industrial	103	15%	132	16%	29
Retail Commercial	134	20%	173	21%	39
Office & Commercial Services	265	39%	329	40%	64
Government	172	26%	189	23%	17
Total	674	100%	822	100%	149

Source: ECONorthwest

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

Estimate of Demand for Commercial and Industrial Land

Exhibit 20 and Exhibit 21 show demand for vacant (including partially vacant) land in Burns and Hines over the twenty-year period. The assumptions used in this analysis are:

Employment density. Employees per acre is a measure of employment density based on the ratio of employees per acre of employment land that is developed for employment uses. Using these assumptions, the forecasted growth of 132 new employees in Hines will result in the following demand for vacant (and partially vacant) employment land: 3 gross acres of industrial land and 8 gross acres of commercial land. Exhibit 21 assumes the following numbers of net employees per acre: industrial will have an average of 10 employees per acre and commercial will have an average of 15 employees per acre.

These employment densities are consistent with employment densities in Oregon cities comparable in size to Burns and Hines. 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 rights-of-way. Future land need for employment should include land in tax lots needed for employment plus land needed for public rights-of-way. One way to estimate the amount of land needed for employment, including public rights-of-way, is to convert from *net* to *gross* acres based on assumptions about the amount of land needed for public rights-of-way.³² 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 Burns' and Hines' existing net-to-gross ratios, ECONorthwest uses a net-to-gross conversion factor of 11% for industrial and 17% for commercial.

Using these assumptions, the forecasted growth of 461 new employees in Burns will result in the following demand for vacant (and partially vacant) employment land: 15 gross acres of industrial land and 27 gross acres of commercial land.

Exhibit 20. Demand for vacant land to accommodate employment growth, Burns UGB, 2019–2039

Land Use Type	New Emp. on Vacant Land	Employees per	Land Demand (Net Acres)	Land Demand (Gross Acres)
		Acre (Net Acres)		
Industrial	131	10	13	15
Commercial	330	15	22	27
Total	461		35	41

Source: ECONorthwest

³² OAR 660-024-0010(6) defines net buildable acre as land that “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.

Using these assumptions, the forecasted growth of 132 new employees in Hines will result in the following demand for vacant (and partially vacant) employment land: 3 gross acres of industrial land and 8 gross acres of commercial land.

Exhibit 21. Demand for vacant land to accommodate employment growth, Hines UGB, 2019–2039

Land Use Type	New Emp. on Vacant Land	Employees		Land Demand (Net Acres)	Land Demand (Gross Acres)
		per Acre (Net Acres)			
Industrial	29	10		2.9	3.2
Commercial	103	15		6.9	8.3
Total	132			9.8	11.5

Source: ECONorthwest

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

Based on the forecasts of employment growth in Exhibit 18 and Exhibit 19—as well as the calculated average size of businesses in Burns and Hines in 2017 (using an analysis of Quarterly Census of Employment and Wage data)—employment growth in Burns and Hines will require sites as summarized in Exhibit 22.

Exhibit 22. Estimate of sites needed for new employment by land use type, Burns UGB and Hines UGB, 2019–2039

Land Use Type	Burns UGB			Hines UGB		
	Employment growth (2019-2039)	Average business size	Estimate forecast of growth of new businesses	Employment growth (2019-2039)	Average business size	Estimate forecast of growth of new businesses
Industrial	131	6	23	29	7	5
Commercial	330	6	56	103	6	17

Source: QCEW, ECONorthwest

Business Oregon works with businesses that are considering expanding or relocating within Oregon to identify potential industrial sites for the business. The following are the characteristics that Business Oregon uses when helping businesses identify places to locate. Business Oregon considers the following siting criteria when working with businesses: availability of necessary workforce, access to transportation, building type, and land availability and readiness.

- **Workforce availability.** Business Oregon considers the need for workers when considering what areas may be appropriate for the business. This consideration includes the number of workers and the types of skills and education the workers will need. Business Oregon identifies areas with a sufficient workforce to meet the business' workforce needs, considering access to training and education for each area, as well as locating concentrations of existing businesses with similar workforce needs where there may be a larger labor pool of qualified workers.
- **Access to transportation.** Businesses consider access to major transportation corridors when they choose a location, both for freight movement and automotive access. In Oregon, I-5 is the primary location that businesses look for available sites, despite availability of the suitable building size elsewhere in the State. Locations along I-84 and state highways can also satisfy the need for transportation access.
- **Business and site size.** Business Oregon typically works with businesses that would employ between 20 and 100 employees. As of early 2019, most businesses that have worked with Business Oregon in the past several years look for sites with an existing building. The size of the buildings these businesses request are typically more than 50,000 square feet, but they have worked with businesses looking for smaller buildings ranging from 5 square feet to 20,000 square feet.
- **Land availability and readiness.** Businesses need sites that can be developed relatively quickly. This means that the landowner is willing to sell the land or act as developer. In addition, the land needs to have easy access to municipal infrastructure such as water, sewers, roads, and stormwater. Access to private infrastructure with sufficient capacity (i.e., electricity, natural gas, or rail) may be critical to some businesses in selecting a location.
- **Other considerations.** Other key factors for choosing a site include the timeline and costs to begin operating at the site. Costs include utility costs, taxes, permitting costs, and available incentives.

Jurisdictions in Eastern Oregon that have difficulty attracting larger industrial employers, can choose to focus on infrastructure for small businesses and entrepreneurs. These include smaller flex spaces with access to reliable broadband services. Once they establish this core infrastructure, many communities in Eastern Oregon can also leverage lifestyle and quality of life as factors to attract entrepreneurs who are generally more mobile than larger, established businesses.

With these considerations in mind and considering that the potential growth industries described in the prior section are generally small businesses, the following are the site needs for businesses that may locate in Burns or Hines. For the most part, Burns' and Hines' potential growth industries need relatively flat sites, especially for industrial or manufacturing businesses. Commercial businesses—especially those serving tourism—will need a site located along Highway 20 or a site with high visibility, or both. Industrial businesses will need easy access to these highways but may not need a location directly along the highways.

For the most part, the size of sites needed by most potential growth industries will range from spaces in existing buildings, to sites of one acre or less, to sites up to five acres for manufacturing businesses.

Manufacturing businesses likely to locate in Burns or Hines will have a range of space needs:

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

The site needs for warehouse and distribution businesses likely to locate in Burns or Hines will have a range of site needs:³³

- **Site size/minimum acreage.** Business Oregon determined that the typical site sizes needed for warehouse and distribution firms range in size from 10 acres up to more than 25 acres for warehouse and distribution businesses. Regional warehouse and distribution businesses typically need sites of 20 to 100 acres. Given the location and access to transportation in Burns and Hines, smaller warehouse and distribution firms (firms serving a more local area) are likely to locate in Burns and Hines.
- **Proximity / access to freight routes.** Warehouse and distribution firms seek sites that are located on arterial or major collector streets with good access to state or interstate highways. Warehouse and distribution businesses reject sites that would force their industrial traffic to be routed through residential neighborhoods. Business Oregon has determined that warehouse and distribution firms need to be located relatively close to a principle arterial road, within five miles of a state highway.
- **Topography / no or little slope.** Business Oregon considers a slope exceeding 5% to be a development constraint for purposes of identifying possible land for warehouse and distribution.
- **Land ownership.** Sites with two or fewer owners are necessary to reduce the cost and uncertainty of land assembly. Developing an industrial building on a site on two or more tax lots requires negotiating land assembly. Land assembly is difficult and often costly for a number of reasons. Developers attempting land assembly often have difficulty assembling a site at a cost that makes development economically viable. When assembling land, developers often find that owners of key sites are unwilling sellers, or have unrealistic expectations of their land, or cannot get agreement among multiple owners to sell the land. As a result, developers of industrial buildings typically choose to develop sites with one or two owners.

Burns and Hines have sites that fit these site needs. Exhibit 33 shows that Burns has one 11-acre light-industrial site and one 24-acre heavy-industrial site. Exhibit 34 shows that Hines has three industrial sites in the 10–20-acre size and one industrial site larger than 20 acres (a 23-acre site). These sites may provide opportunities for warehouse and distribution.

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

³³ Business Oregon, the State of Oregon’s economic development agency, has studied warehouse and distribution site needs. The discussion below that mentions Business Oregon’s recommendations for site characteristics for warehouse and distribution pulls from the aforementioned organization’s Industrial Development Competitive Matrix, which determines that these sites are competitively sized for local and regional warehouse and distribution firms.

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 Burns UGB and Hines 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 Burns UGB and Hines UGB. The results are based on analyses of Harney County and State of Oregon GIS data by ECONorthwest, and they are reviewed by City staff. The methodology we used to develop the buildable lands inventory is presented in Appendix B.

Land Base

Exhibit 23 and Exhibit 24 summarize all land included in the employment land base (e.g., lands with plan designations that allow employment) in the Burns UGB and Hines UGB. ECONorthwest used this land base in the buildable lands analysis for Burns and Hines. The land base includes traditional employment designations within the Burns UGB and Hines UGB. According to 2018 data, within Burns' UGB there are about 613 acres in 485 tax lots in total.

Exhibit 23. Acres in Burns UGB, 2018

Plan Designation	Number of taxlots	Percent	Total taxlot acreage	Percent
City of Burns Designations				
Commercial General	402	83%	189	31%
Light Industrial	30	6%	38	6%
Heavy Industrial	38	8%	147	24%
Industrial/ Energy Development	4	1%	22	4%
County Designations				
Rural Commercial	10	2%	60	10%
Farm & Range Use-160 AC	1	0%	156	25%
Total	485	100%	613	100%

Source: ECONorthwest analysis of data from Harney County.

Within Hines' UGB there are about 1,162 acres in 192 tax lots in total.

Exhibit 24. Acres in Hines UGB, 2018

Plan Designation	Number of taxlots	Percent	Total taxlot acreage	Percent
City of Hines Designations				
Commercial	142	74%	313	27%
Industrial	33	17%	336	29%
Exclusive Farm Use	1	1%	88	8%
County Designations				
Rural Commercial	5	3%	43	4%
Farm & Range Use-160 AC	7	4%	157	14%
Farm & Range Use-80 AC	4	2%	225	19%
Total	192	100%	1,162	100%

Source: ECONorthwest analysis of data from Harney County.

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

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

Exhibit 25 and Exhibit 26 show commercial, industrial, and county land in Burns and Hines by classification (development status). Of the 613 acres in the Burns UGB, about 198 acres (32%) are in classifications with no development capacity (or “committed acres”). Of the remaining 415 acres, 29 acres (5%) are constrained and 386 acres (63%) are buildable land with development capacity.

Exhibit 25. Employment acres by classification and plan designation, Burns UGB, 2018

Plan Designation	Total acres	Committed acres	Constrained acres	Buildable acres
City of Burns Designations				
Commercial General	189	109	5	75
Light Industrial	38	20	0	19
Heavy Industrial	147	45	22	81
Industrial/ Energy Development	22	0	0	22
County Designations				
Rural Commercial	60	24	0	35
Farm & Range Use-160 AC	156	0	2	154
Total	613	198	29	386

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

Of the 1,162 acres in the Hines UGB, about 414 acres (36%) are in classifications with no development capacity. Of the remaining 748 acres, 311 acres (27%) are constrained and 438 acres (38%) are buildable land with development capacity.

Exhibit 26. Employment acres by classification and plan designation, Hines UGB, 2018

Plan Designation	Total acres	Committed acres	Constrained acres	Buildable acres
City of Hines Designations				
Commercial	313	85	42	186
Industrial	336	126	67	143
Exclusive Farm Use	88	25	63	0
County Designations				
Rural Commercial	43	27	1	15
Farm & Range Use-160 AC	157	16	48	94
Farm & Range Use-80 AC	225	135	90	0
Total	1,162	414	311	438

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

Vacant Buildable Land

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

For the purposes of this analysis, Burns and Hines did not consider the floodplain to be a physical constraint that prohibits growth. However, the floodplain includes large areas of eastern Burns and Hines. The Cities and County are working with FEMA to revise the floodplain maps because the existing maps may significantly overstate the amount of land subject to significant flooding. In the future, Burns or Hines may develop an EOA that considers the floodplain a constraint that prohibits development, especially if the floodplain maps are revised.

Exhibit 27 shows unconstrained buildable acres for vacant and partially vacant land by plan designation. The results show that Burns has about 386 net buildable acres in commercial, industrial, and county plan designations. Of this acreage, 19% (75 acres) is in commercial designations, 32% (122 acres) is in industrial designations, and 49% (190 acres) is in county designations.

Exhibit 27. Employment land with unconstrained development capacity (Vacant, and Partially Vacant) by plan designation, Burns UGB, 2018

Plan Designation	Total Buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant lots
City of Burns Designations			
Commercial General	75	69	6
Light Industrial	19	14	5
Heavy Industrial	81	65	16
Industrial/ Energy Development	22	22	0
County Designations			
Rural Commercial	35	3	32
Farm & Range Use-160 AC	154	154	0
Total	386	328	59

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

Exhibit 28 shows unconstrained buildable acres for vacant and partially vacant land by plan designation. The results show that Hines has about 438 net buildable acres in commercial, industrial, and county plan designations. Of this, 42% (186 acres) is in commercial designations, 33% (143 acres) is in industrial designations, and 25% (109 acres) is in county designations.

Exhibit 28. Employment land with unconstrained development capacity (Vacant, Partially Vacant) by plan designation, Hines UGB, 2018

Plan Designation	Total Buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant lots
City of Hines Designations			
Commercial	186	171	15
Industrial	143	105	38
Exclusive Farm Use	0	0	0
County Designations			
Rural Commercial	15	8	7
Farm & Range Use-160 AC	94	64	30
Farm & Range Use-80 AC	0	0	0
Total	438	348	90

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

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

Exhibit 29. Employment land by classification with development constraints, Burns UGB, 2018

Burns EOA Buildable Lands Inventory Development Status and Constraints

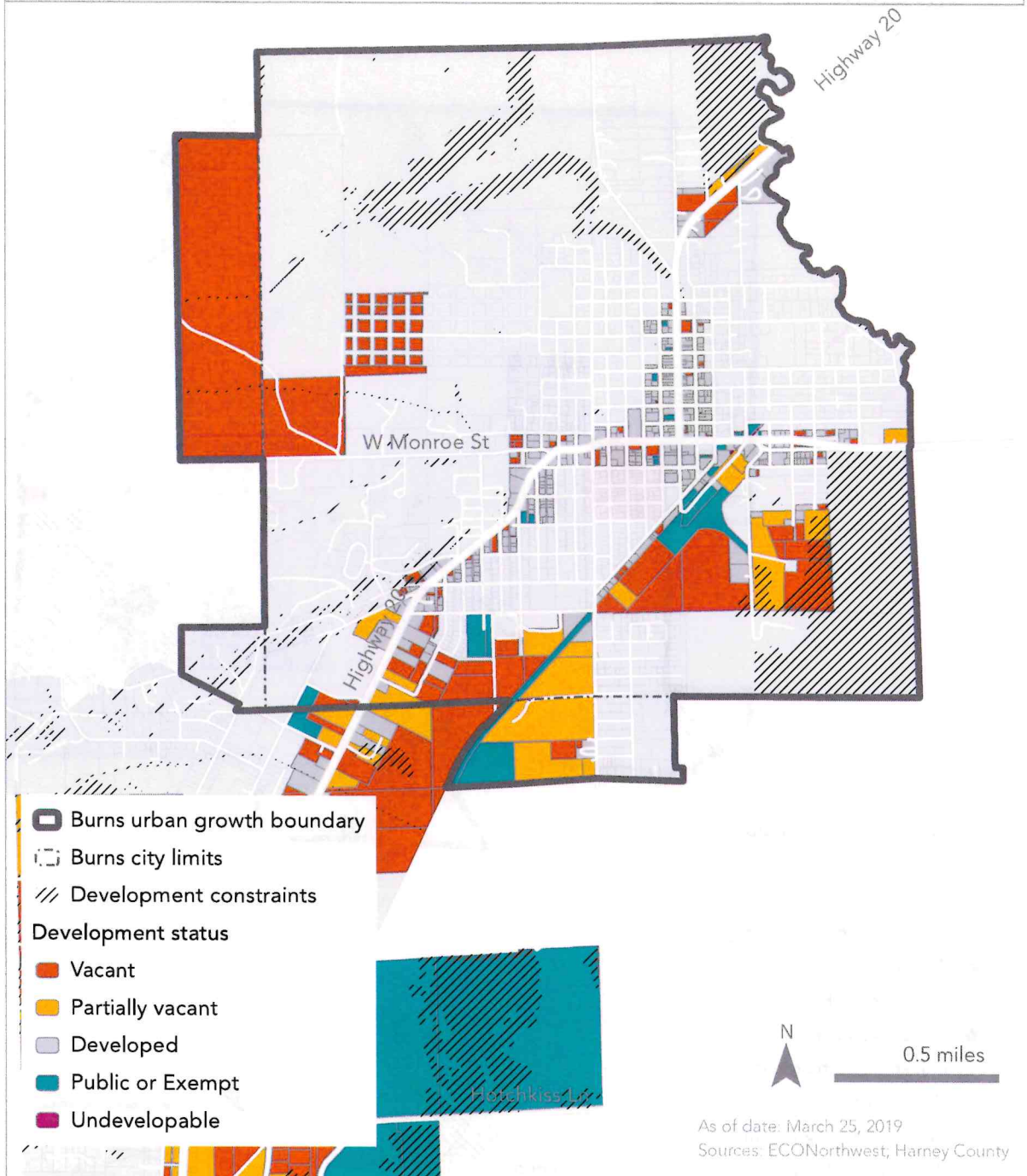


Exhibit 30. Buildable employment land by Plan Designation with development constraints, Burns UGB, 2018

Burns EOA Buildable Lands Inventory

Buildable Land

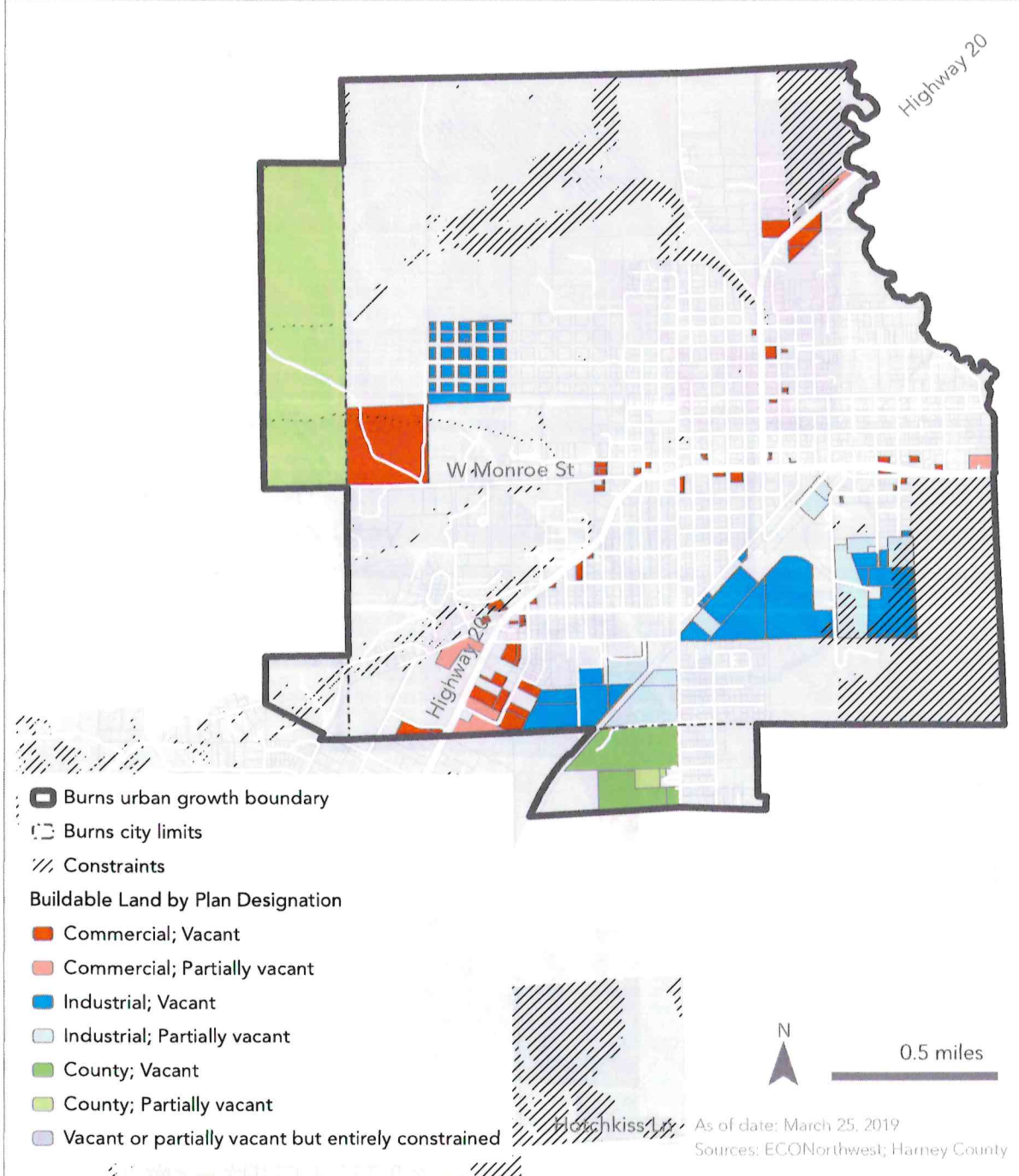


Exhibit 31. Employment land by classification with development constraints, Hines UGB, 2018

Hines EOA Buildable Lands Inventory Development Status and Constraints

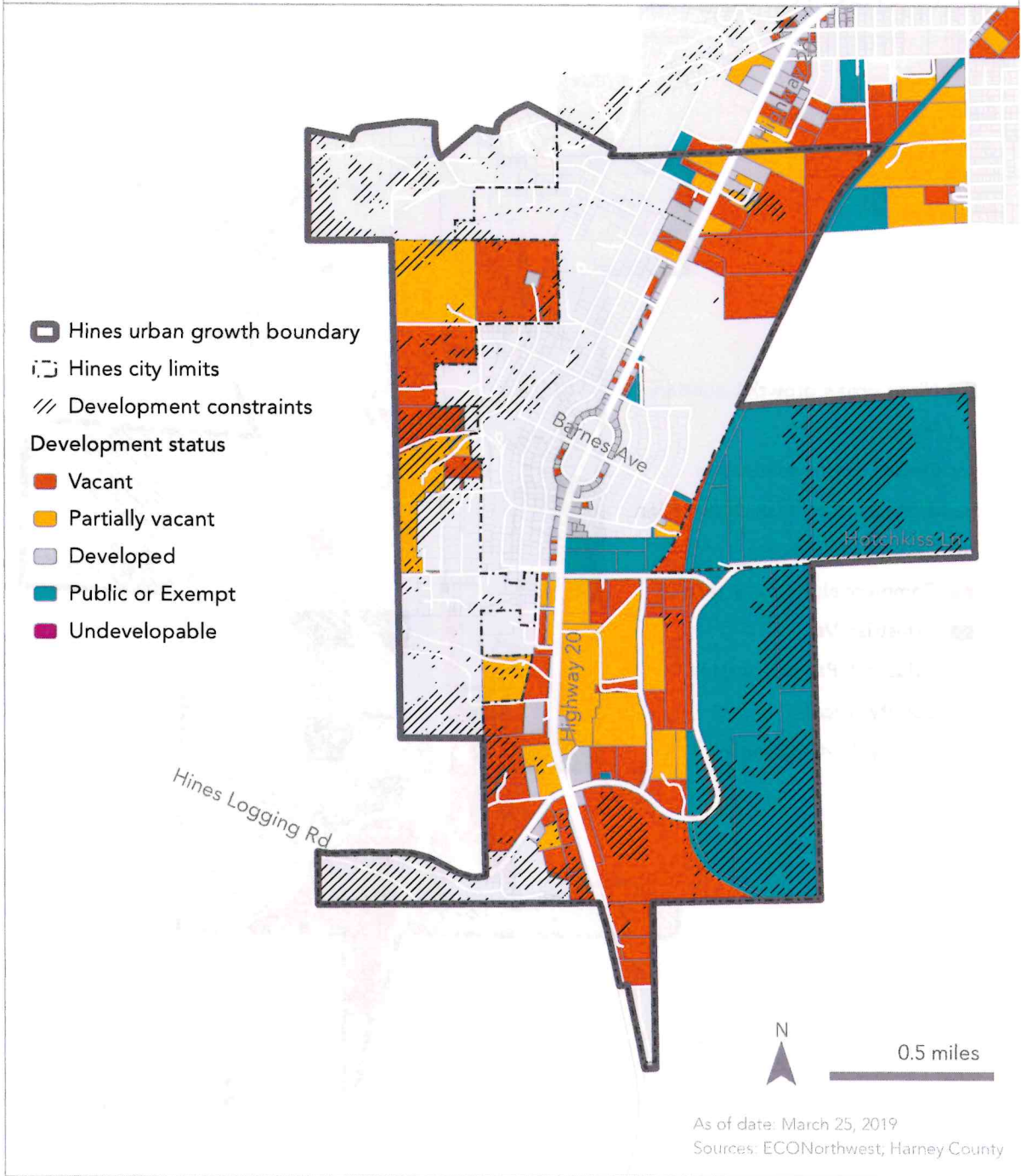


Exhibit 32. Buildable employment land by Plan Designation with development constraints, Hines UGB, 2018

Hines EOA Buildable Lands Inventory

Buildable Land

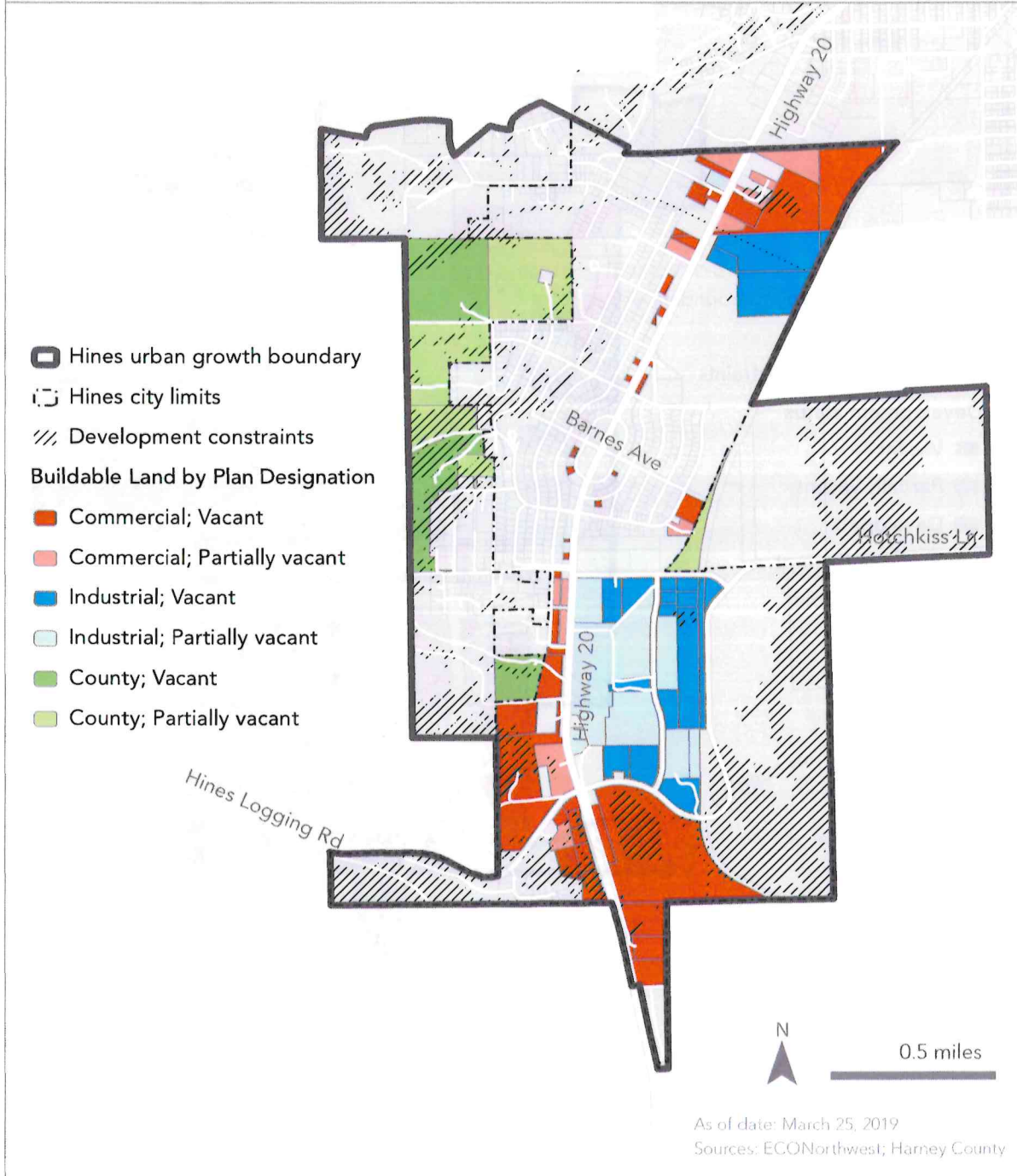


Exhibit 33 and Exhibit 34 show the size of lots by plan designations for buildable employment land. Burns has 45 lots that are smaller than 0.5 acres (with 10 acres of land), 11 lots between 0.5 and 1 acres (8 acres of land), 11 lots between 1 and 2 acres in size (14 acres of land), 19 lots between 2 and 5 acres in size (49 acres of land), 4 lots between 5 and 10 acres in size (30 acres of land), 3 lots between 10 and 20 acres in size (39 acres of land), and 4 lots over 20 acres in size (235 acres of land).

Exhibit 33. Lot size by plan designation, buildable acres, Burns UGB, 2018

	Buildable acres in taxlot						
	<0.5 acres	0.5-1 acres	1-2 acres	2-5 acres	5-10 acres	10-20 acres	>20 acres
Buildable acres on taxlots							
<i>City of Burns Designations</i>							
Commercial General	8	7	9	15	0	0	37
Light Industrial	1	0	0	7	0	11	0
Heavy Industrial	1	1	5	19	30	0	24
Industrial/ Energy Development	0	0	0	4	0	17	0
<i>County Designations</i>							
Rural Commercial	0	1	0	3	0	11	20
Farm & Range Use-160 AC	0	0	0	0	0	0	154
Acreage subtotal	10	8	14	49	30	39	235
Number of taxlots with buildable acreage							
<i>City of Burns Designations</i>							
Commercial General	34	9	7	6	0	0	1
Light Industrial	5	0	0	3	0	1	0
Heavy Industrial	3	1	4	8	4	0	1
Industrial/ Energy Development	2	0	0	1	0	1	0
<i>County Designations</i>							
Rural Commercial	1	1	0	1	0	1	1
Farm & Range Use-160 AC	0	0	0	0	0	0	1
Taxlot count subtotal	45	11	11	19	4	3	4

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

Hines has 22 lots that are smaller than 0.5 acres (with 5 acres of land), 13 lots between 0.5 and 1 acre in size (9 acres of land), 19 lots between 1 and 2 acres in size (28 acres of land), 16 lots between 2 and 5 acres (57 acres of land), 10 lots between 5 and 10 acres (65 acres of land), 4 lots between 10 and 20 acres in size (68 acres of land), and 7 lots over 20 acres in size (206 acres of land).

Exhibit 34. Lot size by plan designation, buildable acres, Hines UGB, 2018

	Buildable acres in taxlot						
	<0.5 acres	0.5-1 acres	1-2 acres	2-5 acres	5-10 acres	10-20 acres	>20 acres
Buildable acres on taxlots							
<i>City of Hines Designations</i>							
Commercial	5	8	15	26	21	15	97
Industrial	0	1	12	25	29	54	23
Exclusive Farm Use	0	0	0	0	0	0	0
<i>County Designations</i>							
Rural Commercial	0	0	0	0	15	0	0
Farm & Range Use-160 AC	0	0	2	6	0	0	86
Farm & Range Use-80 AC	0	0	0	0	0	0	0
Acreage subtotal	5	9	28	57	65	68	206
Number of taxlots with buildable acreage							
<i>City of Hines Designations</i>							
Commercial	22	11	10	7	3	1	3
Industrial	0	2	8	7	5	3	1
Exclusive Farm Use	0	0	0	0	0	0	0
<i>County Designations</i>							
Rural Commercial	0	0	0	0	2	0	0
Farm & Range Use-160 AC	0	0	1	2	0	0	3
Farm & Range Use-80 AC	0	0	0	0	0	0	0
Taxlot count subtotal	22	13	19	16	10	4	7

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

5. Land Sufficiency and Conclusions

This chapter presents conclusions about Burns’ and Hines’ employment-land sufficiency for the 2019–2039 period. The chapter then concludes with a discussion about Burns’ and Hines’ land base and their ability to accommodate growth over the next twenty years, as well as recommendations for each City to consider, ensuring they meet their economic growth needs throughout the planning period.

Land Sufficiency

Burns UGB

Exhibit 35 shows commercial- and industrial-land sufficiency within the Burns UGB. It shows:

- **Vacant unconstrained land** from Exhibit 27 for land within the Burns UGB. Exhibit 35 shows that Burns has 122 gross acres of industrial land and 110 gross acres of commercial land.
- **Demand for commercial and industrial land** from Exhibit 20. Exhibit 35 shows Burns will need a total of 15 gross acres for industrial uses and 27 gross acres for commercial uses over the 2019–2039 period.

Exhibit 35 shows that Burns has:

- A 107-acre surplus of industrial land.
- An 84-acre deficit of commercial land.
- A 154-acre supply of land in the “farm and range use” plan designation within the UGB. Some land in this designation may be suitable for commercial or industrial use, providing Burns with more opportunities for employment development. Land in this designation may be suited for residential development, in addition to (or instead of) commercial or industrial development.

Exhibit 35. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, Burns UGB, 2019–2039

Land Use Type	Land Supply		Land Demand (Gross Acres)	Land Sufficiency (Deficit)
	(Suitable Gross Acres)			
Industrial	122		15	107
Commercial	110		27	84
Farm & Range Use-16	154		-	154
Total	386		41	345

Source: ECONorthwest

Hines UGB

Exhibit 36 shows commercial- and industrial-land sufficiency within the Hines UGB. It shows:

- **Vacant unconstrained land** from Exhibit 28 for land within the Hines UGB. Exhibit 36 shows that Hines has 143 gross acres of industrial land and 201 gross acres of commercial land.
- **Demand for commercial and industrial land** from Exhibit 21. Exhibit 36 shows Hines will need a total of 15 gross acres for industrial uses and 27 gross acres for commercial uses over the 2019–2039 period.

Exhibit 35 shows that Hines has:

- A 140-acre surplus of industrial land.
- A 192-acre deficit of commercial land.
- A 94-acre supply of land in the “farm and range use” plan designation within the UGB. Some land in this designation may be suitable for commercial or industrial use, providing Hines with more opportunities for employment development. Land in this designation may be suited for residential development, in addition to (or instead of) commercial or industrial development.

Exhibit 36. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, Hines UGB, 2019–2039

Land Use Type	Land Supply		Land Demand (Gross Acres)	Land Sufficiency (Deficit)
	(Suitable Gross Acres)			
Industrial	143		3	140
Commercial	201		8	192
Farm & Range Use-160	94		-	94
Total	438		12	426

Source: ECONorthwest

Conclusions and Recommendations

The following are recommendations for actions that can be taken together that apply to Harney County, the City of Burns, and the City of Hines:

- **Identify opportunities to diversify Harney County’s economic base.** Diversifying Harney County’s economy will require coordinating economic development efforts with the County and Cities, as well as with local and regional economic development organizations listed below. We make this recommendation to the County and Cities to continue working together on this issue because it will take resources (staff and financial resources) that can be pooled together among the County and Cities. The County and Cities should consider the following actions:
 - *Identify champions for economic development.* Pursuing economic development will require champions for economic development. They could be led by a countywide economic development specialist, but each City will also need champions to move forward and create support for economic development efforts. The champions could be an elected or appointed official or city staff.
 - *Update the economic development strategy.* Diversifying Harney County’s economic base will require deliberate effort (led by the economic development champions) and would benefit from updating the economic development strategy that the County completed in 2012. The strategy should focus on specific and achievable actions that the County and Cities can take within the next five years (some of which are suggested in this report) and should have a broader focus than land use, considering issues such as workforce development and collaborating with businesses to support business growth. The strategy should have actions that address countywide issues as well as actions for each community.
 - *Coordinate and market opportunities for growth in Harney County.* A key part of the economic development strategy will be coordinating local economic development champions and stakeholders with regional and state partners on economic development, including Greater Eastern Oregon Development Corporation (GEODC), Harney County Economic Development (HCED), Business Oregon, the Department of Land Conservation and Development (DLCD), and other state agencies that are part of the Greater Eastern Oregon Regional Solutions Team. For example, the Cities should work with Business Oregon to ensure that vacant sites are listed on the Oregon Prospector website and that Business Oregon staff are aware of key development opportunities in the Cities.

- **Support development of vacant and potentially redevelopable sites through working with landowners to ensure that sites are adequately serviced with municipal infrastructure.** Aside from ensuring that there is sufficient land to support employment growth, one of the most important ways that the Cities can support economic development is through planning for and developing infrastructure (e.g., roads, water, sanitary sewer, and stormwater systems). We recommend that both Burns and Hines align their goals for economic development with infrastructure development through updates to each city’s Capital Improvements Plans.
 - Burns and Hines should both coordinate with the County to develop on sites within the UGB but outside of town limits. Development of these areas should occur at urban levels of density, ensuring that land is used efficiently.
 - Burns and Hines should both meet with landowners of key development sites to assess whether the landowners are willing to develop or sell their land. For key development or redevelopment sites, the Cities can work with landowners to make land development ready, most notably by planning for infrastructure extensions to provide services to the sites.
 - Burns and Hines should both continue to seek support for infrastructure development from organizations such as GEODC, Business Oregon, Oregon Department of Transportation (ODOT), U.S. Department of Agriculture, U.S. Economic Development Administration, and other sources of funding.

- **Coordinate with partners on economic development.** Harney County, the City of Burns, and the City of Hines have existing collaborative partnerships with public agencies, including the Harney County Chamber of Commerce, HCED, GEODC, Eastern Oregon University Small Business Development Center, ODOT, DLCD, Regional Solutions, and Business Oregon. The communities should continue to build on these relationships with key partners to improve infrastructure and expand on existing resources. The Regional Solutions Team can help the communities coordinate with state agencies and help ensure the communities have access to grants and loans to support infrastructure development.

- **Work with partners to market Harney County, the City of Burns, and the City of Hines as places to do business.** The County and Cities should work with their partners to attract and grow businesses. For example, the Counties and Cities should work with Business Oregon to ensure that vacant sites are listed on the Oregon Prospector website and that Business Oregon staff are aware of key development opportunities in Harney County.

- **Support entrepreneurs and small businesses.** Cities can provide support by allowing home occupations or working closely with small businesses, specifically those with 15 or fewer employees, to ensure they have the help they need through the planning process. Burns and Hines could identify opportunities to more directly support small businesses by working with partners such as small business development centers to provide shared workspace (such as a small amount of office space at a public building). Ensuring that internet connections are reliable and have sufficient communication speeds will allow businesses to operate remotely across the internet. The County should also work with the Cities to ensure that these opportunities are made available to all community members, including culturally specific services to historically underrepresented community members such as Native American and Spanish speaking community members. More broadly, the Cities can coordinate with the County and other regional or state partners to establish small business development centers to connect entrepreneurs and small-business owners with needed services, resources, and other business assistance.
- **Address workforce issues.** A key challenge for businesses in Harney County is attracting reliable and sober workers. One approach to addressing this issue is teaching life skills to young people at the high school level or providing post-high school training via a nonprofit organization. In addition, businesses in Harney County will need workers who are semiskilled and skilled. Trade skills and other training is offered by community colleges. Harney County is not fully served by a community college and may not have the capacity for teaching life skills. Making these types of training available and easily accessible in the County will require a substantial, ongoing effort. The County and Cities can work together to identify champions of these efforts, working with the school district and tapping resources from across Central and Eastern Oregon.

Providing life skill-based education in Harney County schools can also lead to more entrepreneurial ventures and the development of microenterprises, including those related to residential and visitor services (e.g., restaurants, grocery stores, etc.).

Providing resources for entrepreneurs that help fill skill gaps related to running a business can help more entrepreneurs succeed. While some resources are available at the regional or state level, entrepreneurs need on-site support in the local area, as they have little time to travel for business support services.

Other factors in attracting the needed workforce in Harney County are access to adequate workforce housing and ensuring quality child care is available. The County and Cities should work with development partners to plan for housing that is affordable at all income levels, specifically focused on incomes of workers in Harney County. The County and Cities may have opportunities to support development of child-care facilities.

- **Support development of communication infrastructure.** Harney County has limited cell phone and internet connections. The lack of communication infrastructure is a substantial barrier to business growth in Harney County. The County should continue to work with the Cities and key partners, such as Business Oregon, to support development of new communication infrastructure, ensuring there is reliable and faster internet connections. The State may have grants to support development of broadband internet in rural areas.
- **Address housing issues.** Access to workforce housing is a barrier to attracting workers to Harney County and its cities. The County is currently working with Oregon Housing and Community Services on a pilot project to address workforce housing issues, including housing need, existing inventory, and funding sources to address the gap in investment for workforce housing. A key finding in this study is that the main barrier to development of new workforce housing is the lack of developers interested in delivering new housing in Harney County. A next step in assessing need for housing may be for Burns and Hines to conduct a housing needs analysis (HNA). One purpose of completing an HNA would be to update the cities' Housing Elements in their Comprehensive Plan to enable the cities to make needed changes to zoning and plan designations, as well as implementing other housing policies to support development of workforce housing. In addition, the HNA will help to identify need for the amount and types of housing in the Burns UGB and Hines UGB.

The conclusions and recommendations about commercial- and industrial-land sufficiency for Burns are:

- **Burns is forecast to grow in both commercial- and industrial-employment sectors.** Burns is planning for 461 new jobs (excluding government jobs) in the City over the 2019 to 2039 period. About 131 of the jobs will be in industrial land uses, 230 in office and commercial services, and 100 in retail. Growth of these jobs will result in demand for about 15 gross acres of industrial land and 27 gross acres of commercial land.
- **Burns has enough employment land to accommodate growth.** Exhibit 35 shows Burns has enough land for employment growth over the next twenty years, with a 107-acre surplus of industrial land and an 84-acre surplus for commercial land.
- **Burns will need to address key infrastructure needs in the City, especially for development of industrial land.** Lack of infrastructure (including water, wastewater, and transportation) to service industrial land is a barrier to the development of industrial land and can be a barrier to the development of commercial land. The City will need to work with landowners and developers to develop infrastructure to serve key industrial sites. One approach could be reviewing industrial land on a site-by-site basis to identify infrastructure deficits and align these needs with the capital improvement plan and other master-plan updates, such as water and wastewater.

Additionally, the City can work with Business Oregon to determine how to prepare sites for the Shovel Ready Certification Program, which involves working with Business Oregon to produce a plan for delivering needed infrastructure. A first step in this

process is listing potential sites on Oregon Prospector, such as the 40-acre County-owned site zoned for industrial/energy development.

- **Most new businesses will be relatively small and will require small and midsized sites.** Burns' businesses are generally small, averaging about 6 employees per business. Businesses with 9 or fewer employees account for 44% of private employment. Growth of small businesses presents key opportunities for economic growth in Burns. Burns has about 56 sites smaller than one acre and 30 sites between one and five acres. In addition, Burns has 7 sites between five and twenty acres and 4 sites larger than twenty acres. Some of these sites (specifically, larger sites) may subdivide into smaller sites.
- **Update the Economy Element of the comprehensive plan.** The Economy Element has not been updated in more than a decade. We recommend that the Planning Commission and City Council review the existing policies, and after making additional necessary revisions to the policies, adopt revised goals, objectives, and implementation strategies into the Economy Element.
- **Identify opportunities for infill development or redevelopment.** Burns' downtown area is generally built out, with few areas with vacant land. Burns can build on the inventory of redevelopment potential that the Community Response Team developed for businesses on Broadway Avenue to identify opportunities for infill and redevelopment in downtown. Redevelopment could involve the substantial renovation of, change in use of, or demolition of existing buildings, as well as the building of newer, more productive buildings. Infill development may include the expansion of existing buildings or building new structures adjacent to existing buildings. In both cases, new development that increases capacity for business activity is an opportunity.

The ongoing brownfields project will identify a few sites in Burns that are suspected brownfields, and it will assess pollution and contamination on those sites. If the sites are brownfields and contamination is remediated, these sites provide opportunity for redevelopment for commercial, industrial, or residential uses.

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

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

The conclusions and recommendations about commercial- and industrial-land sufficiency for Hines are:

- **Hines is forecast to grow in both commercial- and industrial-employment sectors.** Hines is planning for 132 new jobs (excluding government jobs) in the City over the 2019 to 2039 period. About 29 of the jobs will be in industrial land uses, 64 in office and commercial services, and 39 in retail. Growth of these jobs will result in demand for about 3 gross acres of industrial land and 8 gross acres of commercial land.
- **Hines has enough employment land to accommodate growth.** Exhibit 36 shows Hines has enough land for employment growth over the next twenty years, with a 140-acre surplus of industrial land and a 192-acre surplus of commercial land.
- **Hines will need to address key infrastructure needs in the City, especially for the development of industrial land.** Lack of infrastructure (including water, wastewater, and transportation) to service industrial land is a barrier to development of industrial land and can be a barrier to development of commercial land. The City will need to work with landowners and developers to develop infrastructure to serve key industrial sites. One approach could be reviewing industrial land on a site-by-site basis to identify infrastructure deficits and align these needs with the capital improvement plan and other master-plan updates, such as water and wastewater.

Additionally, the City can work with Business Oregon to determine how to prepare sites for the Shovel Ready Certification Program, which involves working with Business Oregon to produce a plan for delivering needed infrastructure. A first step in this process is listing potential sites (that are for sale or lease) on Oregon Prospector.

- **Most new businesses will be relatively small and will require small and midsized sites.** Hines' businesses are generally small, averaging about 6 employees per business. Businesses with 9 or fewer employees account for 12% of private employment. Growth of small businesses presents key opportunities for economic growth in Hines. Hines has about 35 sites smaller than one acre and 35 sites between one and five acres. In addition, Hines has 30 sites between five and twenty acres and 7 sites larger than twenty acres. Some of these sites (specifically, larger sites) may subdivide into smaller sites.
- **Update the Economy Element of the comprehensive plan.** The Economy Element has not been updated since the 1980s. We recommend that the Planning Commission and City Council review the existing policies, and after making additional necessary revisions to the policies, adopt revised goals, objectives, and implementation strategies into the Economy Element.

- **Identify opportunities for infill development or redevelopment.** Hines is focusing redevelopment on its industrial land, especially the old mill site. The upcoming brownfields project should assess this site (assuming it is selected as a site for assessment) and provide recommendations for the cleanup and remediation of contamination and pollution, if any. Additionally, redevelopment of the site is likely to require the demolition of obsolete buildings and the removal of old equipment. Once the sites are ready for development, these areas will provide opportunities for new development on sites with direct access to Highway 20.

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

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

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

National Trends

Economic development in the City of Burns, the City of Hines, and Harney County over the next twenty years will occur in the context of long-run national trends. The most important of these trends include:

- **Economic growth will continue at a moderate pace.** Analysis from the Congressional Budget Office (CBO) predicts real GDP to grow by 3.1% in 2018, 2.4% in 2019, and settle just under 2% growth for the rest of the decade (through 2028), assuming current laws remain intact.³⁴

The unemployment rate is expected to decrease to 3.6% by the end of 2018 and fall to 3.4% in 2019. Thereafter, the CBO predicts the unemployment rate will rise to 3.8% in 2020 and approach 4.8% through the end of the forecast period (2028).³⁵

As demand for labor increases and market competition for workers pushes the growth of hourly wage compensation, the CBO projects that “the increase in labor compensation, in turn, dampens demand for labor, slowing employment growth and, by 2020, diminishing the positive employment gaps.”³⁶

- **The aging of the Baby Boomer generation, accompanied by increases in life expectancy.** As the Baby Boomer generation continues to retire, the number of Social Security recipients is expected to increase from 61 million in 2017 to over 86 million in 2035, a 41% increase. However, due to lower birth-rate replacement generations, the number of covered workers is only expected to increase 9% over the same time period, from 174 million to almost 190 million in 2035. Currently, there are 35 Social Security beneficiaries per 100 covered workers in 2014, but by 2035, there will be 46 beneficiaries per 100 covered workers. This will increase the percent of the federal budget dedicated to Social Security and Medicare.³⁷

³⁴ Congressional Budget Office, *An Update to the Economic Outlook: 2018 to 2028*. August 2018. <https://www.cbo.gov/system/files?file=2018-08/54318-EconomicOutlook-Aug2018-update.pdf>.

³⁵ *Ibid.*

³⁶ *Ibid.*

³⁷ The Board of Trustees, *The 2018 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, June 5, 2018. <https://www.ssa.gov/oact/tr/2018/tr2018.pdf>.

Baby Boomers are expecting to work longer than previous generations. An increasing proportion of people in their early- to mid-50s expect to work full time after age 65. In 2004, about 40% of these workers expect to work full time after age 65, compared with about 30% in 1992.³⁸ This trend can be seen in Oregon, where the share of workers 65 years and older grew from 2.9% of the workforce in 2000 to 4.1% of the workforce in 2010. In 2017, this share reached 5.5%, or a 90% increase over the 2000 to 2017 period. Over the same seventeen-year period, workers 45 to 64 years increased by about 7%.³⁹

- **Need for replacement workers.** The need for workers to replace retiring Baby Boomers will outpace job growth. According to the Bureau of Labor Statistics, total employment in the United States will grow by about 11.5 million jobs over 2016 to 2026. Annually, they estimate there will be 18.7 million occupational openings over the same period. This exhibits the need for employees over the next decade as the quantity of openings per year is large relative to expected employment growth. About 71% of annual job openings are in occupations that do not require postsecondary education.⁴⁰
- **The importance of education as a determinant of wages and household income.** According to the Bureau of Labor Statistics, a majority of the fastest growing occupations will require an academic degree, and on average, they will yield higher incomes than occupations that do not require an academic degree. The fastest-growing occupations requiring an academic degree will be registered nurses, software developers, general and operations managers, accountants and auditors, market research analysts, marketing specialists, and management analysts. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home-care aides) will grow, accounting for approximately 71% of all new jobs by 2026. These occupations typically have lower pay than occupations requiring an academic degree.⁴¹

The national median income for people over the age of 25 in 2017 was about \$47,164. Workers without a high school diploma earned \$20,124 less than the median income, and workers with a high school diploma earned \$10,140 less than the median income. Workers with some college earned \$6,916 less than median income, and workers with a bachelor's degree earned \$13,832 more than median. Workers in Oregon experience the same patterns as the nation but pay is generally lower in Oregon than the national average.⁴²

³⁸ National Institute of Aging, National Institutes of Health, and U.S. Department of Health and Human Services, *The Health and Retirement Study*, 2007.

³⁹ Analysis of 2000 Decennial Census data; 2010 U.S. Census American Community Survey, 1-Year Estimates; and 2017 U.S. Census American Community Survey, 1-Year Estimates, for the table "Sex by Age by Employment Status for the Population 16 Years and Over."

⁴⁰ Bureau of Labor Statistics, "Occupational Employment Projections to 2016–2026," 2018.

⁴¹ Bureau of Labor Statistics, "Occupational Employment Projections to 2016–2026," 2018.

⁴² Bureau of Labor Statistics, "Employment Projections," March 2018. http://www.bls.gov/emp/ep_chart_001.htm

- **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 related to information technology. These include wireless telecommunications carriers, computer and peripheral equipment manufacturing, electronics and appliance stores, and commercial equipment manufacturing wholesalers.⁴³

Since the end of the recession (or 2010), labor productivity has increased across a handful of large sectors but has also decreased in others. In wholesale trade, productivity—measured in output per hour—increased by 19% over 2009 to 2017. Retail trade gained even more productivity over this period at 25%. Food services, however, have remained stagnant since 2009, fluctuating over the nine-year period and shrinking by 0.01% over this time frame. Additionally, the Bureau of Labor Statistics reports multifactor productivity in manufacturing has been slowing down 0.3% per year over the 2004 to 2016 period. Much of this, they note, is due to slowdown in semiconductors, other electrical component manufacturing, and computer and peripheral equipment manufacturing.⁴⁴

- **The importance of entrepreneurship and growth in small businesses.** According to the 2018 Small Business Profile from the U.S. Small Business Office of Advocacy, small businesses account for over 99% of total businesses in the United States, and their employees account for nearly 50% of American workers.⁴⁵ The National League of Cities suggests ways that local governments can attract entrepreneurs and increase the number of small businesses, including strong leadership from elected officials; better communication with entrepreneurs, especially about the regulatory environment for businesses in the community; and partnerships with colleges, universities, small business development centers, mentorship programs, community groups, business groups, and financial institutions.⁴⁶

⁴³ M. R. Brill and S. T. Rowe, "Industry Labor Productivity Trends from 2000 to 2010." Bureau of Labor Statistics, *Spotlight on Statistics*, March 2013.

⁴⁴ M. Brill, B. Chanksy, and J. Kim, "Multifactor Productivity Slowdown in U.S. Manufacturing," *Monthly Labor Review*, U.S. Bureau of Labor Statistics, July 2018. <https://www.bls.gov/opub/mlr/2018/article/multifactor-productivity-slowdown-in-us-manufacturing.htm>.

⁴⁵ U.S. Small Business Office of Advocacy, 2018 Small Business Profile. <https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf>

⁴⁶ National League of Cities, *Supporting Entrepreneurs and Small Businesses*, 2012. <https://www.nlc.org/supporting-entrepreneurs-and-small-business>

- **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 twenty years (or longer) is 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 twenty years. About 30% of jobs paying \$20 to \$40 per hour, and 4% of jobs paying \$40 or more, are at risk of being automated over the next twenty years.⁴⁷

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).⁴⁸ This includes occupations such as recreational therapists; first-line supervisors of mechanics, installers, and repairers; emergency management directors; mental health and substance abuse social workers; audiologists; occupational therapists; orthotists and prosthetists; health-care social workers; oral and maxillofacial surgeons; and 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.^{49,50,51} This includes occupations such as telemarketers, title examiners, abstractors, searchers, hand sewers, mathematical technicians, insurance underwriters, watch repairers, cargo and freight agents, tax preparers, photographic process workers, processing machine operators, and accounts clerks.⁵²

- **Consolidation of Retail.** Historical shift in retail businesses, starting in the early 1960s, was the movement from one-off mom-and-pop shops toward superstores and the clustering of retail into centers or hubs. Notably, we still see this trend persist; for example, in 1997, the 50 largest retail firms accounted for about 26% of retail sales, and by 2007, they accounted for about 33%.⁵³ The more recent shift began in the late 1990s, where technological advancements gave consumers the option to buy goods through e-commerce channels. The trend toward e-commerce has become increasingly preferential to Millennials and Gen Xers, who are easier to reach online and are more responsive to

⁴⁷ Executive Office of the President, *Artificial Intelligence, Automation, and the Economy*, 2016.

⁴⁸ D. H. Autor, “Why Are There Still So Many Jobs? The History and Future of Workplace Automation,” *Journal of Economic Perspectives* 29 (3): 3–30, Summer 2015.

⁴⁹ C. B. Frey and M. A. Osborne, *The Future of Employment: How Susceptible Are Jobs to Computerisation?*, Oxford Martin School, University of Oxford, 2013.

⁵⁰ C. Otekhile and M. Zeleny, (2016). “Self Service Technologies: A Cause of Unemployment,” *International Journal of Entrepreneurial Knowledge* 4(1), 2016. DOI: 10.1515/ijek-2016-0005.

⁵¹ PwC. (n.d.). *Will Robots Really Steal Our Jobs? An International Analysis of the Potential Long-Term Impact of Automation*.

⁵² C. B. Frey and M. A. Osborne, *The Future of Employment: How Susceptible Are Jobs to Computerisation?*, Oxford Martin School, University of Oxford, 2013.

⁵³ A. Hortaçsu and C. Syverson, “The Ongoing Evolution of U.S. Retail: A Format Tug-of-War,” *Journal of Economic Perspectives* 29(4): 89–112, Fall 2015.

digital ads than older generations.⁵⁴ Since 2000, e-commerce sales grew from 0.9% to 6.4% (2014) and are forecasted to reach 12% by 2020. It is reasonable to expect this trend to continue. With this has come closures of retail stores. By 2027 for example, an estimated 15% of about 1,050 U.S. malls in smaller markets will close, impacting local-employment levels, local-government revenue streams (tax dollars), and neighborhood character.

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

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

- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. High-quality natural resources continue to be important in some states, especially in the western United States. Increases in the population and in household incomes, plus changes in tastes and preferences, have dramatically increased the 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.⁵⁵
- **Continued increase in demand for energy.** Energy prices are forecasted to increase over the planning period. While energy use per capita is expected to decrease through 2050, total energy consumption will increase with the rising population. Energy consumption is expected to grow primarily from industrial (0.9%) and, to a lesser extent, commercial users (0.4%). Residential consumption is forecasted to stagnate (0.0%), and transportation will slightly decrease (-0.1%). This decrease in energy consumption for transportation is primarily due to increased federal standards and increased technology for energy efficiency in vehicles. Moving forward, potential changes in federal laws (such as decreases in car emissions) leave energy demand somewhat uncertain.

Energy consumption by type of fuel is expected to change over the planning period. By 2050, the United States will continue to shift from crude oil toward natural gas and renewables. For example, from 2017 to 2050, the Energy Information Administration projects that the United States' overall energy consumption will average a 0.4% annual

⁵⁴ Pew Research Center, "Generations 2010." <http://www.pewinternet.org/Reports/2010/Generations-2010.aspx>

⁵⁵ For a more thorough discussion of relevant research, refer to T. M. Power and R.N. Barrett, *Post-Cowboy Economics: Pay and Prosperity in the New American West*, Island Press, 2017; and K. K. Kim, D. W. Marcouiller, and S. C. Deller, "Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes," *Growth and Change* 36 (2): 273-297, 2005.

growth rate, while consumption of renewable sources grows at 1.4% per year. With increases in energy efficiency, strong domestic production of energy, and relatively flat demand for energy by some industries, the United States will be able to be a net exporter of energy over the 2017 to 2050 period. Demand for electricity is expected to increase, albeit slowly, over 2017 to 2050 as the population grows and economic activity increases.⁵⁶

- **Impact of rising energy prices on commuting patterns.** As energy prices increase over the planning period, energy consumption for transportation will decrease. These increasing energy prices may decrease willingness to commute long distances, though with expected increases in fuel economy, it could be that people commute further while consuming less energy.⁵⁷ Over 2019 to 2035, the U.S. Energy Information Administration estimates in its forecast that the decline in transportation energy consumption, a result of increasing fuel economy, more than offsets the total growth in vehicle miles traveled (VMT). VMT for passenger vehicles is forecasted to increase through 2050.
- **Potential impacts of global climate change.** The consensus among the scientific community that global climate change is occurring expounds important ecological, social, and economic consequences over the next decades and beyond.⁵⁸ Extensive research shows that Oregon and other western states already have experienced noticeable changes in climate and predicts that more change will occur in the future.⁵⁹

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.⁶⁰ These changes are also likely to reduce winter snowpack and shift the timing of spring runoff earlier in the year.⁶¹

⁵⁶ Energy Information Administration, *Annual Energy Outlook 2018 with Projections to 2050*, U.S. Department of Energy, February 2018. <https://www.eia.gov/outlooks/aeo/pdf/AEO2018.pdf>. The cited growth rates are shown in the Executive Summary and can be viewed here: <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=2-AEO2018&cases=ref2018&sourcekey=0>.

⁵⁷ Energy Information Administration, *Annual Energy Outlook 2018 with Projections to 2050*, U.S. Department of Energy, February 2018.

⁵⁸ U.S. Global Change Research Program. *National Climate Assessment*. 2018. <https://nca2018.globalchange.gov/>

⁵⁹ Oregon Global Warming Commission. *2018 Biennial Report to the Legislature*. 2018. <https://www.keeporegoncool.org/reports/>

⁶⁰ U.S. Global Change Research Program. *National Climate Assessment*. "Chapter 24: Northwest." 2018. <https://nca2018.globalchange.gov/chapter/24/>

⁶¹ Mote, P., E. Salathe, V. Duliere, and E. Jump. 2008. *Scenarios of Future Climate for the Pacific Northwest*. Climate Impacts Group, University of Washington. March. Retrieved June 16, 2009, from <http://cses.washington.edu/db/pdf/moteetal2008scenarios628.pdf>; Littell, J.S., M. McGuire Elsner, L.C. Whitely Binder, and A.K. Snover (eds). 2009. "The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate - Executive Summary." In *The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate*, Climate Impacts Group, University of Washington. Retrieved June 16, 2009, from www.cses.washington.edu/db/pdf/

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.⁶²

These anticipated changes point toward some of the ways that climate change is likely to impact ecological systems and the goods and services they provide. There is considerable uncertainty about how long it would take for some of the impacts to materialize and the magnitude of the associated economic consequences. Assuming climate change proceeds as today’s models predict, however, some of the potential economic impacts of climate change in the Pacific Northwest will likely include:⁶³

- *Potential impact on agriculture and forestry.* Climate change may impact Oregon’s agriculture through changes in growing season, temperature ranges, and water availability.⁶⁴ Climate change may impact Oregon’s forestry through an increase in wildfires, a decrease in the rate of tree growth, a change in the mix of tree species, and increases in disease and pests that damage trees.⁶⁵
- *Potential impact on tourism and recreation.* Impacts on tourism and recreation may range from (1) decreases in snow-based recreation if snow-pack in the Cascades decreases, (2) negative impacts to tourism along the Oregon Coast as a result of damage and beach erosion from rising sea levels,⁶⁶ (3) negative impacts on availability of water summer river recreation (e.g., river rafting or sports fishing) as a result of lower summer river flows, and (4) negative impacts on the availability of water for domestic and business uses.

wacciaexecsummary638.pdf; Madsen, T. and E. Figdor. 2007. *When it Rains, it Pours: Global Warming and the Rising Frequency of Extreme Precipitation in the United States*. Environment America Research & Policy Center and Frontier Group.; and Mote, P.W. 2006. “Climate-driven variability and trends in mountain snowpack in western North America.” *Journal of Climate* 19(23): 6209-6220.

⁶² Oregon Climate Change Research Institute. *Climate Change Influence on Natural Hazards in Oregon Counties*. August 2018 and *Fourth Oregon Climate Assessment Report*. January 2019.

⁶³ 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.

⁶⁴ “The Economic Impacts of Climate Change in Oregon: A preliminary Assessment,” Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

⁶⁵ “Economic Impacts of Climate Change on Forest Resources in Oregon: A Preliminary Analysis,” Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, May 2007.

⁶⁶ “The Economic Impacts of Climate Change in Oregon: A preliminary Assessment,” Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

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

State Trends

Short-Term Trends

According to the Oregon Office of Economic Analysis (OEA), the Oregon economy “continues to hit the sweet spot.”⁶⁷ They also report that “job gains are enough to match population growth and absorb the workers coming back into the labor market. Wages are rising faster than in the typical state, as are household incomes.”⁶⁸ Though they note recent growth is slower than growth experienced several years ago.

Wages in Oregon continue to remain below the national average, but they are at their highest point relative to the early 1980s. The OEA reports that new Oregon Employment Department research “shows that [the] median hourly wage increase for Oregon workers since 2014 has been 3.1 percent annually for the past three years.”⁶⁹ These wage increases are “substantially stronger for the Oregonians who have been continually employed over the last three years.”⁷⁰

By the end of 2018, the OEA forecasts 41,700 jobs will be added to Oregon’s economy. This is an approximate 2.2% annual growth in total nonfarm employment relative to 2017 levels.⁷¹ Leisure and hospitality, construction, professional and business, and health-services industries are forecasted to account for well over half of the total job growth in Oregon for 2018. Oregon continues to have an advantage in job growth compared to other states due to its industrial sector and in-migration flow of young workers in search of jobs.

The housing market continues to recover as Oregon’s economy improves. Oregon is seeing an increase in household formation rates, which is good for the housing market, as this will “help drive up demand for new houses.”⁷² Though younger Oregonians are tending to live at home with their parents longer, the aging Millennial generation (from their early twenties to mid-to-late thirties) and the State’s increase in migration will drive demand for homes in the coming

⁶⁷ Office of Economic Analysis, “Oregon Economic and Revenue Forecast” 38(3): 2, September 2018.

⁶⁸ *Ibid*, page 2.

⁶⁹ *Ibid*, page 5.

⁷⁰ *Ibid*, page 5.

⁷¹ *Ibid*, page 13.

⁷² *Ibid*, page 13.

years. Housing starts in 2018 are on track to just under 22,000 units annually. This is “driven in large part by a decline in multifamily permit activity.”⁷³ Through 2020, the OEA forecasts moderate to strong housing growth. Beyond this time frame, the OEA forecasts an average growth of 24,000 units per year to satisfy the demand for Oregon’s growing population and to make up for the underdevelopment of housing postrecession.⁷⁴

The Oregon Index of Leading Indicators (OILI) has grown quite rapidly since January 2017. The leading indicators showing improvement are consumer sentiment, industrial production, initial claims, the manufacturing purchasing managers index (PMI), new incorporations, semiconductor billings, and withholdings. The indicators that are slowing include air freight and the Oregon Dollar Index, and the indicators not improving include help wanted ads and housing permits.⁷⁵

Oregon’s economic health is dependent on the export market. The value of Oregon exports in 2017 was \$21.9 billion. The countries that Oregon exports the most to are China (18% of total Oregon exports), Canada (11%), Malaysia (11%), South Korea (9%), Japan (8%), and Vietnam (7%).⁷⁶ With straining trade relations overseas, specifically with China, Oregon exports are left potentially vulnerable, as China is a top destination for Oregon exports.⁷⁷ An economic slowdown across many parts of Asia will have a spillover effect on the Oregon economy. Furthermore, with the United States’ withdrawal from the Trans–Pacific Partnership in January 2017, it is unclear how much Pacific Northwest trade will be impacted in the years to come.

Long-Term Trends

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

- **Continued in-migration from other states.** Oregon will continue to experience in-migration (more people moving *to* Oregon than *from* Oregon) from other states, especially California and Washington. From 1990 to 2017, Oregon’s population increased by about 1.3 million, 66% of which was from people moving into Oregon (net migration). The average annual increase in population from net migration over the same time period was just over 33,200. Oregon’s net migration was highest during the early to mid-1990s, reaching over 60,000 in 1991, with another smaller peak of almost 42,100 in 2006. In 2017, net migration reached just over 56,800 persons. Oregon has not seen

⁷³ *Ibid*, page 13.

⁷⁴ *Ibid*, page 13.

⁷⁵ *Ibid*, page 10.

⁷⁶ U.S. Census Bureau, “State Exports from Oregon, 2014–2017.” <https://www.census.gov/foreign-trade/statistics/state/data/or.html>.

⁷⁷ Office of Economic Analysis, “Oregon Economic and Revenue Forecast,” 38(3): 14, September 2018.

negative net migration since the early to mid-1980s.⁷⁸ Oregon's population has continued to get more ethnically and racially diverse, with the Latino population growing from 8% of the population in 2000 to 12% of the population in 2012–2016. The nonwhite population grew from 13% of the population to 15% of the population over the same period. Harney County's population is diversifying in similar ways as the State's, but at a slower pace.

- **Forecast of job growth.** Total nonfarm employment is expected to increase from 1.91 million in 2018 to just over 1.99 million in 2022, an increase of 80,000 jobs. The industries with the largest growth are forecasted to be professional and business services, health services, and retail, accounting for 61% of employment growth.⁷⁹
- **Continued importance of manufacturing to Oregon's economy.** Oregon's exports totaled \$19.4 billion in 2008, nearly doubling since 2000, and reached almost \$22 billion in 2017. The majority of Oregon exports go to countries along the Pacific Rim, with China, Canada, Malaysia, South Korea, and Japan as top destinations. Oregon's largest exports are tied to high-tech industries and mining, as well as agricultural products.⁸⁰ Manufacturing employment is concentrated in five counties in the Willamette Valley and Portland area: Washington, Multnomah, Lane, Clackamas, and Marion Counties.⁸¹
- **Shift in manufacturing from natural resource-based to high-tech and other manufacturing industries.** Since 1970, Oregon has been transitioning away from reliance on traditional resource-extraction industries. A significant indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the lumber and wood products industry and concurrent growth of employment in other manufacturing industries, such as high-tech manufacturing (industrial machinery, electronic equipment, and instruments), transportation equipment manufacturing, and printing and publishing.⁸²
- **Income.** Oregon's income and wages are below that of a typical state. However, mainly due to the wage growth over the last two to three years, Oregon wages are at their highest point relative to other states since the recession in the early 1980s. In 2017, the average annual wage in Oregon was \$51,117, and the median household income was \$60,212 (compared to the national average wage of \$53,621 in 2017 and the national household income of \$60,336).⁸³ Total personal income (all classes of income, minus

⁷⁸ Portland State University Population Research Center, Tables from the *2017 Annual Population Report*, April 2017. <https://www.pdx.edu/prc/population-reports-estimates>.

⁷⁹ Office of Economic Analysis, "Oregon Economic and Revenue Forecast," 38(3): 38, September 2018.

⁸⁰ U.S. Census Bureau, "State Exports from Oregon, 2014–2017." <https://www.census.gov/foreign-trade/statistics/state/data/or.html>.

⁸¹ Oregon Employment Department, "Employment and Wages by Industry (QCEW)," Geographic Profile: Manufacturing (31–33), 2017. <https://www.qualityinfo.org>.

⁸² Although Oregon's economy has diversified since the 1970s, natural resource-based manufacturing accounts for about 38% of employment in manufacturing in Oregon in 2017, with the most employment in food manufacturing (nearly 30,000) and wood product manufacturing (nearly 23,000) (QCEW).

⁸³ Average annual wages are for all industries, which includes private and public employers. Refer to:

Social Security contributions, adjusted for inflation) in Oregon is expected to increase by 22%, from \$202.2 billion in 2018 to \$247.5 billion in 2022.⁸⁴ Per capita income is expected to increase by 16% over the same time period, from \$48,000 in 2018 to \$55,800 in 2022 (in nominal dollars).⁸⁵

- **Small businesses continue to account for a large share of employment in Oregon.** While small firms played a large part in Oregon’s expansion between 2003 and 2007, they also suffered disproportionately in the recession and its aftermath (64% of the net jobs lost between 2008 and 2010 was from small businesses).

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

The average annualized payroll per employee for small businesses was \$37,149 in 2015, which is considerably less than that for large businesses (\$54,329) and the statewide average for all businesses (\$47,278).⁸⁶ Younger workers are important to continue 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. Furthermore, in 2011, about 160,000 start-up companies were created each month; 29% of these companies were founded by people between 20 and 34 years of age.⁸⁷

- **Entrepreneurship in Oregon.** The creation of new businesses is vital to Oregon’s economy, as their formations generate new jobs and advance new ideas and innovations into markets. They can also produce more efficient products and services to better serve local communities. According to the Kauffman Index, Oregon was ranked thirteenth in the country for its start-up activity in 2017, a measurement comprised of three statistics: rate of new entrepreneurs, opportunity share of new entrepreneurs, and start-up density.⁸⁸ This ranking is higher than its 2016 rank of fifteen. Oregon’s rate of new entrepreneurs (the percent of adults that became an entrepreneur in a given month) was in steady decline postrecession, but since 2013, it has gradually recovered to about 0.34%

Bureau of Labor Statistics, Oregon Quarterly Census of Employment and Wages, 2017. <https://www.qualityinfo.org>
U.S. Census American Community Survey 1-Year Estimates, Table B19013, 2017.

⁸⁴ Office of Economic Analysis, “Oregon Economic and Revenue Forecast,” 38(3): 39, September 2018.

⁸⁵ *Ibid*, page 39.

⁸⁶ U.S. Census Bureau, “2015 SU.S.B Annual Data Tables by Establishment Industry.”
<https://www.census.gov/data/tables/2015/econ/susb/2015-susb-annual.html>.

⁸⁷ R. Cooper, M. Hendrix, and A. Bitely, *The Millennial Generation Research Review*, Washington, DC: The National Chamber Foundation, 2012.

<https://www.uschamberfoundation.org/sites/default/files/article/foundation/MillennialGeneration.pdf>.

⁸⁸ Kauffman Foundation, *The Kauffman Index, Oregon*. <https://www.kauffman.org/kauffman-index/profile?loc=41&name=oregon&breakdowns=growth|overall,startup-activity|overall,main-street|overall>.

in 2016. This rate is still well below Oregon’s prerecession peak of 0.43% in 2000, but its recent growth broadly exhibits business ownership and formation is increasing.

Moreover, in 2018, the Oregon Office of Economic Analysis reports new business applications in Oregon are increasing. They do, however, simultaneously note start-up businesses “are a smaller share of all firms than in the past.”⁸⁹ Though this measurement of economic activity does not constitute a full understanding of how well entrepreneurship is performing, it does provide an encouraging signal.

Regional and Local Trends

Throughout this section and the report, the City of Burns and the City of Hines are compared to Harney County and the State of Oregon. These comparisons are to provide context for changes in Burns’, Hines’, and Harney County’s socioeconomic characteristics.

Availability of Labor

The availability of trained workers in Burns, Hines, and Harney County will impact development of its economy over the planning period. A skilled and educated populace can attract well-paying businesses and employers and spur the benefits that follow from a growing economy. Key trends that will affect the workforce in Burns, Hines, and Harney County over the next twenty years include its growth in its overall population, growth in the senior population, and commuting trends.

Population Change

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

Burns’ population has decreased by 3% over the 1990 to 2017 period, from 2,913 residents in 1990 to 2,830 in 2017. Hines’ population has increased over this period by 7%, adding 108 residents since 1990. This rate of growth exceeds that of Harney County, which grew by 300 residents (or 4%) over 1990 to 2017. Relative to Oregon, Harney County has grown at a rather slow pace, increasing at an average annual growth rate of 0.2%, compared to Oregon’s 1.4% average annual rate.

Exhibit 37. Population Growth, Burns, Hines, Harney County, and Oregon, 1990–2017

Geography	1990	2000	2010	2017	Number	Percent	AAGR
Oregon	2,842,321	3,421,399	3,831,074	4,141,100	1,298,779	46%	1.4%
Harney County	7,060	7,609	7,720	7,360	300	4%	0.2%
Burns	2,913	3,064	3,015	2,830	-83	-3%	-0.1%
Hines	1,452	1,623	1,865	1,560	108	7%	0.3%

⁸⁹ J. Lehner, “Start-Ups, R&D, and Productivity,” Salem, OR: Oregon Office of Economic Analysis, August 2018. <https://oregoneconomicanalysis.com/2015/03/13/start-ups-and-new-business-formation/>.

Age Distribution

The number of people aged 65 and older in the United States is expected to increase by nearly three-quarters by 2050, while the number of people under age 65 will only grow by 16%. The economic effects of this demographic change include a slowing of the growth of the labor force, a 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.⁹⁰

Exhibit 38 through Exhibit 42 show the following trends:

- Burns' population is getting older faster than the populations of the City of Hines, Harney County, and Oregon, though Harney County is aging rather quickly relative to Oregon. This suggests that the City of Burns and Harney County, in general, are attracting more people in midlife and more people over 65 years old. Hines' median age is above Oregon's, but Hines' change has been quite small over the 2000 to 2012–2016 period compared to Oregon, Harney County, and the City of Burns.
- The City of Burns, the City of Hines, and Harney County have a larger percentage of residents 60 years and older relative to Oregon. These areas also have smaller populations of persons between the ages of 20 to 39 and 50 to 59. This shows that the City of Burns, the City of Hines, and Harney County are attractive to people in their midlife, which affects potential availability of midcareer workers.
- Harney County's population is expected to continue to age, with people 60 years and older increasing from 32% of the population in 2016 to 38% of the population in 2035. This is consistent with statewide trends. Burns and Hines may continue to attract midlife and older workers over the planning period. While Burns' and Hines' share of retirees may increase over the next twenty years, availability of people nearing retirement (e.g., 55 to 70 years old) is likely to increase. People in this age group may provide sources of skilled labor, as people continue to work until later in life. These skilled workers may provide opportunities to support business growth in the City of Burns, the City of Hines, and Harney County.

⁹⁰ The Board of Trustees, *The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, July 13, 2017.

The Budget and Economic Outlook: Fiscal Years 2018 to 2028, April 2018.

Burns' median age has increased by about seven years since 2000; Hines' median age has increased by about one year since 2000; and Harney County's median age increased by about six years.

This change suggests that Harney County and the City of Burns are attracting more workers in midlife and more people over 65 years old.

Exhibit 38. Median Age, 2000 and 2012-2016

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

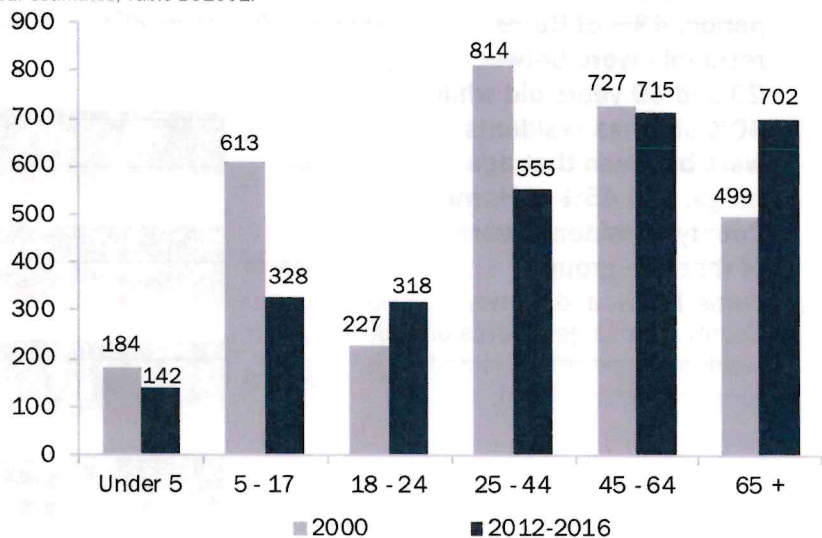
2000	38.7 Burns	39.6 Hines	39.8 Harney County	36.3 Oregon
2012-16	46.0 Burns	40.7 Hines	46.1 Harney County	39.1 Oregon

From 2000 to 2012-2016, Burns' largest population increase was for the populations 18 to 24 (40%) and those aged 65 years and older (41%).

The increase of those aged 18 to 24 is larger than statewide trends, and the increase for those 65 years and older is consistent with statewide trends.

Exhibit 39. Population Change by Age Group, Burns, 2000 to 2012-2016

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

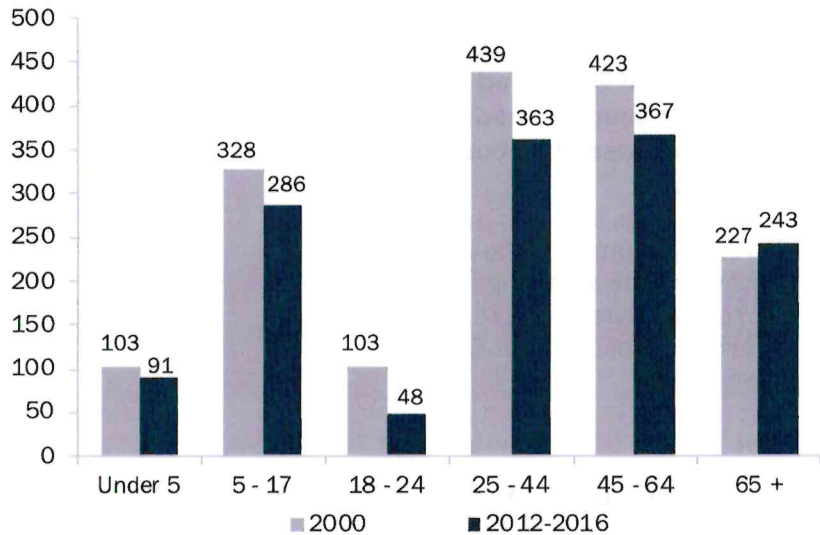


From 2000 to 2012–2016, Hines’ largest population increase was for the population 65 years and older (7%).

The increase of those aged 65 years and older is consistent with statewide trends, albeit Hines’ growth rate is much lower.

Exhibit 40. Population Change by Age Group, Hines, 2000 to 2012–2016

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

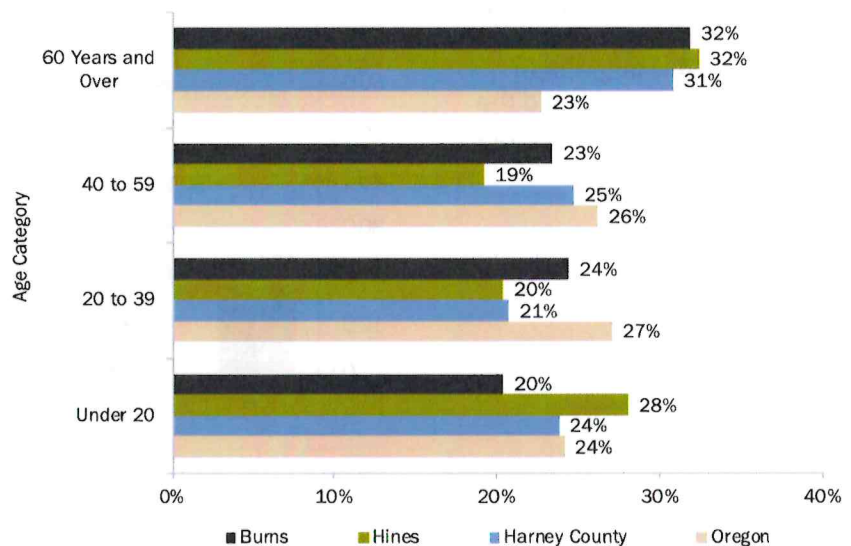


Over the 2012–2016 period, 48% of Burns residents were between 20 and 59 years old while 40% of Hines residents were between that age range, and 45% of Harney County’s residents were of that age group.

Burns, Hines, and Harney County have larger shares of residents aged 60 years and over relative to Oregon.

Exhibit 41. Population Distribution by Age, Burns, Hines, Harney County, and Oregon, 2012–2016

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

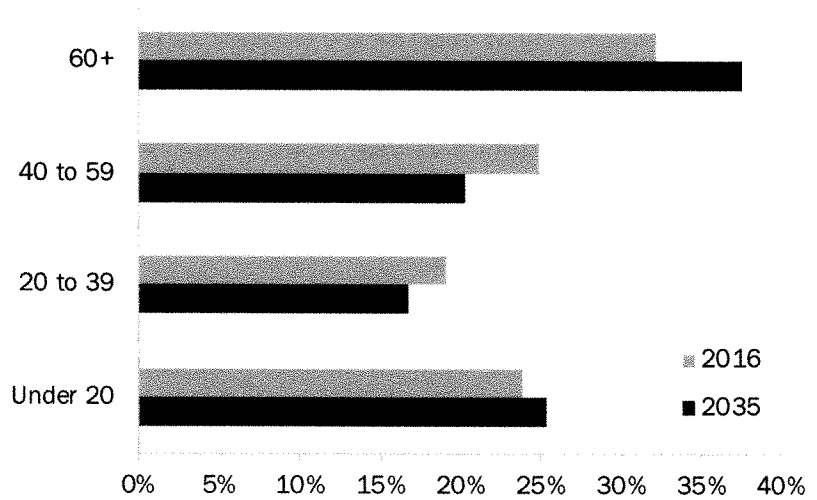


By 2035, Harney County will have a larger share of residents older than 60 than it does today.

The share of residents aged 60 years and older will account for 38% of Harney County's population, compared to 32% in 2016.

Exhibit 42. Population Growth by Age Group, Harney County, 2016 and 2035

Source: Portland State University, Oregon Population Forecast Program, 2016.



Race and Ethnicity

Harney County is becoming more racially and ethnically diverse. The Hispanic or Latino population, as well as the nonwhite population, has increased in Harney County between 2000 and 2012–2016. A similar trend for the Hispanic or Latino population occurred in Burns and Hines, but the nonwhite population decreased in the Cities.

The nonwhite population is defined as the share of the population that identifies as another race other than “white alone,” according to Census definitions. The small size of the cities in Harney County results in small sample sizes, and thus the margin of error is considerable for the estimate of these populations.

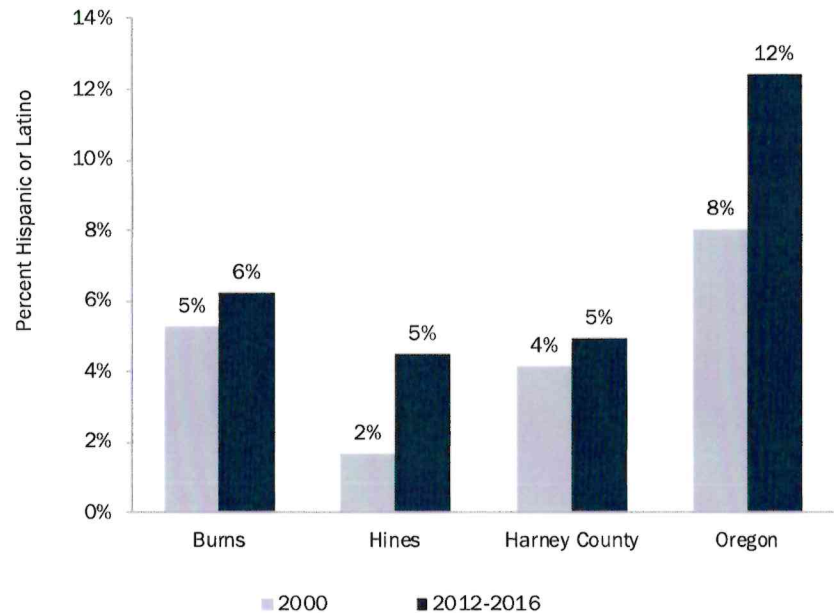
Exhibit 43 and Exhibit 44 show the change in the share of the Hispanic or Latino and nonwhite populations in Harney County and its cities compared to Oregon between 2000 and 2012–2016. The group with the largest share of the nonwhite population in 2012–2016 was those who identify as “American Indian and Alaska Native alone,” representing 3% of the population in Harney County. While Harney County is less ethnically and racially diverse than the State, providing culturally specific services to Native American and Spanish-speaking community members can help improve their participation in the workforce and economy.

Harney County's Hispanic/Latino population increased between 2000 and 2012–2016 from 4% to 5%.

Harney County and its cities are less ethnically diverse than the State.

Exhibit 43. Hispanic or Latino Population as a Percent of the Total Population, 2000, 2012–2016

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



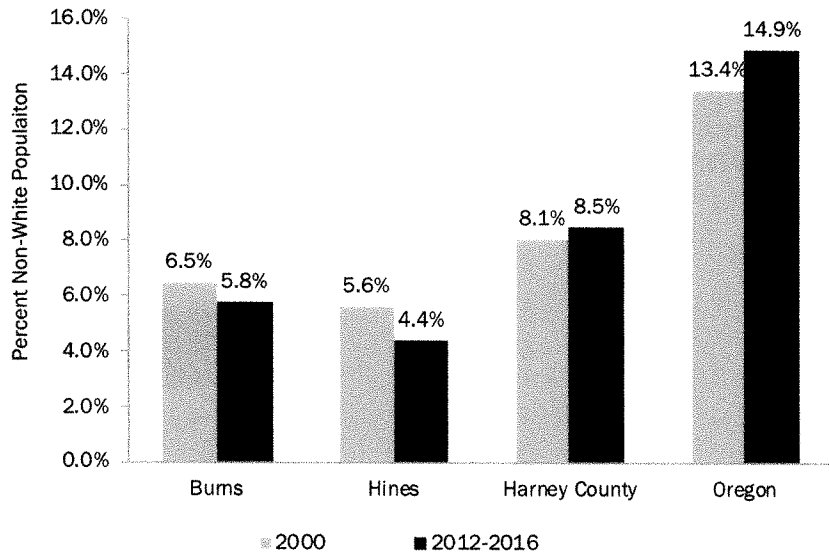
The nonwhite population in Harney County increased between 2000 and 2012–2016, and it decreased in Burns and Hines between 2000 and 2012–2016.

Harney County is less racially diverse than the State, with the nonwhite population at 8% compared to 15% in Oregon

The group with the largest share of the nonwhite population was “American Indian and Alaska Native alone,” representing 3% of the population in Harney County.

Exhibit 44. Nonwhite Population as a Percent of the Total Population, 2000, 2012–2016

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



Income

Income and wages affect business decisions for locating in a city. Areas with higher wages may be less attractive for industries that rely on low-wage workers. Burns’ median household income (\$36,396) is below the County’s median (\$38,431), and Hines’ median household income (\$42,333) is above the County’s median. Average wages at businesses in Burns (\$36,656) and Hines (\$36,304) are below that of Harney County (\$36,661), however, only by a minimal amount.

The increase in average wages in Harney County has many causes, but one cause is the change in mix of jobs in Harney County since 2001. For example, the number of employees in retail trade decreased, which is a sector with below-average wages. Employment in sectors with average wages, such as construction and wholesale trade, increased slightly since 2001.

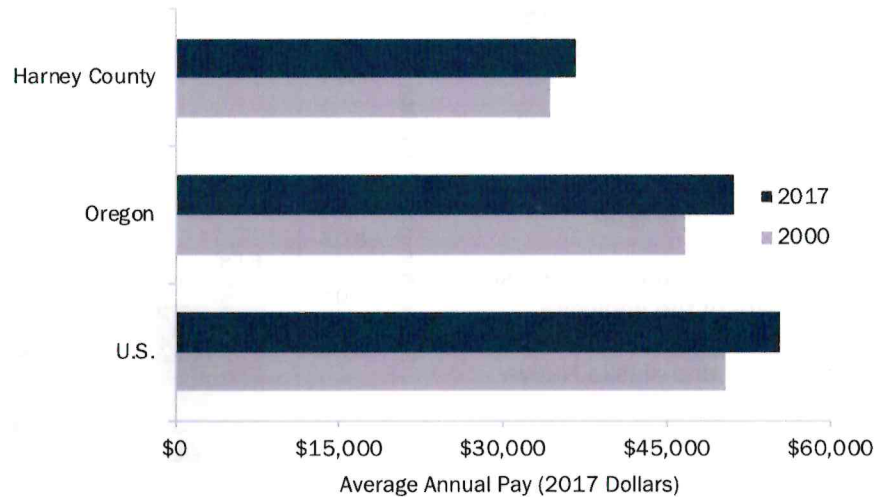
Median household income and median family income in Burns, Hines, and Harney County are below that of the State.

From 2000 to 2017, average annual wages rose in Harney County, Oregon, and the nation.

In 2017, average annual wages were \$36,661 in Harney County, \$51,117 in Oregon, and \$55,390 across the nation.

Exhibit 45. Average Annual Wage for Covered Employment, Harney County, Oregon, and the U.S., 2000 and 2017, Inflation-Adjusted 2017 Dollars

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



Over the 2012–2016 period, Burns, Hines, and Harney County had median household incomes below that of the State. Hines, however, had a median household income above both Burns and Harney County.

Exhibit 46. Median Household Income,⁹¹ 2012–2016

Source: U.S. Census Bureau, American Community Survey 2012–2016 five-year estimates, Table B19013.

\$36,396	\$42,333	\$38,431	\$53,270
Burns	Hines	Harney County	Oregon

⁹¹ 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.

Similar to median household income, Burns, Hines, and Harney County had median family incomes well below that of the State, though these family incomes are higher than household incomes. Hines had a higher median family income compared to Burns and Harney County.

Exhibit 47. Median Family Income,⁹² 2012–2016

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

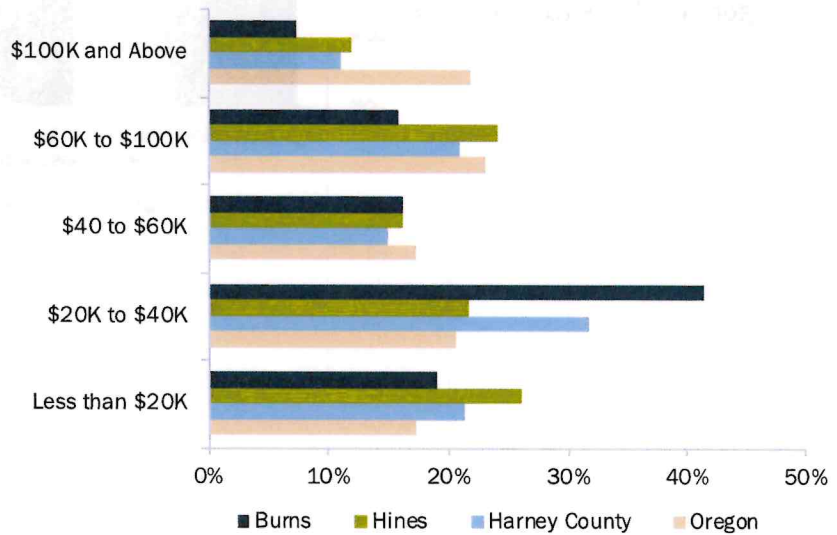
\$37,179	\$54,500	\$46,511	\$65,479
Burns	Hines	Harney County	Oregon

During the 2012–2016 period, 53% of Harney County households, 60% of Burns households, and 48% of Hines households earned less than \$40,000 annually.

About 16% of Burns households and 24% of Hines households earned income between \$60,000 and \$100,000, compared to 11% in Harney County and 23% statewide.

Exhibit 48. Household Income by Income Group, Burns, Hines, Harney County, and Oregon, 2012–2016

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



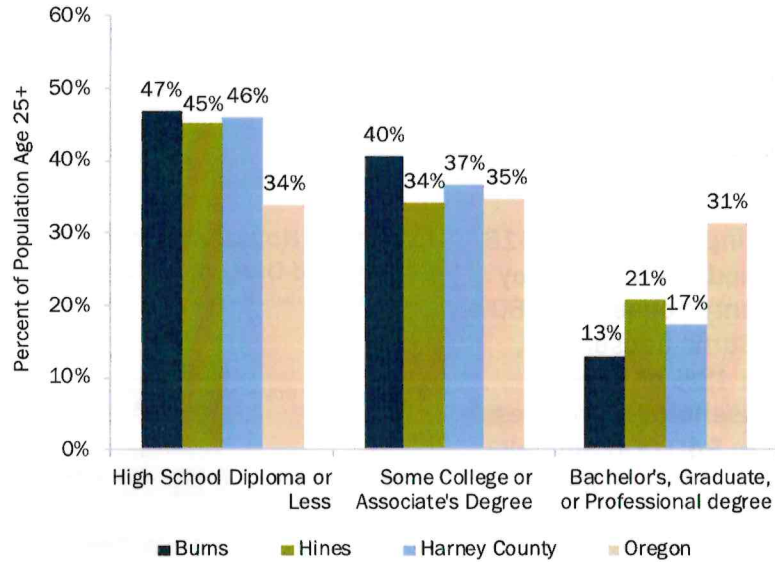
⁹² The Census calculated family income based on the income of the head of household and the income of all individuals 15 years old and over in the household who were related to the head of household by birth, marriage, or adoption, as identified in the response to the Census forms,

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.

Burns and Harney County have a larger share of residents who have completed some college or acquired an associate's degree relative to Oregon. Burns (13%), Hines (21%), and Harney County's (17%) residents tend to have lower levels of bachelor's or professional degree attainment compared to Oregon residents (31%).

Exhibit 49. Educational Attainment for the Population 25 Years and Over, Burns, Hines, Harney County, and Oregon, 2012–2016
Source: U.S. Census Bureau, American Community Survey 2012–2016 5-year estimates, Table B15003.



Labor Force Participation and Unemployment

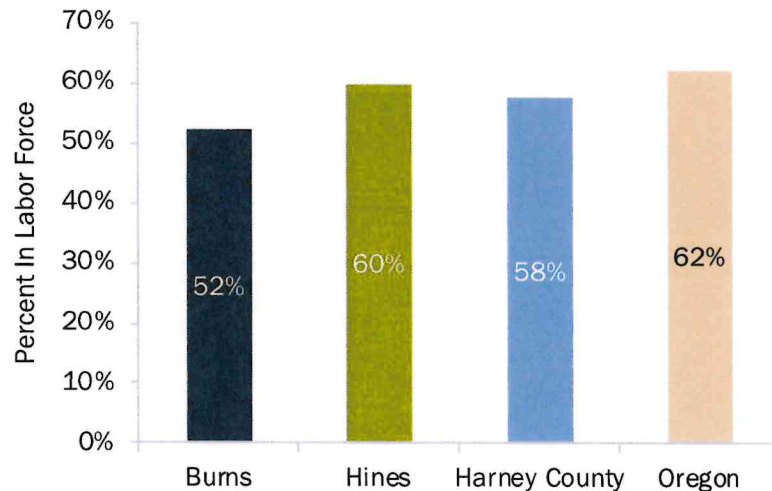
The current labor force participation rate is an important consideration in the availability of labor. The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2012–2016 American Community Survey, Burns had more than 1,200 people in its labor force, Hines had more than 650, and Harney County had over 3,400.

In 2017, the Oregon Office of Economic Analysis reported that 64% of job vacancies were difficult to fill. The most common reason for difficulty in filling jobs included a lack of applications (30% of employers' difficulties), lack of qualified candidates (17%), unfavorable working conditions (14%), a lack of soft skills (11%), and a lack of work experience (9%).⁹³ These statistics indicate a mismatch between the types of jobs that employers are demanding and the skills that potential employees can provide.

Hines has a higher labor force participation rate (60%) than Harney County (58%) and Burns County (52%), but its rate was less than Oregon's (62%) for the 2012–2016 period.

Exhibit 50. Labor Force Participation Rate, Burns, Hines, Harney County, and Oregon, 2012–2016

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



⁹³ Oregon Employment Department, "Oregon's Current Workforce Gaps: Difficult-to-Fill Job Openings," Oregon Job Vacancy Survey, June 2018.

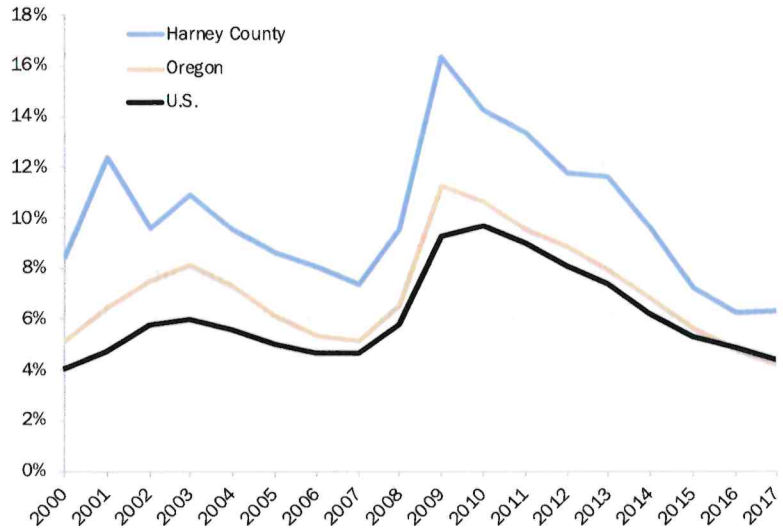
The unemployment rate in Oregon and the U.S. has declined since the recession.

Unemployment rates for Harney County, Oregon and the nation in 2017 are below their respective 2000 rates.

In 2017, the unemployment rate in Harney County was about 6.3%, higher than Oregon's rate of 4.1% and the national rate of 4.4%.

Exhibit 51. Unemployment Rate, Harney County, Oregon, and the U.S., 2000 to 2017

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



Commuting Patterns

Commuting plays an important role in Burns' and Hines' economies because employers in these Cities are able to access workers from people living in them and from across Harney County.

Exhibit 53 shows 19% of people who work in Burns commute from Hines, 2% commute from Baker City, and 1% commute from Crane. The remaining workers commute from many other cities located across the Eastern Oregon region.

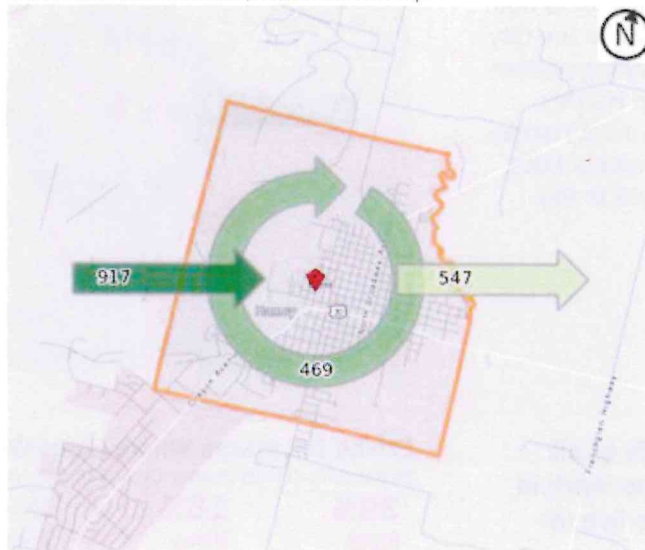
Exhibit 56 shows 39% of people who work in Hines commute from Burns, 2% commute from Ontario, and 1% commute from Crane. The remaining workers commute from various other Eastern Oregon cities.

Burns is part of an interconnected regional economy.

More people commute into Burns than commute out of the City. A sizable number of Burns residents (about 469) both live in and are employed in the City. This commuting pattern differs from Harney County, as most Harney County residents both live and work in the County.

Exhibit 52. Commuting Flows, Burns, 2015

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



About 34% of all people who work in Burns also live in Burns.

Exhibit 53. Places Where Burns Workers Lived,⁹⁴ 2015

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

34%	19%	2%	1%
Burns	Hines	Baker City	Crane

⁹⁴ In 2015, 1,386 people worked at businesses in Burns, with 34% of people (469) both employed and living in Burns.

About 46% of residents who live in Burns also work in Burns.

About 14% of Burns residents commute to Hines.

Exhibit 54. Places Where Burns Residents Were Employed,⁹⁵ 2015

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

46%	14%	3%	2%
Burns	Hines	Bend	Prineville

Hines is also part of an interconnected regional economy

More people commute out of Hines for work than people commuting into the City. Only about 56 Hines residents both live and work in the City. This commuting pattern differs from Harney County, as most Harney County residents both live and work in the County.

Exhibit 55. Commuting Flows, Hines, 2015

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



About 39% of all people who work in Hines also live in Hines.

About 10% of residents who live in Hines also work in Hines.

About 49% of Hines residents commute to Burns.

Exhibit 56. Places Where Hines Workers Lived,⁹⁶ 2015

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

39%	16%	2%	1%
Burns	Hines	Ontario	Crane

Exhibit 57. Places Where Hines Residents Were Employed,⁹⁷ 2015

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

49%	10%	3%	1%
Burns	Hines	Bend	Salem

⁹⁵ In 2015, 1,016 residents of Burns worked, with 46% of Burns residents (469 people) both living and employed in Burns.

⁹⁶ In 2015, 359 people worked at businesses in Hines, with 16% of people (56) both living and working in Hines.

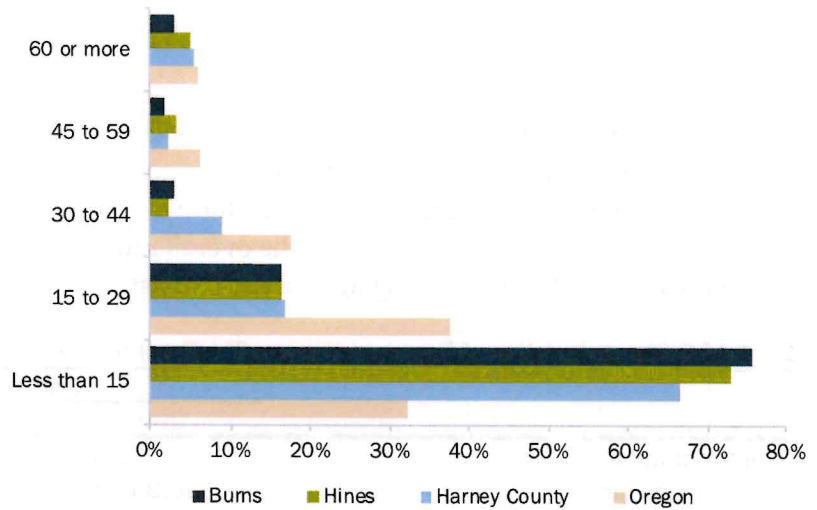
⁹⁷ In 2015, 552 residents of Hines worked, with 10% of Hines residents (56 people) both living and working in Hines.

During the 2012–2016 period, about 76% of Burns residents had a commute of less than 15 minutes and 73% of Hines residents had a commute of that length, compared to 66% of Harney County residents and 32% of Oregon residents.

The majority of residents in Burns, Hines, and Harney County have a commute time of less than 15 minutes.

Exhibit 58. Commute Time by Place of Residence, Burns, Hines, Harney County, and Oregon, 2012–2016

Source: U.S. Census Bureau, American Community Survey 2012–2016 5-year estimates, Table B08303.



Agriculture in Harney County

Agricultural industries in Harney County have been, and continue to be, a large part of the Eastern Oregon economy. Harney County’s Economic Development Strategic Plan identified both strengths and opportunities as well as weaknesses and threats in value-added agriculture industries in the County. Strengths and opportunities included access to land, resources, and a skilled workforce, while the transportation of products and the uncertain transition of farms to new owners—the average age of a principal farm operator in the County in 2012 was 58 years old⁹⁸—were identified as weaknesses or potential threats.⁹⁹

The U.S. Department of Agriculture completed the last Census of Agriculture in 2012. Exhibit 59 summarizes key characteristics of farms in Harney County compared to Oregon in both 2007 and 2012. In 2012, the average size of farms in Oregon was 460 acres, while the average size in Harney County was 3,029 acres. The average farm size in both Oregon and Harney County increased between 2007 and 2012, while the overall number of farms decreased. The age of farm owners is also a factor in changing agricultural industries.

Exhibit 59. Characteristics of Farms in Harney County and Oregon, 2007 and 2012

	Oregon		Harney County	
	2007	2012	2007	2012
Number of farms	38,553	35,439	523	497
Land in farms (acres)	16,399,647	16,301,578	1,461,508	1,505,437
Average size of farm (acres)	425	460	2,794	3,029
Average market value of products sold per farm (adjusted to 2012 dollars)	\$ 126,284	\$ 137,805	\$ 109,800	\$ 178,965
Average net cash farm income per farm (adjusted to 2012 dollars)	\$ 26,020	\$ 22,954	\$ 13,451	\$ 28,565
Average age of principal operator	58	60	56	58

Source: U.S. Department of Agriculture. Census of Agriculture, 2007 and 2012.

⁹⁸ U.S. Department of Agriculture, *Census of Agriculture, Harney County Profile*, 2012.

⁹⁹ Harney County Economic Development Office, *Harney County Economic Development Strategic Plan*, September 2012.

The average market value of products sold per farm in Harney County was \$178,965 in 2012, higher than the average in Oregon overall (\$137,805). The average net cash farm income per farm in Harney County (\$28,565) was also higher than the State average (\$22,954). Furthermore, the net cash farm income increased in Harney County between 2007 and 2012 but decreased in Oregon overall. The strength of Harney County's agricultural production is related to the types of crops produced on land in the County. Exhibit 60 shows that the commodities in Harney County with the highest value of sales in 2012 were "Other Crops and Hay" and "Cattle and Calves."

Exhibit 60. Value of Sales by Commodity Group (per \$1,000), Harney County, 2007 and 2012

	Harney County	
	2007	2012
Grains, oilseeds, dry beans, and dry peas	(D)	\$ 351
Other crops and hay	\$ 13,174	\$ 36,706
Poultry and eggs	\$ 14	\$ 19
Cattle and calves	\$ 37,435	\$ 51,065
Hogs and pigs	\$ 4	\$ 8
Sheep, goats, wool, mohair, and milk	\$ 247	\$ 211
Horses, ponies, mules, burros, and donkeys	\$ 594	\$ 501
Other animals and other animal products	\$ 62	\$ 53

Source: U.S. Department of Agriculture. Census of Agriculture, 2007 and 2012. (D) denotes values that cannot be disclosed.

Tourism in Eastern Oregon and Harney County

Longwoods International provides regional statistics on travel. The following information is from Longwoods International's *2017 Regional Visitor Report* for the Eastern Oregon Region, which is comprised of Baker, Gilliam, Grant, Harney, Malheur, Morrow, Northeast Wasco, Sherman, Umatilla, Union, Wallowa, and Wheeler Counties.¹⁰⁰ Broadly, travelers to Eastern Oregon accounted for:¹⁰¹

- 2.5 million overnight trips in 2017, or 7% of all Oregon overnight travel that year.
- The primary market area for travelers over 2016 and 2017 were Oregon, Washington, and California: 43% of Eastern Oregon visitors came from Oregon, 14% came from Washington, and 10% came from California.
- About 69% of visitors stayed 2 or fewer nights over 2016 and 2017 in Eastern Oregon, 23% stayed 3–6 nights, and 8% stayed 7 or more nights. The average nights spent in Eastern Oregon was 2.6.
- The average per-person expenditures on overnight trips in 2017 ranged from \$10 on recreation, sightseeing, and entertainment to \$37 per night on lodging.
- About 76% of visits to the Eastern Oregon region over 2016 and 2017 were via personally owned automobiles, 18% were by rental car, and 16% were by plane.
- Over 2016 and 2017, visitors tended to be young or middle-aged adults between the ages of 25 to 44; this age group comprised 47% of all visits. About 65% of visitors graduated college or completed a postgraduate education. Additionally, 40% of visitors earned less than \$50,000 annually in household income, 21% earned between \$50,000 and \$74,999, 20% earned between \$75,000 and \$99,999, and 19% earned more than \$100,000. The average household income for Eastern Oregon visitors was about \$64,645.

Harney County's direct travel spending increased 26% from 2000 to 2017.

The Eastern Oregon region's direct travel spending increased by 46% over the same period.

Exhibit 61. Direct Travel Spending (\$ millions), 2000 and 2017

Source: Dean Runyan Associates, Oregon Travel Impacts, 1991–2017.

2000	\$263	\$15
	Eastern Oregon Region	Harney County
2017	\$383	\$19
	Eastern Oregon Region	Harney County

¹⁰⁰ Travel Oregon, *Eastern Oregon Overnight Travel Study: 2017*, Longwoods International, October 2018. <http://industry.traveloregon.com/research/archive/eastern-oregon-overnight-travel-study-2017-longwoods-international/>.

¹⁰¹ Longwoods International issues caution in interpreting these tourism estimates in Eastern Oregon, as the sample size for this region is low.

Harney County's lodging tax receipts increased 46% over 2006 to 2017.

The transient occupancy tax rate is 9% in Burns and 8% in Hines. Despite having a lower rate, Hines had higher lodging tax receipts than Burns in 2006 and 2017.

Exhibit 62. Lodging Tax Receipts (\$ thousands), 2006 and 2017

Source: Dean Runyan Associates, Oregon Travel Impacts, 1991-2017.

2006	\$67	\$130	\$215
	Burns	Hines	Harney County
2017	\$121	\$201	\$313
	Burns	Hines	Harney County

Harney County's largest visitor spending for purchased commodities is food services.

Exhibit 63. Largest Visitor Spending Categories (\$ millions), Harney County, 2017

Source: Dean Runyan Associates, Oregon Travel Impacts.

\$4.8	\$1.0	\$0.5
Accommodations & Food Services	Arts, Entertainment & Recreation	Retail

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

Exhibit 64. Largest Industry Employment Generated by Travel Spending, Harney County, 2017

Source: Dean Runyan Associates, Oregon Travel Impacts.

209 jobs	92 jobs	21 jobs
Accommodations & Food Service	Arts, Entertainment & Recreation	Retail

Appendix B. Buildable Lands Inventory

The buildable lands inventory (BLI) is intended to identify commercial and industrial lands that are available for development for employment uses within the Burns UGB and Hines 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 the methods used to develop the commercial and industrial BLI for the Burns UGB and Hines UGB.

Methods and Definitions

The BLI for Harney County includes all land that allows commercial and industrial uses within the UGBs of Burns and Hines. From a practical perspective, land was included in the BLI if it met all of the following criteria: (1) it is inside the Burns UGB or Hines UGB, (2) it is inside a tax lot (as defined by Harney County GIS), and (3) if its current zoning/comprehensive plan designation allows employment uses.¹⁰² Note that tax lots do not generally include road or railroad rights-of-way or water. ECONorthwest used an August 2018 tax lot shapefile from Harney County as the basis for the analysis. The inventory then builds from the tax lot-level database to form estimates of buildable land by plan designation.

Inventory Steps

The steps in the BLI are:

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

¹⁰² In Harney County, the comprehensive plan map and the zone map are the same.

Step 1: Generate UGB “Land Base”

The commercial and industrial inventory used all of the tax lots in the Burns and Hines UGBs with the appropriate zoning/plan designations.¹⁰³ Exhibit 65 shows the specific designations that were used in the BLI.

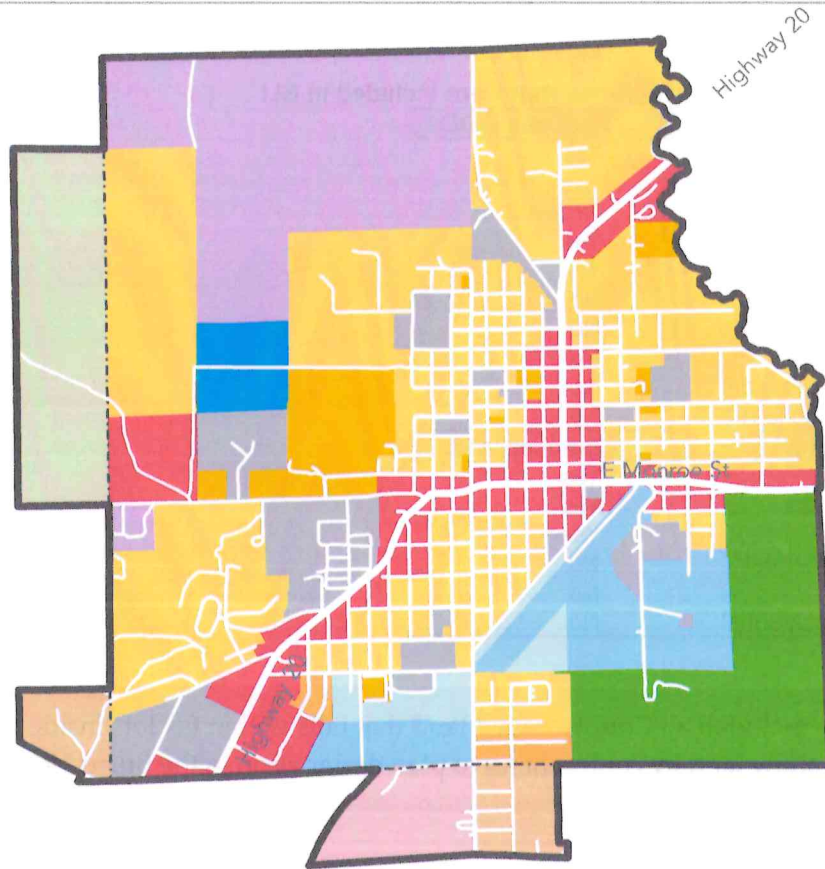
Exhibit 65. Zones in Burns and Hines that were included in BLI

City of Burns Zones	Included in BLI?
Commercial General	Yes
Heavy Industrial	Yes
Indian Trust	No
Industrial/Energy Development	Yes
Light Industrial	Yes
Multifamily Residential	No
Open Space	No
Public Facility	No
Single-Family Residential	No
Single Family/Mobile Home	No
City of Hines Zones	Included in BLI?
Commercial	Yes
Exclusive Farm Use	Yes
Industrial	Yes
Multifamily Residential	No
Public Facility	No
Single-Family Residential	No

In addition, we included all County-zoned land that falls within tax lots inside UGBs. Exhibit 66 and Exhibit 67 show land by comprehensive plan designation in the Burns UGB and Hines UGB by zones included in the BLI.

¹⁰³ One tax lot in Burns—23S31E07DD06300—was rezoned to residential in 2018. The City has not updated its comprehensive plan since then, and as of January 2019 the tax lot continues to have a plan designation of commercial general. Based on previous correspondence with DLCD staff (for another BLI in a different city), we removed this tax lot from the EOA land base and considered it part of the residential land base. A recommendation of the EOA will be to update the City’s comprehensive plan map to reflect this change to the zoning map, as well as any other changes made to the zoning map but not to the comprehensive plan map.

Burns Comprehensive Plan Designations

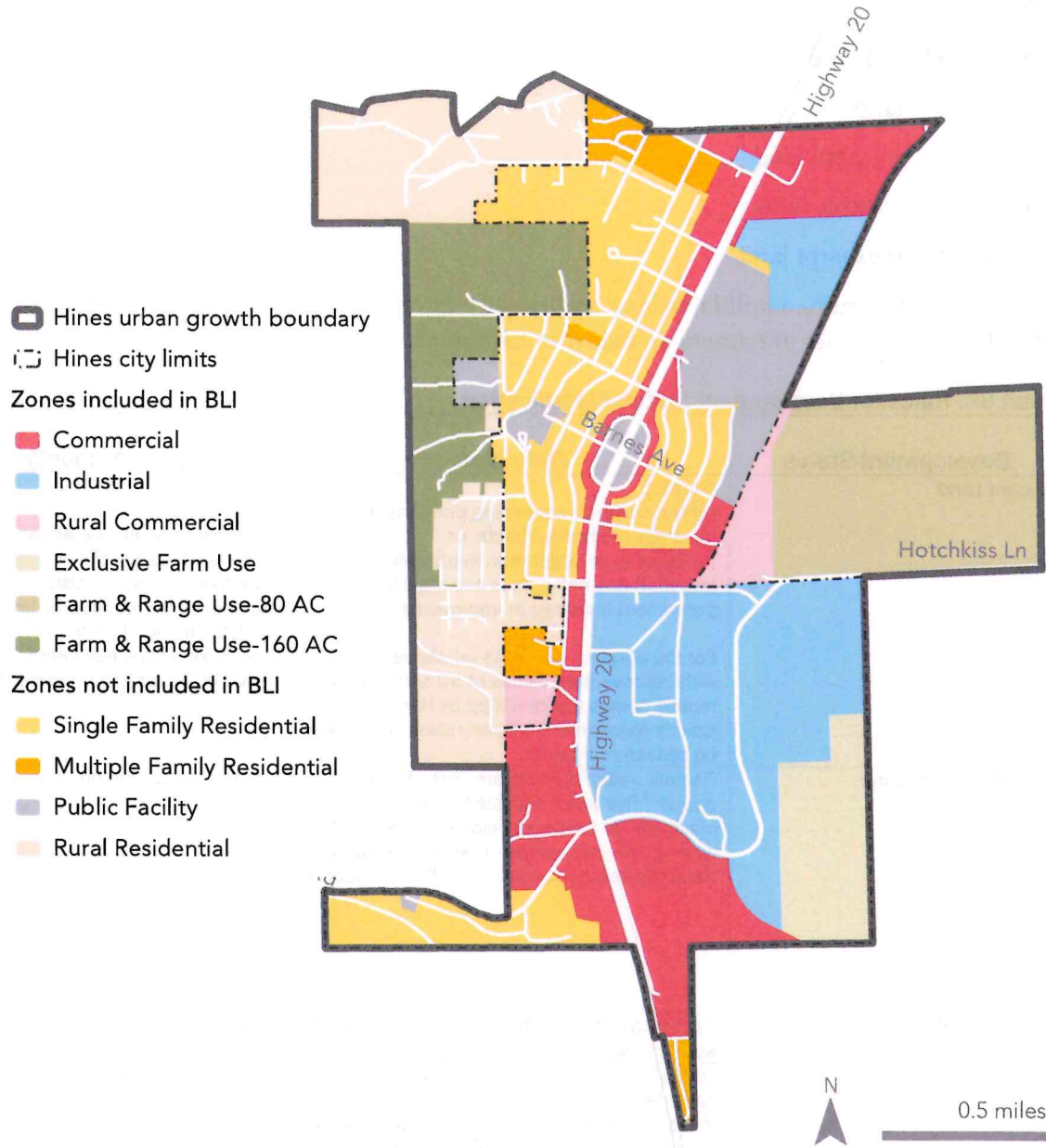


- | | |
|----------------------------------|--------------------------------------|
| Burns urban growth boundary | Zones not included in the BLI |
| Burns city limits | Single Family Residential |
| Zones included in the BLI | Single-Family/Mobile Home |
| Commercial General | Multiple Family Residential |
| Light Industrial | Open Space |
| Heavy Industrial | Public Facility |
| Industrial/ Energy Development | Rural Residential |
| Rural Commercial | Indian Trust |
| Farm & Range Use-160 AC | |



As of date: January 4, 2019
Sources: ECONorthwest, Harney County

Hines Comprehensive Plan Designations



As of date: January 4, 2019
 Sources: ECONorthwest; Harney County

Step 2: Classify Lands

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

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

ECONorthwest identified buildable land and classify development status using a rule-based methodology. The rules are described below in Exhibit 68.

Exhibit 68. Rules for Development Status Classification

Development Status	Definition	Statutory Authority
Vacant Land	<p>A tax lot:</p> <p>(a) Not currently containing permanent buildings or improvements; or</p> <p>(b) Equal to or larger than five acres, where less than one half-acre is occupied by permanent buildings or improvements</p> <p>For the purpose of criteria (a) above, lands with improvement values of \$0 and without mobile homes (as identified by Harney County Assessment property class codes) will be considered vacant.</p>	<p>OAR 660-009-005(14)</p> <p>We propose to include all tax lots in the land base in the inventory—a more inclusive approach than required by law. Tax lots smaller than the thresholds will be evaluated based on existing improvements.</p>
Partially Vacant Land	<p>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 will be based on a visual assessment and City staff verification.</p>	No statutory definition
Undevelopable Land	<p>Vacant tax lots less than 3,000 square feet in size are considered undevelopable.</p>	No statutory definition
Public or Exempt Land	<p>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 and properties with conservation easements. Public lands and exempt land will be identified using the Harney County Assessment property class codes. This category only includes public lands that are located in commercial plan designations.</p>	No statutory definition

Development Status	Definition	Statutory Authority
Developed Land	OAR 660-009-005(1) defines developed land as “Non-vacant land that is likely to be redeveloped during the planning period.” Lands not classified as vacant, partially vacant, undevelopable, or public or exempt are considered developed.	OAR 660-009-005(1) We propose to address redevelopment potential on the demand side—operationalizing a definition of developed land consistent with this definition is complicated

Step 3: Identify Constraints

As shown in Exhibit 69, the BLI included development constraints consistent with guidance in OAR 660-008-0005(2).

Exhibit 69. Constraints to be included in BLI

Constraint	Statutory Authority	Threshold	File name/location
Goal 5 Natural Resource Constraints			
Regulated Wetlands	OAR 660-008-0005(2)	Within National Wetlands Inventory	https://www.fws.gov/wetlands/Data/Data-Download.html
Natural Hazard Constraints			
Floodways	OAR 660-008-0005(2)	Lands within FEMA FIRM-identified floodway, digitized by Harney County	Floodplains feature class DESIGNATION = “Areas of floodway”
100-Year Floodplain	OAR 660-008-0005(2)	Lands within FEMA FIRM 100-year floodplain, digitized by Harney County	Floodplains feature class DESIGNATION = “Areas of 100-year flooding”
Steep Slopes	OAR 660-008-0005(2)	Slopes greater than 15%	State Digital Elevation Model
Landslide Susceptibility	OAR 660-008-0005(2)	Land classified by DOGAMI as having “high” or “very high” landslide susceptibility	https://www.oregongeology.org/pubs/ofr/p-O-16-02.htm

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. Show the development constraints included in the BLI.

Exhibit 70. Employment land development constraints by constraint type, Burns UGB, 2018

Burns EOA Buildable Lands Inventory Development Constraints

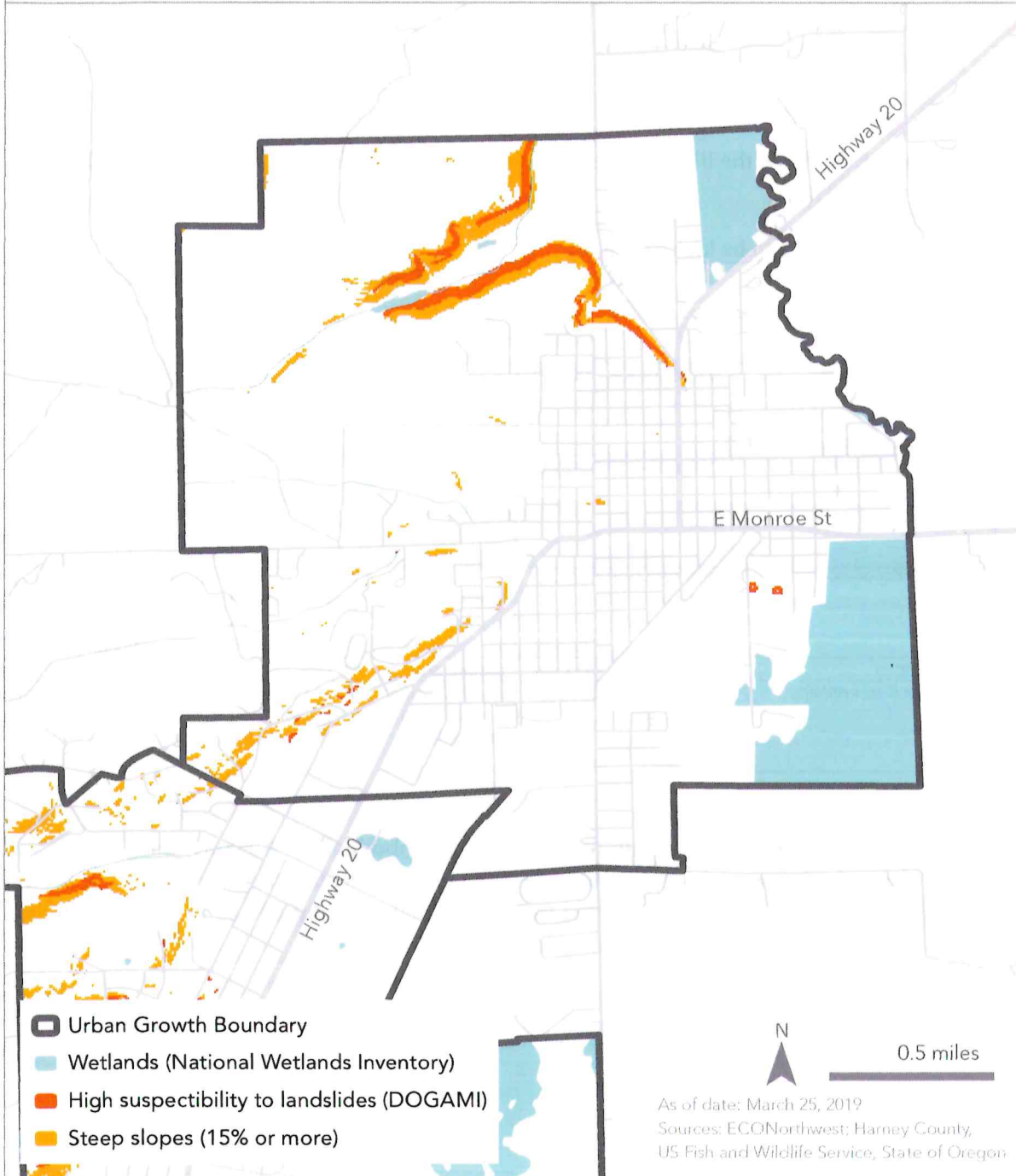
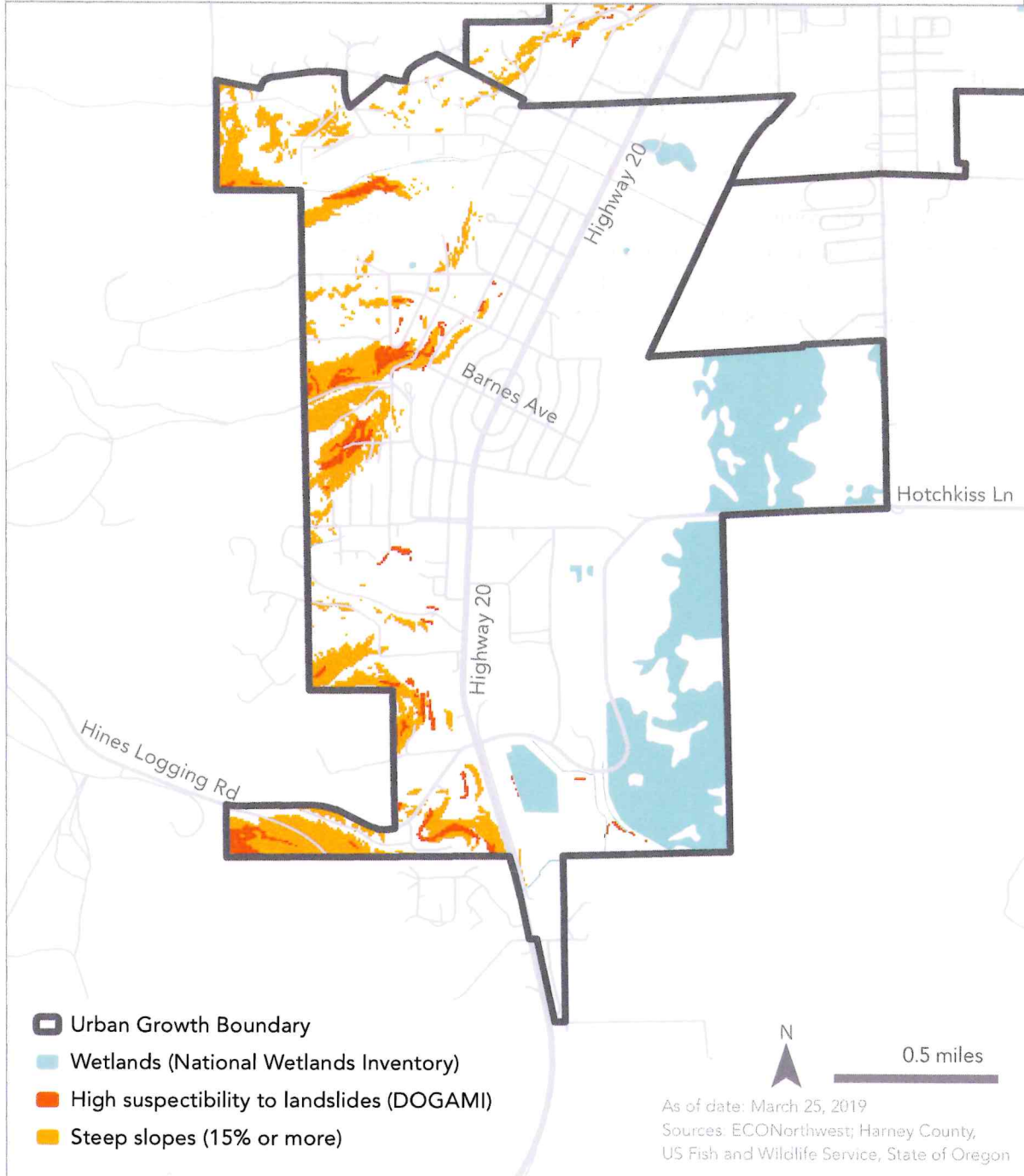


Exhibit 71. Employment land development constraints by constraint type, Hines UGB, 2018

Hines EOA Buildable Lands Inventory Development Constraints



Step 4: Verify Inventory Results

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

Step 5: Tabulate and Map Results

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