

***DRAFT***



**ECONOMIC OPPORTUNITIES ANALYSIS  
HERMISTON, OREGON**

Prepared For:  
City of Hermiston, Oregon

April 2024

# Acknowledgments

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**APPENDIX A: SITING CRITERIA BY INDUSTRY TYPOLOGY**

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# I. INTRODUCTION

This report introduces analytical research presenting an Economic Opportunities Analysis (EOA) for the City of Hermiston, Oregon.

Cities are required to reconcile estimates of future employment land demand with existing inventories of vacant and redevelopable employment land within their Urban Growth Boundary (UGB). The principal purpose of the analysis is to provide an adequate land supply for economic development and employment growth. This is intended to be conducted through a linkage of planning for an adequate land supply to infrastructure planning, community involvement and coordination among local governments and the state.

To this end, this report is organized into seven primary sections:

- **Economic Development Objectives:** The community goals and policies that form the foundation for the EOA.
- **Economic Trends:** Provides an overview of national, state, and local economic trends affecting Umatilla County and the City of Hermiston, including population projections, employment growth and a demographic profile.
- **Economic Development Potential:** A discussion of the comparative advantages of the local community and work force.
- **Industries Differentiation Analysis:** Analysis of key industry typologies the City should consider targeting as economic opportunities over the planning period.
- **Employment Land Needs:** Examines projected demand for industrial and commercial land based on anticipated employment growth rates by sector.
- **Reconciliation:** Summarizes the City's inventory of vacant and redevelopable industrial and commercial land (employment land) within City of Hermiston's UGB. Compares short- and long-term demand for employment land to the existing land inventory to determine the adequacy and appropriateness of capacity over a five and twenty-year horizon.
- **Conclusions and Recommendations:** Summary of findings and policy implications.

## II. COMMUNITY ECONOMIC DEVELOPMENT OBJECTIVES

The City of Hermiston is preparing an Economic Opportunities Analysis (EOA) based on a 20-year forecast of employment growth. A Statement of Community Economic Development Objectives defines a sustainable vision for economic development in Hermiston by considering the city's economic history, changes affecting that tradition, and new and emerging opportunities.

The City of Hermiston aspires to become the regional center for trade and industry through the following actions:

- Ensuring an adequate supply of industrial land in large parcels to provide job creation and economic growth.
- Insuring an adequate supply of commercial land in the downtown and along commercial corridors.
- Removing barriers to commercial redevelopment to ensure a modern and efficient commercial base.
- Continue to provide leadership in identifying and locating new, and expanding existing, industrial, and commercial businesses into the City.
- Providing adequate infrastructure to support all employment activities through public and private funding sources.

The following is a summary of policies that are related to the objectives of this EOA, drawn from Chapter III of the City of Hermiston Comprehensive Plan, which contains more context and discussion on each.

### **POLICY 20: GENERAL ECONOMIC DEVELOPMENT**

#### **Overview**

Hermiston is well situated as an economic hub in Umatilla County and the surrounding region. The city enjoys some competitive advantages which can be enhanced in the future to grow employment, establish successful industry clusters, and diversify the employment base. An ample supply of buildable commercial and industrial lands, in multiple zoning classifications, will provide the flexibility to meet the needs of new and expanding businesses.

#### **Vision**

To become the center of commercial and industrial activity in northeast Oregon providing an attractive, livable community utilizing adaptive, modern policies to capture economic development opportunities.

### **POLICY 17: AGRICULTURE AND AGRICULTURE-RELATED ECONOMY**

THE CITY OF HERMISTON WILL UNDERTAKE ACTIVITIES WHICH REINFORCE ITS POSITION AS THE RURAL SERVICE CENTER FOR THE REGION.

- A) The City will maintain an adequate supply of designated commercial land within the City to provide a full range of goods and services needed by area farmers, and support agriculturerelated industries;
- B) The City will encourage agriculture-related businesses which add value to agricultural production in the area, including food processing, storing and shipping, and agri-tourism.

**POLICY 18: GENERAL INDUSTRIAL DEVELOPMENT**

THE CITY OF HERMISTON WILL FACILITATE INDUSTRIAL DEVELOPMENT AS A MEANS OF CREATING NEW JOBS AND FOSTERING THE ECONOMIC WELL BEING OF THE COMMUNITY. IN SUPPORT OF THIS GOAL, THE CITY OF HERMISTON ADOPTS THE FOLLOWING POLICIES:

- A) The City will maintain an adequate supply of designated industrial land to meet anticipated demand, including large developable parcels;
- B) Provide an appropriate level of urban services, including water, sewer, roads, and police and fire protection in a timely and efficient manner;
- C) Identify and recruit new types of industry as a means of diversifying the economic base, and building existing industry clusters.

**POLICY 19: COMMERCIAL DEVELOPMENT**

THE CITY OF HERMISTON WILL ASSURE THE AVAILABILITY OF A SUFFICIENT SUPPLY OF COMMERCIAL LAND TO ACCOMMODATE 20-YEAR PROJECTED NEED AND STRIVE TO ACHIEVE THE BALANCED DISTRIBUTION OF COMMERCIAL ACTIVITIES IN NEIGHBORHOODS, DOWNTOWN, AND ALONG OUTLYING HIGHWAYS.

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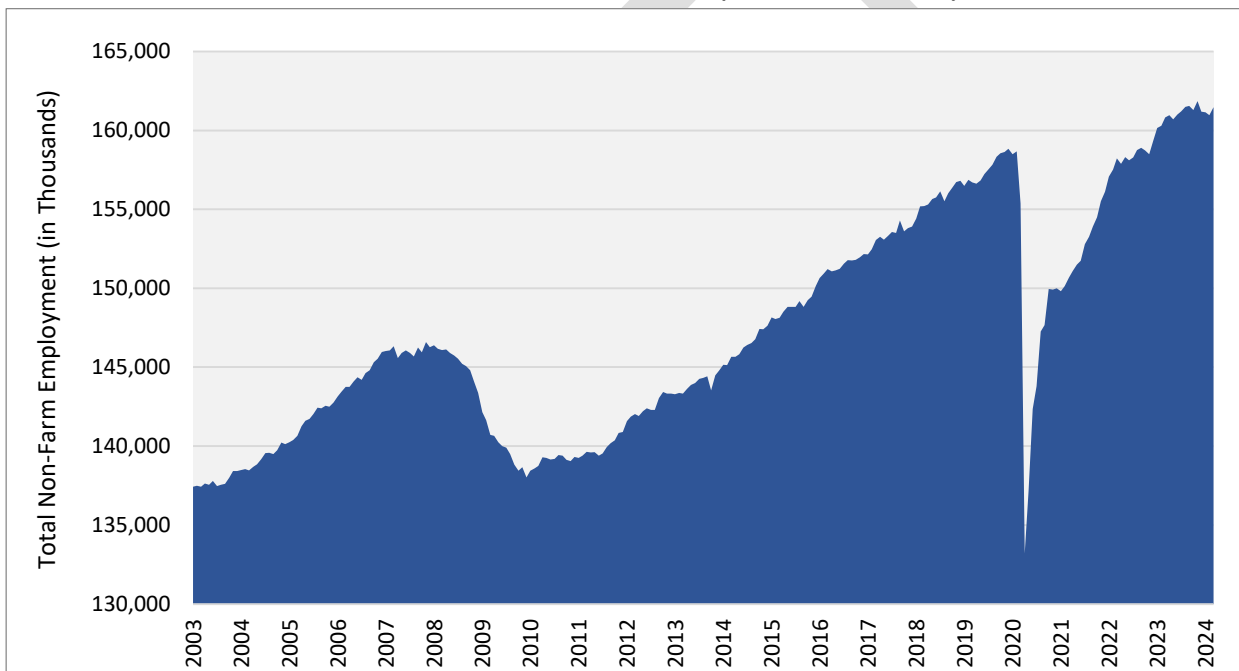
### III. ECONOMIC TRENDS

This section summarizes employment and workforce trends at the national, state, and local level that will influence economic conditions in the City of Hermiston over the 20-year planning period. This section is intended to provide the economic context for growth projections and establish a socioeconomic profile of the community.

#### A. NATIONAL TRENDS

**Employment:** In the first months of the pandemic, the nation lost nearly 22 million jobs, or 14% of total employment. However, the economy recovered quickly, displaying exponential growth as early as February 2021. As of late 2022, national employment had largely returned to pre-pandemic levels, eventually going on to reach a new peak in 2023 with roughly 162 million non-farm jobs in the economy (Figure 3.1).

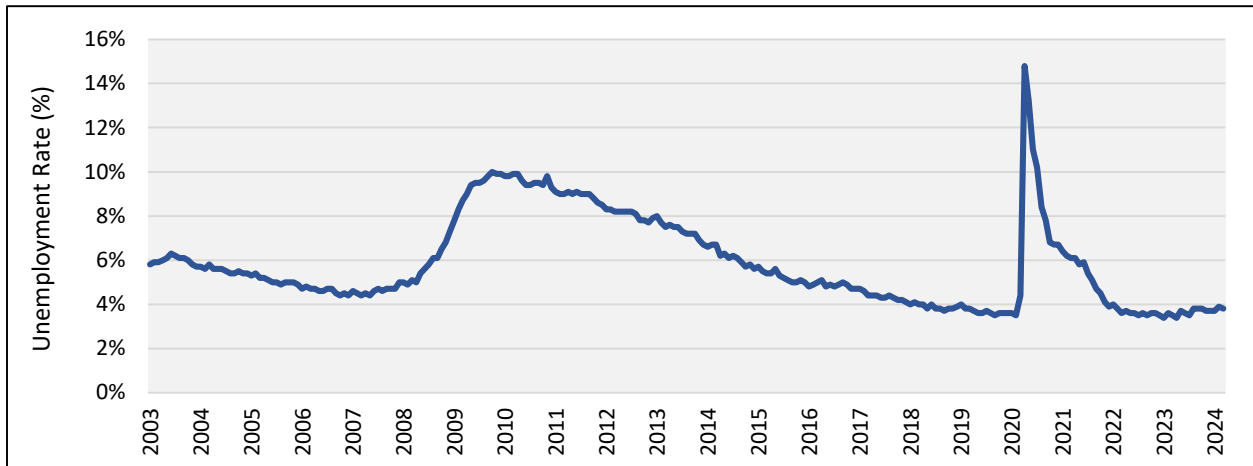
FIGURE 3.1: NATIONAL EMPLOYMENT LEVELS (JAN 2003 – MAR 2024)



Source: U.S Federal Reserve Bank of St. Louis

**Unemployment Rate** The national unemployment rate spiked to nearly 15% in 2020 as many businesses paused operations or closed permanently in the first months of the pandemic. However, the unemployment rate began to decline almost immediately, and by mid-2022 had fallen back to a low 3.5%. There has been a slight uptick in the unemployment rate following the summer 2023, but it has remained low by historical standards, hovering around 3.9% as of March 2024 (Figure 1.2).

**FIGURE 3.2: NATIONAL UNEMPLOYMENT RATE (JAN 2003 – MAR 2024)**

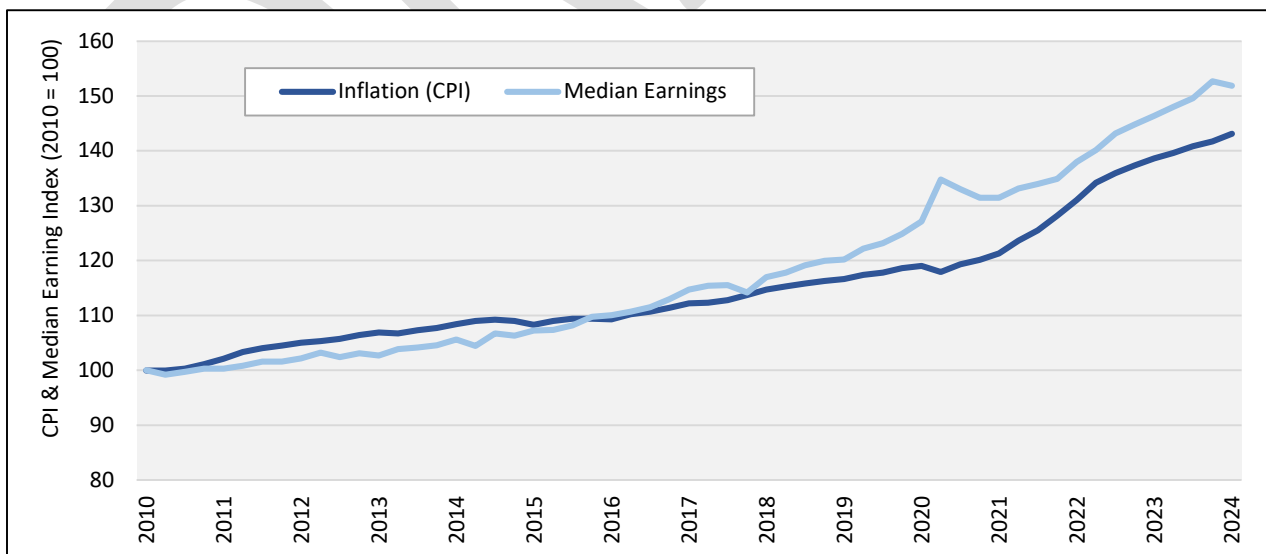


Source: U.S Federal Reserve Bank of St. Louis

**Inflation:** The counter story to this strong positive rebound in employment has been a rising rate of inflation coming out of the pandemic. Various stimulus measures, combined with supply shortages, led to rising prices for many consumer products, energy, and food. The rate of inflation accelerated in 2021 and began moderating towards the end of 2022, though the rate remains elevated (Figure 3.3). The Federal Reserve has maintained higher interest rates to curb price increases, however recent inflation has been at least partially driven by global macroeconomic forces beyond the Fed’s control.

**Wages:** On a positive note, average household earning levels have also enjoyed growth coming out of the recession and have largely kept pace with, or exceeded, inflation in recent years. Earnings also spiked in 2020 when government stimulus payments were added to earned wages. However, this growth has started to decelerate as of Q1 2024, decreasing from the quarter before (Figure 3.3).

**FIGURE 3.3: INFLATION INDEX VS. MEDIAN EARNINGS INDEX (Q1 2010 – Q1 2024)**

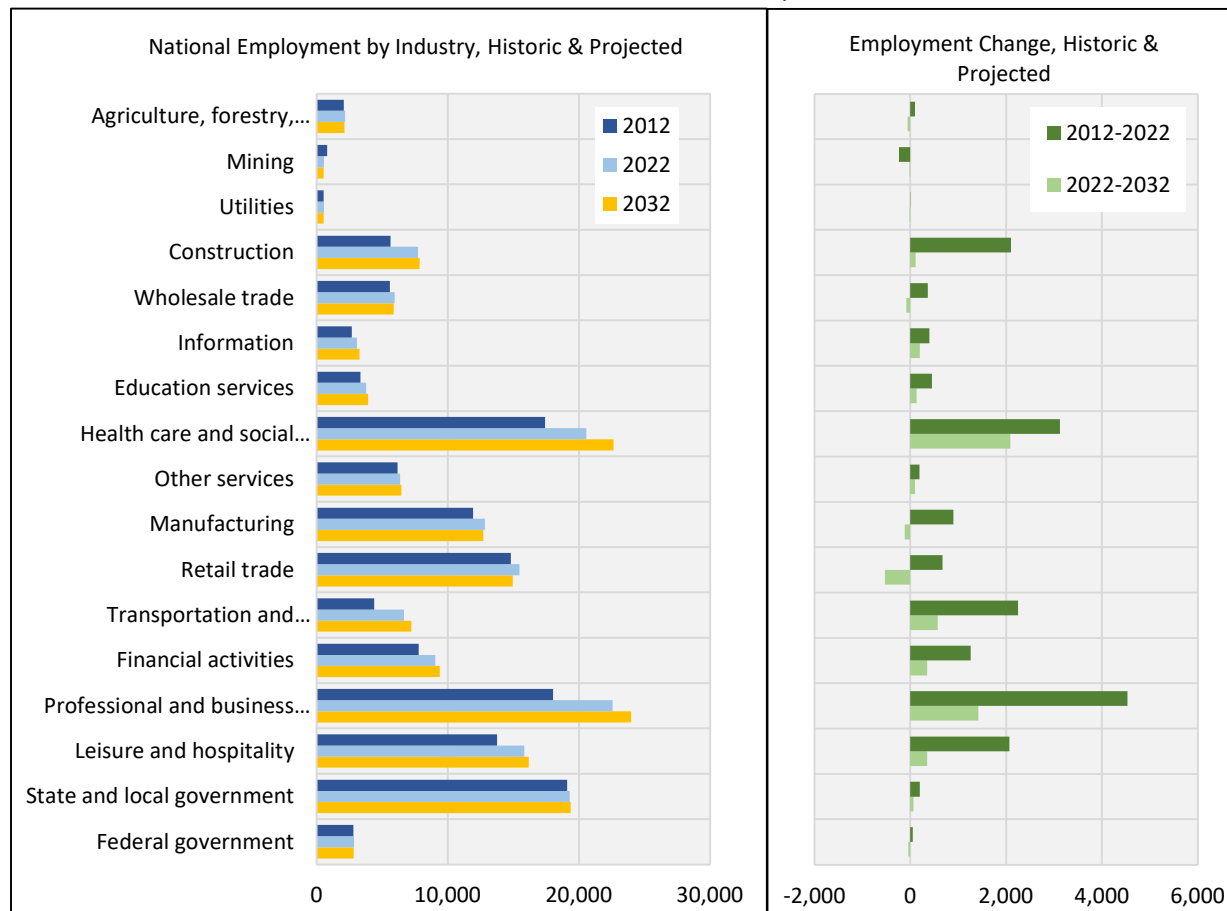


Source: U.S. Federal Reserve Bank of St. Louis; Consumer Price Index for Urban Consumers (US); Median Earnings for Full-Time Employees, Seasonally Adjusted



**Industry Sector Employment:** At a national level healthcare & social assistance is projected to account for the largest share of new employment growth, followed by professional & business services, and leisure & hospitality. The aging of the population is expected to drive the healthcare sector over the next few decades.

**FIGURE 3.4: NATIONAL EMPLOYMENT GROWTH BY SECTOR, HISTORIC AND PROJECTED**

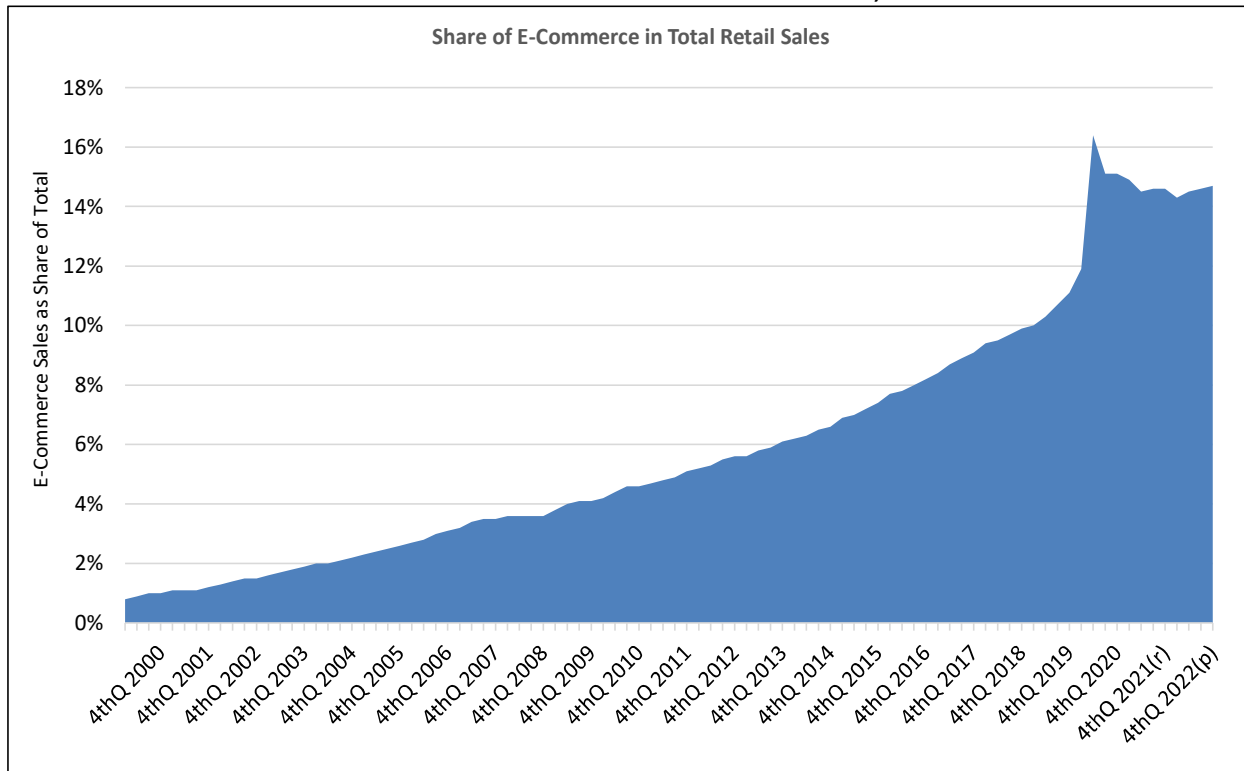


SOURCE: US Bureau of Labor Statistics

Recent trends and current forecasts reflect a shift from a goods economy, featuring manufacturing and natural resources, towards a service economy, which emphasizes technological innovation, research, and design.

The most dramatic spending shift in the context of real estate in recent times is the growth in online shopping, which has reduced the overall need for brick-and-mortar space, especially from retailers selling physical goods. While the share of sales accounted for by e-commerce has grown at a steady pace over the last decade, the pandemic greatly accelerated this trend. In 2020, the share of sales taking place online jumped from 12% of total retail spending to 16%. It has since settled to 14.5% of spending, which is well above the pre-pandemic share (Figure 3.5).

**FIGURE 3.5: E-COMMERCE AS A PERCENT OF TOTAL RETAIL SALES, UNITED STATES**



SOURCE: Retail Indicators Branch, U.S. Census Bureau, JOHNSON ECONOMICS

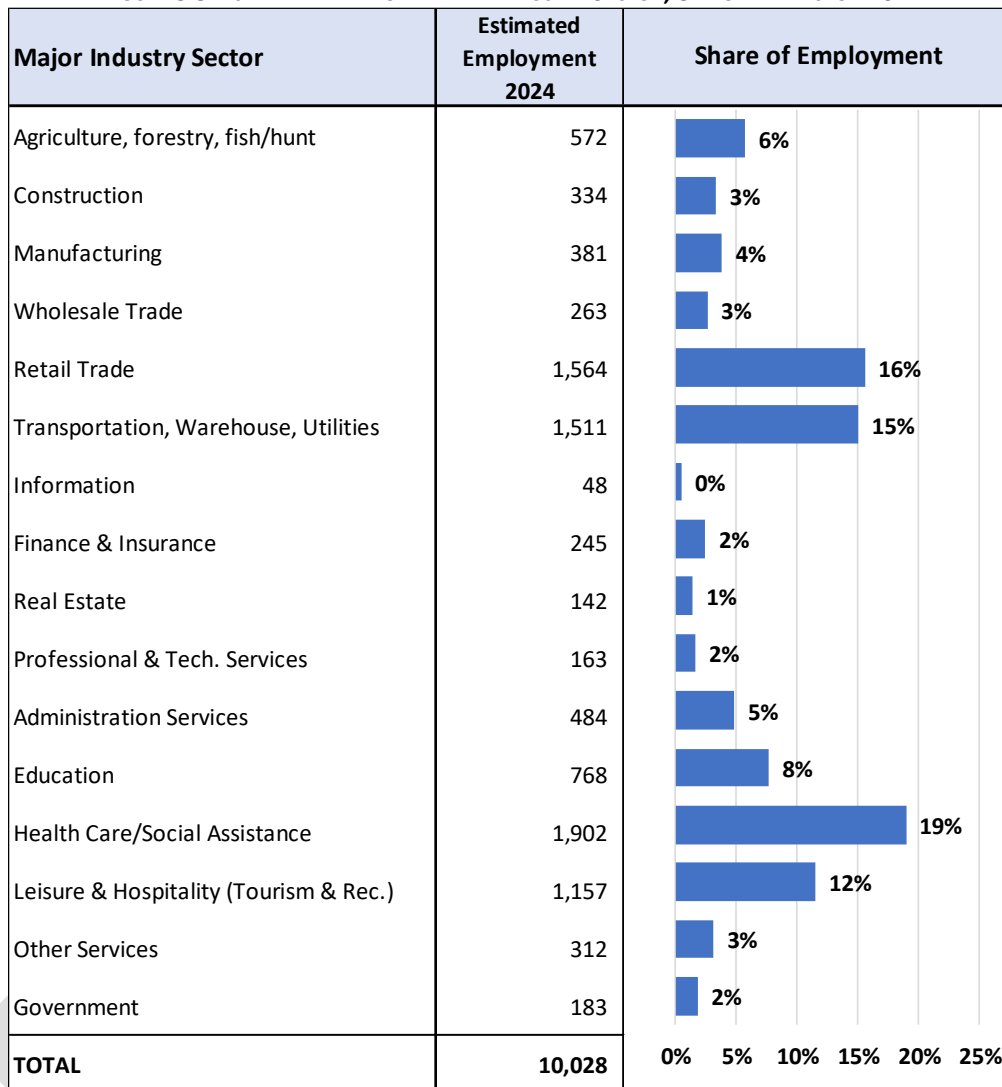
The growth in e-commerce has accelerated a shift in storage needs from retail stores to warehouses and distribution centers. At the same time, automation is causing a consolidation within the warehousing and distribution industry, leading to increasing reliance on larger third-party operators able to make heavy investments in capital and expertise. Finally, changes in the use of electronic devices and growth in online services are causing a shift in the tech sector, from hardware manufacturing to software development.

This pattern has also been reflected in the State of Oregon, with e-commerce employment increasing at the expense of brick-and-mortar retail employment. This is causing a shift in storage needs from retail stores to warehouses and distribution centers. This has also been one factor underlying the growth of the data center industry to facilitate the growth in online activity, which is discussed in greater detail in a following section.

## **B. HERMISTON EMPLOYMENT AND FIRMS**

As of 2024, the City of Hermiston is home to over 755 businesses with roughly 10,000 workers, including the self-employed. The largest industries by employment are health care, retail, transportation/warehousing/utilities, and leisure and hospitality (including dining and tourism-related). Hermiston has the lowest estimated employment representation in government, real estate and professional services, and the information sectors. (Industry sectors are discussed in more detail in Section IV of this report)

**FIGURE 3.5: ESTIMATED EMPLOYMENT BY INDUSTRY SECTOR, CITY OF HERMISTON 2022**



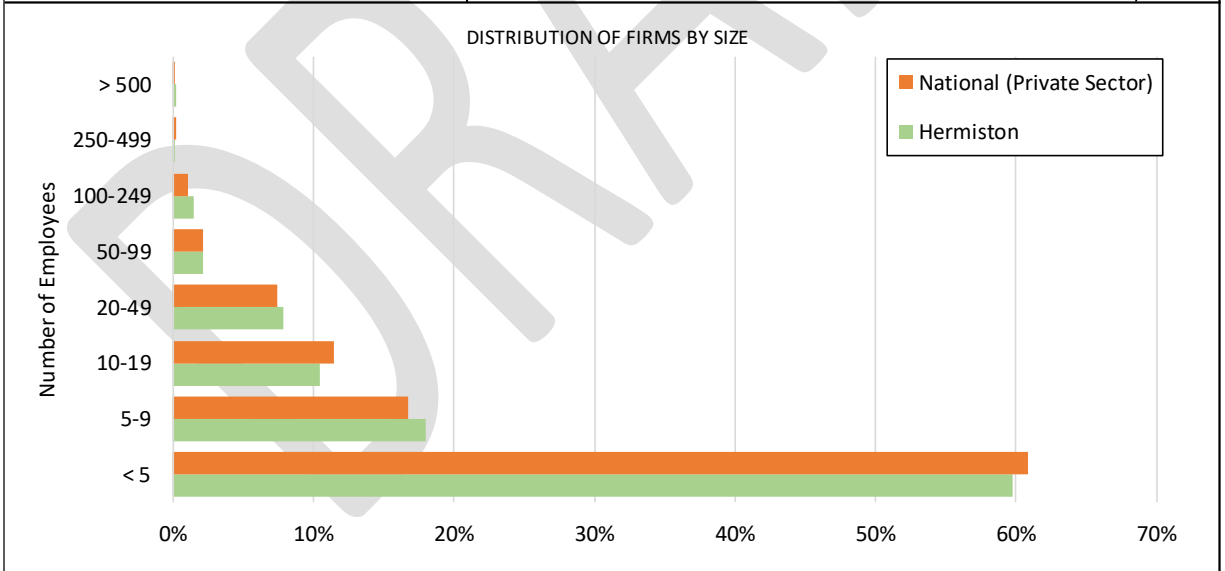
SOURCE: Oregon Employment Department, 2022 QCEW data projected to 2024, Johnson Economics

The local employment base is dominated by relatively small firms, with nearly 90% of businesses having fewer than 20 employees (Figure 3.2). However, this trend is in keeping with the national average. Most businesses are small businesses. (This is based on the most recent 2022 QCEW data for unemployment-insurance covered employment, and therefore doesn't include all self-employment or owner/operator businesses.) Just 1% of firms have more than 100 employees. This is again, in keeping with national trends.

As of 2022, there were an estimated 755 firms in Hermiston with covered employees.

**FIGURE 3.6: DISTRIBUTION OF FIRMS BY SIZE, CITY OF HERMISTON - 2022**

NAICS		Size of Firm/Employees								Total
Code	Industry	< 5	5-9	10-19	20-49	50-99	100-249	250-499	> 500	
11	Agriculture, forestry, fishing, and hunting	2	3	1	2	0	1	0	0	9
21	Mining	1	0	0	0	0	0	0	0	1
23	Construction	38	6	5	3	0	0	0	0	52
31	Food Manufacturing	0	0	2	0	0	0	0	0	2
32	Wood Manufacturing	2	2	1	1	0	1	0	0	7
33	Metals Manufacturing	2	3	0	1	0	0	0	0	6
22	Utilities	1	1	1	0	0	1	0	0	4
42	Wholesale trade	11	5	0	2	2	0	0	0	20
44	Retail trade	19	9	9	4	3	2	0	0	46
45	Retail trade	14	8	11	1	0	0	1	0	35
48	Transportation	10	5	2	0	0	1	0	0	18
49	Delivery and warehousing	0	0	1	1	0	0	0	1	3
51	Information	11	0	2	0	0	0	0	0	13
52	Finance and Insurance	15	8	5	1	1	0	0	0	30
53	Real Estate and Rental	34	3	3	1	0	0	0	0	41
54	Professional, Scientific, and Technical Services	20	4	2	1	0	0	0	0	27
55	Management of Companies and Enterprises	1	3	0	1	0	0	0	0	5
56	Administrative and Waste Management	19	7	4	2	1	2	0	0	35
61	Educational services	2	1	0	6	4	2	0	0	15
62	Health care and social assistance	159	28	13	5	3	1	0	1	210
71	Arts, Entertainment, and Recreation	1	1	1	3	0	0	0	0	6
72	Accommodation and Food Services	17	16	10	21	1	0	0	0	65
81	Other services	42	19	4	1	0	0	0	0	66
92	Government	1	4	2	2	1	0	0	0	10
99	Unclassified	29	0	0	0	0	0	0	0	29
<b>TOTAL</b>		<b>451</b>	<b>136</b>	<b>79</b>	<b>59</b>	<b>16</b>	<b>11</b>	<b>1</b>	<b>2</b>	<b>755</b>

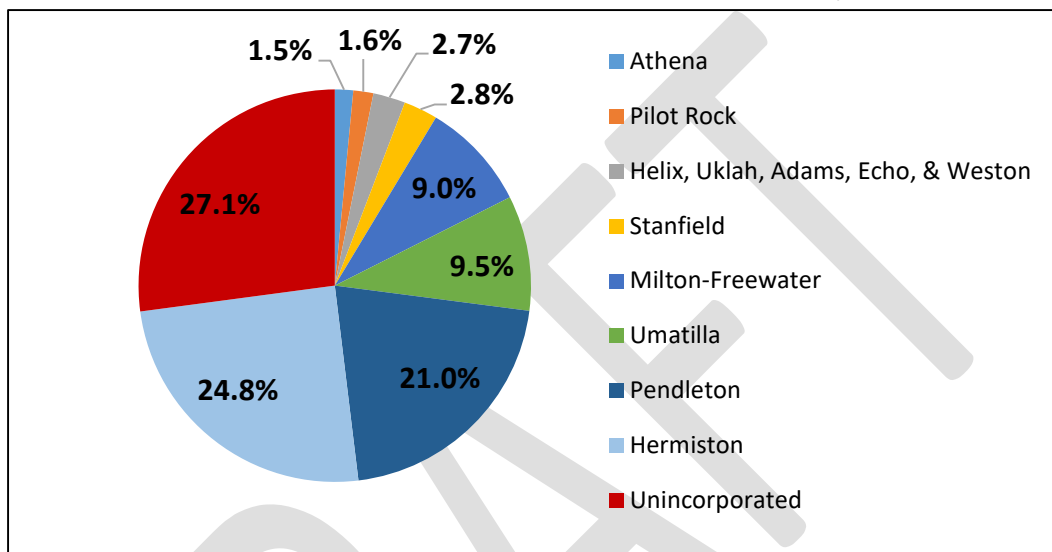


Source: Oregon Employment Department, QCEW data

## B. LOCAL POPULATION AND WORKFORCE TRENDS

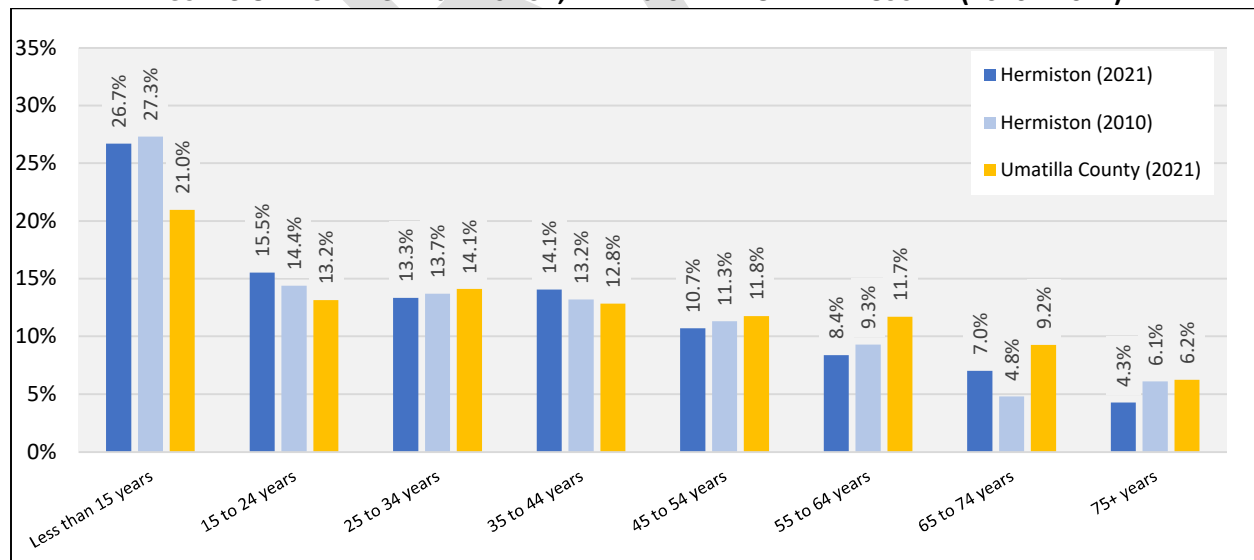
**Population:** With a population of roughly 20,000 people in 2022, the City of Hermiston is the largest incorporated municipality in Umatilla county, representing nearly 25% of the county’s population. The city has grown at an estimated rate of 1.5% per year since 2010, almost double that of the county’s growth rate. The city grew by roughly 3,200 residents since 2010, which accounts for 72% of the entire county’s growth of 4,400 residents in that period. It is projected that by 2043 Hermiston will represent over 31% of Umatilla’s county population<sup>1</sup>.

**FIGURE 3.7: SHARE OF TOTAL POPULATION IN UMATILLA COUNTY, 2022<sup>2</sup>**



SOURCE: Population Research Center, Portland State University

**FIGURE 3.8: BROAD AGE DISTRIBUTION, HERMISTON AND UMATILLA COUNTY (2010 – 2021)**



SOURCE: U.S Census Bureau, ACS 5-Year Estimate

<sup>1</sup> PSU Population Research Center, Oregon Population Forecast Program (2022 – 2026 Cycle)

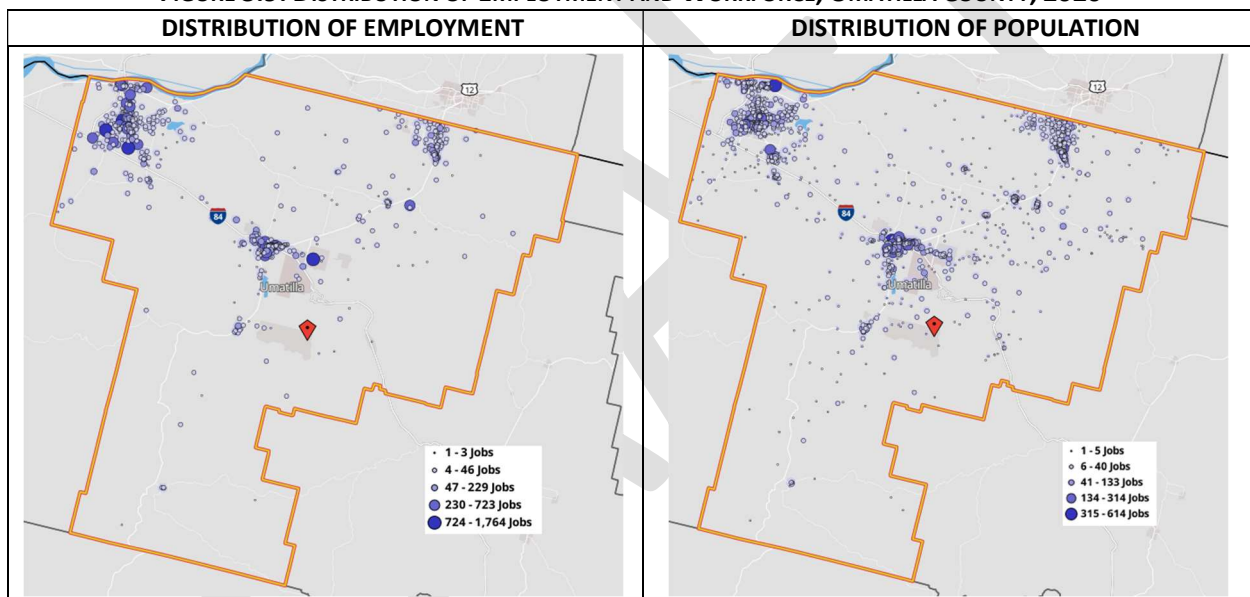
<sup>2</sup> Helix, Uklah, Adams, Echo, & Weston are grouped together as each of these cities represent less than 1% of the county’s population respectively.

Hermiston has a younger population than the county, with over a quarter of the population being younger than 15 years according to the Census (Figure 3.8). Between 2010 and 2021, the <15 age bracket grew the most as a share of the population, highlighting Hermiston’s appeal as well as a place suitable for young families. Those aged 45 to 64 also grew as a share of the total population but remain smaller than the county share.

When compared to the rest of the state, Umatilla County has a larger proportion of children, and around 2% fewer people aged 18-64, and around 3% fewer people aged 65 and older, thus having a proportionally younger population but smaller share in prime working years than the state. The trend towards an older population is a national trend due to the aging of the large Baby Boom generation. The first half of this generation is now well past the traditional retirement age, while much of the younger half will be retiring over the coming decade.

**Employment and Population Concentrations:** The distribution of employment in Umatilla County is concentrated around the cities of Hermiston and Umatilla city in the northwest; Pendleton in the heart of the county; and Milton-Freewater in the northeast. The distribution of population is similar, however with more households spread throughout the various unincorporated areas of the county.

**FIGURE 3.9: DISTRIBUTION OF EMPLOYMENT AND WORKFORCE, UMATILLA COUNTY, 2020**

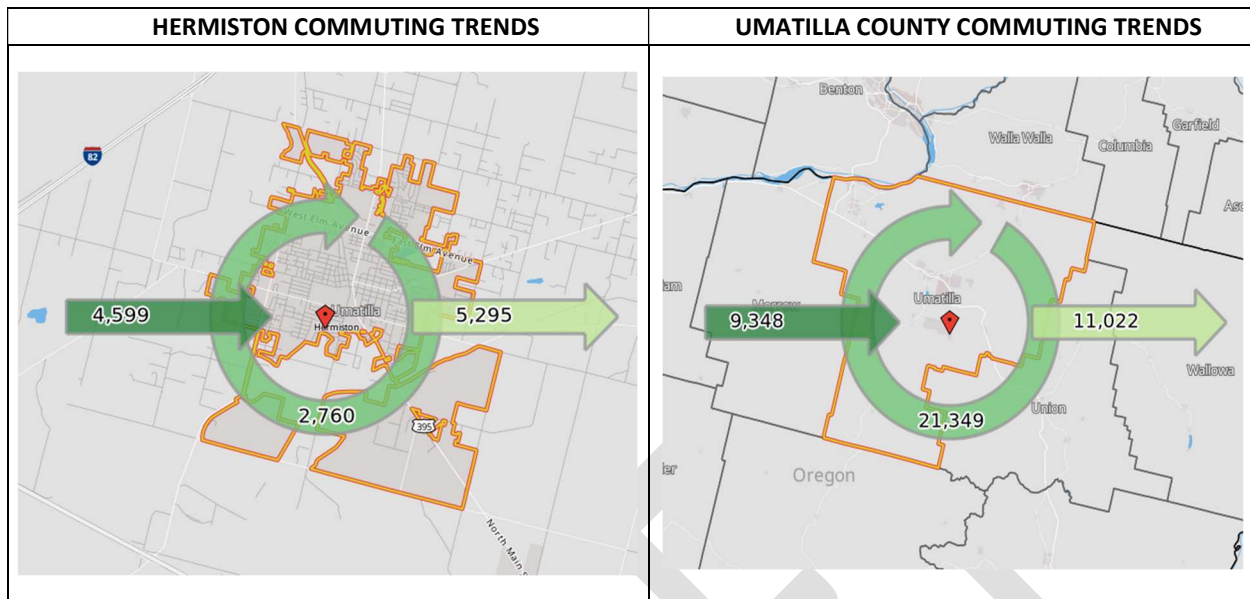


SOURCE: Census Bureau, Longitudinal Employer-Household Dynamics (LEHD) Data

**Commuting Trends:** In 2020 (the most recent data available), the city of Hermiston was estimated to have roughly 4,600 people commuting in for work, while 5,300 people commuted out; 2,760 residents both lived and worked in the city. These figures reflect “covered employment” as of 2020, the most recent year available. Covered employment refers to those jobs where the employee is covered by federal unemployment insurance. This category does not include many contract employees and the self-employed and therefore is not a complete picture of local employment. The figures discussed here are best understood as indicators of the general pattern of commuting and not exact figures.

Of those residents who work outside of the city, the most common commute destinations are Umatilla city, Pendleton, Boardman, and Portland. For local employees who commute in from outside of Hermiston, most live in Umatilla city, Pendleton, and Kennewick.

**FIGURE 3.10: NET INFLOW-OUTFLOW OF EMPLOYEES, HERMISTON, AND UMATILLA COUNTY, 2020**

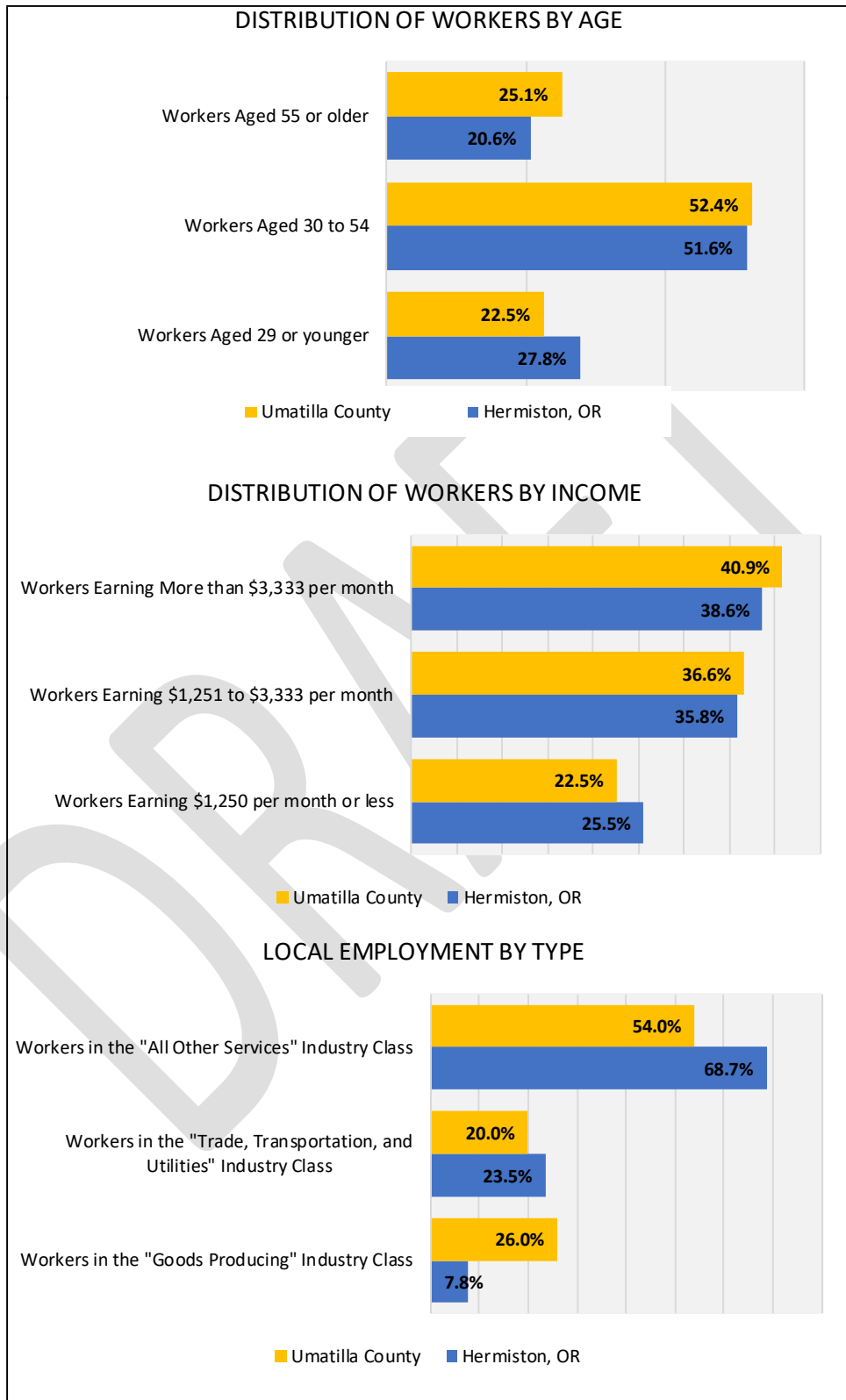


SOURCE: Census Bureau, Longitudinal Employer-Household Dynamics (LEHD) Data

Some amount of cross-commuting is common in most communities, as residents are willing to consider a larger employment market beyond the city boundaries, and as workers in the broader area search for available housing that may be in other cities. However, over one third of working residents of Hermiston both live and work in Hermiston, which is a fairly high share compared to many markets.

**Labor Force Characteristics:** The figures below show a comparison of labor force distribution in Hermiston city and Umatilla county. Hermiston has a larger proportion of workers aged 29 or younger as well as workers who earn \$1,250 or less per month (categories provided by the Census Bureau.) This highlights how Hermiston’s labor force is somewhat younger and relatively lower income compared to the county.

**FIGURE 3.11: NET INFLOW-OUTFLOW DETAILS, HERMISTON AND UMATILLA COUNTY, 2020**

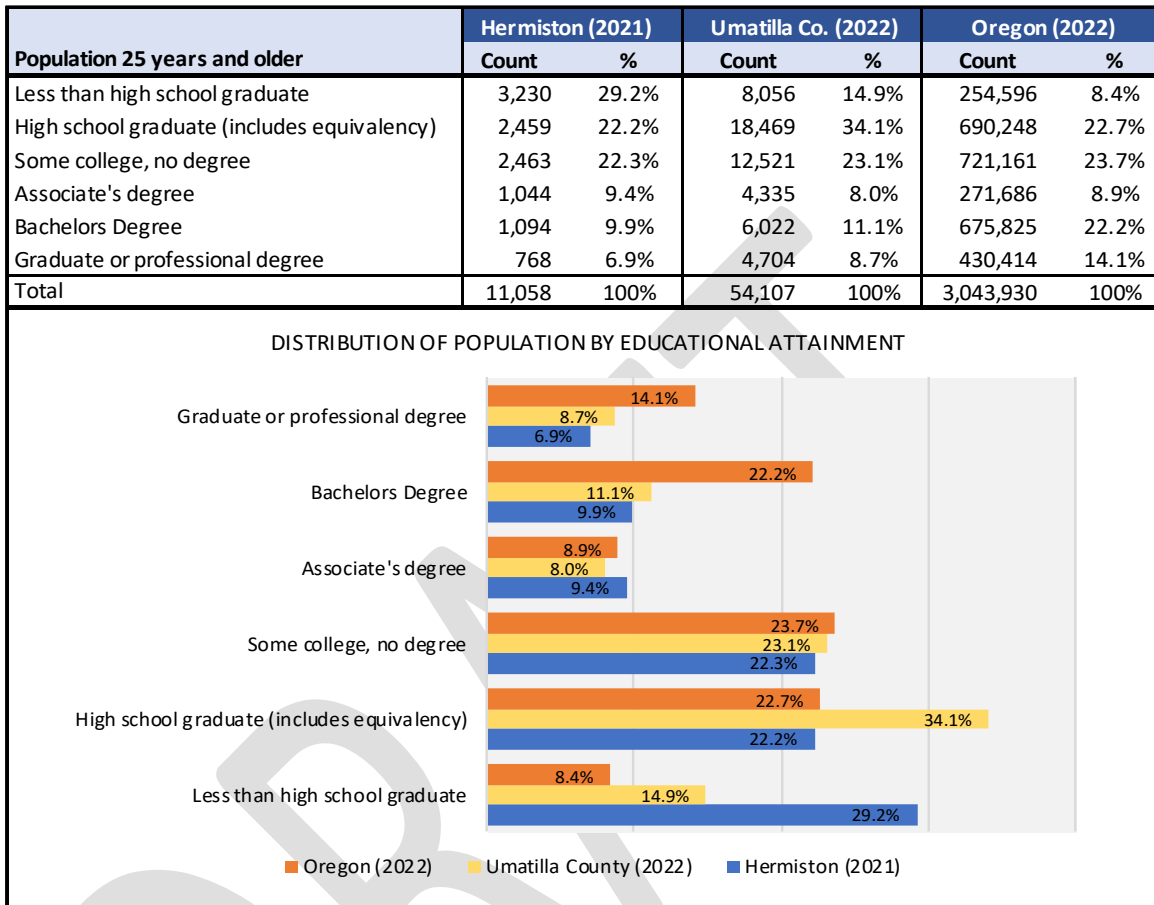


SOURCE: US Census Bureau, LEHD Origin-Destination Employment Statistics



Hermiston has a lower-educated adult population in comparison to the county or state (Figure 3.12). Note that the data on Hermiston is from 2021 as that is the most recent available data.

**FIGURE 3.12: EDUCATIONAL ATTAINMENT PROFILE FOR THE POPULATION 25 AND OVER, 2021 & 2022**



SOURCE: U.S. Census Bureau, 2017-2021 ACS 5-Year Estimates, 2021 - 2022 ACS 1-Year Estimates

- Roughly 30% of the local population 25 and older has not completed high school, as compared to 8.4% statewide.
- An additional 22% have a high school education.
- 49% of the adult population in 2021 has some education beyond high school, compared to 51% countywide (2022), and 69% statewide (2022).
- 26% of local adults in 2021 had completed a post-secondary degree, compared to 28% of the county population in 2022, and 45% of the state population in 2022.

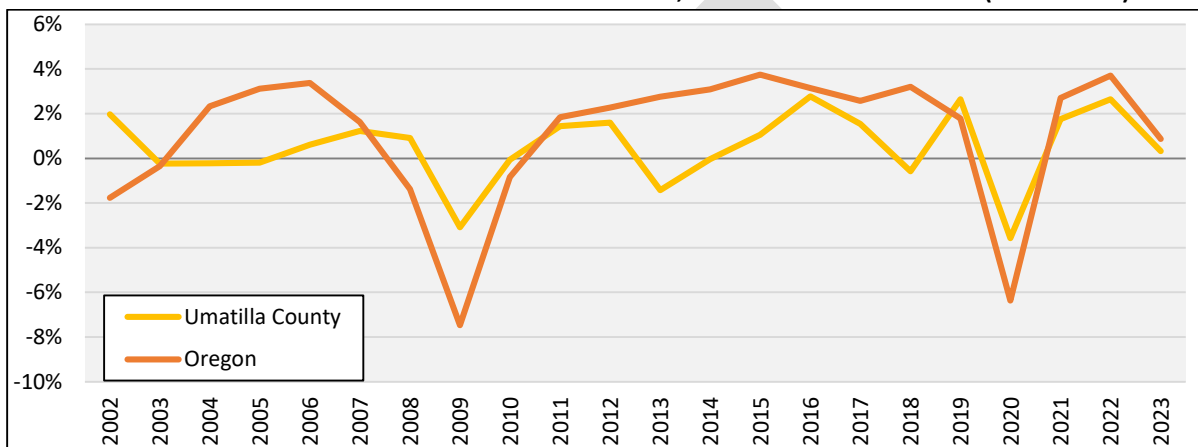
The local workforce actually has good capacity to fill many information technology (IT) jobs, a field which has seen growing demand due to the region becoming an emerging data center hub. Contrary to popular belief, many IT jobs do not require a college degree. For example, data from Indeed.com shows that as of 2023, 36% of “Data Center Technician” job openings only require a high school diploma or GED, while 31% require a bachelor’s degree, 27% require an associate’s degree, and 6% require a master’s degree <sup>3</sup>.

<sup>3</sup> <https://www.indeed.com/career/data-center-technician/career-advice>

**Employment Growth:** Umatilla County has displayed weaker employment growth when compared to the State of Oregon. Throughout the 2010's Umatilla County's employment growth hovered between 1.5% to 3%, but with 2013 and 2018 both seeing a net decrease in the employment base.

In comparison, the state's employment growth rate hovered consistently around the 2% to 4% range, averaging at 2.4% annually in the same time span. Despite this, Umatilla County has been less effected by recent shocks such as the '08 – '09 and COVID recessions. This is most likely due to a large share of the county's employment base being historically employed in the health care and social assistance sector which is more resilient to economic shocks. During the most recent COVID recession, Umatilla County's employment base decreased by 3.6% while the state's employment base decreased by 6.4%.

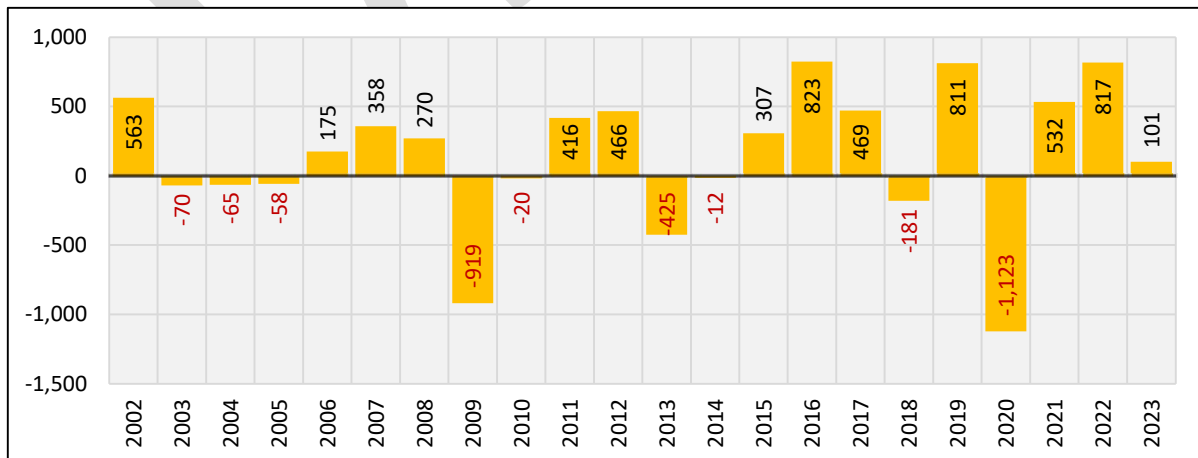
**FIGURE 3.13: YEAR-OVER-YEAR EMPLOYMENT GROWTH RATE, UMATILLA COUNTY & OREGON (2002 – 2023)**



Source: Oregon Employment Department, QCEW Estimates

Annual employment growth in Umatilla County was slow in the 2000's with more jobs lost than gained throughout the decade. The 2010's saw better employment growth, peaking in 2016 with 823 jobs added. As with most of the nation, the county experienced significant job loss in 2020 due to the COVID pandemic, but quickly rebounded in the following years. As of 2022, all the jobs lost in 2020 have been recovered, while the state had only recovered roughly 80% of the jobs lost by the end of the year.

**FIGURE 3.14: NET CHANGE IN EMPLOYMENT, UMATILLA COUNTY (2002 – 2023)**



Source: Oregon Employment Department, QCEW Estimates

## IV. COMMUNITY ECONOMIC DEVELOPMENT POTENTIAL

The economic climate of a community helps foster growth of existing firms and industry clusters and make the area attractive for new businesses. The City of Hermiston has several advantages that boost its potential as a location for current and future business.

**Location:** Hermiston's location is an advantage for some industries and a challenge for others. Located on the Columbia River Gorge in Eastern Oregon, the addressable market for goods and service providers in Hermiston stretches from Boardman to Pendleton to the Tri-Cities in Washington. However, the market for small local, non-traded sector businesses is limited by population size and density.

The location has strong benefits for some industry, in particular agriculture and ag support businesses, food processing and manufacturing, businesses benefiting from river access and transport, and those drawing from the ample power, water, and land resources, which notably includes the data center industry over the past decade.

**Transportation Connectivity:** Hermiston has strong regional transportation access, being located at the conjunction of the I-84 and I-82 freeways, and near multiple state and federal highways. I-84 is the main route for commuters, freight, and travelers between Boise and Portland, while I-82 provides direct access to the Tri-Cities area in Washington State to the north. Hermiston has easy access to its nearest neighboring communities including Umatilla, Boardman, and Pendleton.

Businesses in the area have multiple access points to freight rail service with connections to the remainder of the Northwest. There are small municipal airports located in Hermiston and Pendleton, and the larger Tri-Cities airport is located 45 minutes to the north. Portland International Airport is located roughly three hours to the west, and Boise Airport four hours to the east.

**Labor Market:** The availability of ample and skilled labor is a key factor in economic development potential. Beyond the talent pool of Hermiston residents, the city's central location and freeway access give local businesses the ability to draw on a larger labor pool from the region. In Oregon, Hermiston draws on a labor pool from across Umatilla County and North Morrow County, and as far as La Grande. The Tri-Cities metro area, with a population of over 300,000, is located 30 minutes to the north and is an important source of skilled labor across the region.

An estimated 63% of the local workforce commutes into Hermiston. While ideally these workers may eventually choose to relocate to the community, in the meantime businesses know they can attract workers with a full range of skills and experience from a broader area if necessary.

Common workforce issues include finding qualified workers with the proper basic and technical skills, training entry-level workers effectively, and successfully employing contractors from staffing agencies. With the ongoing development of large data center facilities in Umatilla County, a specialized industry that hardly existed 15 years ago, along with other employment growth, drawing sufficient skilled workers to the area may remain a challenge for the foreseeable future. The continued population growth in Hermiston and ready access to the broader region will help this effort. New and existing local businesses will also assist in developing the specific skills and education they will need from their workforce.

**Quality of Life:** Hermiston offers a high quality of life and urban amenities to attract new workers and businesses to the city. The city offers a mixture of small-town lifestyle, diverse cultural activities, with access to nature and rural amenities, while also being a quick trip away from other metro areas with additional urban amenities. The community features relatively affordable housing in comparison to other parts of the region, good schools, parks, and ample shopping and local services.

Hermiston's location on the gorge in Northeastern Oregon offers ready access to a full range of river and mountain recreation, including camping, hiking, fishing, and hunting.

**Utilities:** Hermiston and Umatilla County have ready access to ample green energy from regional dams on the Columbia River watershed, including the McNary Dam directly to the North. The area also has ample water resources to meet the needs of agriculture and water-dependent industry. This combination has made Umatilla and Morrow Counties attractive to the data center industry over the past decade as they need dependable sources of both.

**Flat, Buildable, Land:** The study area has a diversity of potentially available land to accommodate a range of uses and intensity of uses. This diversity can expand regional marketability and offers the flexibility to plan uses meeting specific site criteria. Within the State of Oregon, there are very limited opportunities for large-lot industrial development. The region's potential supply of large sites can provide a strong competitive advantage, if it is made available. While the land in the county may be hypothetically suitable however, the right amount, location, and sizes of development sites for different employers may not be currently available within the Urban Growth Boundary.

**Economic Development Partnerships:** Hermiston has several partners in economic development, including the Hermiston Chamber of Commerce, Umatilla County, the Port of Umatilla, neighboring cities, NEOEDD, and Business Oregon. Hermiston features a Blue Mountain Community College campus to offer ongoing education and training to the local workforce.

Local and regional employers are also key partners in promoting and growing their industries. Hermiston works with these and other regional partners to provide the infrastructure and services needed to retain and attract businesses to the city.

**Economic Development Tools:** Hermiston features an Enterprise Zone and Opportunity Zones which allow for tax abatements to incentivize new business development across the city. Hermiston also maintains multiple Urban Renewal areas that can offer incentives for development, secure key economic development sites, among other projects.

# V. INDUSTRY DIFFERENTIATION ANALYSIS

This element of the Economic Opportunities Analysis utilizes analytical tools to assess the economic landscape in Umatilla County and the City of Hermiston. The objective of this process is to identify a range of industry types that can be considered targeted economic opportunities over the planning period.

A range of analytical tools to assess the local and regional economic landscape are used to determine the industry typologies the county and individual cities should consider targeting over the planning period. Where possible, we look to identify the sectors that are likely to drive growth in current and subsequent cycles.



## ECONOMIC SPECIALIZATION (UMATILLA COUNTY)

A common analytical tool to evaluate economic specialization is location quotient analysis. This metric compares the concentration of employment in an industry at the local level to a larger geography. All industry categories are assumed to have a quotient of 1.0 on the national level, and a locality’s quotient indicates if the local share of employment in each industry is greater or less than the share seen nationwide. For instance, a quotient of 2.0 indicates that locally, that industry represents twice the share of total employment as seen nationwide. A quotient of 0.5 indicates that the local industry has half the expected employment.

**FIGURE 5.1: INDUSTRY SECTOR SPECIALIZATION BY MAJOR INDUSTRY, UMATILLA COUNTY, 2022**

Industry	Annual Establishments	Average Employment	Total Annual Wages	Average Annual Wages	Employment LQ
101 Goods-producing	505	7,754	\$372,716,437	\$48,066	1.64
1011 Natural resources and mining	195	3,649	\$146,559,195	\$40,164	9.49
1012 Construction	232	1,235	\$75,186,831	\$60,859	0.76
1013 Manufacturing	79	2,870	\$150,970,411	\$52,604	1.06
102 Service-providing	1849	16,948	\$810,378,253	\$47,817	0.75
1021 Trade, transportation, and utilities	410	6,774	\$327,118,030	\$48,294	1.13
1022 Information	35	657	\$62,828,861	\$95,581	1.02
1023 Financial activities	171	710	\$41,441,687	\$58,341	0.39
1024 Professional and business services	211	1,306	\$66,612,269	\$50,989	0.27
1025 Education and health services	517	3,944	\$221,186,028	\$56,083	0.8
1026 Leisure and hospitality	210	2,733	\$62,023,130	\$22,695	0.82
1027 Other services	219	794	\$27,834,584	\$35,052	0.85
1029 Unclassified	77	29	\$1,333,664	\$45,988	0.46
<b>Total</b>	<b>4,710</b>	<b>49,403</b>	<b>\$2,366,189,380</b>	<b>\$47,896</b>	

SOURCE: U.S. Bureau of Labor Statistics

A location quotient analysis was completed for Umatilla County, which evaluated the distribution of local employment relative to national averages, as well as average annual wage levels by industry (Figure 5.1). The industries that are well-represented countywide are good candidates for growth in localities such as Hermiston as the city has the ability to tap into regional advantages to grow locally.

Among major industries, the natural resources sector (which includes agriculture) was the most strongly represented, with trade, transportation, and utilities being the next. Manufacturing and information each have representation somewhat higher than the national average, though recent additions to employment in the information sector from data center development are not included in this 2022 data. The professional & business services and financial activities sector were the most under-represented major industries. The information sector provided the highest average wages among these industries, while the leisure and hospitality industry (tourism) has the lowest average wages.

A more detailed analysis shows that the industries with the highest LQ in the county are the “agriculture, forestry, fishing, and hunting” category followed by the local government, transportation & warehousing, and utilities industries. The industries that employ the most people in the county are the local government, healthcare & social assistance, “agriculture, forestry, fishing, and hunting”, and retail trade industry. The most under-represented industries are the educational services, management of companies & enterprises, and professional & technical services.

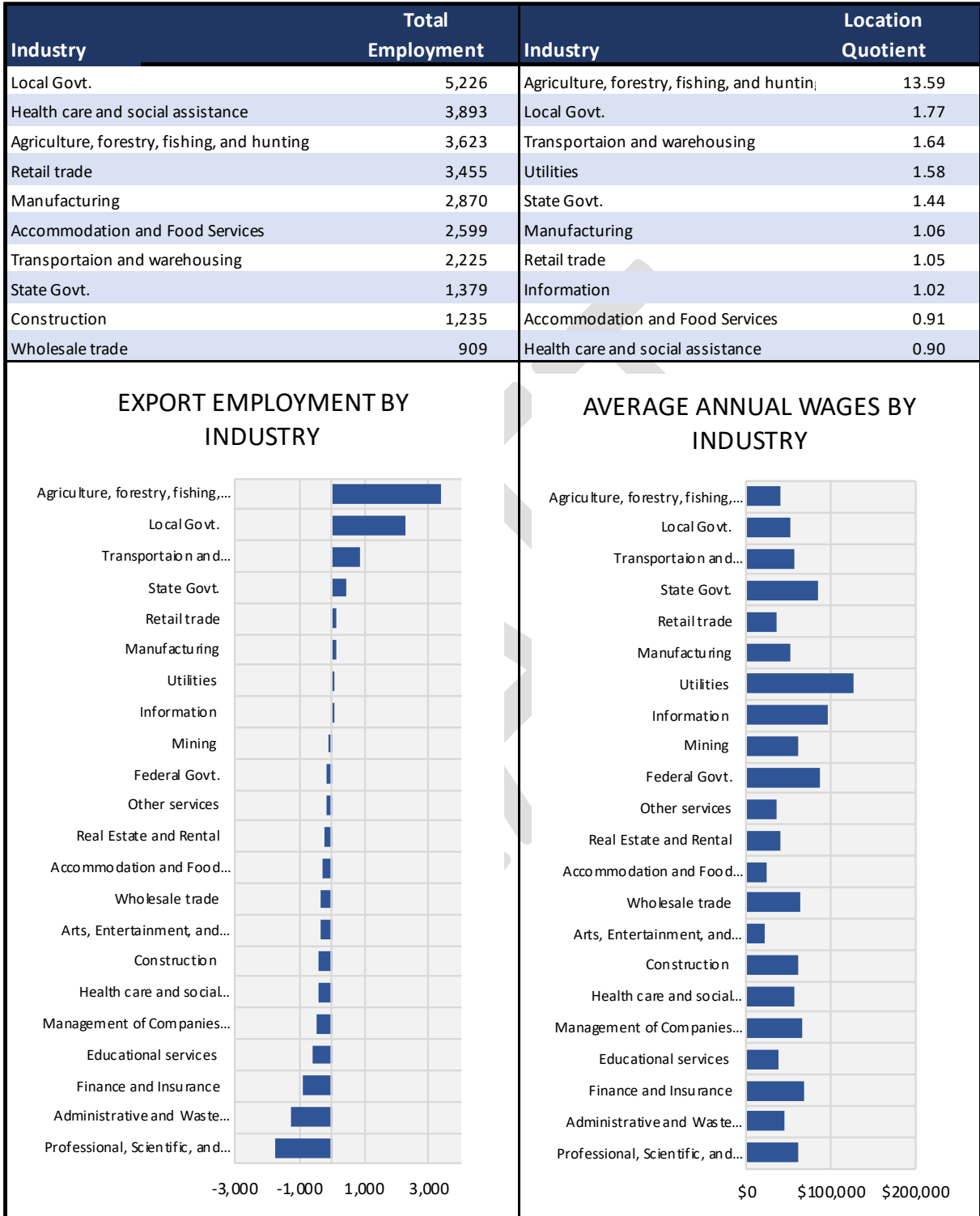
**FIGURE 5.2: INDUSTRY SECTOR SPECIALIZATION BY DETAILED INDUSTRY, UMATILLA COUNTY, 2022**

Industry	Annual	Average	Average Annual		
	Establishments	Employment	Total Annual Wages	Wages	Employment LQ
Agriculture, forestry, fishing, and hunting	191	3,623	\$144,924,249	\$40,006	13.59
Mining	4	26	\$1,634,946	\$61,891	0.22
Utilities	8	185	\$23,542,562	\$127,372	1.58
Construction	232	1,235	\$75,186,831	\$60,859	0.76
Manufacturing	79	2,870	\$150,970,411	\$52,604	1.06
Wholesale trade	86	909	\$57,256,576	\$63,000	0.72
Retail trade	234	3,455	\$121,540,510	\$35,177	1.05
Transportation and warehousing	82	2,225	\$124,778,382	\$56,086	1.64
Information	35	657	\$62,828,861	\$95,581	1.02
Finance and Insurance	82	468	\$31,600,826	\$67,547	0.35
Real Estate and Rental	89	243	\$9,840,861	\$40,581	0.49
Professional, Scientific, and Technical Services	115	464	\$28,612,014	\$61,653	0.21
Management of Companies and Enterprises	7	56	\$3,622,314	\$64,877	0.11
Administrative and Waste Management	89	787	\$34,377,941	\$43,710	0.39
Educational services	14	51	\$1,883,657	\$36,695	0.08
Health care and social assistance	503	3,893	\$219,302,371	\$56,339	0.9
Arts, Entertainment, and Recreation	21	134	\$2,774,769	\$20,785	0.27
Accommodation and Food Services	190	2,599	\$59,248,361	\$22,793	0.91
Other services	219	794	\$27,834,584	\$35,052	0.85
Federal Govt.	30	469	\$40,759,761	\$86,908	0.77
State Govt.	43	1,379	\$115,935,338	\$84,072	1.44
Local Govt.	112	5,226	\$271,544,662	\$51,960	1.77
<b>Total</b>	<b>2,465</b>	<b>31,748</b>	<b>\$1,610,000,787</b>	<b>\$50,712</b>	

SOURCE: U.S. Bureau of Labor Statistics

The level of indicated export employment per sector is estimated by combining the location quotients and overall employment levels. Export industries are important in that they grow the overall size of the local economy by bringing in dollars from outside the community, rather than recirculating internal spending. The industries with the highest level of export employment are agriculture & forestry and transportation & warehousing.

**FIGURE 5.3: TOP TEN INDUSTRIES IN TERMS OF TOTAL AND EXPORT EMPLOYMENT, UMATILLA COUNTY (2022)**



SOURCE: U.S. Bureau of Labor Statistics

## ECONOMIC SPECIALIZATION (CITY OF HERMISTON)

The same analysis for the City of Hermiston reveals high levels of employment concentration in industries such as delivery & warehousing, educational services, utilities, and agriculture & forestry.

**FIGURE 5.4: INDUSTRY SECTOR SPECIALIZATION BY DETAILED INDUSTRY, CITY OF HERMISTON, 2022**

Industry	Annual Establishments	Average Employment	Total Annual Wages	Average Annual Wages	Employment LQ
Agriculture, forestry, fishing, and hunting	9	231	\$10,866,443	\$47,041	3.08
Mining	1	4	\$120,577	\$30,144	0.12
Construction	52	253	\$15,309,246	\$60,511	0.55
Food Manufacturing	2	25	\$562,515	\$22,501	0.18
Wood Manufacturing	7	307	\$17,540,956	\$57,137	1.55
Metals Manufacturing	6	55	\$2,484,585	\$45,174	0.13
Utilities	4	119	\$13,532,680	\$113,720	3.61
Wholesale trade	20	247	\$13,730,094	\$55,587	0.69
Retail trade	81	1,463	\$55,801,536	\$38,142	1.59
Transportation	18	254	\$22,069,723	\$86,889	1.25
Delivery and warehousing	3	1,010	\$49,029,059	\$48,544	5.63
Information	13	44	\$1,661,560	\$37,763	0.24
Finance and Insurance	30	221	\$13,774,444	\$62,328	0.59
Real Estate and Rental	41	128	\$5,696,790	\$44,506	0.92
Professional, Scientific, and Technical Services	27	107	\$5,346,415	\$49,966	0.17
Management of Companies and Enterprises	5	54	\$3,580,314	\$66,302	0.36
Administrative and Waste Management	35	477	\$18,787,459	\$39,387	0.84
Educational services	15	700	\$39,768,126	\$56,812	3.92
Health care and social assistance	210	1,734	\$112,839,561	\$65,075	1.43
Arts, Entertainment, and Recreation	6	92	\$1,546,388	\$16,809	0.67
Accommodation and Food Services	65	969	\$22,994,147	\$23,730	1.21
Other services	66	259	\$9,381,655	\$36,223	0.99
Government	10	183	\$13,398,659	\$73,217	0.14
<b>Total</b>	<b>726</b>	<b>8,936</b>	<b>\$449,822,932</b>	<b>\$50,338</b>	

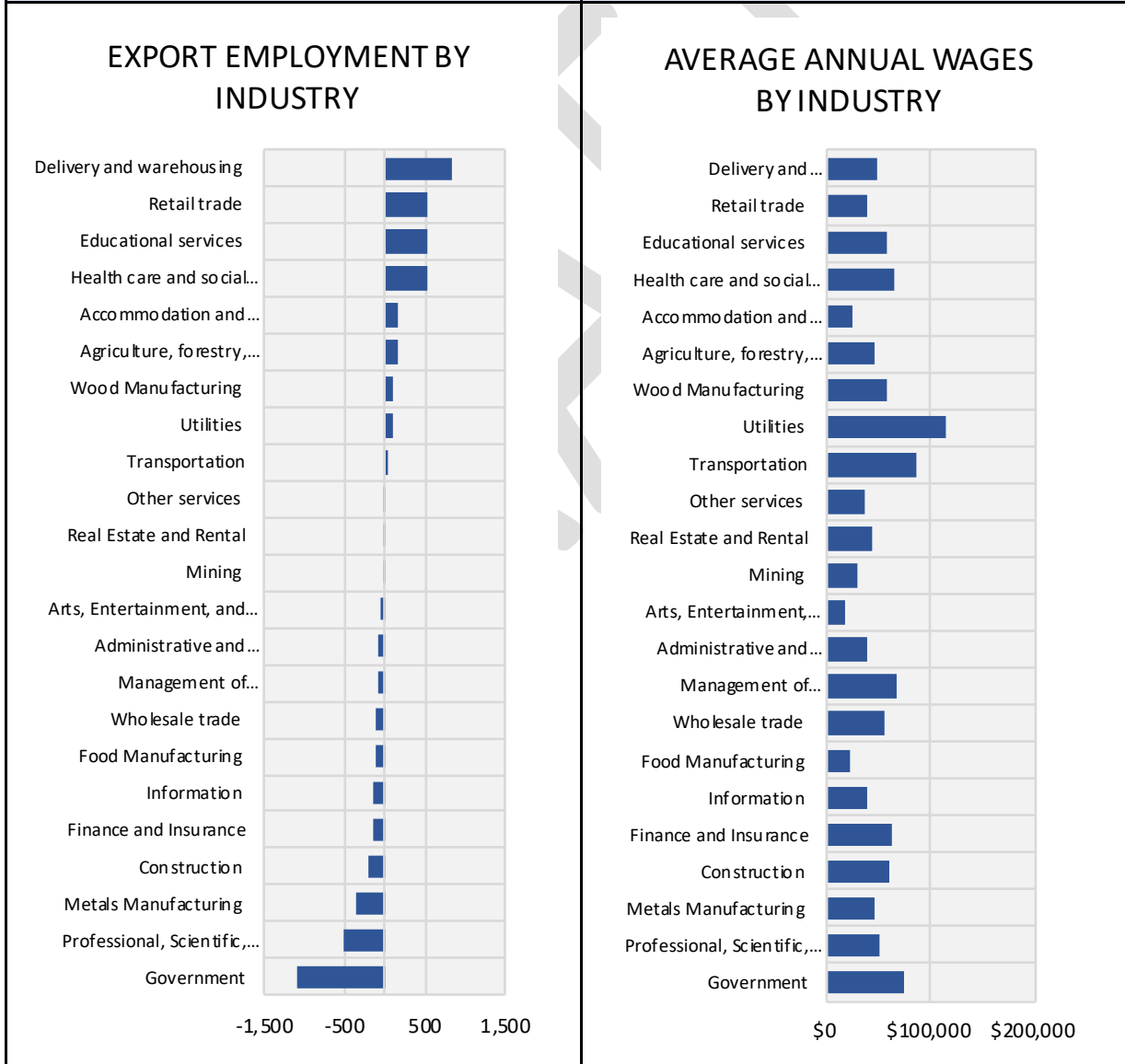
SOURCE: Oregon Employment Department

The top sectors in terms of overall employment were healthcare & social assistance, retail trade, delivery & warehousing, and accommodation & food service. Nine industries in the city have positive export employment, the largest being delivery & warehousing, retail trade, educational services, and healthcare & social assistance. Walmart Associates Inc is a major employer in the area employing over 1,500 people across the delivery & warehousing and retail trade industries. The top industries with the highest average annual wages are utilities, transportation, and government. The most underrepresented industries in the city by location quotient are the mining, metals manufacturing, and government industries.



**FIGURE 5.5: TOP TEN INDUSTRIES IN TERMS OF TOTAL AND EXPORT EMPLOYMENT, CITY OF HERMISTON (2022)**

Industry	Total Employment	Industry	Location Quotient
Health care and social assistance	1734	Delivery and warehousing	5.63
Retail trade	1463	Educational services	3.92
Delivery and warehousing	1010	Utilities	3.61
Accommodation and Food Services	969	Agriculture, forestry, fishing, and hunting	3.08
Educational services	700	Retail trade	1.59
Administrative and Waste Management	477	Wood Manufacturing	1.55
Wood Manufacturing	307	Health care and social assistance	1.43
Other services	259	Transportation	1.25
Transportation	254	Accommodation and Food Services	1.21
Construction	253	Other services	0.99



SOURCE: Oregon Employment Department and Bureau of Labor Statistics

## ECONOMIC DRIVERS

### Shift Share Analysis

The identification of the economic drivers of a local or regional economy is critical in informing the character and nature of future employment, and by extension land demand over a planning cycle. To this end, we employ a shift-share analysis of the local economy emerging out of the latter half of the recent expansion cycle<sup>4</sup>.

A shift-share analysis is an analysis that measures the local effect of economic performance within a particular industry or occupation. The process considers local economic performance in the context of national economic trends—indicating the extent to which local growth can be attributed to unique regional competitiveness or simply growth in line with broader trends. For example, consider that Widget Manufacturing is growing at a 1.5% rate locally, about the same rate as the local economy. On the surface we would consider the Widget Manufacturing industry to be healthy and contributing soundly to local economic expansion. However, consider also that Widget Manufacturing is booming across the country, growing at a robust 4% annually. In this context, local widget manufacturers are struggling, and some local or regional conditions are stifling economic opportunities.

We can generally classify industries, groups of industries, or clusters into four groups:

**Growing, Outperforming:** Industries that are growing locally at a rate faster than the national average. These industries have characteristics locally leading them to be particularly competitive.

**Growing, Underperforming:** Industries that are growing locally but slower than the national average. These industries generally have a sound foundation, but some local factors are limiting growth.

**Contracting, Outperforming:** Industries that are declining locally but slower than the national average. These industries have structural issues that are impacting growth industry wide. However, local firms are leveraging some local or regional factor that is making them more competitive than other firms on average.

**Contracting, Underperforming:** Industries that are declining locally at a rate faster than the national average. These industries have structural issues that are impacting growth industry wide. However, some local or regional factors are making it increasingly tough on local firms.

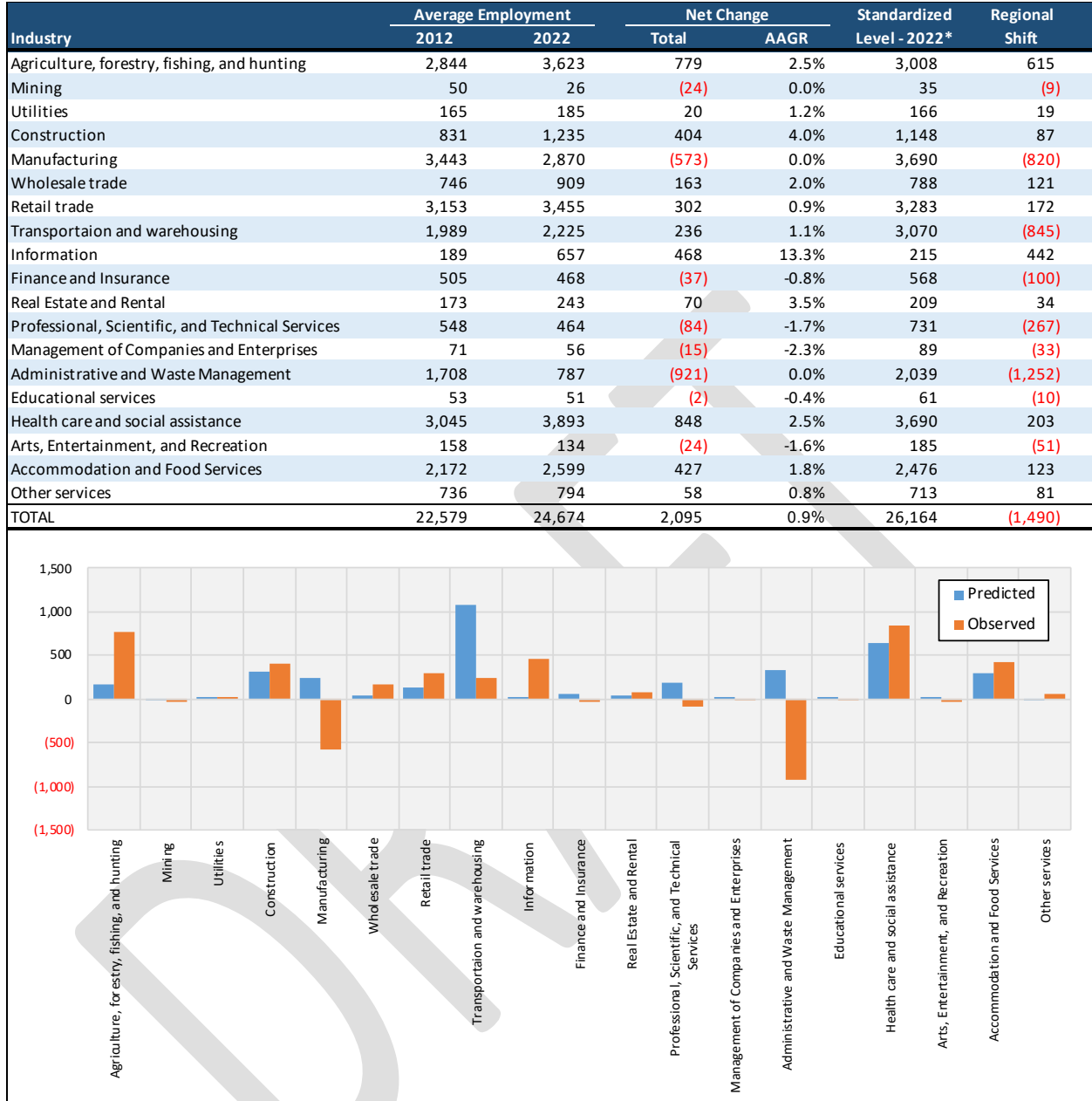
The average annual growth rate by industry from 2012 to 2022 in Umatilla County was compared to the national rate. The observed local change was compared to a standardized level reflecting what would be expected if the local industry grew at a rate consistent with national rates for that industry.

As shown in Figure 5.6, most county industries grew at a slower rate than the rest of the country. Sectors that did experience a notable positive regional shift in employment during this period were agriculture & forestry, information, health care & social assistance, retail trade, and accommodation & food services. The sectors that outperformed expectations the most were agriculture & forestry, information, and health care & social assistance. Sectors with the greatest negative regional shift in employment were administrative & waste management, transportation & warehousing, and manufacturing.

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<sup>4</sup> Measured from 2012 through 2022

**FIGURE 5.6: INDUSTRY SECTOR SHIFT SHARE ANALYSIS, UMATILLA COUNTY (2012 – 2022)**

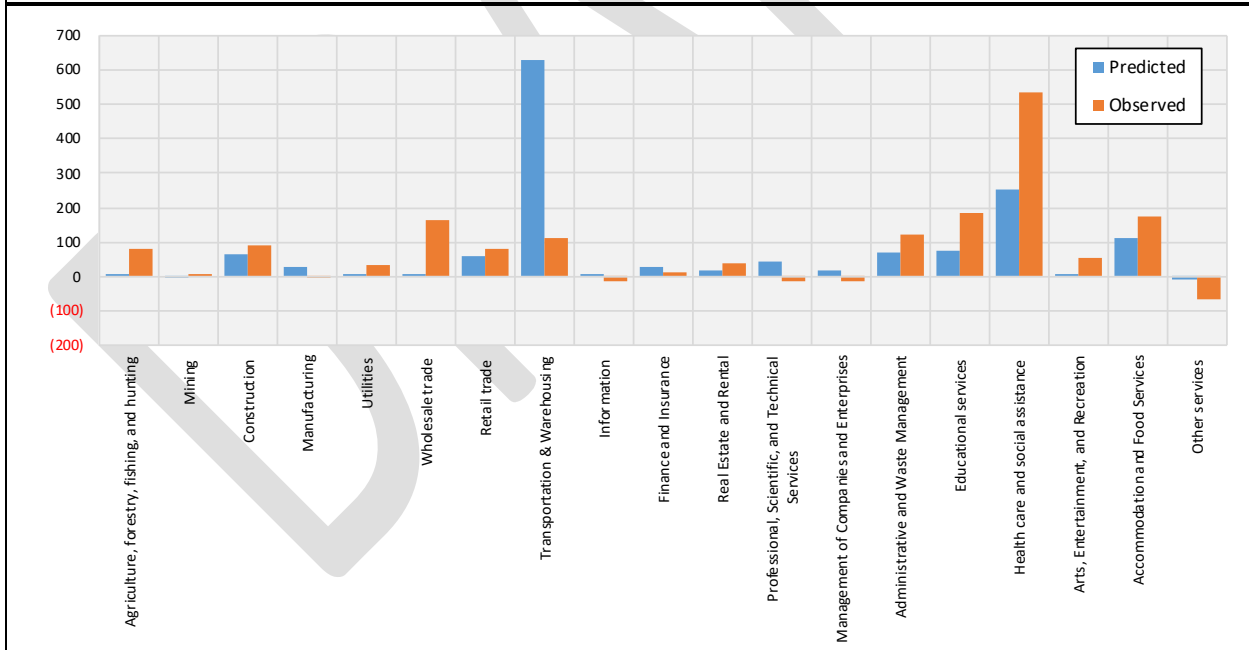


\* Employment level in each industry had it grown at the same rate as its counterparts at the national level over the same period.  
 SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Bureau of Labor Statics, Oregon Employment Department

When the same analysis is done for the city of Hermiston, the city’s growth outperformed the rest of the county in additional industries. The best performing sectors on this measure in the local economy were health care & social assistance, wholesale trade, and educational services. These sectors grew faster than expected based on the national pace.

**FIGURE 5.7: INDUSTRY SECTOR SHIFT SHARE ANALYSIS, CITY OF HERMISTON (2012 – 2022)**

Industry	Average Employment		Net Change		Standardized Level - 2022*	Regional Shift
	2012	2022	Total	AAGR		
Agriculture, forestry, fishing, and hunting	152	231	79	4.3%	161	70
Mining	3	4	1	2.9%	2	2
Construction	163	253	90	4.5%	225	28
Manufacturing	389	387	(2)	-0.1%	417	(30)
Utilities	84	119	35	3.5%	85	34
Wholesale trade	85	247	162	11.3%	90	157
Retail trade	1,385	1,463	78	0.5%	1,442	21
Transportation & Warehousing	1,155	1,264	109	0.9%	1,783	(519)
Information	56	44	(12)	-2.4%	64	(20)
Finance and Insurance	209	221	12	0.6%	235	(14)
Real Estate and Rental	91	128	37	3.5%	110	18
Professional, Scientific, and Technical Services	124	107	(17)	-1.5%	165	(58)
Management of Companies and Enterprises	71	54	(17)	-2.7%	89	(35)
Administrative and Waste Management	356	477	121	3.0%	425	52
Educational services	516	700	184	3.1%	593	107
Health care and social assistance	1,201	1,734	533	3.7%	1,455	279
Arts, Entertainment, and Recreation	40	92	52	8.7%	47	45
Accommodation and Food Services	797	969	172	2.0%	909	60
Other services	325	259	(66)	-2.2%	315	(56)
<b>TOTAL</b>	<b>7,202</b>	<b>8,753</b>	<b>1,551</b>	<b>2.0%</b>	<b>8,610</b>	<b>143</b>



\* Employment level in each industry had it grown at the same rate as its counterparts at the national level over the same period.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Bureau of Labor Statistics

## Growth and Current Strength Analysis

This analysis takes a look at the relationship between the location quotient of an industry and its employment growth (shift share) over the years to give useful insight into an industry's competitive performance. As mentioned above, location quotients are a metric that compares a local industry's employment concentration to the nation's employment concentration of the same industry. A quotient above 1 indicates that an industry has more local representation compared to what is expected nationally while a quotient less than 1 indicates that the local industry has less than the expected employment. When an industry's LQ is compared alongside its employment growth one can identify which industries in the region have been highly competitive, showing signs of growth, decreasing in competitiveness, or underperforming.

Much like the shift share analysis, this analysis separates industries/clusters into 4 categories<sup>5</sup> :

**Growth Clusters:** Industries that show strong concentration locally ( $LQ > 1.0$ ) and have had positive employment growth in recent history. These industries are a focal point of the regional economy, displaying strong competitive advantage and potential growth.

**Mature Clusters:** Industries that have a strong local concentration ( $LQ > 1.0$ ), but negative employment growth during the period of analysis. These industries have been an important factor in the local economy but may need resources to ensure growth into the future and continued competitiveness.

**Emerging Clusters:** Industries that have a smaller local concentration ( $LQ < 1.0$ ), but have seen positive employment growth recently. Although these industries may not have been as important in the regional economy, there is strong potential for growth and could be main drivers of the regional economy in the foreseeable future.

**Declining Clusters:** Industries that have a smaller local concentration ( $LQ < 1.0$ ) as well as negative employment growth. These industries are shrinking and have little competitive advantage in the region.

The Figure 5.8 below depicts this relationship in the city of Hermiston during the 2012 – 2022 period. A majority of industries showed positive employment growth in the last decade, placing them in the growth and emerging clusters. However, more industries have an LQ lower than 1, indicating that industries within Hermiston are less concentrated than what is expected on the national level. The growth cluster is made up of 8 industries having both LQ's above 1 as well as positive employment growth. The delivery and warehousing industry (NAICS 49) had the highest LQ while the wood manufacturing sector (NAICS 32) boasted the highest growth rate among the growth cluster. Other industries in the growth cluster include agriculture (NAICS 11), utilities (NAICS 22), educational services (NAICS 61), retail trade (NAICS 45), accommodation & food services (NAICS 72), as well as health care & social assistance (NAICS 62). These industries can be considered some of the focal points of Hermiston's economy in the last decade.

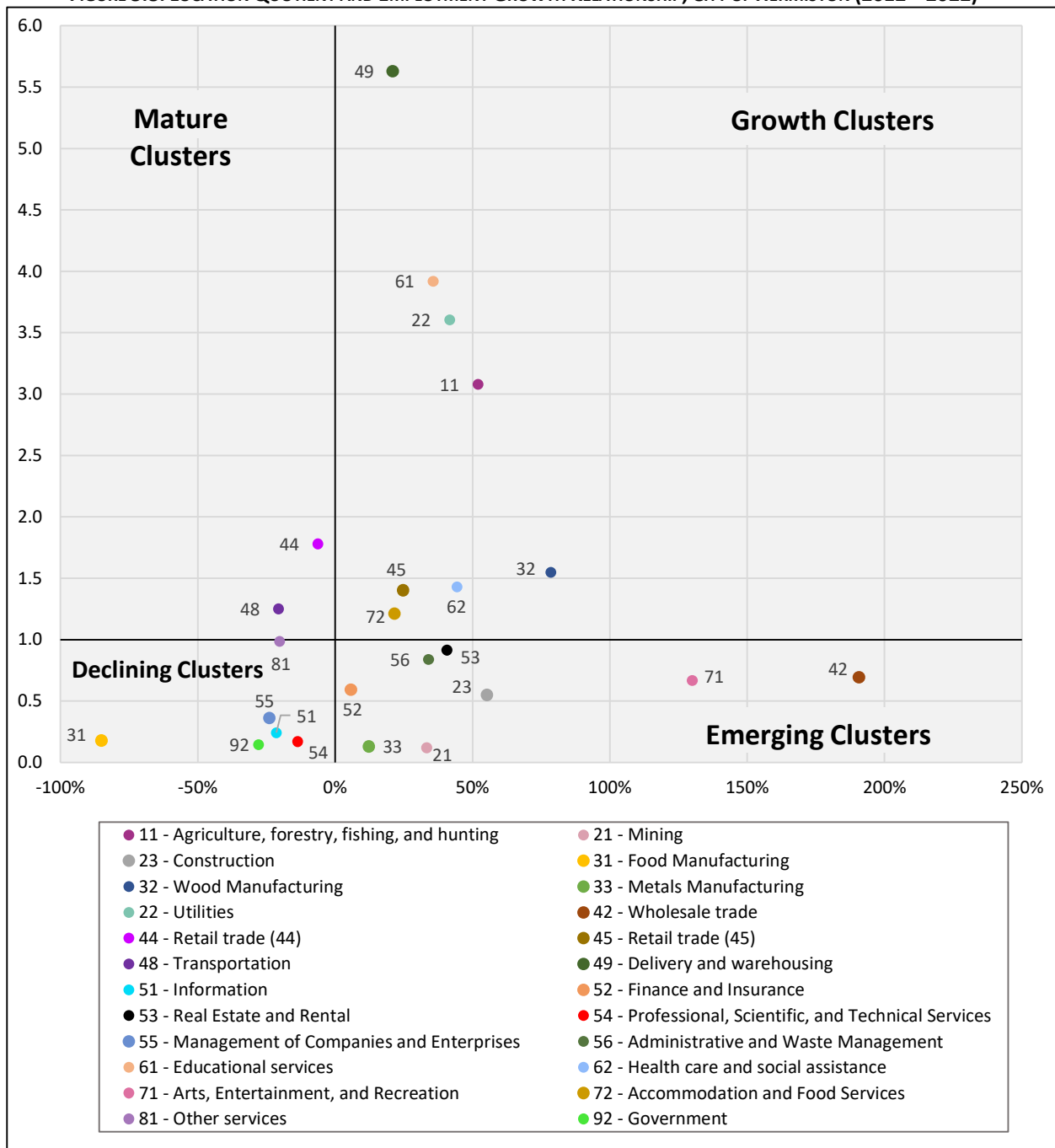
On the other hand, the emerging cluster, which is characterized by industries with a lower local concentration yet positive employment growth, is also comprised of 8 industries. The industry in this cluster with a concentration closest to that of its national counterpart is the real estate and rental industry while the wholesale trade industry displayed the strongest employment growth in the cluster and city (roughly +191% in the last decade). Industries in this cluster can be expected to become important economic drivers in Hermiston in the future if they experience sustained growth.

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<sup>5</sup> Kaliba, Aloyce. (2014). Industry Cluster Analyses for Capital Region Planning and Development District and the North Delta Regional Planning & Development District, Louisiana, USA. 10.13140/RG.2.1.2639.5282.

Industries in the mature and declining clusters are a minority, indicating that most of Hermiston’s industries have been thriving in recent years. Notable industries in these two clusters are transportation in the mature cluster (LQ of 1.25, employment growth of -20.6%) and the information sector in the declining cluster (LQ of 0.24, employment growth of -21.4%).

**FIGURE 5.8: LOCATION QUOTIENT AND EMPLOYMENT GROWTH RELATIONSHIP, CITY OF HERMISTON (2012 – 2022) \***

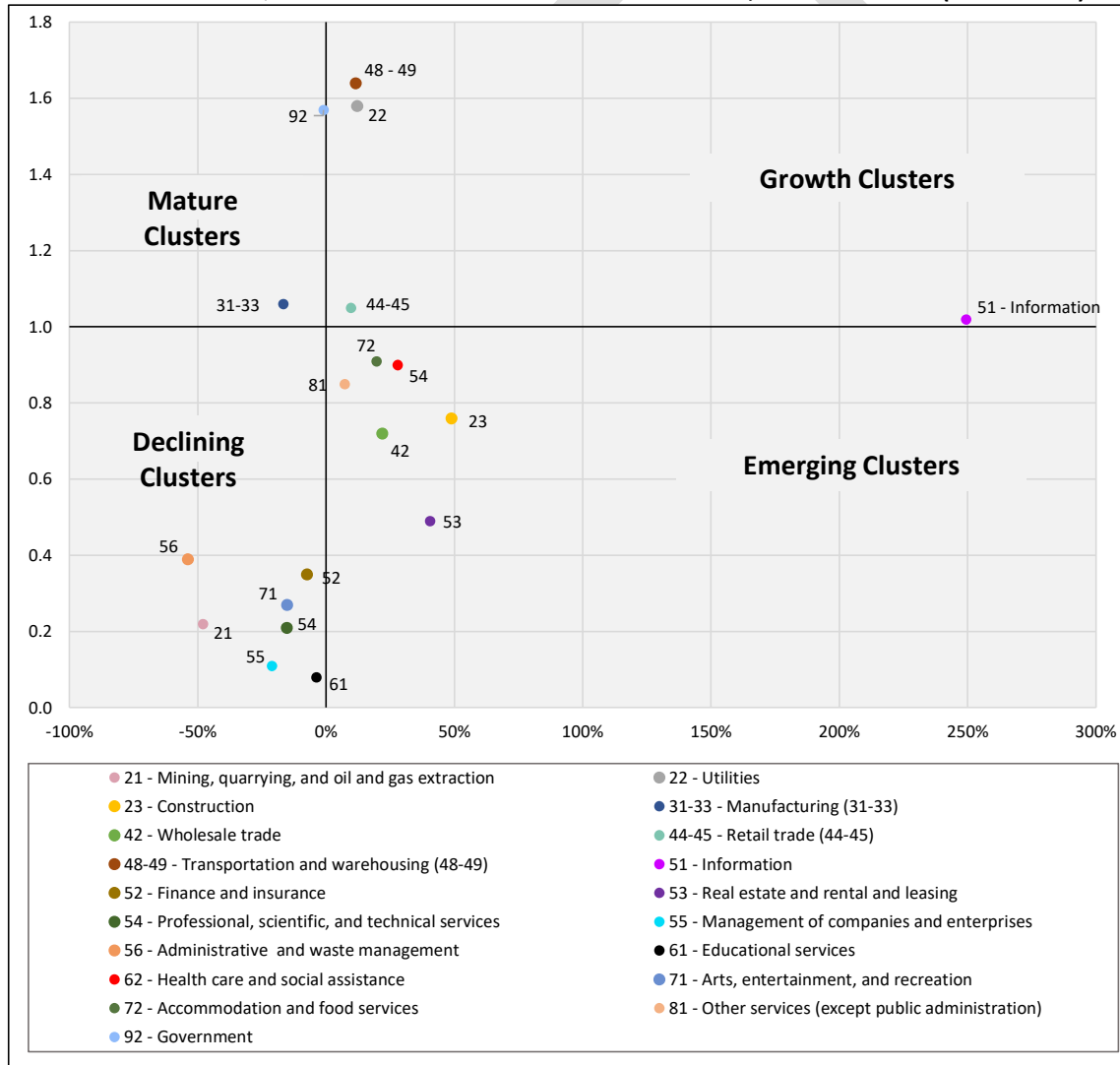


The unclassified sector (NAICS 99) was left out due to having an employment base of less than 10.

Source: Oregon Employment Department, Bureau of Labor Statistics, JOHNSON ECONOMICS

Figure 5.9 below depicts this same analysis applied to Umatilla County during the 2012 – 2022 period. Much like Hermiston, a majority of Umatilla County’s industries experienced positive employment growth while more industries were less concentrated than their national counterparts. A notable industry in the growth cluster is the information sector (NAICS 51), which fell under the declining clusters in the city of Hermiston. On the county level, the information sector has experienced the most employment growth out of any industry, increasing by roughly 250% in the last decade. This sector also has more representation locally when compared to its national counterpart making it undoubtedly one of the strongest economic drivers in the region. The information sector’s recent impressive performance is most likely due to the recent increased development of data centers in the region. These developments were driven by Umatilla County’s strategic geography along the region’s fiber optic network as well as its proximity to a large body of water and a freeway hub. These factors work together in reducing a data center’s operating costs, making Umatilla County a lucrative geography for this type of development. Besides this, much of Umatilla County’s industries share similar traits with that of Hermiston’s in terms of competitiveness and concentration, especially among the lower LQ industries.

**FIGURE 5.9: LOCATION QUOTIENT AND EMPLOYMENT GROWTH RELATIONSHIP, UMATILLA COUNTY (2012 – 2022) \***



\* The agriculture sector (NAICS 11) is left out in the figure for display purposes. For context this industry had an LQ of 13.59 with employment growing by roughly 27% from 2012 to 2022. The unclassified sector (NAICS 99) was also left out due to its employment base being less than 10.

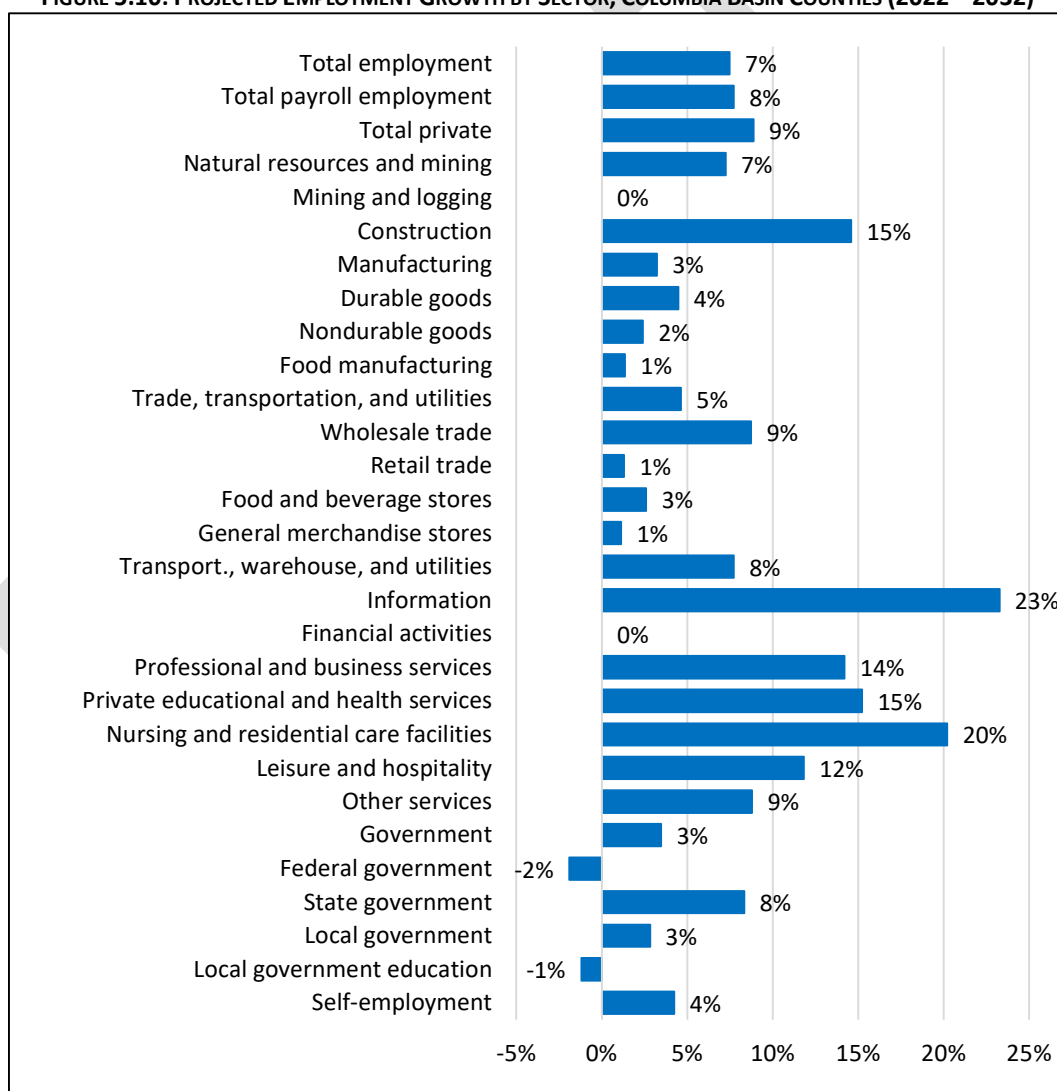
Source: Oregon Employment Department, Bureau of Labor Statistics, JOHNSON ECONOMICS

## PROJECTED EMPLOYMENT GROWTH (OED)

The State of Oregon produces employment forecasts by sector at the broader regional level, which groups the Morrow and Umatilla counties together into one Columbia Basin region. The most recent forecast anticipates a gain of 3,100 jobs from 2022 through 2032, reflecting an average annual growth rate of about 1% during the period. This growth is in-line with Umatilla county’s historical average annual growth rate since 2002 as highlighted in Section II.

In this region, the major industries with the fastest growth rates are projected to be information including data centers, private educational & health services (including nursing facilities), construction and professional services. Government employment is projected to shrink slightly, while other sectors are expected to experience flat or very low growth. The projected large increase in the information industry is, in part, due to the influx of data centers that have been recently constructed and planned to be introduced in the region.

**FIGURE 5.10: PROJECTED EMPLOYMENT GROWTH BY SECTOR, COLUMBIA BASIN COUNTIES (2022 – 2032)**



SOURCE: Oregon Employment Department, Workforce and Economic Research Division



## DATA CENTER DEVELOPMENT ACTIVITY – UMATILLA COUNTY

This EOA analysis would be incomplete without addressing the recent history of data center development in the area, including Umatilla County and adjacent Morrow County. These facilities have been attracted to the area, as well as Central Oregon, due to the availability of ample affordable power and water resources that meet the criteria for data center campuses, as well as large, flat development sites to house these substantial facilities. Local and state financial incentives have also helped attract this development.

Data centers accommodate the physical equipment necessary to store, manage, process, and transmit digital information over the internet. Demand for data centers has and continues to increase rapidly, especially as cloud computing, streaming services, e-commerce, and artificial intelligence (AI) become more prevalent.

While data centers come in a wide variety of sizes and capacities, development in Umatilla and Morrow Counties has been almost exclusively of “hyperscale” data center campuses, which serve the needs of the largest internet and cloud computing companies including Amazon, Google, Facebook, Apple, and Microsoft. These companies are among the largest and best capitalized in the world with the resources to make these massive investments.

Over the prior decade, growth in this sector has been extremely robust and outstripped growth in any other sector. Since roughly 2014, over nine large data center campuses have been developed in Umatilla and Morrow Counties. These campuses include 34 individual data center buildings of roughly 200k square feet each, and cover an estimated 850 acres, including accompanying substations. There are currently four additional campuses currently under development.

In Umatilla County, there have been four campuses developed over a decade, with three in the past five years, and four more under development. These developments average 140 acres in size, with an average of four large data center buildings per campus, qualifying as hyperscale data center campuses. While there are multiple classes of

Data from the Bureau of Economic Analysis (BEA) for Umatilla County indicates that between 2012 and 2022 (the most recent year available) job growth in the “Information” sector that includes data centers outpaced growth in all other sectors. The sector added an estimated 565 new jobs over that decade with most of this growth taking place in the second half of the period. It is important to note that this data does not include multiple new data center facilities that have come on line since 2022, which are estimated to have added hundreds of additional jobs in this sector.

The 565 new jobs represented growth of 220% in this sector between 2012 and 2022, or 12.3% per year. The second fastest growing sector in the county was Construction, which grew at 3% annually (445 new jobs). The accelerated growth in construction jobs is also at least partially attributable to the development of these large data center campuses.

Continuous growth over the last five years indicates that large technology companies have the will and resources to develop hyperscale data center campuses at a rate of one to two per year, consuming somewhere between 100 to 400 acres per year, for the foreseeable future.

## VI. FORECAST OF EMPLOYMENT AND LAND NEED

### CITY OF HERMISTON EMPLOYMENT FORECAST

Goal 9 requires that jurisdictions plan for a 20-year supply of commercial and industrial capacity. Because employment capacity is the physical space necessary to accommodate new workers in the production of goods and services, employment need forecasts typically begin with a forecast of employment growth in the community. The previous analysis of economic trends and targeted industries set the context for these estimates. This analysis translates those trends into estimates of employment growth by broad industry. Forecasts are produced at the sector or subsector level (depending on available information), and subsequently aggregated into two-digit North American Industry Classification System (NAICS) sectors. Estimates in this analysis are intended for long-range land planning purposes and are not designed to predict or respond to business cycle fluctuation.

The projections in this analysis are built on an estimate of employment in 2024, the commencement year for the planning period. Employment growth will come as the result of net-expansion of existing businesses in the community, new business formation, or the relocation/recruitment of new firms. Forecast scenarios consider a range of factors influencing growth. Long-range forecasts typically rely on a macroeconomic context for growth. The forecast does not consider the impact of a significant exogenous shift in employment such as recruitment of an unforeseen major employer. (This forecast **does** include the anticipated employment at data center facilities currently under construction, because this employer is known at the time of this analysis. More detail below.)

### OVERVIEW OF EMPLOYMENT FORECAST METHODOLOGY

Our methodology starts with employment forecasts for major commercial and industrial sectors. Forecasted employment is allocated to building type, and a space demand is a function of the assumed square footage per employee ratio multiplied by projected change. The need for space is then converted into land and site needs based on assumed development densities using floor area ratios (FARs).

FIGURE 6.1: UPDATE TO BASELINE YEAR AND CONVERSION OF COVERED TO TOTAL EMPLOYMENT



The first analytical step of the analysis is to update covered employment to the 2024 base year. The Quarterly Census of Employment and Wages (QCEW) data was used to determine the City of Hermiston's covered employment by industry through 2022, the latest year available. To update these estimates, we use observed industry specific growth rates for Umatilla County between 2012 and 2022.

The second step in the analysis is to convert “covered”<sup>6</sup> employment to “total” employment. Covered employment only accounts for a share of overall employment in the economy. Specifically, it does not consider sole proprietors or commissioned workers. Covered employment was converted to total employment based on observed ratios at the national level derived from the Bureau of Economic Analysis from 2014 through 2022. The differential is the most significant in administration services, professional & technical services, and other services. The adjusted 2024 total employment base for the city of Hermiston is just over 10,000 jobs.

**FIGURE 6.2: UPDATE TO 2024 BASELINE AND CONVERSION OF COVERED TO TOTAL EMPLOYMENT, CITY OF HERMISTON (2022 – 2024)**

Major Industry Sector	QCEW Employment			Total Emp. Conversion <sup>2</sup>	2024 Estimate
	2022 Employment	'12-'22 County Δ <sup>1</sup>	2024 Estimate		
Agriculture, forestry, fishing, hunting	235	3.5%	252	44%	572
Construction	253	3.5%	271	81%	334
Manufacturing	387	-1.8%	373	98%	381
Wholesale Trade	247	2.0%	257	98%	263
Retail Trade	1,463	0.8%	1,488	95%	1,564
Transportation, Warehouse, & Utilities	1,383	-0.6%	1,367	91%	1,511
Information	44	1.5%	45	95%	48
Finance & Insurance	221	0.5%	223	91%	245
Real Estate	128	0.5%	129	91%	142
Professional & Technical Services	161	-4.1%	148	91%	163
Administration Services	477	-4.1%	439	91%	484
Education	700	2.3%	732	95%	768
Health Care/Social Assistance	1,734	2.3%	1,814	95%	1,902
Leisure & Hospitality	1,061	1.6%	1,096	95%	1,157
Other Services	259	1.1%	265	85%	312
Government	183	-0.1%	183	100%	183
<b>TOTAL</b>	<b>8,936</b>	<b>1.6%</b>	<b>9,082</b>	<b>91%</b>	<b>10,028</b>

Source: Johnson Economics

1) Growth rate calculated using CES data for Umatilla County

2) Bureau of Economic Analysis (2022 National Averages)

### **BASELINE SCENARIO: BASELINE “SAFE HARBOR” FORECAST**

The Goal 9 statute does not have a required method for employment forecasting. However, OAR 660-024-0040(9)(a) outlines several safe harbor methods, which are intended to provide jurisdictions an agreed-upon methodological approach to jobs forecasting. The recommended approach for the City of Hermiston is 660-024-0040(9)(a)(B), which allows reliance on the most recent 20-year coordinated population forecast for the City prepared by Portland State University Population Research Center. The overall employment growth rate is assumed to match population growth rate.

The second safe harbor method uses the regional employment forecast by industry, published by the Oregon Employment Department (see Figure 5.10). In the case of Hermiston, both methods result in a very similar growth rate. The baseline growth rate shown in Figure 6.3 (following page) is based on the population growth forecast which has a slightly higher rate compared to the OED forecast (0.97% vs. 0.91% annually). The baseline forecast would entail the creation of 2,136 new jobs over the 20-year forecast period.

<sup>6</sup> The Department of Labor’s Quarterly Census of Employment and Wages (QCEW) tracks employment data through state employment departments. Employment in the QCEW survey is limited to firms with employees that are “covered” by unemployment insurance.

### **ADJUSTED EMPLOYMENT FORECAST: DATA CENTER GROWTH, AND ECONOMIC IMPACTS**

A second adjusted forecast scenario was influenced by the analysis conducted in the EOA, and specific known employment-use developments that are proposed in Hermiston and adjacent parts of Umatilla County. The adjusted forecast includes the anticipated employment created at these new developments, as well as estimates of additional “indirect and induced” employment that will result from the economic activity generated in the general community from these large investments.

- The adjusted forecast estimates the creation of 1,400 information sector jobs over the 20-year period. This employment would be created by the development of at least six planned and proposed hyperscale data center campuses in Hermiston over the planning period. See the following page for greater detail.
- Using the IMPLAN (IMPact for PLANning)<sup>7</sup> economic multiplier model, Johnson Economics estimated the impact of the data center development activity, including construction, on the broader economy. Large data center campuses are very high-value investments that generate significant additional spending in the region, in the building and operations phases. This added economic activity helps generate new jobs across support industries. These are called indirect or induced effects. Due to the sheer size of the data center investments in a relatively rural county, the resulting indirect and induced employment across other industries is estimated at roughly 2/3 of the direct data center employment.

As summarized in Figure 6.3 below, this adjusted growth forecast estimates an average annual growth rate of 1.9% for the period, for a total addition of 4,669 new jobs. The forecasted rate of 1.9% is in keeping with the realized employment growth rate since 2010 of 1.8% per year, (source: Oregon Employment Department, QCEW data).

#### **Hermiston-Area Hyperscale Development Activity**

As discussed in Section V, the data center industry has grown rapidly in the region over the past decade, with eight hyperscale data center campuses finished or under development in Umatilla County. Two campuses are currently under development in south Hermiston on E. Penney Avenue. These two campuses cover roughly 215 acres, include 8 individual data center buildings, and will house hundreds of future jobs which are reflected as future growth in the Information sector in Figure 6.3 below.

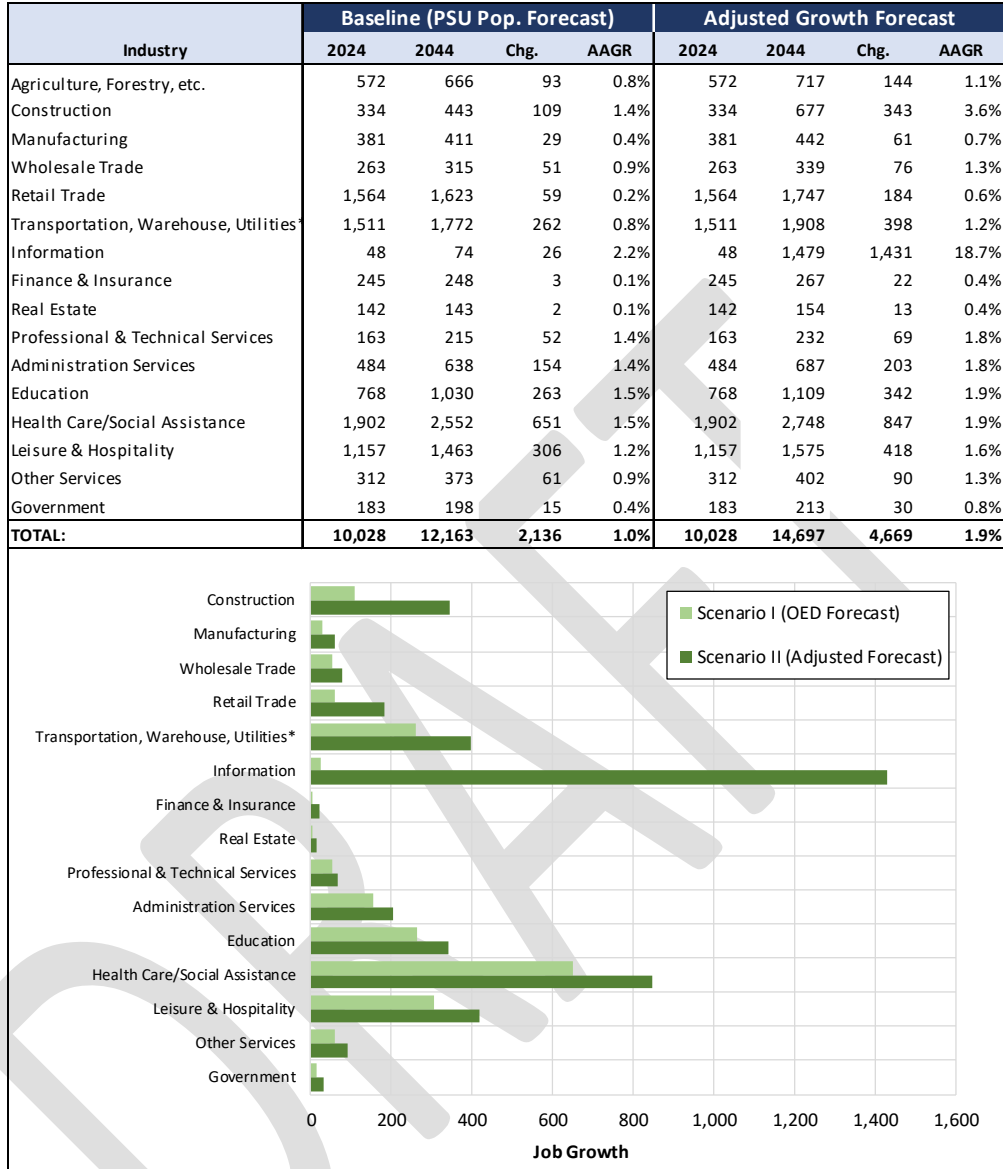
In addition to these two campuses under development, there are multiple proposed additional hyperscale campuses in the immediate area of Hermiston. These campuses will be served by Hermiston infrastructure and utilities, and it is reasonable to assume that these would be Hermiston developments, even if located on land that is currently unincorporated and/or outside of the city’s UGB. (As Section VII of this report discusses, there will be no suitably large buildable sites remaining within the UGB after the build-out of the Penney Ave. sites.)

The proposed ongoing development of multiple new hyperscale campuses is credible, being supported by a very large technology company that has proven its intent to build these facilities continuously and quickly in Umatilla County over the past decade.

Based on this analysis, high employment growth has been forecasted in the Information sector as shown in Figure 6.3. As the proposer of the new campuses has demonstrated that it has the intent and the resources to make these large investments on an ongoing basis, this analysis finds that they are not speculative and will happen if suitable sites are available.

<sup>7</sup> IMPLAN is an economic impact model designed for analyzing the effects of industry activity (employment, income, or business revenues) upon all other industries in an economic area. Minnesota IMPLAN Group (MIG), Stillwater, Minnesota

**FIGURE 6.3: ADJUSTED GROWTH FORECAST, CITY OF HERMISTON (2024 - 2044)**



Source: Oregon Employment Department, Johnson Economics

**FIVE-YEAR INCREMENTAL FORECAST**

The adjusted growth forecast, accounting for the development of hyperscale data centers, estimates an annual growth rate of 1.9%, or 4,669 new jobs over the 20-year period. Over 1,400 of these new jobs in the information sector, attributable almost wholly to data center development, account for 31% of this anticipated growth.

Forecasts grounded in broad based economic variables cannot account for all the realities of local businesses and trends among evolving industries. Any long-term forecast is inherently uncertain and should be updated on a regular basis to reflect more current information. This is particularly true in a smaller jurisdiction such as Hermiston, in which a single large firm’s location and/or operational decision may substantively impact the rate of growth.

The adjusted growth forecast was further broken down into four five-year increments, assuming a consistent rate of growth over the period. We would expect that in reality the twenty-year period will include multiple business cycles, and that the growth rate will be variable over that time.

**FIGURE 6.4: GROWTH FORECAST, 5-YEAR INCREMENTS, CITY OF HERMISTON (2024 - 2044)**

Industry	Overall Employment					Net Change by Period				Total 24-44
	2024	2029	2034	2039	2044	24-29	29-34	35-39	40-44	
<b>Adjusted Growth Forecast</b>										
Agriculture, forestry, fishing, hunting	572	605	640	677	717	33	35	37	39	144
Construction	334	398	475	567	677	65	77	92	110	343
Manufacturing	381	396	411	426	442	14	15	16	16	61
Wholesale Trade	263	280	299	318	339	17	18	19	21	76
Retail Trade	1,564	1,608	1,653	1,699	1,747	44	45	47	48	184
T.W.U.	1,511	1,602	1,698	1,800	1,908	91	96	102	108	398
Information	48	113	266	628	1,479	65	153	361	852	1,431
Finance & Insurance	245	250	256	261	267	5	5	5	6	22
Real Estate	142	145	148	151	154	3	3	3	3	13
Professional & Technical Services	163	178	195	212	232	15	16	18	19	69
Administration Services	484	528	576	629	687	44	48	53	58	203
Education	768	842	923	1,012	1,109	74	81	89	98	342
Health Care/Social Assistance	1,902	2,085	2,286	2,507	2,748	183	201	220	242	847
Leisure & Hospitality	1,157	1,250	1,350	1,458	1,575	93	100	108	117	418
Other Services	312	332	354	377	402	20	22	23	25	90
Government	183	190	197	205	213	7	7	8	8	30
<b>TOTAL:</b>	<b>10,028</b>	<b>10,802</b>	<b>11,727</b>	<b>12,929</b>	<b>14,697</b>	<b>774</b>	<b>925</b>	<b>1,202</b>	<b>1,768</b>	<b>4,669</b>

Source: Oregon Employment Department, Johnson Economics

## EMPLOYMENT LAND FORECAST

The next step in the analysis is to convert projections of employment into forecasts of land demand over the planning period. The methodology begins by allocating employment by sector into a distribution of building typologies that those economic activities typically use. As an example, insurance agents typically locate in traditional office space, often along commercial corridors. However, a percentage of these firms are also located in commercial retail space adjacent to retail anchors. Cross tabulating this distribution provides an estimate of employment in each typology.

The next step converts employment into space using estimates of the typical square footage exhibited within each typology. Adjusting for market average vacancy we arrive at an estimate of total space demand for each building type.

Finally, we can consider the physical characteristics of individual building types and the amount of land they typically require for development. The site utilization metric commonly used is referred to as a “floor area ratio” or FAR. For example, assume a 25,000-square foot general industrial building requires roughly a site of roughly 100k square feet to accommodate its structure, setbacks, parking, and necessary yard/storage space. This building would have an FAR of roughly 0.25. Demand for space is then converted to net acres using a standard floor area ratio FAR for each development form.

## LAND DEMAND ANALYSIS – ADJUSTED GROWTH FORECAST

In this analytical step we allocate employment growth to the standard building typologies. The building typology matrix represents the share of sectoral employment that is located across various building types. (Note that only a fraction of employment in the agricultural sector is assumed to need urban real estate, as many of these companies

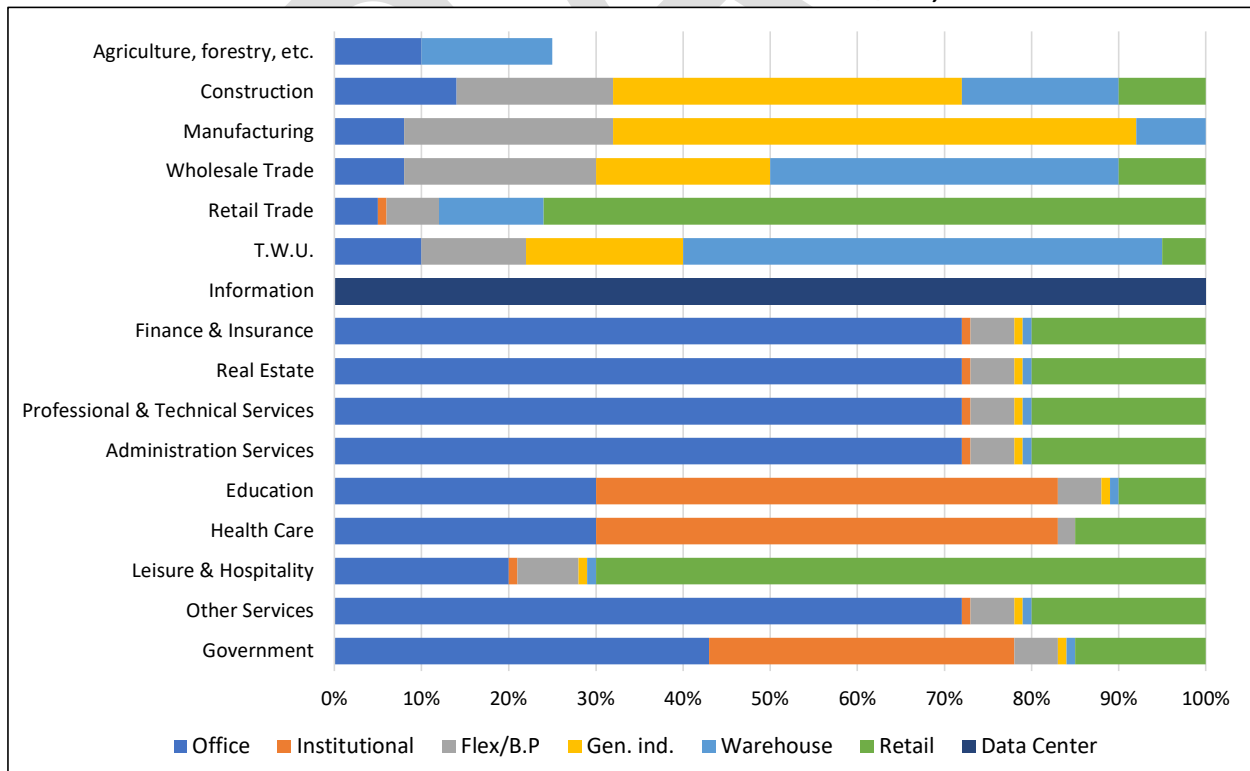
operate in unincorporated areas in the region around the city. Food processing operations are captured under “manufacturing.”)

**FIGURE 6.5: DISTRIBUTION OF EMPLOYMENT BY SPACE TYPE, CITY OF HERMISTON (ADJUSTED FORECAST)**

Industry Sector	BUILDING TYPE MATRIX						
	Office	Institutional	Flex/B.P	Gen. ind.	Warehouse	Data Center	Retail
Agriculture, forestry, etc.	10%	0%	0%	0%	15%	0%	0%
Construction	14%	0%	18%	40%	18%	0%	10%
Manufacturing	8%	0%	24%	60%	8%	0%	0%
Wholesale Trade	8%	0%	22%	20%	40%	0%	10%
Retail Trade	5%	1%	6%	0%	12%	0%	76%
T.W.U.	10%	0%	12%	18%	55%	0%	5%
Information	0%	0%	0%	0%	0%	100%	0%
Finance & Insurance	72%	1%	5%	1%	1%	0%	20%
Real Estate	72%	1%	5%	1%	1%	0%	20%
Professional & Technical Services	72%	1%	5%	1%	1%	0%	20%
Administration Services	72%	1%	5%	1%	1%	0%	20%
Education	30%	53%	5%	1%	1%	0%	10%
Health Care	30%	53%	2%	0%	0%	0%	15%
Leisure & Hospitality	20%	1%	7%	1%	1%	0%	70%
Other Services	72%	1%	5%	1%	1%	0%	20%
Government	43%	35%	5%	1%	1%	0%	15%
<b>TOTAL</b>	<b>18%</b>	<b>14%</b>	<b>5%</b>	<b>6%</b>	<b>8%</b>	<b>31%</b>	<b>16%</b>

Source: Johnson Economics

**FIGURE 6.6: ASSUMED DISTRIBUTION OF SPACE BY TYPE AND INDUSTRY SECTOR, CITY OF HERMISTON**



Source: Johnson Economics

Under the employment forecast scenario, employment housed in data center developments accounts for the greatest share of growth, followed by employment housed in office and retail space. If we exclude the forecasted data center employment (~1,430 jobs), the combined employment forecast in commercially zoned space (~2,250 jobs) is greater than that forecast for industrially zoned space (~900 jobs). Note that the 4,561 total jobs shown here is less than the total employment in the adjusted forecast (4,669 jobs) because not all agricultural jobs require real estate space.

**FIGURE 6.7: NET GROWTH IN EMPLOYMENT BY BUILDING TYPE, CITY OF HERMISTON (ADJUSTED FORECAST) 2024-2044**

Industry Sector	NET CHANGE IN EMPLOYMENT BY BUILDING TYPE - 2024-2044							Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
Agriculture, forestry, etc.	14	0	0	0	22	0	0	36
Construction	48	0	62	137	62	0	34	343
Manufacturing	5	0	15	37	5	0	0	61
Wholesale Trade	6	0	17	15	30	0	8	76
Retail Trade	9	2	11	0	22	0	140	184
T.W.U.	40	0	48	72	219	0	20	398
Information	0	0	0	0	0	1,431	0	1,431
Finance & Insurance	16	0	1	0	0	0	4	22
Real Estate	9	0	1	0	0	0	3	13
Professional & Technical Services	49	1	3	1	1	0	14	69
Administration Services	146	2	10	2	2	0	41	203
Education	103	181	17	3	3	0	34	342
Health Care	254	449	17	0	0	0	127	847
Leisure & Hospitality	84	4	29	4	4	0	293	418
Other Services	65	1	4	1	1	0	18	90
Government	13	11	2	0	0	0	5	30
<b>TOTAL</b>	<b>860</b>	<b>650</b>	<b>236</b>	<b>272</b>	<b>371</b>	<b>1,431</b>	<b>739</b>	<b>4,561</b>

Source: Johnson Economics

Employment growth estimates by building type are then converted to demand for physical space. This conversion assumes the typical space needed per employee on average. This step also assumes a market average vacancy rate, acknowledging that equilibrium in real estate markets is not 0% vacancy. We assume a 10% vacancy rate for office, retail, and flex uses, as these forms have high rates of speculative multi-tenant usage. A 5% rate is used for general industrial and warehouse—these uses have higher rates of owner occupancy that lead to lower overall vacancy. Institutional uses and data centers are assumed to have no vacancy, as they are typically purpose-built for healthcare, nonprofit, government, or related users.

The demand for space is converted into an associated demand for acreage using an assumed Floor Area Ratio (FAR). The combined space and FAR assumptions further provide estimates indicated of job densities, determined on a per net-developable acre basis.



**FIGURE 6.8: NET ACRES REQUIRED BY BUILDING TYPOLOGY, CITY OF HERMISTON (ADJUSTED FORECAST) – 20-YEAR**

	DEMAND BY GENERAL USE TYPOLOGY, 2023-2043							Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
<b>Employment Growth</b>	860	650	236	272	371	1,431	739	4,561
<b>Avg. SF Per Employee</b>	350	350	990	600	1,800	7,000	500	2,627
<b>Demand for Space (SF)</b>	301,100	227,600	234,000	163,400	667,900	10,019,800	369,400	11,983,200
<b>Floor Area Ratio (FAR)</b>	0.30	0.30	0.25	0.25	0.25	0.15	0.25	0.17
<b>Market Vacancy*</b>	10.0%	0.0%	10.0%	5.0%	5.0%	0.0%	10.0%	6.7%
<b>Implied Density (Jobs/Acre)*</b>	33.6	37.3	9.9	17.2	5.7	0.9	19.6	17.7
<b>Net Acres Required</b>	25.6	17.4	23.9	15.8	64.6	1,533.5	37.7	1,718.4
Share for infrastructure (Net-to-Gross)	20%	20%	15%	15%	15%	5%	20%	6%
<b>Gross Acres Required</b>	32.0	21.8	28.1	18.6	76.0	1,614.2	47.1	1,837.7

\* Average of Totals excludes data centers, due to distorting effect.  
 Source: Johnson Economics

Commercial office and retail densities are 33 and 20 jobs per acre, respectively. Industrial uses range from 17 for general industrial to less than 6 jobs per acre for warehouse/distribution. Data centers have low employment density due to the very large buildings and large-acreage sites typical of this use.

The projected 4,669-job expansion in the local employment base through 2044 requiring an estimated 1,718 net acres, and 1,838 gross acres, of employment land. A large majority of this needed land will be very large industrial sites suitable for known planned and proposed hyperscale data center development. This growth in the data center industry represents the bulk of forecasted employment growth, and land need (88%).

Due to the centrality of this identified future use, Figure 6.9 separates out data centers from other industrial uses to better represent the need from other sectors over the planning period. Excluding data centers, there is a forecasted need for 224 gross acres to house job growth in other commercial and industrial categories.

**FIGURE 6.9: EMPLOYMENT GROWTH AND LAND NEED BY BUILDING TYPOLOGY, CITY OF HERMISTON**

	Land Use (Excluding D.C.)			Data Center	Total
	Commercial	Industrial	Subtotal		
<b>20-Year Job Growth:</b>	2,250	880	3,129	1,431	4,561
<b>Job Share:</b>	72%	28%	100%	31%	100%
<b>Net Needed Acres:</b>	80.7	104.2	184.9	1,533.5	1,718.4
<b>Gross Needed Acres:</b>	100.9	122.6	223.5	1,614.2	1,837.7
<b>Land Need Share:</b>	45%	55%	100%	88%	100%

Source: Oregon Employment Department, Portland State University, City of Hermiston, Johnson Economics LLC

Despite the higher number of commercial jobs, the gross acreage of industrial land needed is 55% of this gross land need, and commercial is 45%. This is because of the relatively lower average job densities of industry requires more land to accommodate the same number of jobs.

## VII. RECONCILIATION OF EMPLOYMENT LAND NEED AND INVENTORY

The inventory of buildable employment land provides a snapshot of the current local capacity to accommodate more businesses and jobs over the planning period. This current available land is compared to the forecasted need for new land over the 20-year planning period, presented in Section VI.

### SUMMARY OF LAND DEMAND (ACRES)

The estimate of future land need is re-presented below. A total need for 1,838 gross acres was identified across a range of land use and building types, based on the adjusted growth forecast. Data centers account for 1,614 gross acres of this need. Other industrial uses account for 123 gross acres of need, and commercial uses 101 gross acres.

FIGURE 7.1: SUMMARY OF FORECASTED 20-YEAR LAND NEED BY BUILDING TYPOLOGY (HERMISTON)

	Land Use (Excluding D.C.)			Data Center	Total
	Commercial	Industrial	Subtotal		
20-Year Job Growth:	2,250	880	3,129	1,431	4,561
Job Share:	72%	28%	100%	31%	100%
Net Needed Acres:	80.7	104.2	184.9	1,533.5	1,718.4
Gross Needed Acres:	100.9	122.6	223.5	1,614.2	1,837.7
Land Need Share:	45%	55%	100%	88%	100%

Source: Oregon Employment Department, Portland State University, City of Hermiston, Johnson Economics LLC

### SUMMARY OF LAND SUPPLY (ACRES)

To assess the remaining supply of buildable employment land suitable to accommodate the 20-year land need, an inventory of land with the proper zoning was conducted. The following is a summary of the results on that inventory. A more detailed explanation of the methodology and findings of the Buildable Land Inventory (BLI) is presented as Appendix C of this report.

FIGURE 7.2: BUILDABLE LAND INVENTORY, NET DEVELOPABLE ACRES BY ZONE (HERMISTON)

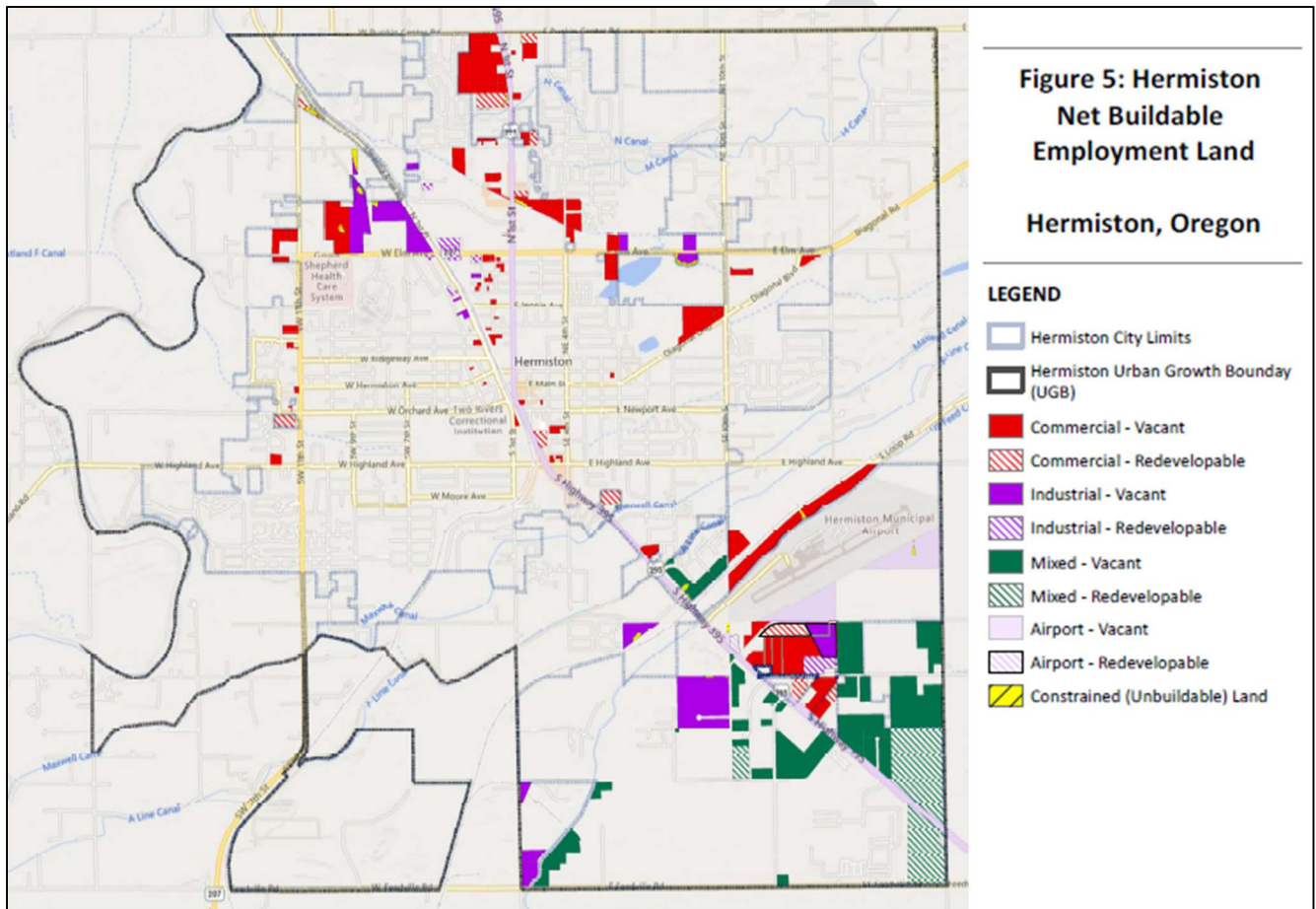
TABLE 3: RECLASSIFIED HERMISTON EMPLOYMENT BUILDABLE LANDS INVENTORY <sup>1</sup>			
	Vacant	Redevelopable	Total
Designation	Net Buildable Acreage	Potential Acreage <sup>2</sup>	Potential Acreage
<b>Commercial Designation (includes 50% of Mixed Designations acreage)</b>			
Commercial (C)	208.71	35.90	244.61
50% of Mixed Commercial/Industrial (C/I) and Future Mixed Commercial/Industrial (F-C/I)	90.97	50.28	141.25
<i>Commercial subtotal</i>	<i>299.68</i>	<i>86.18</i>	<i>385.86</i>
<b>Industrial Designations (includes 50% of Mixed Designations acreage)</b>			
Airport (A)	48.04	1.88	49.92
Industrial (I)	105.22	15.70	120.92
50% of Mixed Commercial/Industrial (C/I) and Future Mixed Commercial/Industrial (F-C/I)	90.97	50.28	141.25
<i>Industrial subtotal</i>	<i>244.23</i>	<i>67.86</i>	<i>312.09</i>
<b>Total</b>	<b>543.91</b>	<b>154.04</b>	<b>697.95</b>
Table Note:			
<sup>1</sup> Due to rounding, some totals may not correspond with the sum of separate figures.			
<sup>2</sup> The Redevelopable Potential Acreage assumes removal of existing structures, and redevelopment of the entire parcel.			

Source: City of Hermiston, Mackenzie

The BLI filtered the zoned employment land in Hermiston by Commercial or Industrial zoning category, environmental constraints that will limit development, and whether the parcel is already developed, vacant, or partially vacant (see Appendix C for more detail). The inventory was vetted to address development projects in the pipeline and known limitations on specific sites that will prevent development on all or a portion of the site.

The preceding figure presents the estimated net developable acres of land by zone. There are an estimated 386 net acres of buildable Commercial land and an estimated 313 net acres of buildable Industrial land.

**FIGURE 7.3: BUILDABLE LAND INVENTORY, EMPLOYMENT LAND BY DEVELOPMENT STATUS (HERMISTON)**



Source: City of Hermiston, MACKENZIE

### **RECONCILIATION OF 20-YEAR LAND SUPPLY AND DEMAND**

Comparing the Buildable Land Inventory to the 20-year forecast of employment land need indicates that the City of Hermiston faces a deficit of employment land over the planning period. *However*, the unmet need for land is specifically in large-lot sites for hyperscale data center campuses (discussed more below). There is sufficient *gross* buildable land in both the Commercial and Industrial categories to accommodate the forecasted need for other commercial and industrial categories, excluding data centers.

A summary of the comparison of land supply and demand is presented below.

**FIGURE 7.4: RECONCILIATION OF LAND SUPPLY AND 20-YEAR DEMAND (HERMISTON)**

<b>EMPLOYMENT ZONING DESIGNATION</b>	<b>20 YR. DEMAND (Gross Acres)</b>	<b>BUILDABLE LAND (Acres)</b>	<b>Permitted Data Center Sites (Acres)<sup>1</sup></b>	<b>SURPLUS OR (DEFICIT) (Gross Acres)</b>
Commercial (Office, Institutional, Retail)	100.9	385.9		285.0
Industrial (Gen. Ind., Warehouse, Flex)	122.6	312.1		189.5
Data Center Campus	1,614.2	NA <sup>2</sup>	214	(1,400.2)
<b>TOTAL:</b>	<b>1,837.7</b>	<b>698.0</b>	<b>214.0</b>	<b>(925.7)</b>

<sup>1</sup> Two known large-lot hyperscale data center developments have been permitted in south Hermiston. These are two sites on E. Penney Ave, that will accommodate an estimated eight total large data center building, and an estimated 240 of the forecasted data center jobs.

<sup>2</sup> While the buildable land inventory found a surplus of industrial land in gross terms, none of the remaining sites meet the specific unique requirements of hyperscale data center campuses. Most importantly, remaining buildable sites lack the size to house a new campus. Following the development of the two E Penney sites identified above, no additional appropriate large-lot sites will remain.

Source: Johnson Economics, City of Hermiston, Mackenzie

- This analysis indicates that Hermiston has sufficient general Commercial acres, and general Industrial acres to accommodate the forecasted 20-year demand for land (other than for large-lot data centers).
- It is important to note that some of the forecasted growth will include employers who may have specific site needs and preferences that are not reflected in the available buildable inventory. (See Appendix A for more details on site preferences for certain key industries.) In particular, there is forecasted demand for more suitable large-lot industrial sites while relatively few of these sites were found in the inventory that are unconstrained. This is discussed in greater detail below.
- Based on identified proposed data center projects in the Hermiston area, and the rate of development of data centers generally in Umatilla and neighboring Morrow Counties over the past decade, there is a strong identified need for significant acreage for large-lot industrial sites appropriate for these developments.
- In keeping with recent data center campuses in the county, hyperscale data centers require a minimum of 100 acres of buildable land to accommodate at least four buildings. Each campus is also accompanied by an electrical substation to meet power needs, that typically requires an additional five to fifteen acres (see Appendix A).
- There is an estimated need for 1,400 gross acres in the Hermiston area to accommodate multiple hyperscale data center campuses of 100 or more acres. Over a 20-year period, this rate of development is in keeping with the observed development of these facilities in the County over the past decade.

DRAFT

**TECHNICAL MEMO:  
SITING CRITERIA FOR  
HYPERSCALE DATA  
CENTERS**

**To**  
Johnson Economics

**For**  
City of Hermiston Economic  
Opportunities Analysis (EOA)

**Dated**  
April 30, 2024 **DRAFT**

**Project Number**  
2240028.00



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## ATTACHMENT

1. Business Oregon Industrial Development Competitiveness Matrix, July 2015

## I. INTRODUCTION

### Hermiston Economic Opportunities Analysis

This technical memo describes Mackenzie’s findings related to siting criteria for one of the City of Hermiston’s target industrial uses identified in the Economic Opportunity Analysis (EOA) currently under development by Johnson Economics. Information from this document will be used in conjunction with the Employment Lands - Buildable Lands Inventory (BLI) component of the EOA to identify land and infrastructure needed to attract hyperscale data center operators.

### Industrial Development Competitiveness Matrix

In 2015, in partnership with Business Oregon, Mackenzie developed a matrix outlining criteria that make a site competitive for development with a range of industrial uses (see Attachment 1). The criteria include physical site characteristics, transportation needs, utility needs, and other considerations used to assist in the selection of appropriate sites for industrial development. Data Center is one of the use categories identified in the matrix; however, for the reasons explained below, the 2015 matrix does not account for the more recent trend of hyperscale data centers.

### Data Centers

Data centers accommodate the physical equipment necessary to store, manage, process, and transmit digital information over the internet. The data center industry has changed quickly as data processing needs have grown exponentially in response to the general growth of the internet (e.g., e-commerce) and development of new industries including widespread adoption of decentralized cloud services, video and game streaming, mass data farming and processing, and artificial intelligence (AI).

In the data center industry, rather than measure facilities in square feet, they are often measured in terms of bulk energy such as megawatts (MW), which provides a more useful representation of their processing capacity. To put the growth of this market into perspective, a report by McKinsey & Company estimates the data center industry is expected to grow from 17 gigawatts (GW, i.e. 1,000 MW) in 2022 to about 35 GW by 2030.<sup>1</sup> According to Cushman & Wakefield, Oregon ranks #8 in the global established data center market and #5 in the established Americas market.<sup>2</sup>

### Types of Data Centers

Data centers can be developed at different scales, depending on the location and need they are intended to serve. Table 1 below lists categories identified by NAIOP, the Commercial Real Estate Development Association.

---

<sup>1</sup> *Investing in the Rising Data Center Economy*, McKinsey & Company, 2023.

<sup>2</sup> *Global Data Center Market Comparison*, Cushman & Wakefield, 2024.

TABLE 1: FIVE TYPES OF DATA CENTERS <sup>3</sup>
There is no one-size-fits-all when it comes to data centers, and depending on who is counting, five popular types of data centers are operating today.
<b>Enterprise data centers:</b> The enterprise data center supports a single organization. It is typically built, maintained, operated and managed by companies, such as banks, brokerage firms and insurance companies, for their own use.
<b>Multitenant or co-location data centers:</b> The co-location data center is one where a company will rent space within that data center, which is owned by others and located off premises from the company.
<b>Hyperscale data centers:</b> Hyperscale data centers are those of Amazon Web Services, Microsoft and IBM, and support their large-scale IT infrastructure.
<b>Edge data centers:</b> Edge data centers are owned by third parties in a specific metro area to bring IT infrastructure closer to users. They handle real-time data processing. These centers reduce communication delays.
<b>Container data centers:</b> Container data centers come in shipping containers or modules. These are ready-made data centers. They are plug-and-play, with all the components ready to go.

As the data needs of society have grown, the proliferation and scale of data centers has accelerated with it, including in Umatilla County. The development characteristics and site needs of data centers as described in the 2015 matrix (Attachment 1) do not accurately represent very large data centers and the examples that have been developed in Eastern Oregon over the last decade.

### ***Hyperscale Data Centers***

Based on the EOA’s identified need for hyperscale data centers, the remainder of this report discusses the characteristics and site needs of these modern very-large data centers. This analysis is intended to augment the prior siting criteria work noted above, to address the evolution of the data center industry over the past decade. By way of context, in 2010, the ratio of energy consumption for hyperscale and cloud data centers was 13% of the total and 87% for other types. As of 2022, hyperscale demand increased to 77%.<sup>4</sup>

Hermiston’s proximity to the Columbia River and major electrical transmission lines makes the area desirable for hyperscale data center campuses, as evidenced by several recent developments by Amazon Web Services (AWS) in Morrow and Umatilla Counties. The following sections of this report primarily focus on the siting criteria for the **hyperscale category** of data center facilities, based on information derived from trade organizations, literature, an end user, and Mackenzie engineering staff.

<sup>3</sup> *Data Center Real Estate: Challenges and Opportunities*, Development, Winter 2023/2024

<sup>4</sup> *What do you Need to Know About Designing Data Centers?*, Consulting Specifying Engineer, May/June 2023



## II. SITING CRITERIA FOR HYPERSCALE DATA CENTERS

Due to changes in data center development patterns, the Data Centers category outlined in the 2015 Industrial Development Competitiveness Matrix (Attachment 1) is not directly germane to current hyperscale data center development trends in Eastern Oregon. The purpose of this section is to revisit and update the siting criteria to be applicable to the types of hyperscale data centers identified in the City of Hermiston's EOA.

### **Hyperscale Data Center Site Criteria**

The availability of sufficient, affordable, and dependable electricity and water supply are critical factors driving site selection for data center development. Due to the need for data centers to stay in continuous operation, low natural hazard and security risks are also critical. There is also preference for milder climates, which reduces cooling demand and in turn, electricity, and water consumption.

#### ***Site and Building Characteristics***

The typical site size for a hyperscale data center campus is 100 acres or more, including four or more buildings at 200,000 square feet (SF) - 250,000 SF each, with 5-10 acres for dedicated electrical substations. For hyperscale data centers, the minimum site size needed for a single building is approximately 25 acres; however, recent trends in Umatilla and Morrow Counties show that the development generally consists of four or more buildings on 100+ acres. Site topography should be relatively flat, with a maximum grade of 7%, and site shape should accommodate large rectangular building(s).

#### ***Location***

Sites should be within 30 miles of an interstate highway or freight route. Frontage on major streets is not necessary as data centers do not rely on or benefit from high daily vehicle or pedestrian traffic, so facilities can be removed from major arterials. Proximity to marine ports and airports is generally not necessary. Proximity to rail lines is also not necessary.

Due to the noise produced by cooling equipment and backup generators, proximity to residential zones or other sensitive uses may be undesirable, although it is typically possible to mitigate those effects through building and landscape design.

#### ***Utilities***

##### *Water*

Data centers utilize large amounts of water for cooling equipment. In some cases, the water demand for data centers is estimated based on their energy use, which is measured in megawatt-hours (MWh). The estimated water demand is 1,000 gallons per day per acre, which requires a minimum 12" high-pressure supply line per Mackenzie engineering staff.

##### *Sanitary Sewer*

According to Mackenzie civil engineers, a minimum 8" service line is required.

### *Natural Gas*

Natural gas supply is not required; however, a minimum 4" service line where available increases the marketability of sites and is highly recommended.

### *Electricity*

Data centers have a very high demand for electricity to power and cool equipment. Cooling the equipment accounts for approximately 40% of total energy consumption. The minimum power requirement per building is 60 megawatts (MW), so a prototypical four-building campus would require a minimum supply of 240 MW. This level of demand requires a dedicated substation, typically 5-10 acres in size. Redundancy is required to ensure data centers can operate without interruption. According to the U.S. Department of Energy (DOE), data centers collectively account for about 2% of total U.S. electricity use.<sup>5</sup> Backup generators, typically diesel-powered, are also required.

### *Telecommunications*

Data center facilities require major telecommunications infrastructure including fiber optic service and route diversity.

### *Transportation*

Sites require adequate access and circulation for truck traffic and fire apparatus. Proximity to public transit, airports, marine ports, or railroads is not required. Data centers generate minimal traffic, so frontage on high-capacity road classifications is not critical to site selection. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, the average daily trip (ADT) generation rate is 0.99 trips per 1,000 SF (KSF) of gross floor area (GFA). By contrast, the Industrial Development Competitiveness Matrix specifies trip generation capacity in terms of average daily trips per acre (ADT/ac). The ADT/ac metric does not account for floor area ratio (FAR), which can vary significantly between single- and multi-story developments. Mackenzie transportation engineers estimate a range of 15 to 45 daily trips per acre, with the lower end of the range representing sites with a low FAR and the upper end representing sites with a high FAR.

### *Security*

Sites require gated access, security lighting, and enhanced security systems to ensure data remains secure and systems stay online. Proximity to buildings or infrastructure which may be vulnerable to attack is a factor in evaluating site suitability.

### *Natural Hazards*

Due to the need for the facility to be in continuous operation, sites must have minimal seismic, flood, or other natural hazard risk exposure.

---

<sup>5</sup> [www.energy.gov/eere/buildings/data-centers-and-servers](http://www.energy.gov/eere/buildings/data-centers-and-servers)

## ***Examples of Eastern and Central Oregon Hyperscale Data Center Campuses***

The following examples describe hyperscale data center facilities from Umatilla, Morrow, and Crook Counties.

### ***Amazon Web Services (AWS) | Umatilla County, OR***

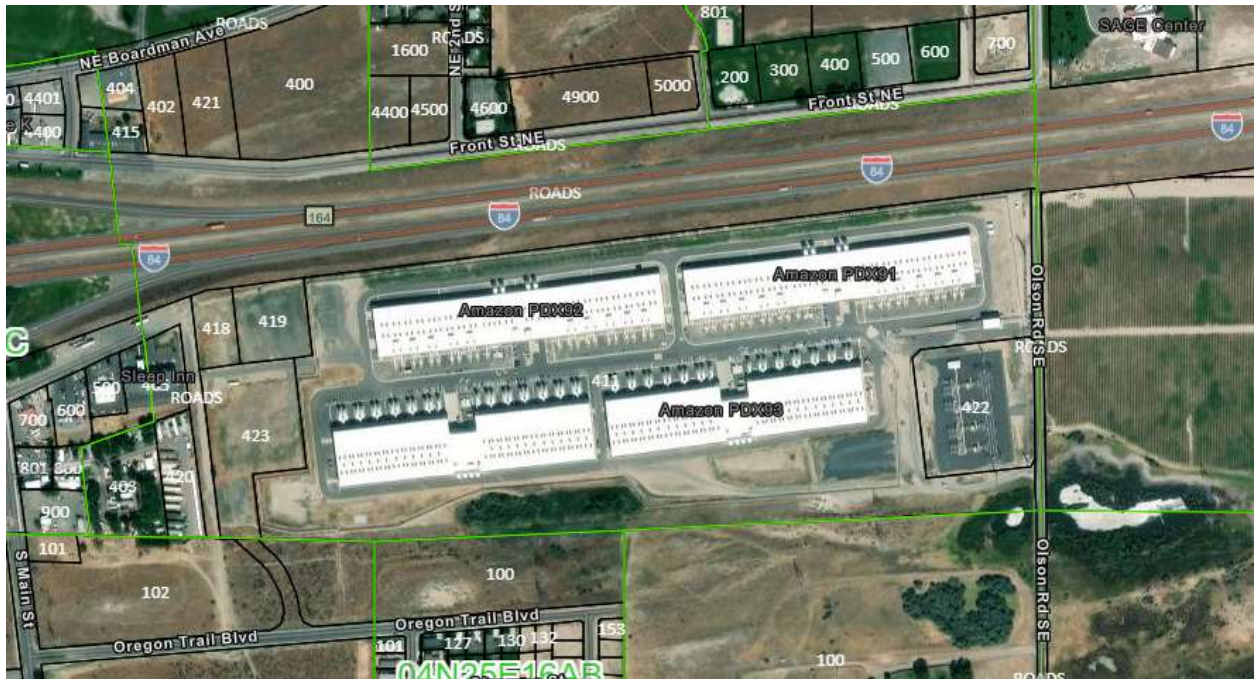


**Figure 1: AWS Data Center, Umatilla County, Oregon**

*Image Source: Umatilla County Interactive Map*

- Site Address: 77954 Cottonwood Bend Rd, Hermiston, OR 97838
- Year Developed: 2022 - 2023
- Site Size: 117 acres
- Dedicated Substation Size: 9 acres
- Buildings: (4) single-story buildings – (1) at 217,900 SF and (3) at 250,000 SF each

Amazon Web Services (AWS) | City of Boardman, OR



**Figure 2: AWS Data Center, Boardman, OR**

*Image Source: Morrow County Interactive Map*

- Site Address: 79386 Olson Rd, Boardman, OR 97838
- Year Developed: 2022 – 2023
- Site Size: 75 acres
- Dedicated Substation Size: 5 acres
- Buildings: (4) single-story buildings at 206,000 SF each

DRAFT



**Figure 3: Apple Data Center, Prineville, OR**

*Image Source: Crook County Interactive Map*

- Site Address: 1600 SW Baldwin, Prineville, OR 97754
- Year Developed: 2012 - 2023
- Site Size: 154 acres
- Dedicated Substation Size:  $\pm 2$  acres
- Buildings: (3) single-story buildings – (1) at  $\pm 270,000$  SF; (2) at  $\pm 338,000$  SF each



**Figure 4: Facebook Data Center, Prineville, OR**

*Image Source: Crook County Interactive Map*

- Site Address: 735 SW Connect Way, Prineville, OR 97754
- Year Developed: 2011 - 2023
- Site Size: ±363 acres
- Dedicated Substation Size: (1) at ±10.0 acres, (1) at 1.3 acres, and (1) at 1.5 acres
- Buildings: (11) buildings totaling ±4.6 million SF

### III. RECOMMENDATIONS

Based on information from the Industrial Development Competitiveness Matrix and the findings in this technical memo, Mackenzie recommends the following siting criteria for the hyperscale data centers discussed in the City of Hermiston’s EOA.

TABLE 2: SITING CRITERIA FOR HYPERSCALE DATA CENTERS		
<i>Criteria</i>		<i>Hyperscale Data Center</i>
<b>Physical Site</b>		
Total Site Size*	Competitive Acreage**	25 - 100+
Competitive Slope	Maximum Slope	0 - 7%
<b>Transportation</b>		
Trip Generation	Average Daily Trips Per Acre	15 - 45
Miles to Interstate or Freight Route	Miles	within 30
Railroad Access	Dependency	Not Required / Avoid
Proximity to Marine Port	Dependency	Not Required
Proximity to International / Regional Airport	Dependency	Not Required
<b>Utilities</b>		
Water	Minimum Line Size (inches diameter)	12" – 16"
	Minimum Fire Line Size (inches diameter)	10" - 12"
	High Pressure Water Dependency	Required
	Flow (gallons per day per acre)	1,000+
Sanitary Sewer	Minimum Service Line (inches diameter)	8" - 10"
	Flow (gallons per day per acre)	500 - 1,000±
Natural Gas	Minimum Service Line	4"

	(inches diameter)	
	On Site	Competitive
Electricity	Min. Service Demand	60 - 240 MW
	Close proximity to substation	Required on-site
	Redundancy Dependency	Required
Telecommunications	Major Communications Dependency	Required
	Route Diversity Dependency	Required
	Fiber Optic Dependency	Required
Special Considerations	<p>Larger sites may be needed. The 100-acre site requirement represents the more typical site for hyperscale data center campuses.</p> <p>Power delivery, water supply, and security are critical. Surrounding environment (vibration, air quality, etc.) is crucial.</p> <p>May require high volume/supply of water and sanitary sewer treatment.</p>	

**Terms:** “Required” factors are seen as mandatory in a vast majority of cases and have become industry standards.  
“Competitive” significantly increases marketability and is highly recommended. May be linked to financing in order to enhance the potential reuse of the asset in case of default.  
“Preferred” increases the feasibility of the site and its future reuse. Other factors may, however, prove more critical.  
“Not required” does not apply for the industry and/or criteria.  
“Avoid” factors act as deterrents to businesses in these industries because of negative impacts.

\* Total Site: Building footprint, including buffers, setbacks, parking, mitigation, and expansion space.  
\*\* Competitive Acreage: Acreage that would meet the site selection requirements of the majority of industries in this sector.  
† Data Center Water Requirements: While the Business Oregon Industrial Development Competitiveness Matrix identifies water requirements in gallons per MWh for data centers, this table uses gallons per acre.  
‡ Sanitary Sewer Requirements: Sewer requirement is reported as 200% of the domestic usage at the Data Center facility. Water and sewer requirements for Data Centers are highly variable based on new technologies and should be reviewed on a case-by-case basis for specific development requirements.



ATTACHMENT A

**BUSINESS OREGON  
INDUSTRIAL  
DEVELOPMENT  
COMPETITIVENESS  
MATRIX**

*Source: Mackenzie,  
Business Oregon*

DRAFT

**TECHNICAL MEMO:  
CITY OF HERMISTON  
EMPLOYMENT LANDS  
– BUILDABLE LANDS  
INVENTORY**

**To**  
Johnson Economics

**For**  
City of Hermiston Economic  
Opportunities Analysis (EOA)

**Dated**  
April 23, 2024 **DRAFT**

**Project Number**  
2240028.00



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**APPENDIX**

Appendix A – Manual Adjustment Log

## **I. INTRODUCTION AND PURPOSE**

This technical memo describes Mackenzie’s findings related to the employment areas buildable lands inventory for the City of Hermiston. Information from this document will be incorporated into the Economic Opportunity Analysis (EOA) reconciliation of employment land supply and demand in the main report by Johnson Economics.

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## II. EMPLOYMENT LANDS BUILDABLE LANDS INVENTORY

As part of this project, the City of Hermiston requested a buildable lands inventory (BLI) for employment lands to identify those parcels available for and suitable for development by commercial and industrial users within the Urban Growth Boundary (UGB). Mackenzie has compiled information on buildable lands to further the City's economic development objectives and to satisfy provisions of Oregon Statewide Land Use Planning Goal 9, Economic Development, as codified at Oregon Administrative Rules (OAR) 660, Division 9 to implement Oregon Revised Statutes (ORS) 197.712(2).

To determine the City's buildable lands, Mackenzie utilized geographic information systems (GIS) data from the City and Umatilla County, Federal Emergency Management Agency (FEMA), Oregon Department of State Lands (DSL), Oregon Department of Geology and Mineral Industries (DOGAMI), Oregon Department of Forestry (ODF), and Bing Maps to review information on parcels, comprehensive plan designation, assessed value, and topographic conditions to:

- Categorize land designated or planned for employment.
- Screen out properties which are already developed.
- Determine which properties are vacant or redevelopable.
- Deduct areas with site constraints that preclude development.
- Identify the remaining buildable area of vacant and redevelopable sites after deducting for constraints.



### Study Area

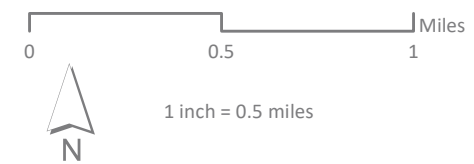
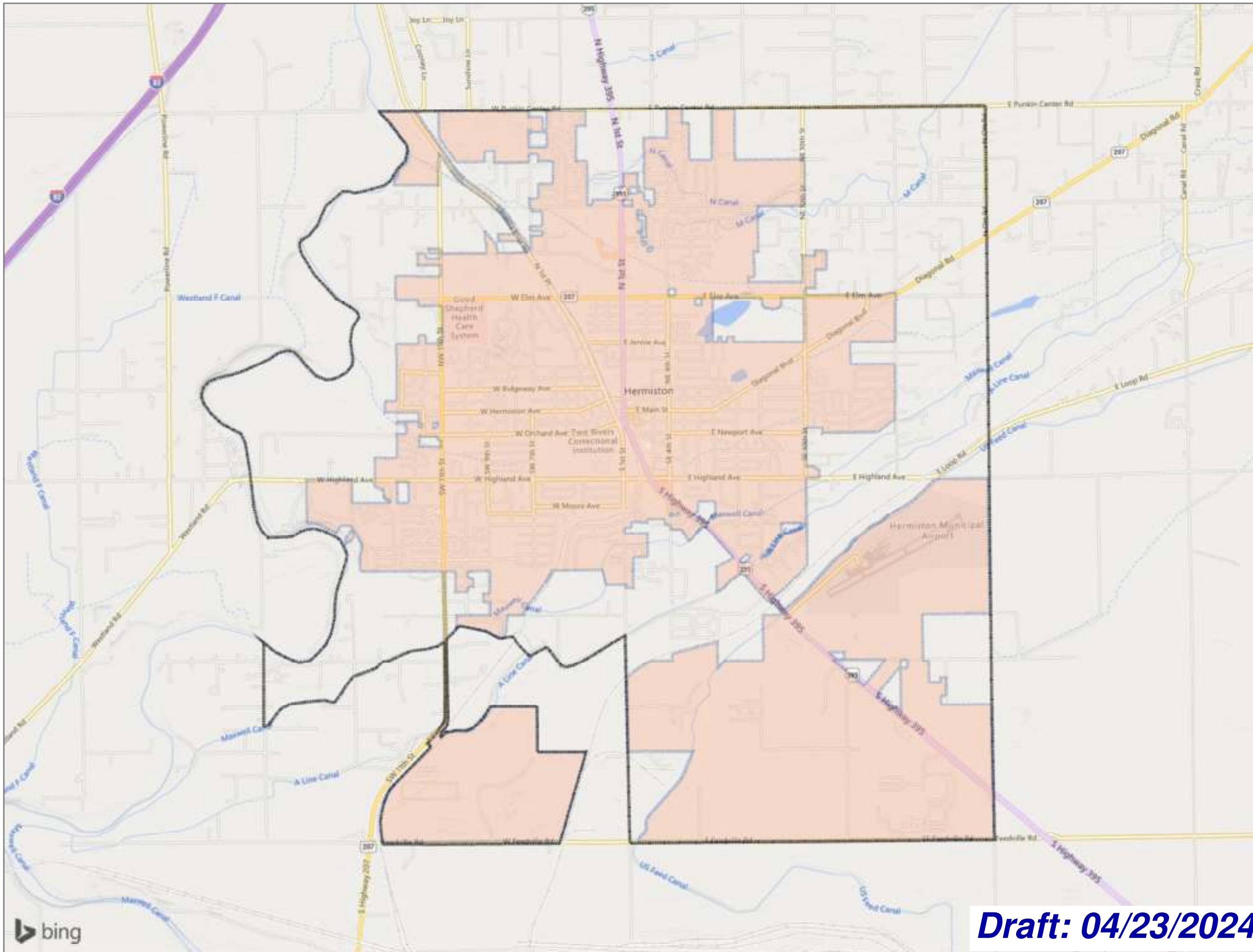
The study area includes the area within the City of Hermiston and the Hermiston UGB as shown in Figure 1. Areas within the UGB outside city limits are within unincorporated Umatilla County.

**Figure 1: Hermiston City Limits and Urban Growth Boundary**

**Hermiston, Oregon**

**LEGEND**

-  Hermiston City Limits
-  Hermiston Urban Growth Boundary (UGB)



SOURCE DATA: City of Hermiston, 2024  
 GEOGRAPHIC PROJECTION: NAD 83 HARN, Oregon North Lambert Conformal Conic

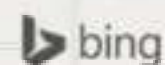
Date: 4/9/2024  
 File: Figure 1 City Limits and UGB  
 Map Created By: SH  
 Project No: 2240028.00



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**Draft: 04/23/2024**



The areas noted in Table 1 were analyzed as part of this employment land BLI.

<b>TABLE 1: CITY OF HERMISTON BLI EMPLOYMENT AREAS</b>	
<i>Comprehensive Plan Abbreviation</i>	<i>Comprehensive Plan Designation</i>
C	Commercial
A	Airport
C/I	Mixed Commercial/ Industrial
I	Industrial
F-I	Future Industrial
F-C/I	Future Mixed Commercial/ Industrial

Those employment areas listed in Table 1 are graphically depicted in Figure 2.

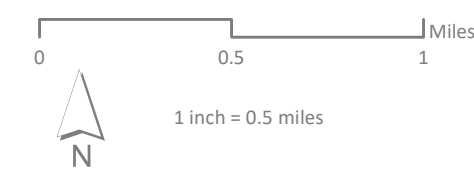
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**Figure 2: Hermiston Employment Land Comprehensive Plan Designations**

**Hermiston, Oregon**

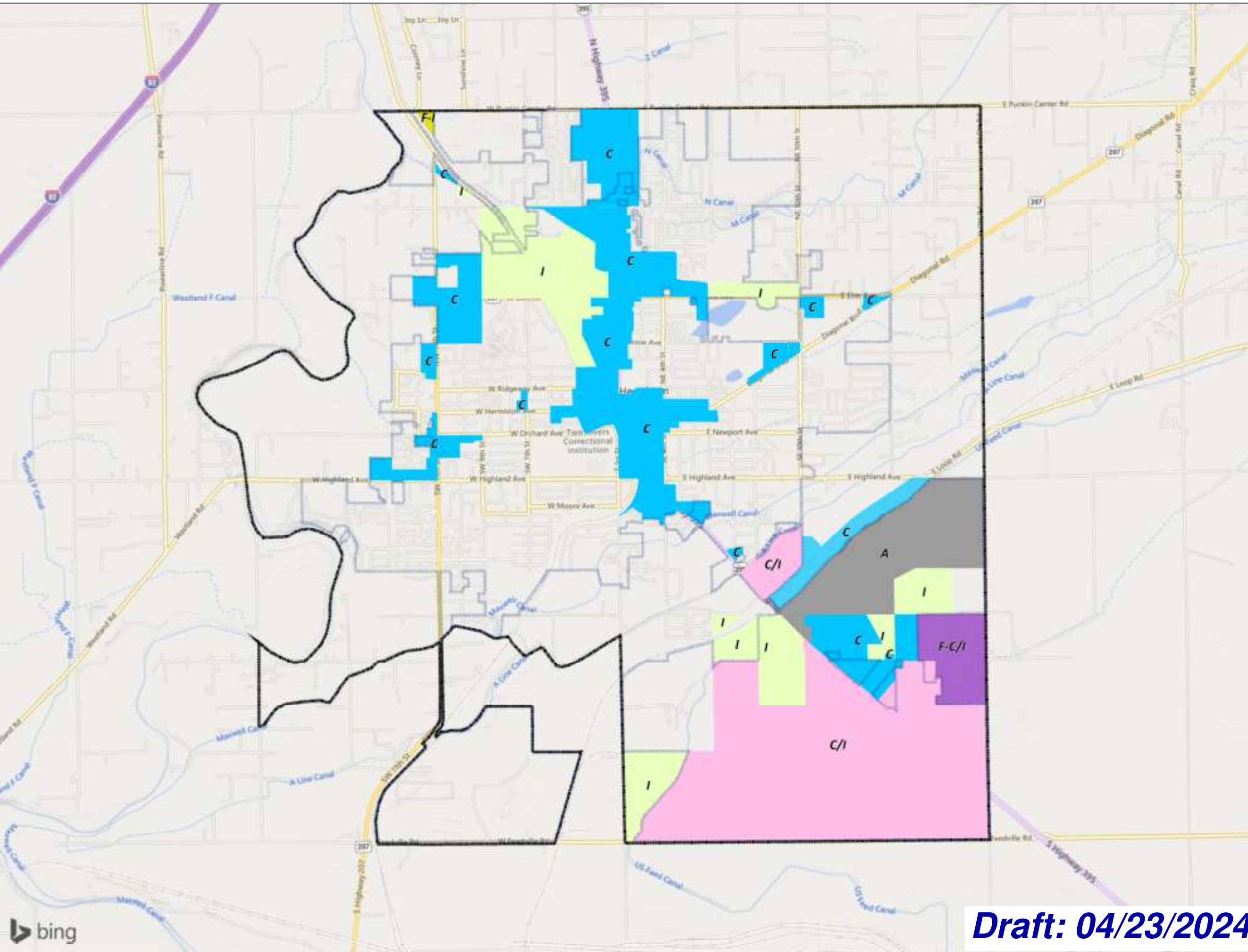
**LEGEND**

-  Hermiston City Limits
-  Hermiston Urban Growth Bounday (UGB)
- Comprehensive Plan Designations**
-  Airport (A)
-  Commercial (C)
-  Commercial/ Industrial (C/I)
-  Future Commercial/ Industrial (F-C/I)
-  Industrial (I)
-  Future Industrial (F-I)

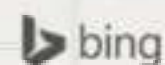


SOURCE DATA: City of Hermiston, 2024  
 GEOGRAPHIC PROJECTION: NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 4/23/2024  
 File: Figure 2  
 Map Created By: SH  
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## Vacant and Redevelopable Parcels

To identify parcels which may be available for economic development, Mackenzie utilized GIS software to determine which parcels with commercial or industrial zoning were vacant or redevelopable, as follows:

- The vacant employment parcels were identified as being those parcels in the Comprehensive Plan Designations (Designations) identified in Table 1 that Umatilla County Assessor data identify as having an improvement valuation of 0 and which had no visually identifiable development based on aerial photography. Parcels were reviewed on an individual basis without regard to ownership or proximity that could allow for aggregation by developers.
- The redevelopable employment parcels were identified based on coordination with Johnson Economics and City staff regarding conditions which would likely increase attractiveness for site redevelopment. Two distinct methodologies were used, depending on use category. For industrial and mixed employment areas, this included parcels over two acres with building values less than 30% of the total land value and parcels over five acres where less than half-acre is occupied by permanent buildings or improvements. For commercial employment areas, this included parcels larger than one acre with building values less than 30% of the total land value and parcels over five acres where less than half-acre is occupied by permanent buildings or improvements.

Following GIS analysis to identify parcels in each of the categories, Mackenzie refined the results as follows:

- To incorporate direction provided by the City staff for specific parcels where staff had institutional knowledge of the employment land inventory and additional constraints, as explained in the Manual Adjustment Log included as Appendix A.
- To remove surface parking areas serving adjacent and nearby commercial uses.
- To remove GIS irregularities such as small slivers of land that are likely a result of misaligned data sets provided by multiple sources.

A map of the vacant and redevelopable parcels is included as Figure 3.

**Figure 3: Hermiston Vacant and Redevelopable Employment Land**

**Hermiston, Oregon**

**LEGEND**

-  Hermiston City Limits
-  Hermiston Urban Growth Bounday (UGB)
-  Commercial - Vacant
-  Commercial - Redevelopable
-  Industrial - Vacant
-  Industrial - Redevelopable
-  Mixed - Vacant
-  Mixed - Redevelopable
-  Airport - Vacant
-  Airport - Redevelopable

0 0.5 1 Miles



1 inch = 0.5 miles

SOURCE DATA:  
City of Hermiston, 2024  
Umatilla County Assessor, 2024

GEOGRAPHIC PROJECTION:  
NAD 83 HARN, Oregon North  
Lambert Conformal Conic

Date: 4/19/2024

Map Created By: SH  
Project No: 2240028.00

File: Figure 3 Vacant and Redevelopable Parcels

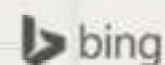
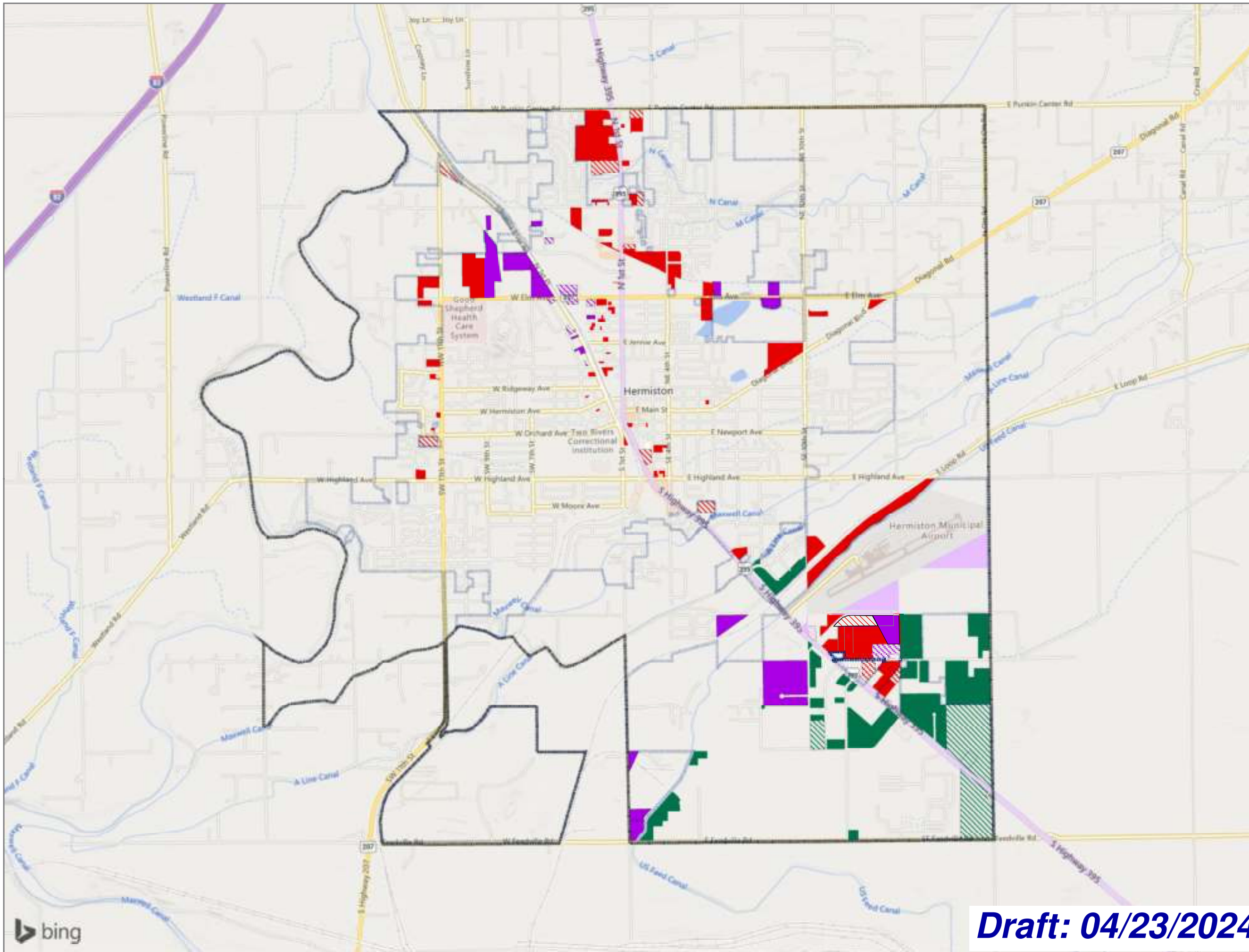


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## Development Constraints

OAR 660, Division 9 allows for reduction of buildable area in a BLI based on site development constraints, as defined in OAR 660-009-0005(2):

*'Development Constraints' means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.*

Based on this definition, for the Hermiston BLI, development constraints that render land undevelopable for employment uses were identified as land with any of the following characteristics:

- Property within the 1% annual chance (100-year) floodplain.
- Areas with slopes of 5% or greater in areas with an industrial or Mixed Designation<sup>1</sup>.
- Areas with slopes of 10% or greater in areas with a commercial Designation.
- Areas within High landslide susceptibility area per Oregon Department of Geology and Mineral Industries (DOGAMI)<sup>2</sup>.
- Wetlands identified in the Oregon Department of State Lands' (DSL) wetland data.

The resulting site constraints on employment land are depicted in Figure 4.

---

<sup>1</sup> The 5% slope criteria was used as a constraint for land within the Airport Comprehensive Plan Designation as the allowed uses in the Airport Zone align with that of C-2/M-1 (Comprehensive Plan Designation of C/I) which is classified as a Mixed Designation.

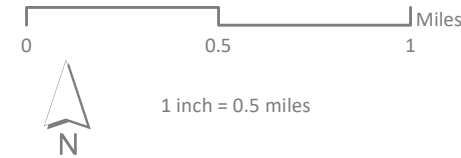
<sup>2</sup> No High landslide susceptibility area per Oregon Department of Geology and Mineral Industries (DOGAMI) were identified in the employment land study area.

**Figure 4: Hermiston Employment Land Development Constraints**

**Hermiston, Oregon**

**LEGEND**

-  Hermiston City Limits
-  Hermiston Urban Growth Boundary (UGB)
-  Industrial and Mixed Employment Land
-  Commercial Employment Land
-  Slope of 5% or greater (Industrial and Mixed Employment Land)
-  Slope of 10% or greater (Commercial Land)
-  Wetlands (LWI)
-  100-Year Floodplain
-  Streams



SOURCE DATA: City of Hermiston (2024), Oregon Department of Forestry (2023), FEMA (2023), Oregon Department of State Lands (2023)

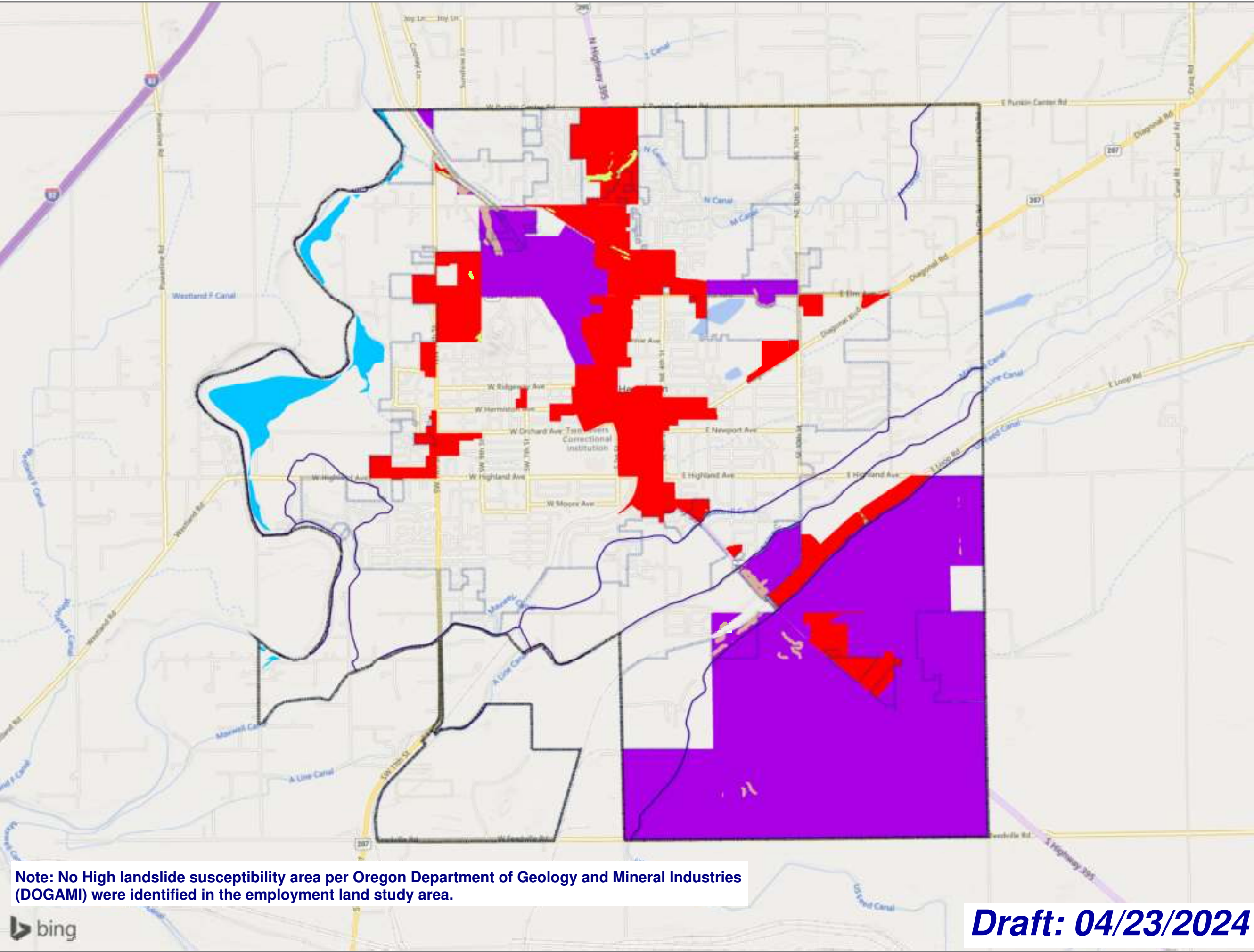
GEOGRAPHIC PROJECTION: NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 4/23/2024 Map Created By: SH  
File: Figure 4 Constraints Map Project No: 2240028.00



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**Note: No High landslide susceptibility area per Oregon Department of Geology and Mineral Industries (DOGAMI) were identified in the employment land study area.**

**Draft: 04/23/2024**



## Buildable Employment Lands












The areas with constraints (Figure 4) were then deducted from the vacant and redevelopable parcels (Figure 3) to determine the net buildable portions of vacant and redevelopable parcels. Parcels resulting in less than 0.10 acres of net buildable land were removed since development of the small parcel less than 0.10 acres is not feasible (this removed 16 parcels from the inventory). The results of this analysis for City of Hermiston are summarized in Table 2 and shown graphically in Figure 5.

TABLE 2: HERMISTON EMPLOYMENT BUILDABLE LANDS INVENTORY <sup>1</sup>						
Designation	Vacant		Redevelopable		Total	
	Number of Parcels	Net Buildable Acreage	Number of Parcels	Potential Acreage <sup>2</sup>	Number of Parcels	Potential Acreage
<b>Commercial Designation</b>						
Commercial (C)	109	208.71	11	35.90	120	244.61
<i>Commercial subtotal</i>	<i>109</i>	<i>208.71</i>	<i>11</i>	<i>35.90</i>	<i>120</i>	<i>244.61</i>
<b>Industrial Designations</b>						
Airport (A)	3	48.04	1	1.88	4	49.92
Industrial (I)	26	105.22	8	15.70	34	120.92
<i>Industrial subtotal</i>	<i>29</i>	<i>153.26</i>	<i>9</i>	<i>17.58</i>	<i>38</i>	<i>170.84</i>
<b>Mixed Designations</b>						
Future Mixed Commercial/ Industrial (F-C/I)	3	66.79	0	0	3	66.79
Mixed Commercial/ Industrial (C/I)	33	115.15	3	100.56	36	215.71
<i>Mixed Subtotal</i>	<i>36</i>	<i>181.94</i>	<i>3</i>	<i>100.56</i>	<i>39</i>	<i>282.50</i>
<b>Total</b>	<b>174</b>	<b>543.91</b>	<b>23</b>	<b>154.04</b>	<b>197</b>	<b>697.95</b>
<b>Table Notes:</b>						
<sup>1</sup> Due to rounding, some totals may not correspond with the sum of separate figures.						
<sup>2</sup> The Redevelopable Potential Acreage assumes removal of existing structures, and redevelopment of the entire parcel.						

**Figure 5: Hermiston Net Buildable Employment Land**

**Hermiston, Oregon**

**LEGEND**

-  Hermiston City Limits
-  Hermiston Urban Growth Boundary (UGB)
-  Commercial - Vacant
-  Commercial - Redevelopable
-  Industrial - Vacant
-  Industrial - Redevelopable
-  Mixed - Vacant
-  Mixed - Redevelopable
-  Airport - Vacant
-  Airport - Redevelopable
-  Constrained (Unbuildable) Land

0 0.5 1 Miles



1 inch = 0.5 miles

SOURCE DATA:  
City of Hermiston (2024), Oregon Department of Forestry (2023), FEMA (2023), Oregon Department of State Lands (2023), Umatilla County Assessor (2023)

GEOGRAPHIC PROJECTION:  
NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 4/18/2024 Map Created By: SH  
File: Figure 5 Buildable Land Inventory Map Project No: 2240028.00



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To account for the fact that the Mixed Designations can accommodate either commercial or industrial development, the acreage from the Mixed Designations could be tracked in either category. For simplicity, City staff supported an approach in which half the acreage from Mixed Designations was assigned to the Commercial category and the remaining half was assigned to the Industrial category. The resulting reclassified acreage figures are depicted in Table 3.

<b>TABLE 3: RECLASSIFIED HERMISTON EMPLOYMENT BUILDABLE LANDS INVENTORY<sup>1</sup></b>			
	<i>Vacant</i>	<i>Redevelopable</i>	<i>Total</i>
<i>Designation</i>	<i>Net Buildable Acreage</i>	<i>Potential Acreage<sup>2</sup></i>	<i>Potential Acreage</i>
<b>Commercial Designation (includes 50% of Mixed Designations acreage)</b>			
Commercial (C)	208.71	35.90	244.61
50% of Mixed Commercial/Industrial (C/I) and Future Mixed Commercial/Industrial (F-C/I)	90.97	50.28	141.25
<i>Commercial subtotal</i>	<i>299.68</i>	<i>86.18</i>	<i>385.86</i>
<b>Industrial Designations (includes 50% of Mixed Designations acreage)</b>			
Airport (A)	48.04	1.88	49.92
Industrial (I)	105.22	15.70	120.92
50% of Mixed Commercial/Industrial (C/I) and Future Mixed Commercial/Industrial (F-C/I)	90.97	50.28	141.25
<i>Industrial subtotal</i>	<i>244.23</i>	<i>67.86</i>	<i>312.09</i>
<b>Total</b>	<b>543.91</b>	<b>154.04</b>	<b>697.95</b>
<b>Table Note:</b>			
<sup>1</sup> Due to rounding, some totals may not correspond with the sum of separate figures.			
<sup>2</sup> The Redevelopable Potential Acreage assumes removal of existing structures, and redevelopment of the entire parcel.			

Analysis of the data in Table 3 reveals the following<sup>3</sup>:

- The commercial designations have approximately 300 acres (55%) of vacant buildable land, and the industrial designations have approximately 245 acres (45%) of vacant buildable land, for a total of approximately 544 net acres of vacant buildable employment land.
- The commercial designations have approximately 86 acres (56%) of redevelopable buildable land, and the industrial designations have approximately 68 acres (44%) of redevelopable buildable land, for a total of approximately 154 net acres of redevelopable buildable employment land.
- In total, the commercial designations have approximately 385 acres (55%) of buildable land and the industrial designations have approximately 312 acres (45%) of buildable land, for a total of approximately 698 net acres of buildable employment land.

<sup>3</sup> The Commercial and Industrial acreage in this list each include 50% of the Mixed Subtotal, as both Commercial and Industrial Uses are allowed in the Mixed Designations.

## Buildable Employment Lands Parcel Sizes

Based on the buildable parcels within the UGB is shown in Figure 5 and tabulated in Table 2, Mackenzie has sorted the net buildable land supply by parcel size for each Designation, the results of which are in Table 4. The majority (63%) of Commercial parcels are less than 1 acre in size. The majority (73%) of Industrial and Mixed Designation parcels are less than 5 acres in size.

TABLE 4: HERMISTON EMPLOYMENT NET BUILDABLE LANDS INVENTORY PARCEL SIZES									
<i>Designation</i>	<i>0 to 0.99 acres</i>	<i>1 to 4.99 acres</i>	<i>5 to 9.99 acres</i>	<i>10 to 19.99 acres</i>	<i>20 to 29.99 acres</i>	<i>30 to 49.99 acres</i>	<i>50 to 99.99 acres</i>	<i>100+ acres</i>	<i>TOTAL</i>
<b>Commercial Designation</b>									
Commercial (C)	75	36	5	2	0	2	0	0	120
<i>Commercial subtotal</i>	75	36	5	2	0	2	0	0	120
<b>Industrial Designations</b>									
Airport (A)	0	2	0	0	2	0	0	0	4
Industrial (I)	15	12	5	1	0	1	0	0	34
<i>Industrial subtotal</i>	15	14	5	1	2	1	0	0	38
<b>Mixed Designations</b>									
Mixed Commercial/ Industrial (C/I)	6	21	6	2	0	0	1	0	36
Future Mixed Commercial/ Industrial (F-C/I)	0	0	0	2	0	1	0	0	3
<i>Mixed Subtotal</i>	6	21	6	4	0	1	1	0	39
<b>Commercial, Industrial, and Mixed Total</b>									
<b>Totals</b>	<b>96</b>	<b>71</b>	<b>16</b>	<b>7</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>197</b>



DRAFT

APPENDIX A

**MANUAL  
ADJUSTMENT  
LOG**

**City of Hermiston Employment Lands Buildable Lands Inventory (BLI) Manual Adjustment Log**  
**Last Update: April 23, 2024**

Date of Removal	Taxlot(s)	Gross Acreage	Comprehensive Plan Designation	Zone	Reason for Removal
April 8, 2024	4N2810AB00700 4N2810AB00800	3.57 AC	Industrial (I)	M-1	Parcel has an approved land use decision for development.*
April 8, 2024	4N28230000200	200 AC	Mixed Commercial/ Industrial (C/I)	C-2/M-2	Parcel has an approved land use decision for development.*
April 8, 2024	4N2824BB00101 4N2824BB00200 4N2824BB01500 4N2824BB01600	3.15 AC	Mixed Commercial/ Industrial (C/I)	C-2/M-1	Parcel has an approved land use decision for development.*
April 8, 2024	4N28240000600	100 AC	Mixed Commercial/ Industrial (C/I)	C-2/M-1	Parcel has an approved land use decision for development.*
April 8, 2024	4N2810AB00205	1.2 AC	Industrial (I)	M-1	Parcel has an approved land use decision for development.*
April 10, 2024	4N2813C000903 4N2813C000100	33.6 AC	Industrial (I) and Commercial (C)	C-2 and M-1	Parcels have split Designations. The portion of each parcel Designated as Commercial is included in the commercial acreage total. The portion of each parcel Designated as Industrial is included in the industrial acreage total.
April 10, 2024	4N28130000200	31 AC	Commercial (C)	C-2	Per Ordinance No. 2356, the Comprehensive Plan Map Amendment changed approximately 31 acres from Industrial to Commercial. This

Date of Removal	Taxlot(s)	Gross Acreage	Comprehensive Plan Designation	Zone	Reason for Removal
					adjustment was made manually due to the recency of the City Council approval on March 11, 2024.
April 18, 2024	4N2814D000100	0.2 AC	Airport (A)	A	Parcel is partially located in the Runway Protection Zone (RPZ), limiting opportunity for development. The portion of the parcel located in the RPZ is removed from the inventory, and the portion of the site outside of the inventory is included in the inventory.*
April 18, 2024	4N2814D000200	2.5 AC	Airport (A)	A	Parcel is located in the Runway Protection Zone, limiting opportunity for development.*
April 18, 2024	4N2814D000300	4.1 AC	Airport (A)	A	Parcel is located in the Runway Protection Zone, limiting opportunity for development.*
<b>Table Footnote:</b> <i>*Refinement requested by staff</i>					