



ECONOMIC OPPORTUNITIES ANALYSIS (OREGON STATEWIDE PLANNING GOAL 9)

Prepared For:
City of Klamath Falls, Oregon

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Acknowledgments

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City Staff & Advisory Committee

Joe Wall, Planning Manager
Jonathan Teichert, City Manager
Iain Vasey, Development Services Director
Mark Willrett, Public Works Director
Sheryl Franklin, Planning Commission Chair
Linda Tepper, Airport Business Manager
Erik Nobel, Klamath County Planning Director
Randy Shaw, Klamath County Planning Commission Chair
Justin Sparks, Klamath County Planning Commissioner
Randy Cox, Executive Director, KCEDA
Denise Stilwell, Executive Director, SCOEDD
Larry Holzgang, Regional Development Officer, Business Oregon
Tonia Ulbricht, Interim Executive Director, Discover Klamath
Jared Hall, Planning Director, Klamath Tribes
Lauren Jespersen, Director, Sky Lakes Foundation
Joe Young, Captain – Base Civil Engineer, 173rd Fighter Wing
Ken Fincher, Vice President of University Advancement, OIT

Consultants

Jerry Johnson, Johnson Economics
Brendan Buckley, Johnson Economics
Brian Varricchione, Mackenzie
Sid Hariharan, Mackenzie

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I. INTRODUCTION

This report introduces analytical research presenting an Economic Opportunities Analysis (EOA) for the City of Klamath Falls, 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 six primary sections:

- **Economic Trends:** Provides an overview of national, state, and local economic trends affecting Klamath County and the City of Klamath Falls, including population projections, employment growth and a demographic profile.
- **Target Industries:** 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.
- **Capacity:** Summarizes the City's inventory of vacant and redevelopable industrial and commercial land (employment land) within the City of Klamath Falls UGB.
- **Reconciliation:** 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.
- **Economic Development Potential and Conclusions:** Summary of findings and policy implications.

II. ECONOMIC TRENDS

This report section summarizes long and intermediate-term trends at the national, state, and local level that will influence economic conditions in the City of Klamath Falls over the 20-year planning period. This section is intended to provide an economic context for growth projections and establish a socioeconomic profile of the community. This report's national evaluation has a focus on potential changes in structural socioeconomic conditions both nationally and globally. Our localized analysis considers local growth trends, demographics, and economic performance.

NATIONAL TRENDS

National trends are addressed as they provide context for regional and local economic development efforts. The national economy has been significantly impacted in the last few years by the COVID-19 pandemic, which led to sharp decreases in employment in 2020.

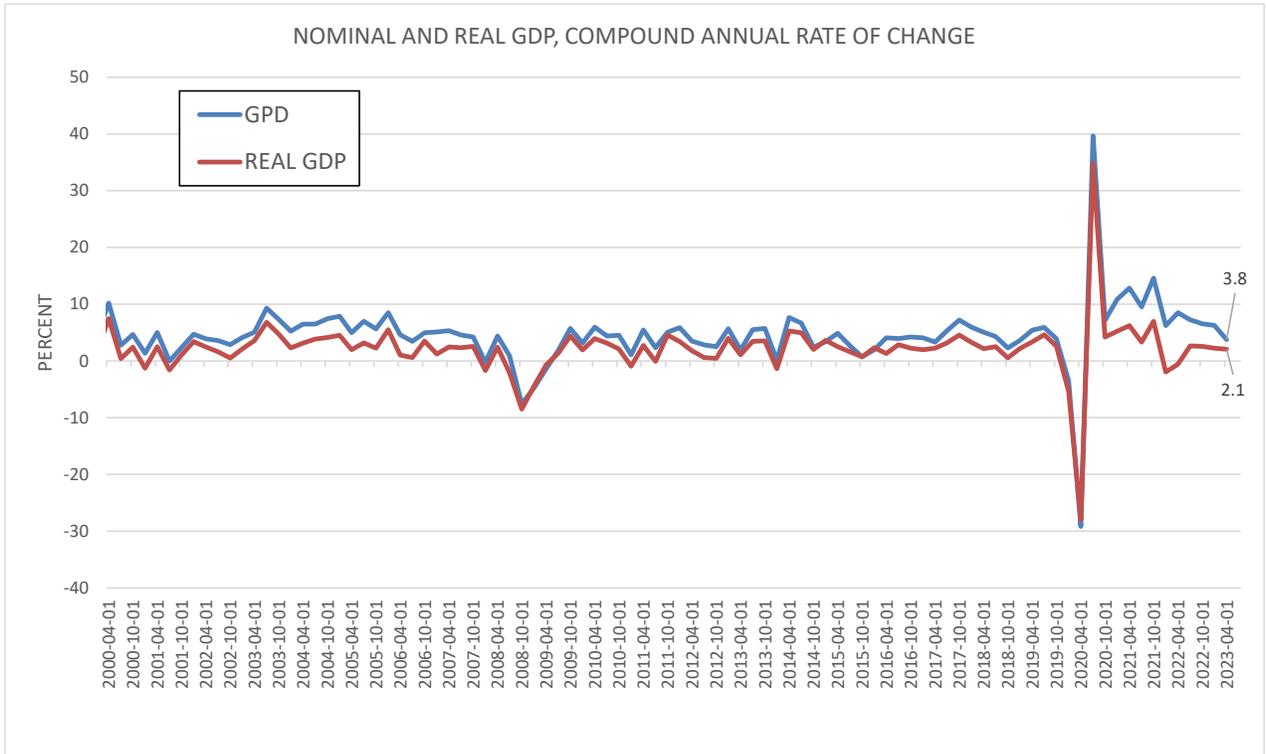
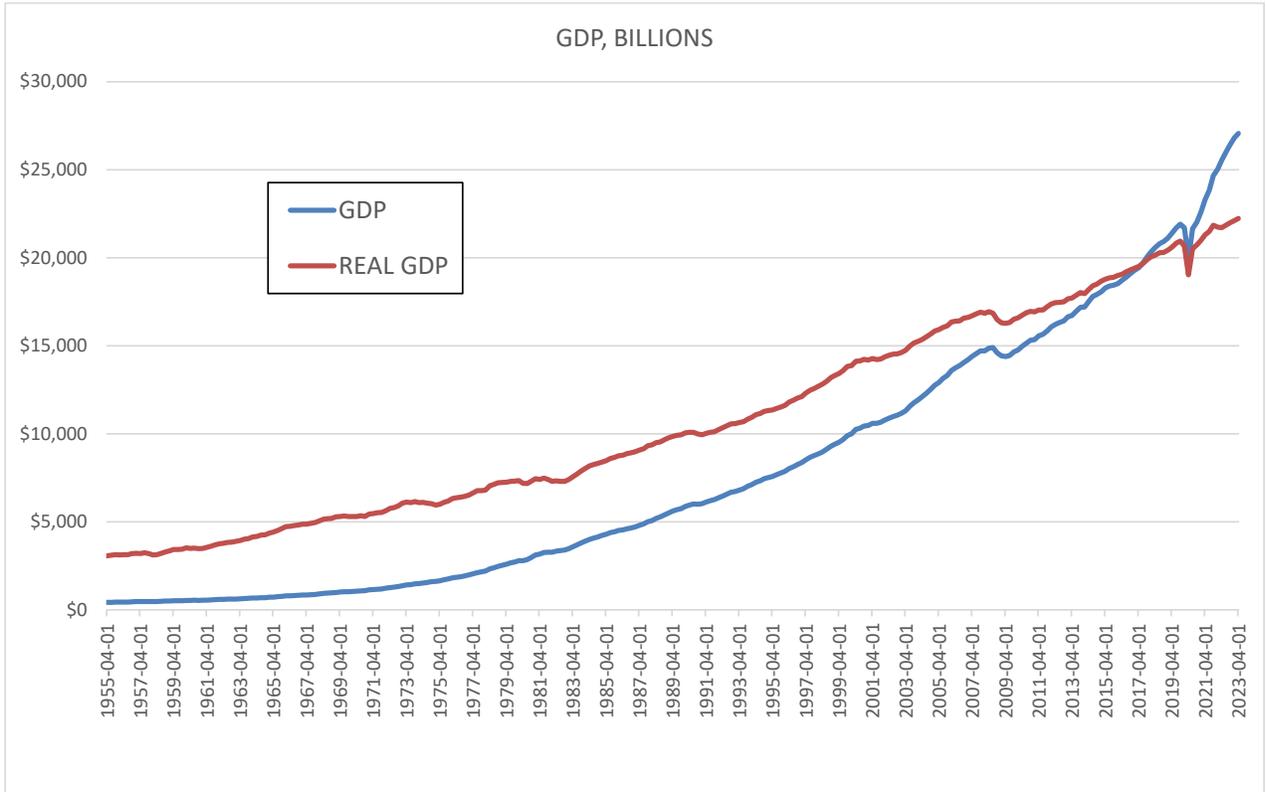
The United States enjoyed a sustained economic expansion over the last decade, which was sharply truncated by the Covid-19 pandemic in March 2020. At a national level there has been a shift within the economy from consumption of goods to consumption of services, especially services oriented around personal wellbeing (health, private education, finance). This is reflective of increasing levels of wealth and discretionary income in the population. At the same time, growth in fixed investment (equipment and structures) and government defense spending is moderating – making manufactured goods a less important part of the economy.

A commonly used and reported measure of economic prosperity is real gross domestic product (GDP). Real GDP is essentially a measure of national wealth adjusted for inflation, and the increased purchasing power of the population translates into greater investment in health care, education, housing, leisure, and many other factors. U.S. real GDP expanded at an average annual rate of 2.3% from 2010 through 2019. In comparison, the average growth rate over the 1970 to 1999 period was 3.2%.

Following a period of relatively stable growth, the pandemic hurt real GDP greatly in the first two quarters of 2020, recording negative growth of 5.1% in the first quarter and 31.2% in the second quarter. In the third quarter, real GDP jumped up to a 33.8% positive change. Since then, the economy expanded every quarter through the end of 2021. The first two quarters of 2022 had negative growth when adjusted for inflation, and growth since that time has been modest as inflation has remained persistent.

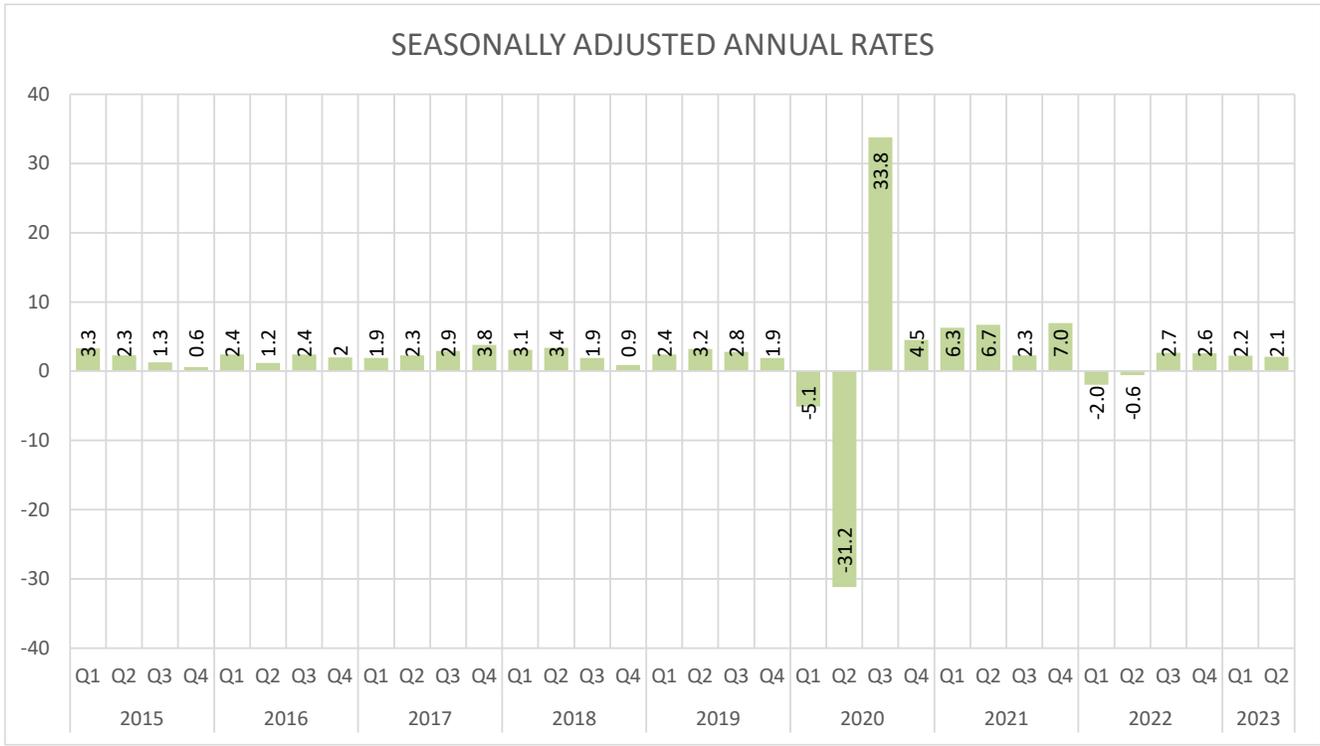
The economy rebounded quickly following the pandemic-induced recession, but rising inflation has significantly reduced real GDP growth. While nominal GDP growth was up 3.8% during the first quarter of 2023, real GDP (adjusted for inflation) rose only 2.1%. Both nominal and real GDP are now well above pre-pandemic levels.

FIGURE 2.01: NATIONAL GROSS DOMESTIC PRODUCT TRENDS



U.S. Bureau of Economic Analysis

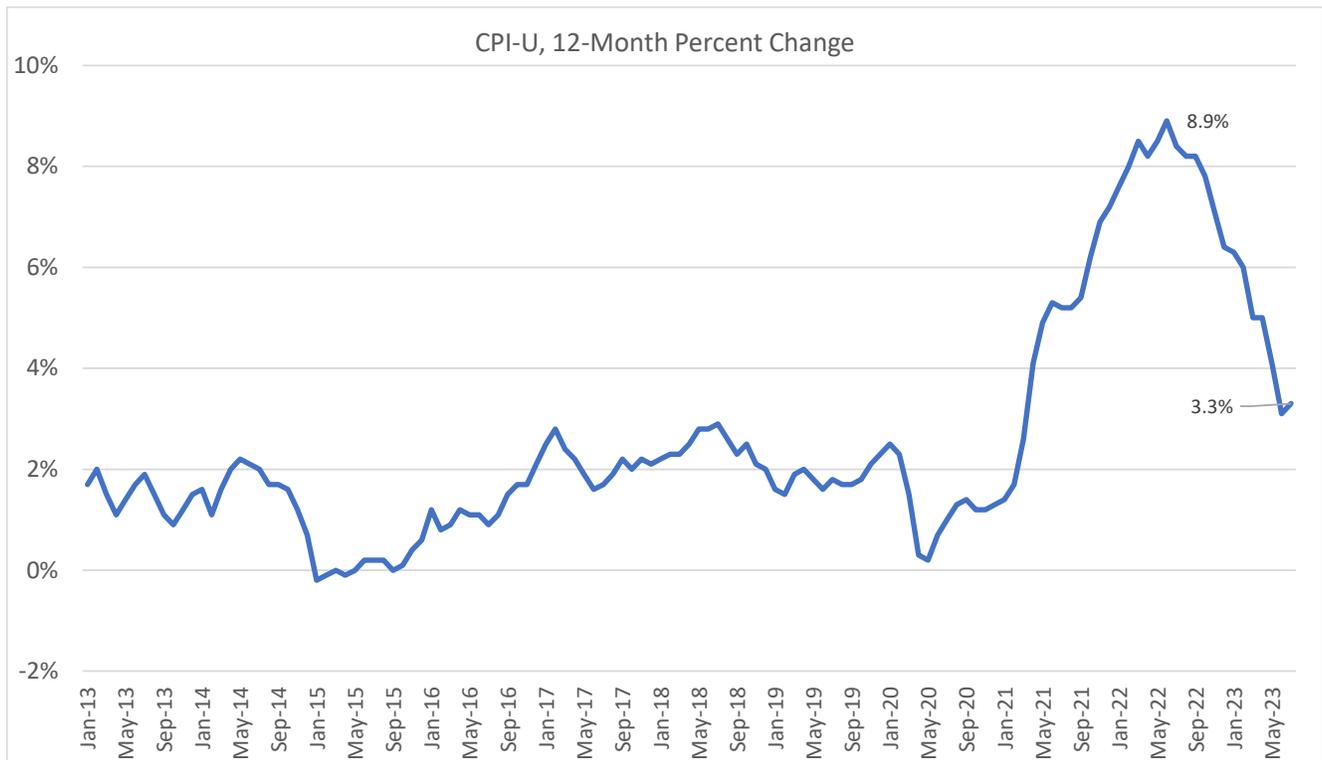
FIGURE 2.02: REAL GDP – PERCENT CHANGE FROM PRECEDING QUARTER



SOURCE: US Bureau of Economic Analysis

The key economic story in the last two years has been the emergence of significant inflation. At the national level, the inflation rate has remained below 5.0% for the last forty years, with rates below 2.0% for the last decade. The economy has enjoyed a sustained of low inflation and low interest rates, which has now been disrupted. An unprecedented level of public spending to mitigate the impacts of the pandemic fueled a commensurate increase in consumption. This was unusually inflationary due to the significant disruptions in the supply chain at that time. The Federal Reserve’s response to this was a significant tightening to slow inflation, which the Fed has long used 2% as a targeted inflation rate. While the rate has dropped to nearly 3%, it remains above the targeted rate and the Fed may tighten further to achieve their targets.

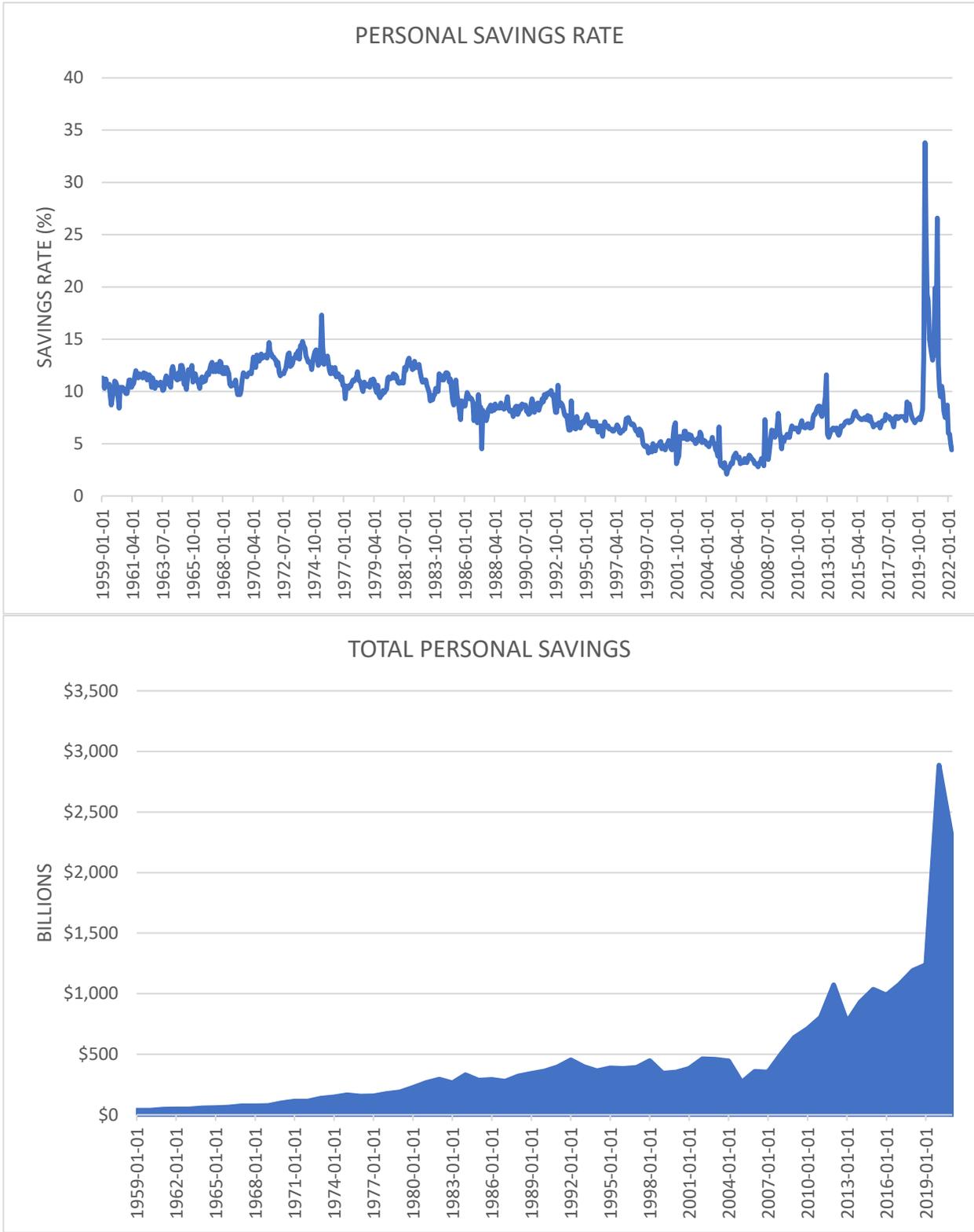
FIGURE 2.03: CONSUMER PRICE INDEX OVER TIME (CPI-U)



U.S. Federal Reserve Bank of St. Louis

A key component of the inflationary pressure has been an elevated level of accumulated saving associated with the stimulus payments. Consumers have continued to spend this accumulated wealth over the last year, with the savings rate dropping below 5% in the last quarter. Total personal savings in the United States had growth to just under \$2.9 trillion in the first quarter of 2020, dropping to under \$2.3 trillion by the first quarter of 2021. While the historically elevated level of personal savings is declining, there remains plenty of fuel to feed demand side pressure.

FIGURE 2.04: PERSONAL SAVINGS TRENDS, NATIONAL

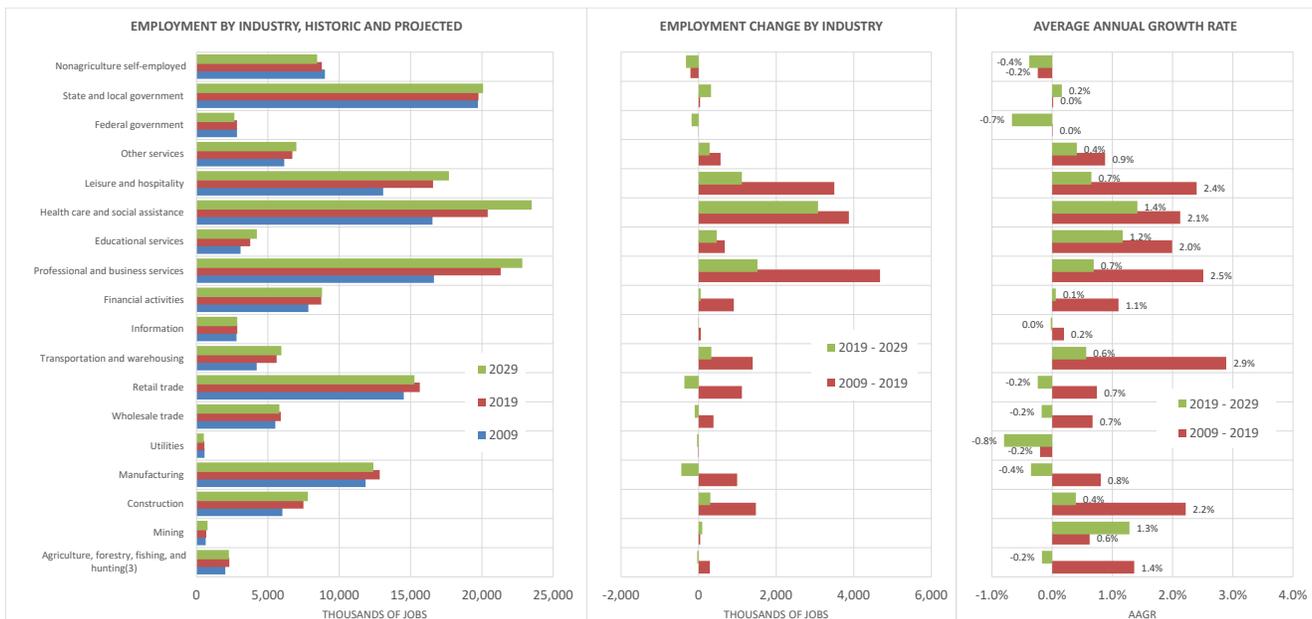


SOURCE: Federal Reserve Bank of St. Louis

A few additional trends observed at the national level have significant implications for the industrial real estate market: E-commerce is rapidly taking market share from brick-and-mortar retailers, approaching 10% of all retail sales. This trend has accelerated during the pandemic and is likely to pose an ongoing challenge for brick-and-mortar retailers. This is causing 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. Automation is also impacting the manufacturing industry, though to a lesser extent and primarily among larger industry leaders. 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.

At a national level, healthcare & social assistance is projected to account for a significant 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 2.05: NATIONAL EMPLOYMENT GROWTH BY SECTOR, HISTORIC AND PROJECTED



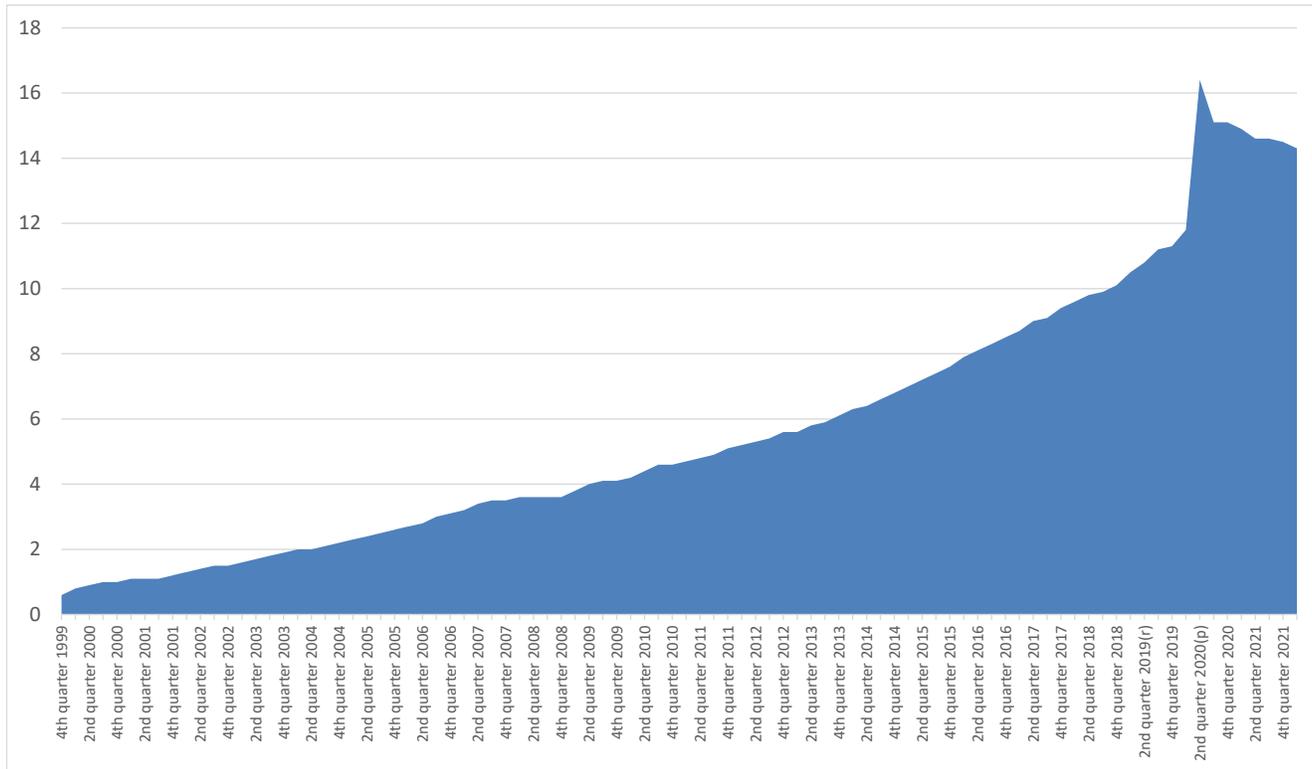
SOURCE: US Bureau of Economic Analysis

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 has accelerated this trend with e-commerce estimated to account for almost 16% of all sales in the second quarter of 2020.

In the first six months of the year, consumers spent \$347.26 billion online with U.S. retailers, up 30.1% from \$266.84 billion for the same period in 2019. Following a sharp peak during the pandemic, e-commerce's share of overall retail sales has dropped closer to 14%. While reflecting a short-term decrease in share, the share remains somewhat above the long term trend line.

FIGURE 2.06: E-COMMERCE AS A PERCENT OF TOTAL RETAIL SALES, UNITED STATES



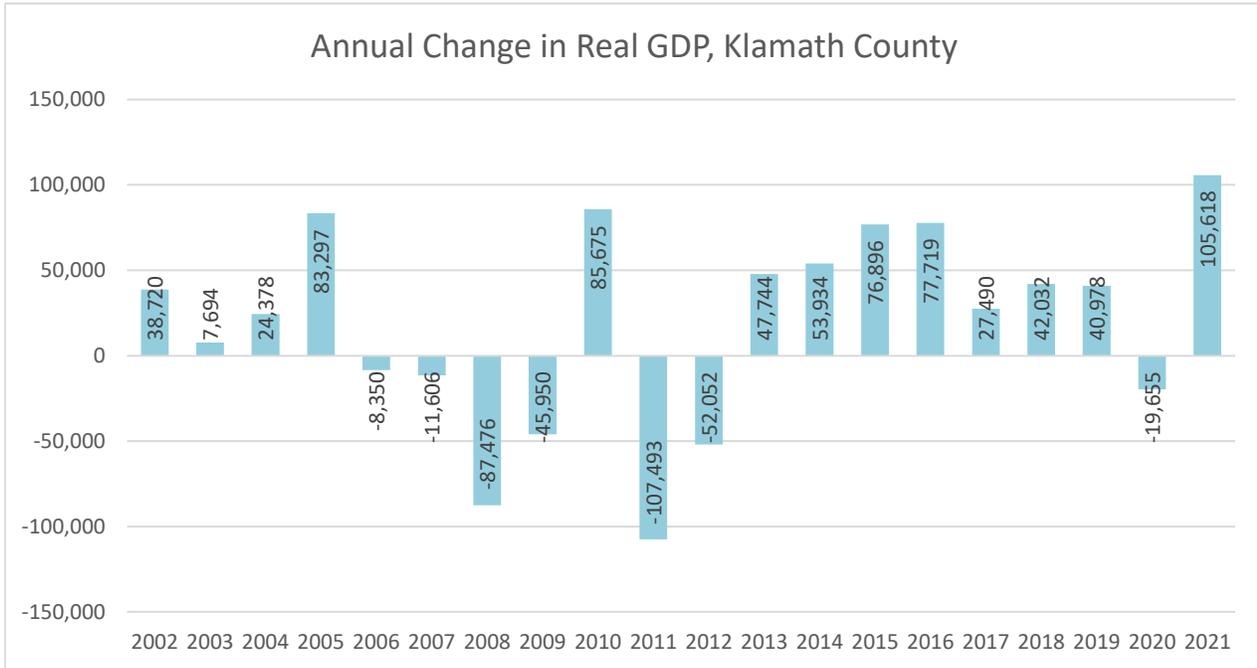
SOURCE: Retail Indicators Branch, US Census Bureau, JOHNSON ECONOMICS

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.

KLAMATH COUNTY ECONOMIC TRENDS

From 2013 to 2019, Klamath County was experiencing a period of consistent growth. Like the rest of the country, the pandemic was detrimental to the GDP of the county, giving Klamath County its worst year in terms of GDP since 2012. The county rebounded quickly in 2021 with the largest expansion in the last twenty years.

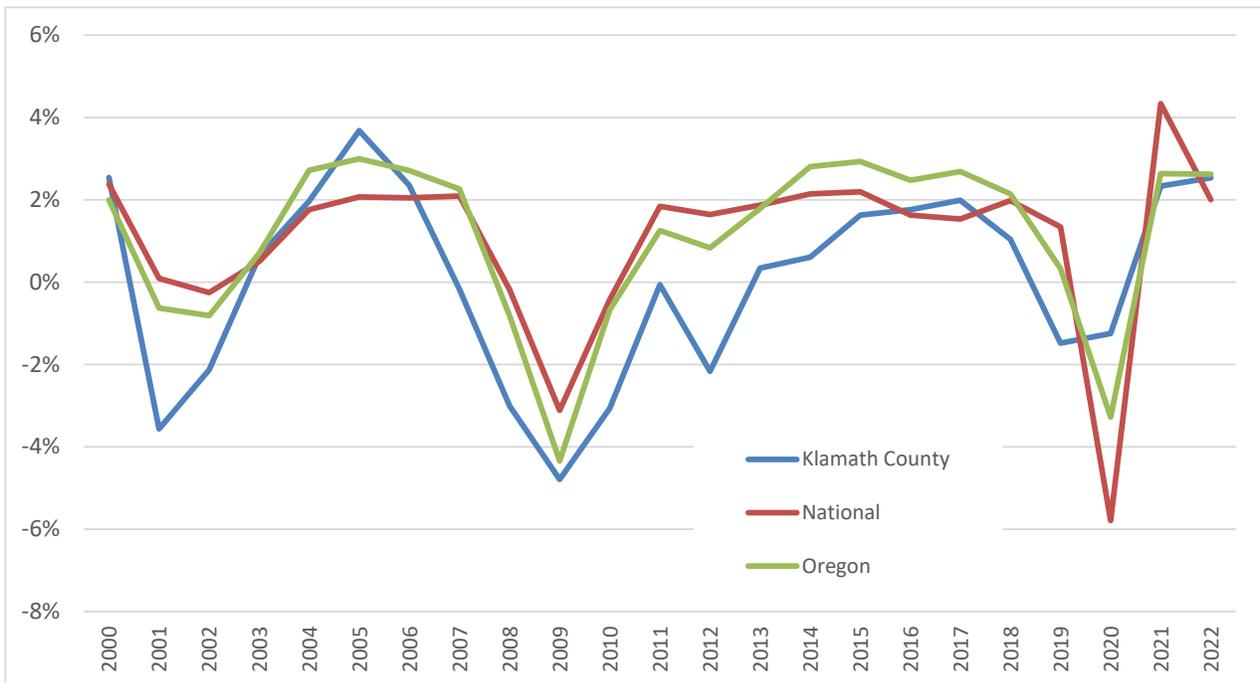
FIGURE 2.09: ANNUAL CHANGE IN GDP CHANGE, KLAMATH COUNTY



SOURCE: US Bureau of Economic Analysis

Klamath County has historically shown less annual employment growth than Oregon or the country in almost every year since 2000. However, during the pandemic it performed better than Oregon and the United States in this metric. The county’s rate of growth was roughly equal to the statewide average in 2022, while the decline during the pandemic was less severe.

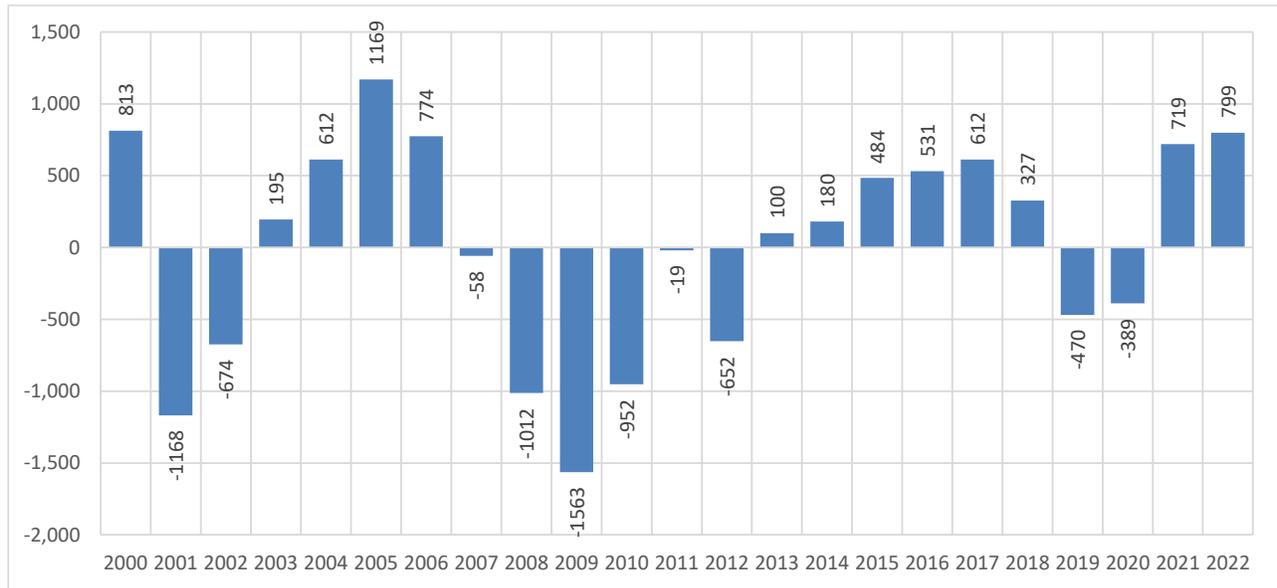
FIGURE 2.10: COMPARISON OF ANNUAL EMPLOYMENT GROWTH RATES



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

After three straight years of very consistent growth from 2015 to 2017, growth began to slow in 2018 and drop slightly in 2019. Following the large loss of employment during 2019 and 2020, Klamath County bounced back in 2021 and 2022. The County is now well ahead of its pre-pandemic employment levels.

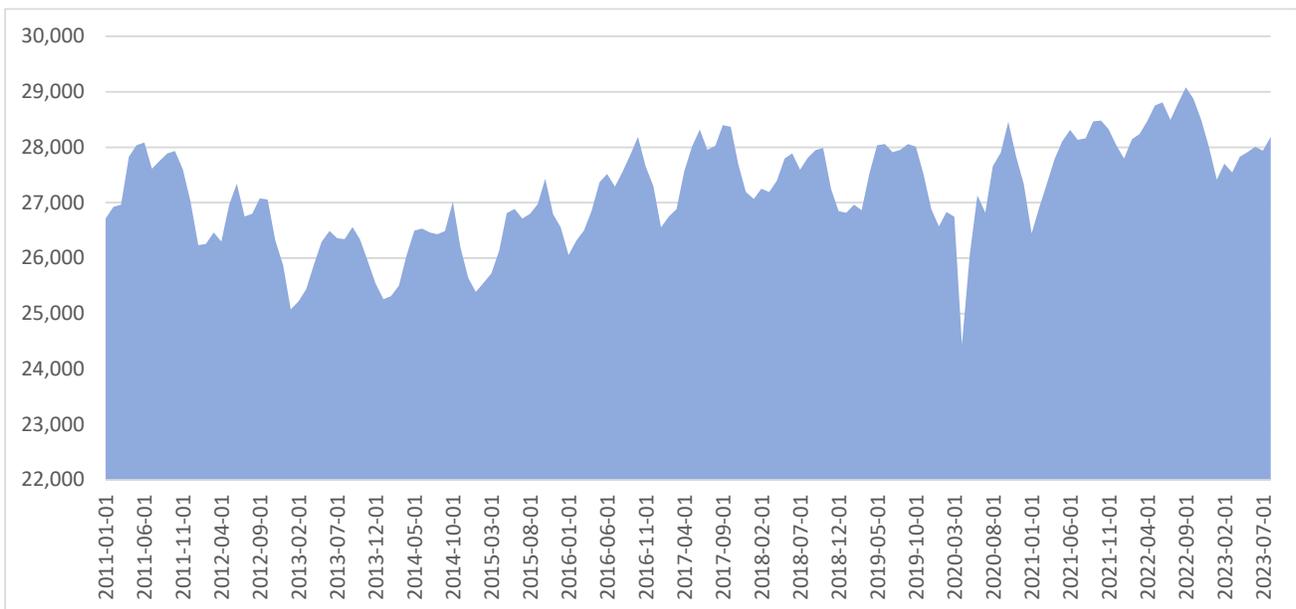
FIGURE 2.09: KLAMATH COUNTY EMPLOYMENT TRENDS, NET CHANGE BY YEAR



SOURCE: U.S. Bureau of Economic Analysis

Klamath County’s employment level per month reveals that employment cyclically drops during winter months. Employment levels typically peak from May to June and September to October. This implies that the prosperity of the county’s economy rests on seasonal employment during these months. In 2021, the typical low point was not as steep as it has historically been. This could signal a potential change in the structure of Klamath County’s economy following the pandemic.

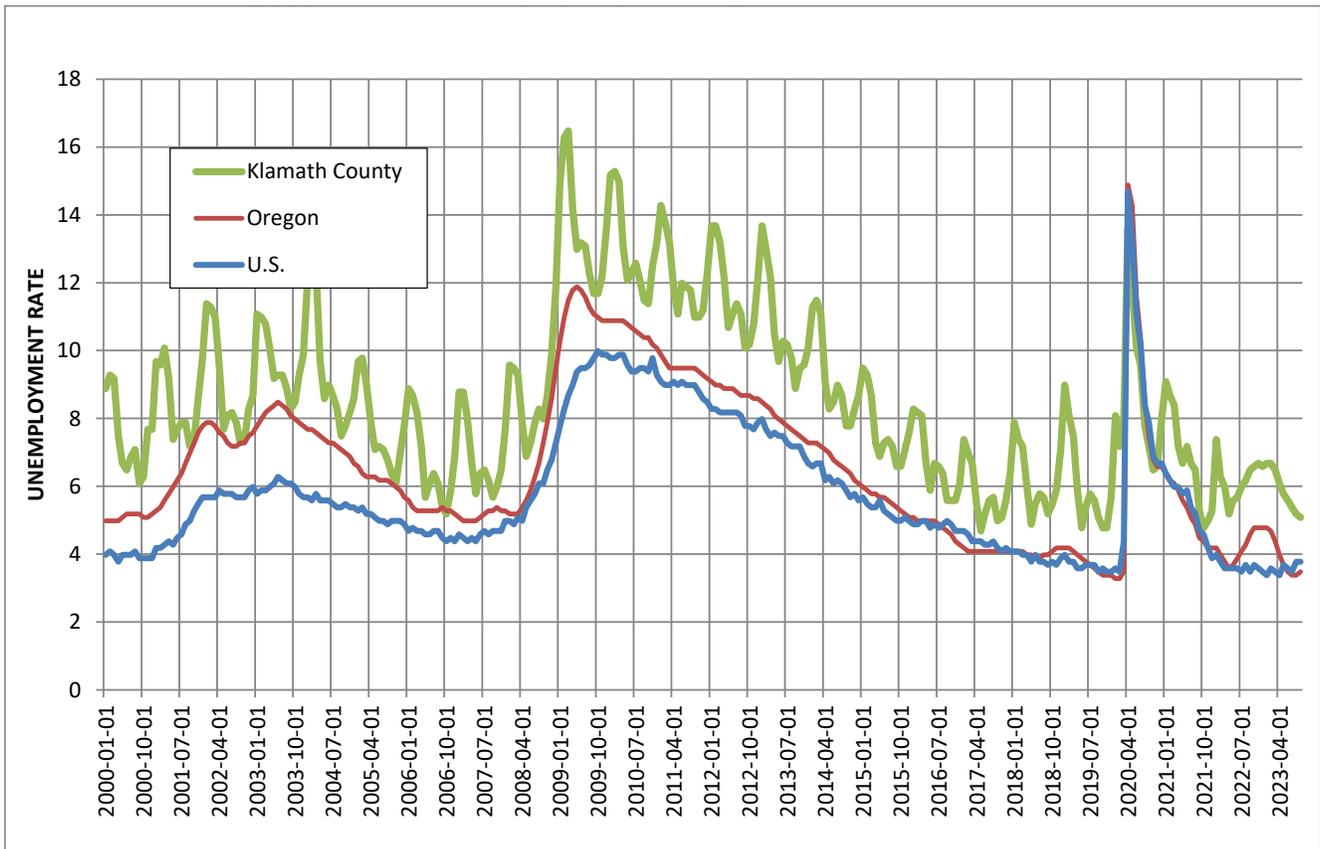
FIGURE 2.10: KLAMATH COUNTY EMPLOYED PERSONS BY MONTH



SOURCE: Federal Reserve Bank of St. Louis, JOHNSON ECONOMICS

The Klamath County unemployment rate fluctuates often and is typically higher than that of Oregon or the nation. The unemployment rate reached over 14% during the pandemic but has since dropped to a more normal level of 5.1%. In recent years the unemployment rate of Klamath County has stayed slightly closer to Oregon and the nation than it did from 2010 to 2015, yet it has consistently remained higher.

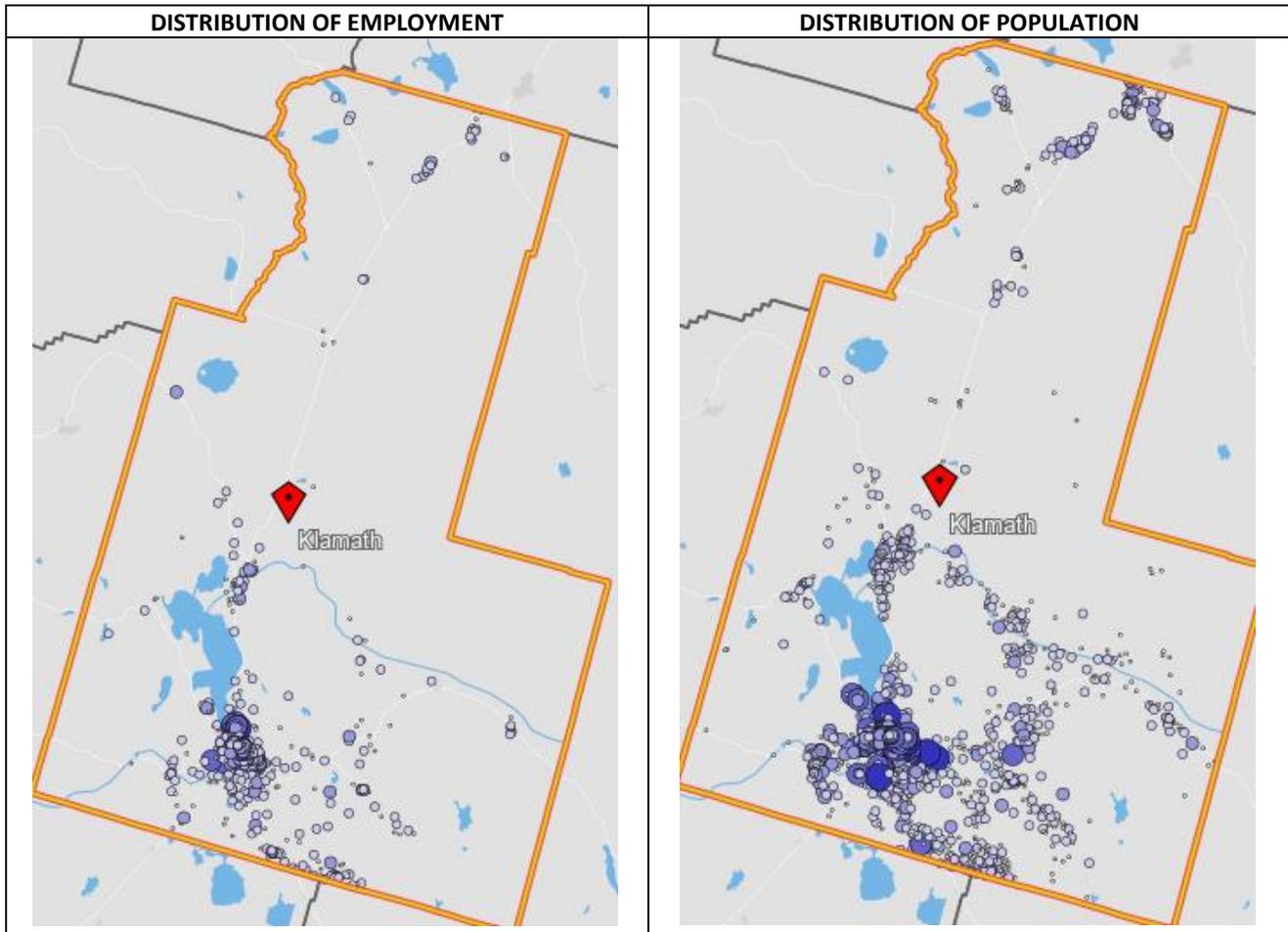
FIGURE 2.11: COMPARISON OF UNEMPLOYMENT RATE TRENDS



SOURCE: St. Louis Federal Reserve, JOHNSON ECONOMICS

The distribution of employment in Klamath County is very concentrated around Klamath Falls, with most of the outliers in cities east of Klamath Falls such as Bonanza or north in cities such as Chiloquin. The distribution of population is much more evenly spread out, while still generally being concentrated in the southern half of the county. This shows the lack of economic productivity in most areas in Klamath County outside of Klamath Falls. Likely, people prefer living further out from the city but cannot reasonably work far from the city. It is also probable that Klamath County has a relatively large number of retired people, who can live further out in the country without the need to commute for work.

FIGURE 2.15: DISTRIBUTION OF EMPLOYMENT AND WORKFORCE, KLAMATH COUNTY, 2019

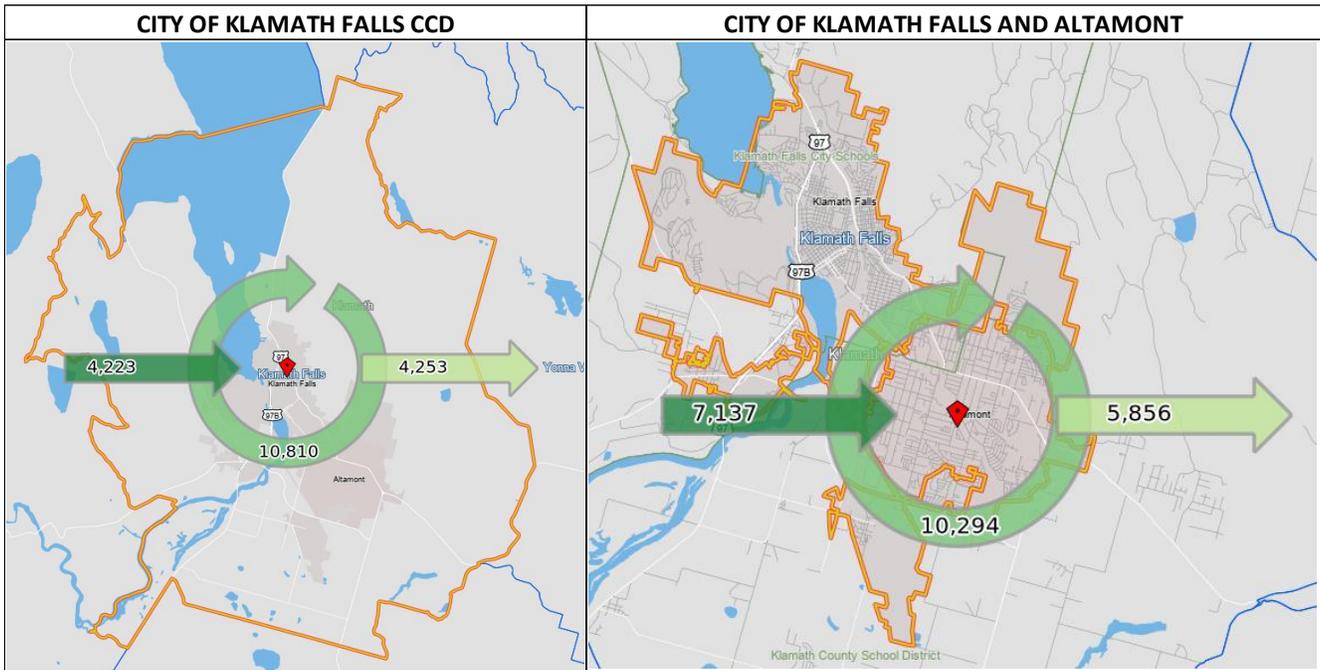


SOURCE: Census Bureau, LEHD Data

In 2019, the Klamath Falls CCD¹ was estimated to have 4,223 people commuting in for work, while 4,253 people commuted out. This indicates a relatively balanced employment/workforce base in the broader Klamath Falls area. The City of Klamath Falls and its UGB had an estimated 7,137 people commuting in and 5,856 commuting out, while over 10,000 lived and worked in the area. While the region is well balanced, the City of Klamath Falls has a position as a dominant employment hub, with roughly 1,300 more jobs than active workforce participants.

¹ CCD refers to Census County Division, which are geographic entities established cooperatively by the Census Bureau and officials of state and local governments. The primary goal of the CCD program has been to establish and maintain a set of subcounty units that have stable boundaries and recognizable names

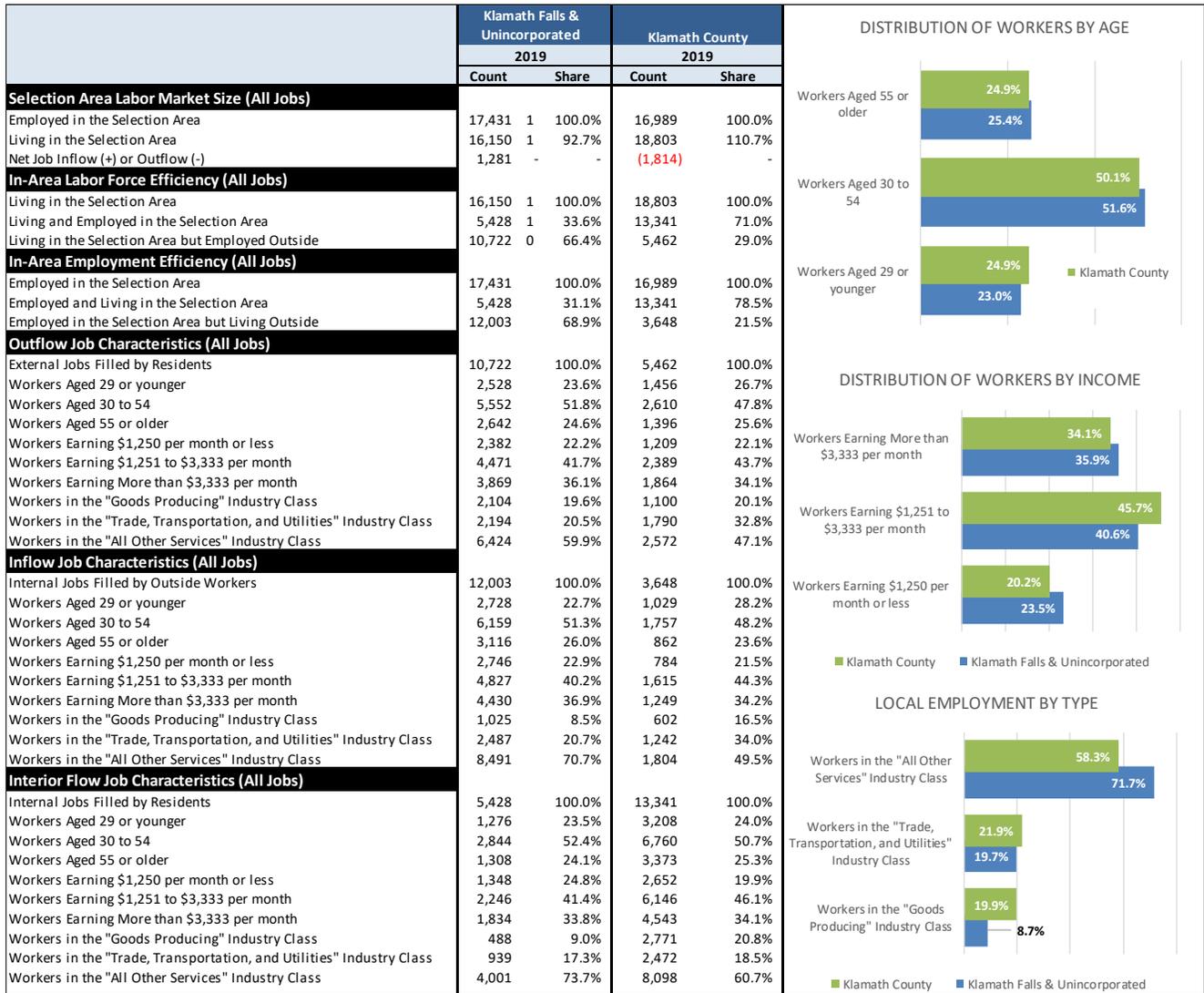
FIGURE 2.16: NET INFLOW-OUTFLOW OF EMPLOYEES, 2019



SOURCE: Census Bureau, LEHD Data

When comparing the distribution and characteristics of the labor force in Klamath County and Klamath Falls, Klamath Falls had a higher percentage of people working in an industry other than goods producing or trade, transportation, and utilities, while Klamath County had more than double the percentage of people employed in the goods producing industry. Klamath County has a far higher percentage of people employed and living in the area, which is to be expected when comparing a county and a city.

FIGURE 2.17: NET INFLOW-OUTFLOW DETAIL, CITY OF KLAMATH FALLS AND KLAMATH COUNTY, 2019

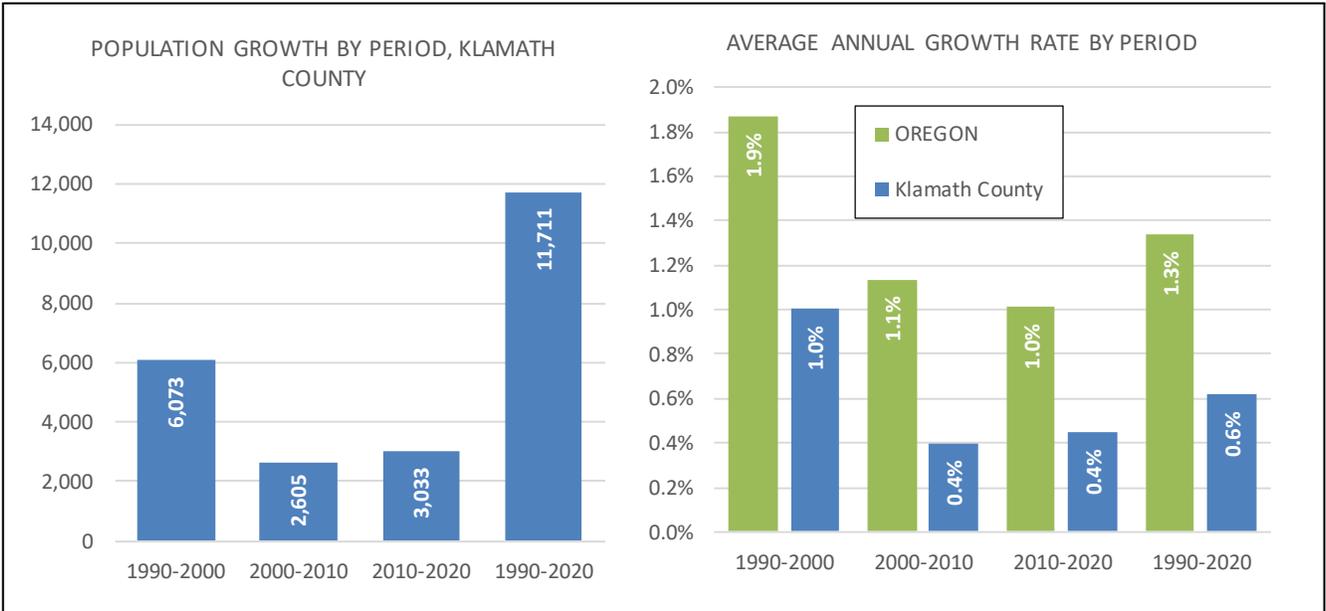


SOURCE: US Census Bureau, LEHD Origin-Destination Employment Statistics

POPULATION AND WORKFORCE

Klamath County has consistently seen a population growth rate that is about half as fast as the rest of the state but with a growth uptick in the past 5 years. In the last 30 years, the quickest annual population growth was 1% between 1990 to 2000. In the two decades following, from 2000-2010 and 2010-2020, the average annual growth rate dipped to 0.4%, while average annual growth rates have increased since 2018 where they have outgained the state as a whole. The official 2020 Census population figures exceeded estimates from Portland State University’s Population Research Center, with Klamath County’s 2020 actual population being above the forecast for 2025 and nearly to the 2030 population forecast.

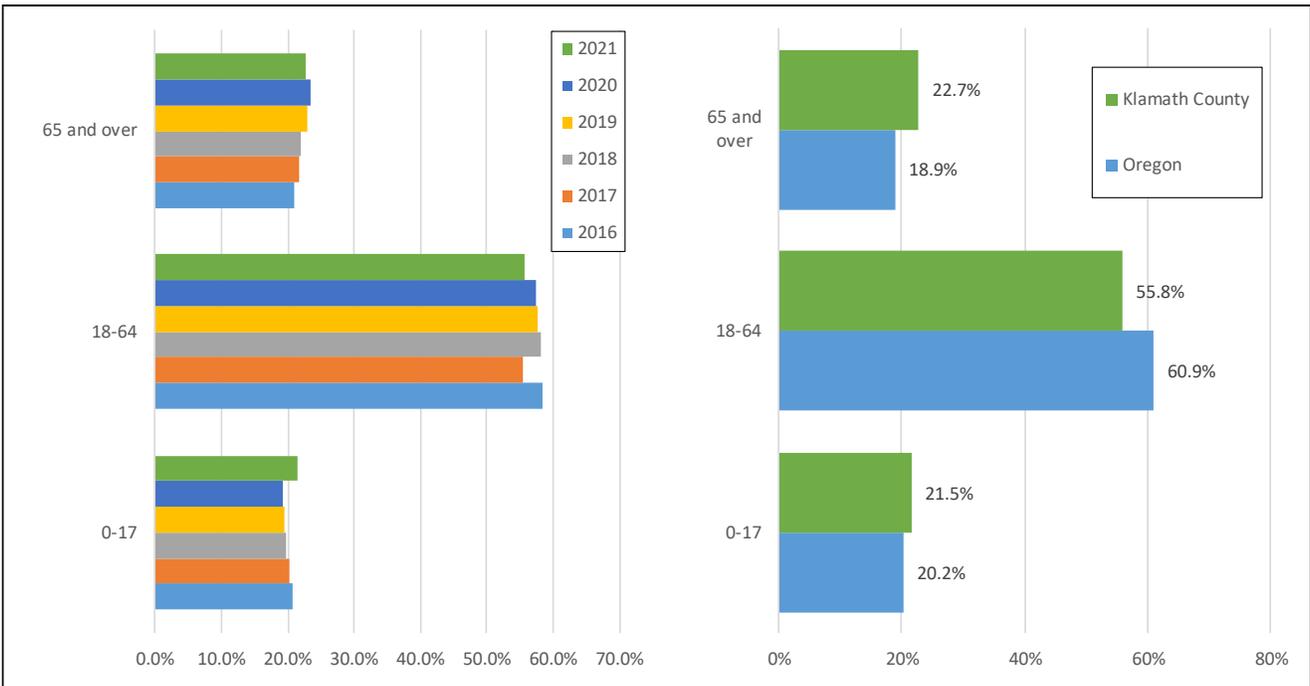
FIGURE 2.16: HISTORIC POPULATION TRENDS, KLAMATH COUNTY



SOURCE: Population Research Center, Portland State University

From 2016 to 2020, the Klamath County population was getting older. However, in 2021 the percentage of children in the county saw an increase. When compared to the rest of the state, Klamath County has more children and elders, yet around 5% less people of working age, leading to a proportionally smaller work force than the state.

FIGURE 2.17: BROAD AGE DISTRIBUTION, KLAMATH COUNTY

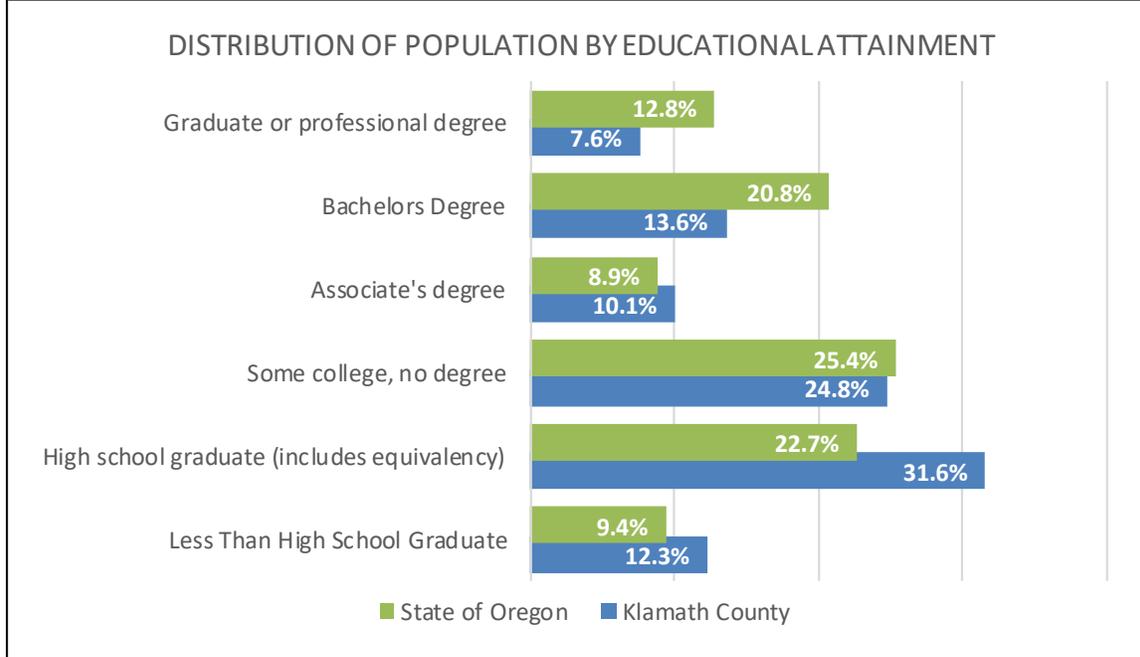


SOURCE: Population Research Center, Portland State University

The number of residents in Klamath County with higher education is generally lower than that of the statewide pattern degrees. Klamath County does have a relatively high level of people with their highest level of education being a high school diploma and an associate degree.

FIGURE 2.18: EDUCATIONAL ATTAINMENT PROFILE, 2020

	Klamath County		State of Oregon	
	Count	%	Count	%
Less Than High School Graduate	5,855	12.3%	274,182	9.4%
High school graduate (includes equivalency)	15,013	31.6%	659,085	22.7%
Some college, no degree	11,769	24.8%	737,003	25.4%
Associate's degree	4,794	10.1%	257,692	8.9%
Bachelors Degree	6,460	13.6%	603,359	20.8%
Graduate or professional degree	3,623	7.6%	372,561	12.8%
Total	47,514		2,903,882	

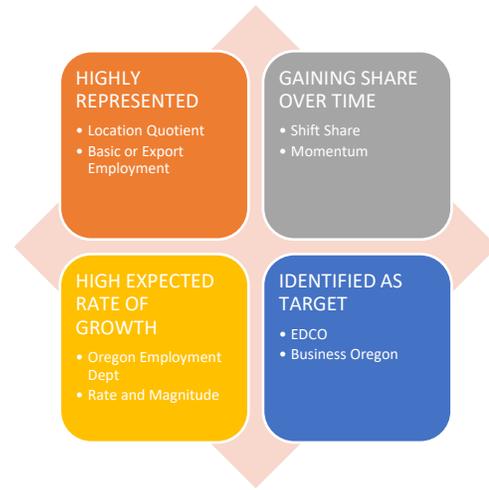


SOURCE: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

III. TARGET INDUSTRY ANALYSIS

This element of the Economic Opportunities Analysis utilizes analytical tools to assess the economic landscape in Klamath County and the City of Klamath Falls. 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

The most 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.

A location quotient analysis was completed for Klamath County, which evaluated the distribution of local employment relative to national averages, as well as average annual wage levels by industry. Among major industries, the natural resources and mining industry was by far the most over-represented, with federal and local government being the next most over-represented. Information and financial activities were the most under-represented major industries. The federal and state government provided the highest wages among these industries, while the leisure and hospitality industry has the lowest average wages.

FIGURE 3.01: INDUSTRY SECTOR SPECIALIZATION BY MAJOR INDUSTRY, KLAMATH COUNTY, 2021

Industry	Annual Establishments	Average Employment	Total Wages	Avg. Annual Wages	Employment LQ
102 Service-providing	1,749	14,288	\$586,680,971	\$41,061	0.90
101 Goods-producing	374	3,754	\$190,812,385	\$50,827	1.12
1011 Natural resources and mining	129	1,044	\$46,818,683	\$44,831	3.79
1012 Construction	196	975	\$50,848,364	\$52,143	0.84
1013 Manufacturing	49	1,735	\$93,145,338	\$53,696	0.90
1021 Trade, transportation, and utilities	377	4,353	\$165,854,983	\$38,100	1.01
1022 Information	29	111	\$5,721,037	\$51,387	0.25
1023 Financial activities	152	682	\$38,168,048	\$55,938	0.52
1024 Professional and business services	224	1,679	\$85,605,881	\$51,001	0.50
1025 Education and health services	484	4,148	\$214,948,384	\$51,821	1.17
1026 Leisure and hospitality	205	2,448	\$52,573,554	\$21,475	1.11
Federal Government	34	772	\$54,522,793	\$70,648	1.71
State Government	23	503	\$33,674,237	\$67,013	0.71
Local Government	151	3,215	\$166,731,315	\$51,855	1.50

SOURCE: Bureau of Labor Services

A more detailed industry analysis shows that the industries with the highest LQ in the county are wood product manufacturing, crop production, and other crop farming. Despite being the most over-represented industries, they still employ far less people than retail trade, health care and social assistance, or leisure and hospitality. The most under-represented industries are information, finance and insurance, and professional and technical services.

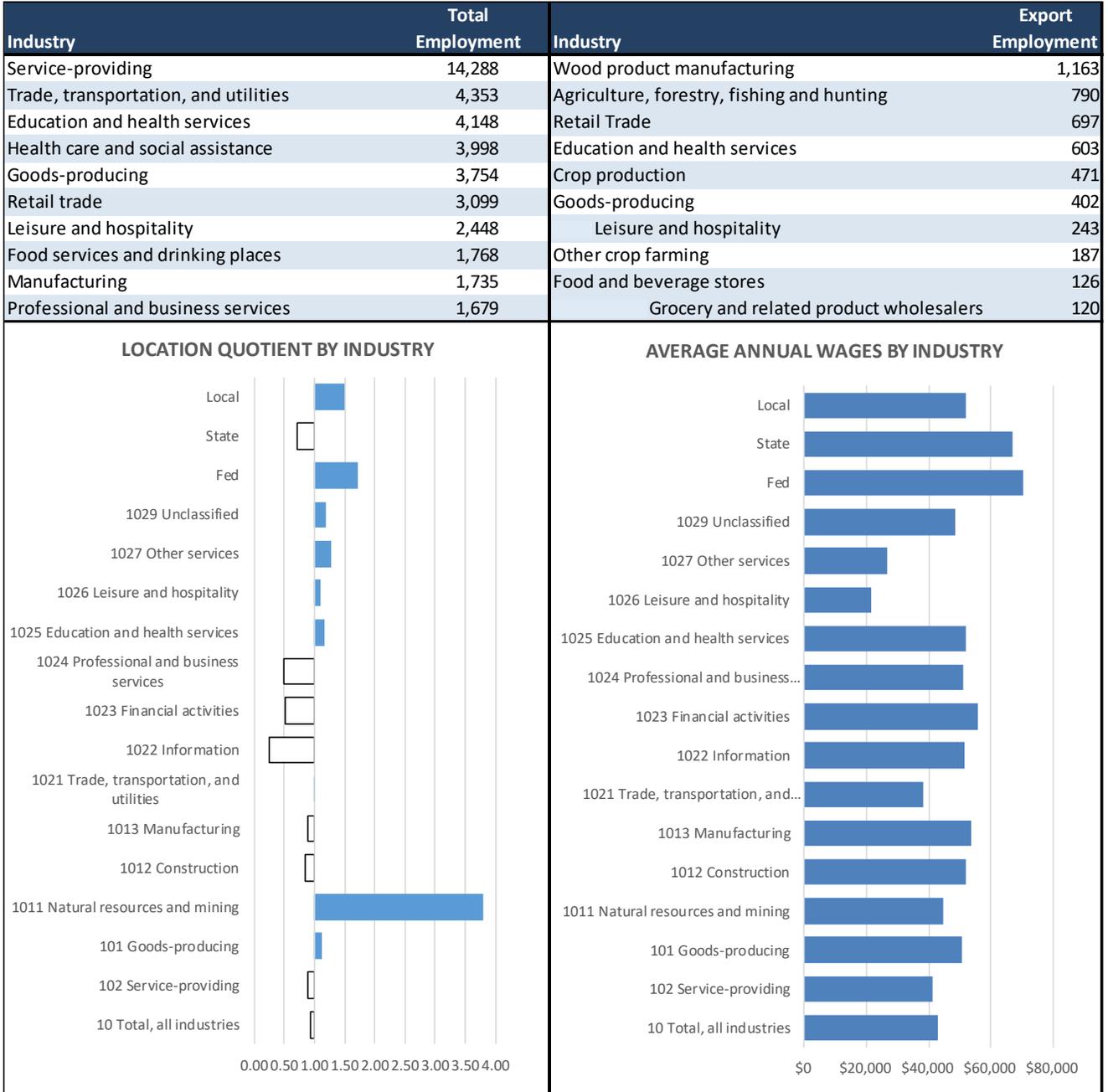
FIGURE 3.02: INDUSTRY SECTOR SPECIALIZATION BY DETAILED INDUSTRY, KLAMATH COUNTY, 2020²

Industry	Annual Establishments	Average Employment	Total Wages	Avg. Annual Wages	Employment LQ
NAICS 111 Crop production	66	556	\$22,819,198	\$41,079	6.51
NAICS 1119 Other crop farming	43	198	\$8,397,185	\$42,482	18.41
NAICS 115 Agriculture and forestry support activiti	18	160	\$9,126,201	\$56,950	2.70
NAICS 11 Agriculture, forestry, fishing and hunting	125	985	\$43,192,977	\$43,869	5.04
NAICS 22 Utilities	7	70	\$8,155,462	\$117,064	0.82
NAICS 23 Construction	196	975	\$50,848,364	\$52,143	0.84
NAICS 31-33 Manufacturing	49	1,735	\$93,145,338	\$53,696	0.90
NAICS 42 Wholesale trade	79	735	\$35,719,329	\$48,603	0.82
NAICS 44-45 Retail trade	216	3,099	\$99,375,046	\$32,065	1.29
NAICS 48-49 Transportation and warehousing	75	449	\$22,605,146	\$50,299	0.48
NAICS 51 Information	29	111	\$5,721,037	\$51,387	0.25
NAICS 52 Finance and insurance	78	469	\$29,910,789	\$63,821	0.49
NAICS 53 Real estate and rental and leasing	74	214	\$8,257,259	\$38,646	0.62
NAICS 54 Professional and technical services	136	767	\$45,826,631	\$59,735	0.49
NAICS 62 Health care and social assistance	466	3,998	\$207,931,225	\$52,010	1.28
NAICS 71 Arts, entertainment, and recreation	24	165	\$2,414,257	\$14,624	0.53
NAICS 721 Accommodation	34	515	\$13,095,356	\$25,440	2.20
NAICS 321 Wood product manufacturing	11	1,227	\$68,118,250	\$55,505	19.14
NAICS 5419 Other professional and technical servic	18	126	\$4,268,236	\$33,808	1.01
1026 Leisure and hospitality	205	2,448	\$52,573,554	\$21,475	1.11
State Government	23	503	\$33,674,237	\$67,013	0.71
Local Government	151	3,215	\$166,731,315	\$51,855	1.50

SOURCE: Bureau of Labor Services

We can estimate the level of indicated export employment by sector by combining the location quotients and overall employment levels. The industries with the highest level of export employment are wood product manufacturing, retail trade, and agriculture, forestry, fishing, and hunting. The industries with the highest total employment are service-providing, trade, transportation, and utilities, and education and health services.

FIGURE 3.03: TOP TEN INDUSTRIES IN TERMS OF TOTAL AND EXPORT EMPLOYMENT, KLAMATH COUNTY



SOURCE: Bureau of Labor Services

The same analysis for the City of Klamath Falls reveals high levels of employment concentration in industries such as educational services, health care and social services, and utilities.

FIGURE 3.04: INDUSTRY SECTOR SPECIALIZATION BY DETAILED INDUSTRY, CITY OF KLAMATH FALLS UGB, 2020²

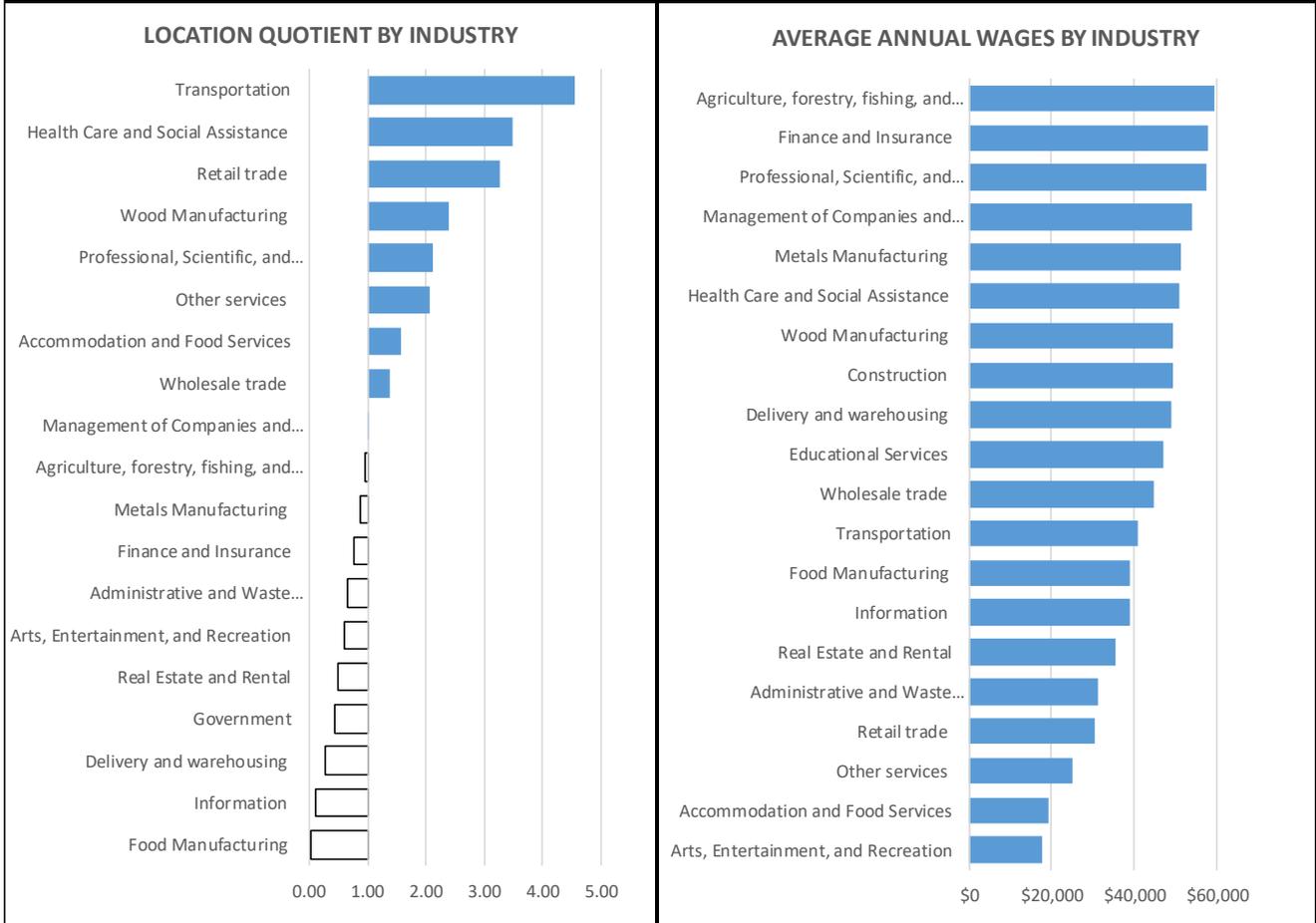
Industry	Annual Establishments	Average Employment	Total Wages	Avg. Annual Wages	Employment LQ
Agriculture, forestry, fishing, and hunting	20	148	\$8,807,734	\$59,512	0.95
Construction	148	887	\$43,610,053	\$49,166	13.14
Food Manufacturing	3	23	\$896,774	\$38,990	0.03
Wood Manufacturing	17	649	\$32,090,104	\$49,445	2.38
Metals Manufacturing	19	237	\$12,107,360	\$51,086	0.87
Wholesale trade	56	548	\$24,486,829	\$44,684	1.39
Retail trade	1,184	2,741	\$83,848,309	\$30,590	3.26
Transportation	32	309	\$12,592,018	\$40,751	4.55
Delivery and warehousing	10	196	\$9,575,560	\$48,855	0.28
Information	27	139	\$5,401,481	\$38,860	0.11
Finance and Insurance	75	447	\$25,914,327	\$57,974	0.76
Real Estate and Rental	63	193	\$6,833,975	\$35,409	0.50
Professional, Scientific, and Technical Services	117	645	\$37,028,788	\$57,409	2.11
Management of Companies and Enterprises	9	347	\$18,675,060	\$53,819	1.02
Administrative and Waste Management	64	487	\$15,266,815	\$31,349	0.64
Educational Services	41	1,598	\$74,891,329	\$46,866	5.92
Health Care and Social Assistance	411	4,123	\$210,222,134	\$50,988	3.49
Arts, Entertainment, and Recreation	24	172	\$3,014,068	\$17,524	0.59
Accommodation and Food Services	148	1,681	\$32,078,422	\$19,083	1.57
Other services	172	699	\$17,397,429	\$24,889	2.05
Government	53	1,094	\$69,713,835	\$63,724	0.45
Total	2,693	17,363	\$744,452,404	\$42,876	

SOURCE: Oregon Employment Department

The top sectors in terms of overall employment were health care and social assistance, accommodation and food services, and government. There were seven industries with positive export employment, the largest being health care and social assistance, educational services, and retail trade.

FIGURE 3.05: TOP TEN INDUSTRIES IN TERMS OF TOTAL AND EXPORT EMPLOYMENT, CITY OF KLAMATH FALLS UGB, 2020

Industry	Total Employment	Industry	Export Employment
Health Care and Social Assistance	4,123	Health Care and Social Assistance	2,941
Retail trade	2,741	Retail trade	1,899
Accommodation and Food Services	1,681	Educational Services	1,328
Educational Services	1,598	Construction	819
Government	1,094	Accommodation and Food Services	613
Construction	887	Wood Manufacturing	376
Other services	699	Other services	358
Wood Manufacturing	649	Professional, Scientific, and Technical Services	339
Professional, Scientific, and Technical Services	645	Transportation	241
Wholesale trade	548	Wholesale trade	153



SOURCE: Oregon Employment Department and Bureau of Labor Services

ECONOMIC DRIVERS

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 cycle².

A shift-share analysis is an analytical procedure 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.

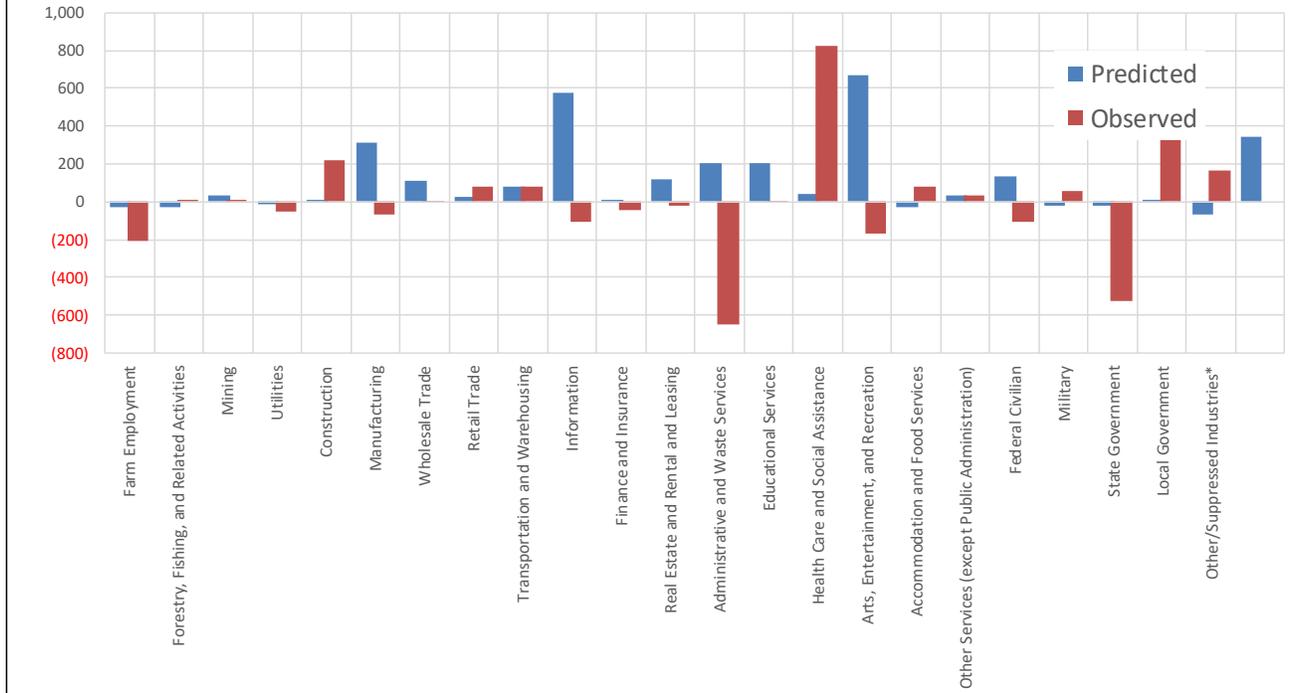
The average annual growth rate by industry from 2010 to 2020 in Klamath County was compared to the national rate. The observed local change was compared to a standardized level reflecting what would be expected if the local industry grew at a rate consistent with national rates for that industry. As shown in Figure 3.06, most industries grew at a slower rate than the rest of the country. Sectors that did experience a positive regional shift in employment during this period were mining, health care and social assistance, accommodation and food services, military, and local government. The only sectors that comfortably outperformed expectations were mining, military, and local government. Sectors with the greatest negative regional shift in employment were farm employment, transportation and warehousing, and administrative and waste services.

² Measured from 2010 through 2020

FIGURE 3.06: INDUSTRY SECTOR SHIFT SHARE ANALYSIS, KLAMATH COUNTY(2010 – 2020)

Industry	Average Employment		Net Change		Standardized Level - 2020 *	Regional Shift
	2010	2020	Total	AAGR		
Farm Employment	1,725	1,516	(209)	-1.3%	(29)	(180)
Forestry, Fishing, and Related Activities	439	453	14	0.3%	37	(5)
Mining	56	66	10	1.7%	(14)	44
Utilities	127	76	(51)	-5.0%	1	(41)
Construction	1,305	1,521	216	1.5%	309	(7)
Manufacturing	1,870	1,805	(65)	-0.4%	111	(9)
Wholesale Trade	865	860	(5)	-0.1%	24	(3)
Retail Trade	3,611	3,692	81	0.2%	78	0
Transportation and Warehousing	875	957	82	0.9%	576	(56)
Information	282	175	(107)	-4.7%	2	(39)
Finance and Insurance	811	770	(41)	-0.5%	117	(19)
Real Estate and Rental and Leasing	1,299	1,280	(19)	-0.1%	208	(17)
Administrative and Waste Services	1,586	934	(652)	-5.2%	204	(54)
Educational Services	304	300	(4)	-0.1%	38	(14)
Health Care and Social Assistance	3,793	4,620	827	2.0%	671	4
Arts, Entertainment, and Recreation	556	391	(165)	-3.5%	(30)	(24)
Accommodation and Food Services	2,259	2,340	81	0.4%	37	2
Other Services (except Public Administration)	1,720	1,751	31	0.2%	135	(6)
Federal Civilian	966	857	(109)	-1.2%	(17)	(10)
Military	202	262	60	2.6%	(18)	39
State Government	1,005	479	(526)	-7.1%	6	(53)
Local Government	2,985	3,362	377	1.2%	(70)	15
Other/Suppressed Industries*	1,474	1,638	164	1.1%	344	(12)

TOTAL	30,115	30,105	(10)	0.0%	2,720	(447)
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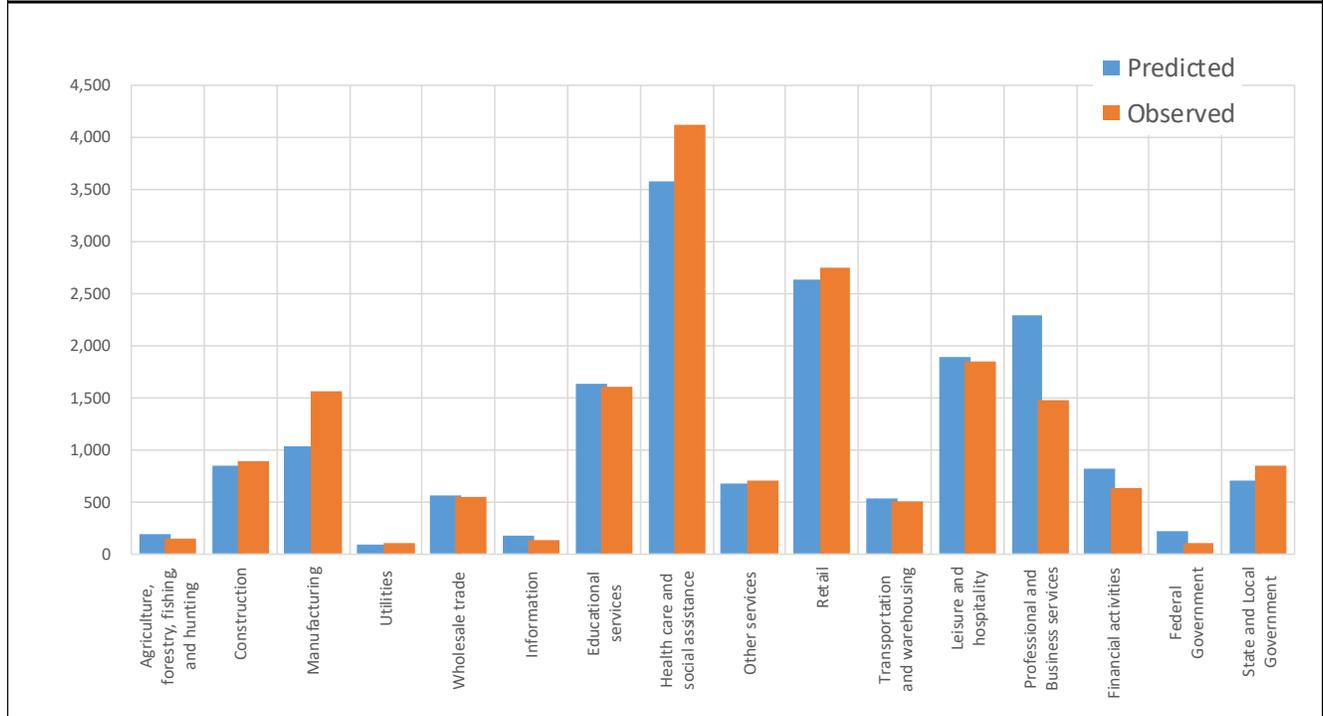
* Employment level in each industry had it grown at the same rate as its counterparts at the national level over the same period.

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

When the same analysis was done for the City of Klamath Falls UGB, growth was also slow compared to the rest of the country. The best performing sectors on this measure in the local economy were health care and social assistance, other services, retail trade, accommodation and food services, and professional, scientific, and technical services.

FIGURE 3.07: INDUSTRY SECTOR SHIFT SHARE ANALYSIS, CITY OF KLAMATH FALLS UGB (2010 – 2020)

Industry	Average Employment		Net Change		Standardized Level - 2020 *	Regional Shift
	2010	2020	Total	AAGR		
Goods producing	1,629	1,817	188	1.10%	1,842	(25)
Service Providing	13,467	14,431	964	0.69%	14,598	(167)
Agriculture, forestry, fishing, and hunting	186	148	(38)	-2.26%	198	(50)
Construction	646	887	241	3.22%	851	36
Manufacturing	983	1,559	576	4.72%	1,038	521
Utilities	98	106	8	0.79%	96	10
Wholesale trade	541	548	7	0.13%	566	(18)
Information	183	139	(44)	-2.71%	182	(43)
Educational services	1,492	1,598	106	0.69%	1,636	(38)
Health care and social assistance	3,037	4,123	1,086	3.10%	3,571	552
Other services	671	699	28	0.41%	677	22
Retail	2,562	2,741	179	0.68%	2,634	107
Transportation and warehousing	406	505	99	2.21%	540	(35)
Leisure and hospitality	1,856	1,853	(3)	-0.02%	1,896	(43)
Professional and Business services	1,901	1,479	(422)	-2.48%	2,293	(814)
Financial activities	720	640	(80)	-1.17%	816	(176)
Federal Government	230	110	(120)	-7.11%	226	(116)
State and Local Government	724	842	118	1.52%	704	138
TOTAL	16,823	17,490	667	0.39%	18,199	(709)

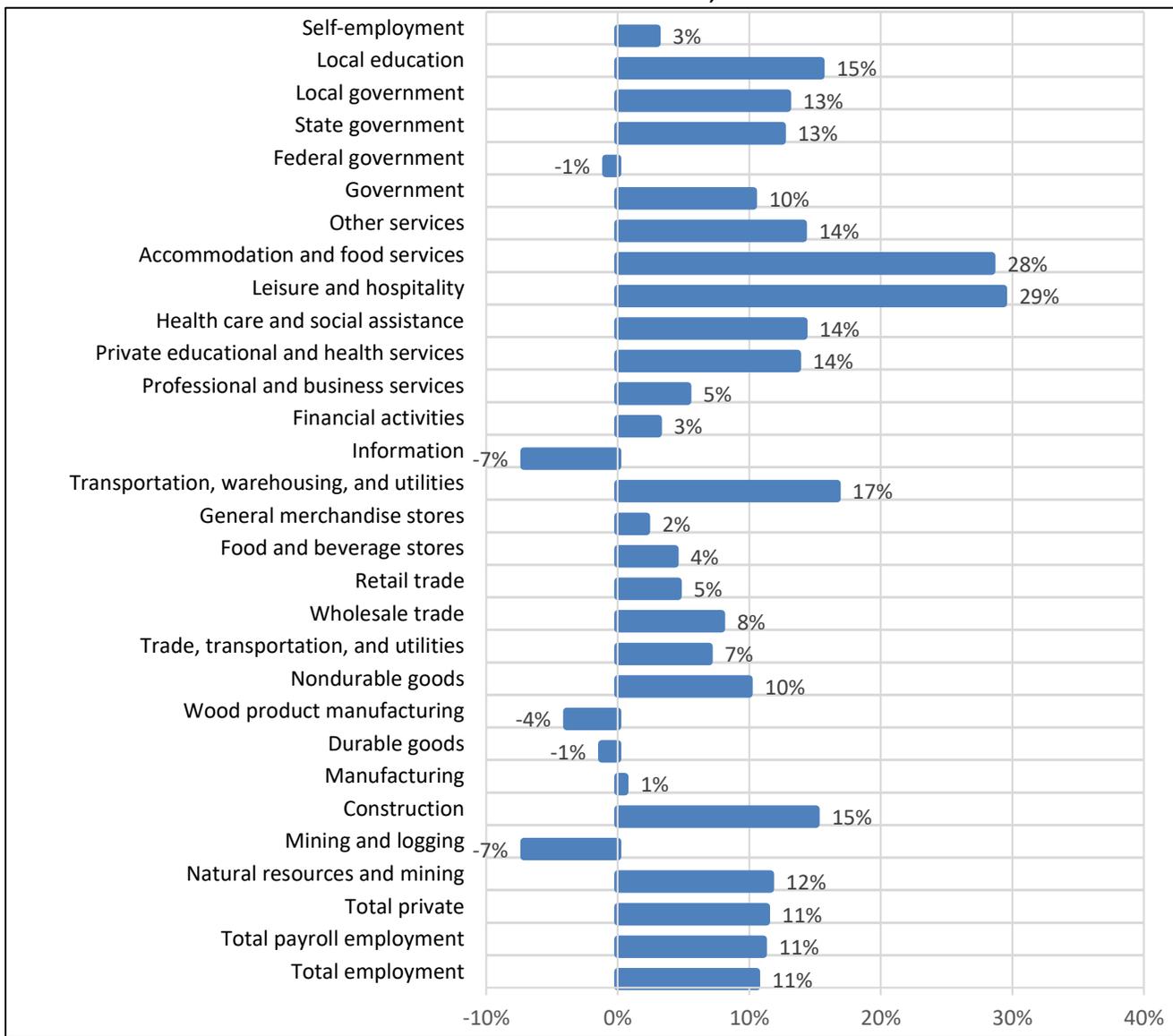


PROJECTED EMPLOYMENT GROWTH

The State of Oregon produces employment forecasts by sector at the broader regional level, which groups Klamath and Lake Counties together. The most recent forecast anticipates a gain of 2,880 jobs from 2020 through 2030, reflecting an average annual growth rate of about 1.1% during the period.

In this region, the industries with the fastest growth rates are projected to be leisure and hospitality, construction, and transportation, warehousing, and utilities. Leisure and hospitality, local government, and accommodation and food services are the industries expected to experience the most total job growth. Information, mining and logging, and wood product manufacturing are the industries projected to experience the most negative growth.

FIGURE 2.12: PROJECTED EMPLOYMENT GROWTH BY SECTOR, KLAMATH AND LAKE COUNTIES



SOURCE: Oregon Employment Department, Workforce and Economic Research Division

REGIONAL AND STATEWIDE ECONOMIC DEVELOPMENT

Active economic development agencies assisting the City of Klamath Falls include Business Oregon and KCEDA (Klamath County Economic Development Association). These groups develop lists of targeted industries on a regular basis, and the following are the most current:

BUSINESS OREGON

Outdoor Gear and Apparel
Forestry & Wood Products
Advanced Manufacturing
Business Services
Food & Beverage
Bioscience
Metals & Machinery
High Technology

PREVIOUS EOA (2009)

Wood Products
Educational/Vocational Training
Medical Services and Bioscience
Renewable Energy
Regional Retail

KCEDA

Natural Resource Cluster
Food Processing
Forestry & Wood Products
Advanced Manufacturing Cluster
Clean Technology Cluster
High Technology Cluster
Biosciences
Cyber Technology
Data Center
Tourism/Hospitality/Recreation

CITY OF KLAMATH FALLS TARGET INDUSTRIES

The preceding analysis provides a basis for identification of target industries for the City of Klamath Falls. The selected industries include a wide range of industries that have either shown historic strength in the area, strong growth potential, and/or consistency with the locally expressed economic development objectives for the community.

EXPORT EMPLOYMENT

Health Care/Social Assistance
Educational Services
Retail Trade
Accommodation and Food Services
Wood Manufacturing

SHIFT SHARE SECTORS

Health Care/Social Assistance
Manufacturing
Government
Retail Trade
Other Services

EMPLOYMENT GROWTH

Health Care/Social Assistance
Construction
Professional, Scientific, Technical
Retail Trade
Education Services

CURRENT BASE

Health Care/Social Assistance
Retail Trade
Accommodation & Food Services
Education Services
Government
Other Services
Construction
Administrative/Waste Management
Wood Manufacturing
Wholesale Trade

REGIONAL/STATEWIDE TARGETS

Natural Resource Cluster
Food Processing
Forestry & Wood Products
Advanced Manufacturing
Tourism/Hospitality/Recreation
Educational/Vocational Training
High Technology Cluster
Biosciences
Cyber Technology
Data Center

CITY OF KLAMATH FALLS

Health Care/Social Assistance
Educational Services
Tourism/Hospitality/Recreation
Accommodation & Food Services
Manufacturing
Trade
Retail Trade
Wholesale Trade
Professional, Scientific, Technical
Construction

The following section has a more detailed overview of the several of these targeted sectors and their role in the local economy.

TARGET INDUSTRY CLUSTERS

This section discusses potential target industries for the City of Klamath Falls based on the community’s historical strengths and advantages, regional trends, and local goals and objectives.

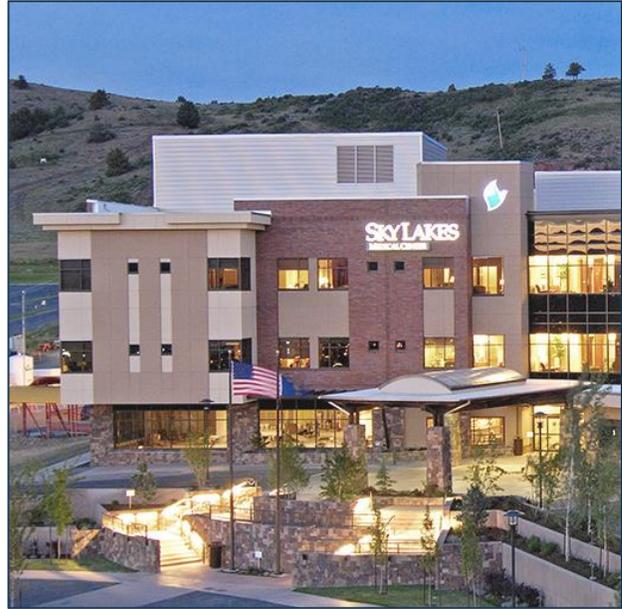
HEALTH CARE AND SOCIAL ASSISTANCE

The health care and social services sectors account for almost a quarter of all employment in the Klamath Falls UGB, with the sector adding almost 1,100 jobs over the last decade. The Sky Lakes Medical Center is the only hospital in south-central Oregon and northeastern California, and a high proportion of the local employment base in this sector is supported by expenditures originating from outside of Klamath Falls.

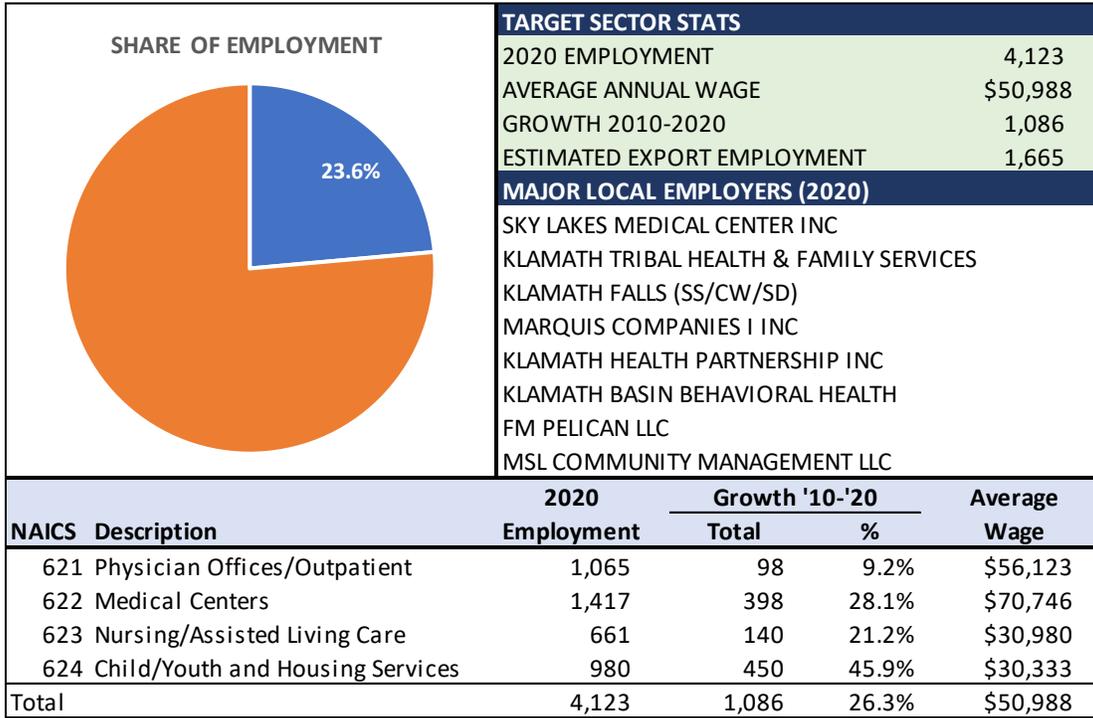
Demand for these services tends to follow demographic trends, and the aging of the local and regional population base is expected to support a growing demand for health services. The following are key industry trends:

- Emphasis on leveraging cost advantages.
- Strong growth in utilization of mobile health systems, software, and access to information.
- Emerging care models include smaller, distributed clinics (i.e., Zoomcare).
- Phone and video appointments.

With the only full-service hospital in the region, Klamath Fall’s dominance in the industry should continue, with the remainder of the region lacking the critical demographics to support a second facility. This sector accounted for 4,123 jobs in 2020, with average annual wages of \$50,988.



SECTOR SUMMARY: HEALTH CARE AND SOCIAL ASSISTANCE



Cluster Strengths

- The aging of population will support health services.
- Klamath Falls is the regional hub for medical services, an advantage that is expected to continue.

Cluster Opportunities

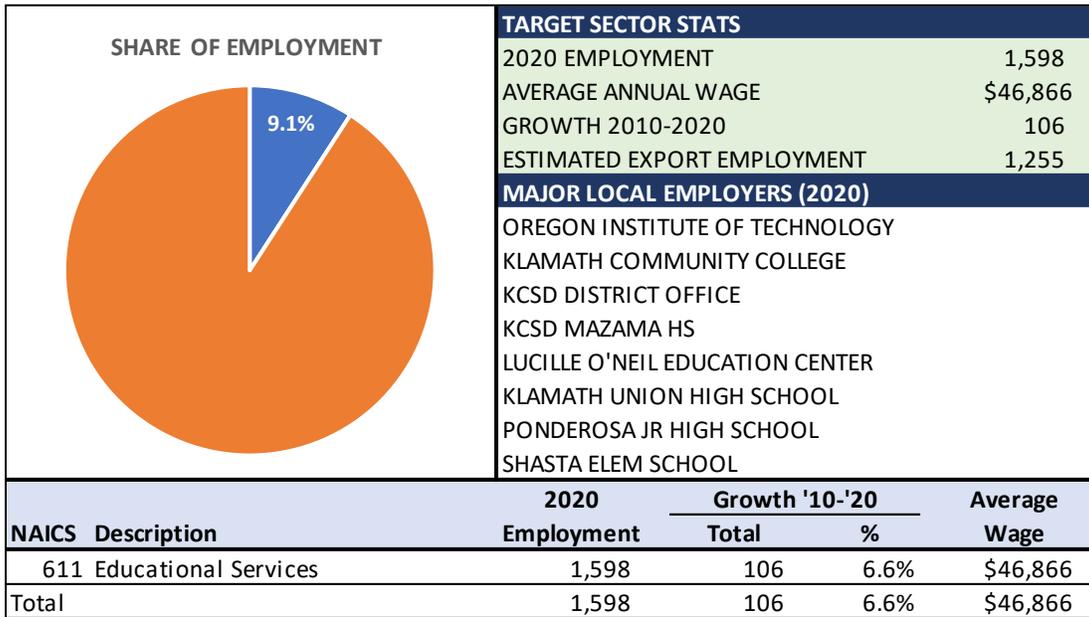
- Development of new medical facilities.
- More medical office space for medical and dental.
- Alternative healthcare providers.
- Healthcare sector tie-in with area higher-learning and training programs from OIT, KCC, and Oregon Health & Science University (OHSU)

EDUCATION SERVICES

Klamath Falls has an existing concentration of Education Services employment, with both the Oregon Institute of Technology (OIT) and Klamath Community College (KCC). The sector accounted for almost 1,600 employees with an average annual wage of \$46,866 in 2020. Most of the jobs in the sector are considered export employment, bringing a net influx of dollars into the community.



SECTOR SUMMARY: EDUCATION SERVICES



Cluster Strengths

- Existing campuses for OIT and KCC.
- Good regional access.
- Educational services tend to be countercyclical, providing stability and growth in difficult markets.

Cluster Weakness

- Modest growth rate in the industry.

The sector accounts for an estimated 9.1% of employment in the UGB but has added only 106 jobs in the last decade.

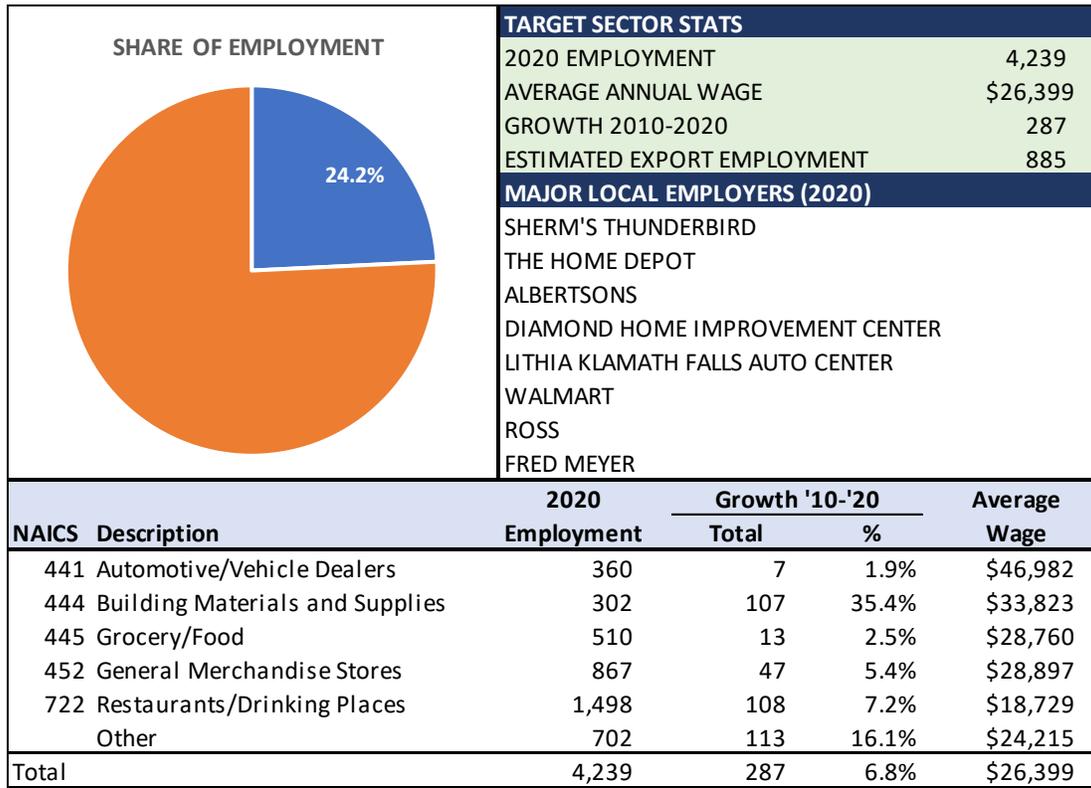
RETAIL TRADE

The City of Klamath Falls serves as the commercial hub for south-central Oregon and northeastern California, and as such has a retail trade sector that is 48% greater than what is supported by locally originating expenditures. The City's position at the confluence of multiple highways provides a competitive advantage for regional-serving retailers.

The overall employment level in this sector was 4,239 in 2020, representing 24.2% of the local employment base. The average annual wage was approximately \$26,400 per year in 2020, with employment expanding by 287 jobs over the last decade.



SECTOR SUMMARY: RETAIL TRADE



The retail sector serves as a basic industry in Klamath Falls, with an estimated 885 jobs supported by expenditures from non-residents. This brings net new dollars into the community from travelers and through traffic.

Cluster Strengths

- Confluence of multiple regional highways.
- Commercial hub for broader region.
- Strong base of local retailers in place.

Cluster Challenges

- Limited available labor workforce.
- Relatively low wage levels.

Many portions of the retail sector have been negatively impacted by the pandemic, and online retailers continue to increase their share of overall sales.

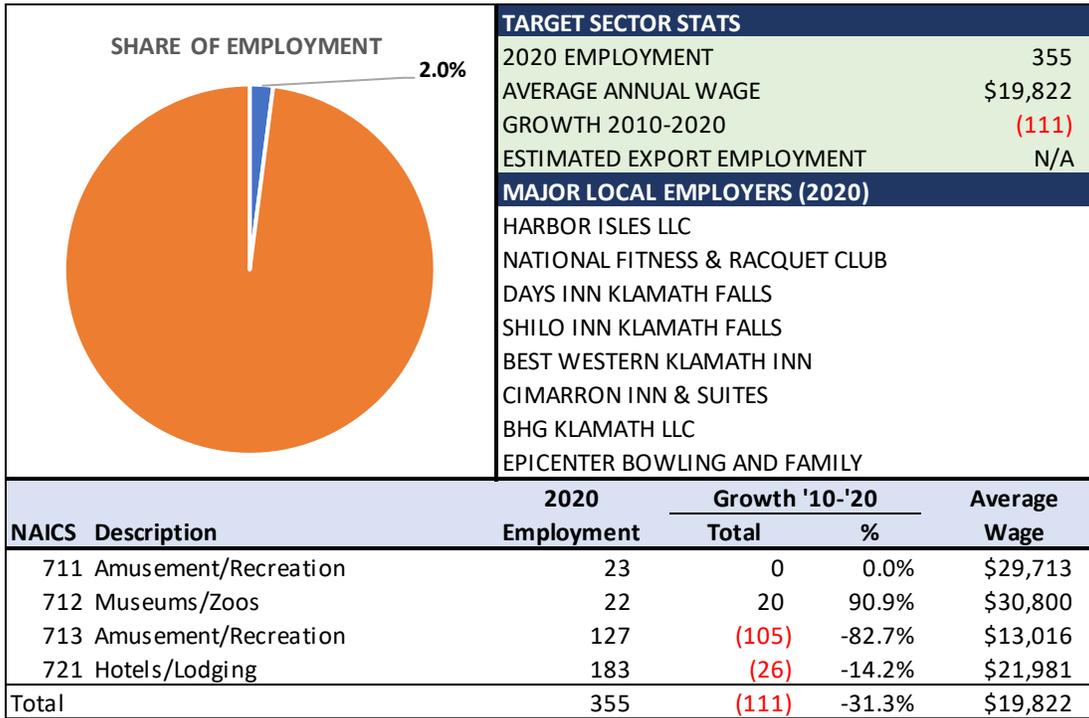
TOURISM & RECREATION

Klamath enjoys physical and locational attributes that make recreation and hospitality an attractive target sector. The area is centrally located with access to recreational opportunities, while serving as a commercial hub for a broader area. Major proximate attractors include Crater Lake National Park, Lava Beds National Monument, and the Running Y Resort. The City of Klamath Falls has developed a mix of lodging and lifestyle retail stores and restaurants, providing a strong base for ongoing development and a range of amenities that can support tourist activities.

The amenities that tourism traffic supports are largely consistent with what is desirable to residents. Quality retail, restaurant, recreation, and hospitality tenants make a community an attractive place to live and work. Studies have shown that amenity-related supportive uses also benefit and attract residents and businesses. This is a growing phenomenon in the context of emerging consumer preferences.

Tourist-related sectors (excluding food services) employment accounted for only 355 jobs in 2020. The sector represents only 2.0% of employment in the UGB, with employment levels declining by 111 jobs over the last decade. Average annual wages in the sector were \$19,822 in 2020.

SECTOR SUMMARY: TOURISM & RECREATION



The numbers for the UGB do not reflect employment in nearby tourism driven locations such as Running Y and the casino.

Cluster Strengths

- Recreational amenities.
- Central location along multiple corridors.
- Strong base of existing businesses in downtown area attractive for tourists.

Cluster Weakness

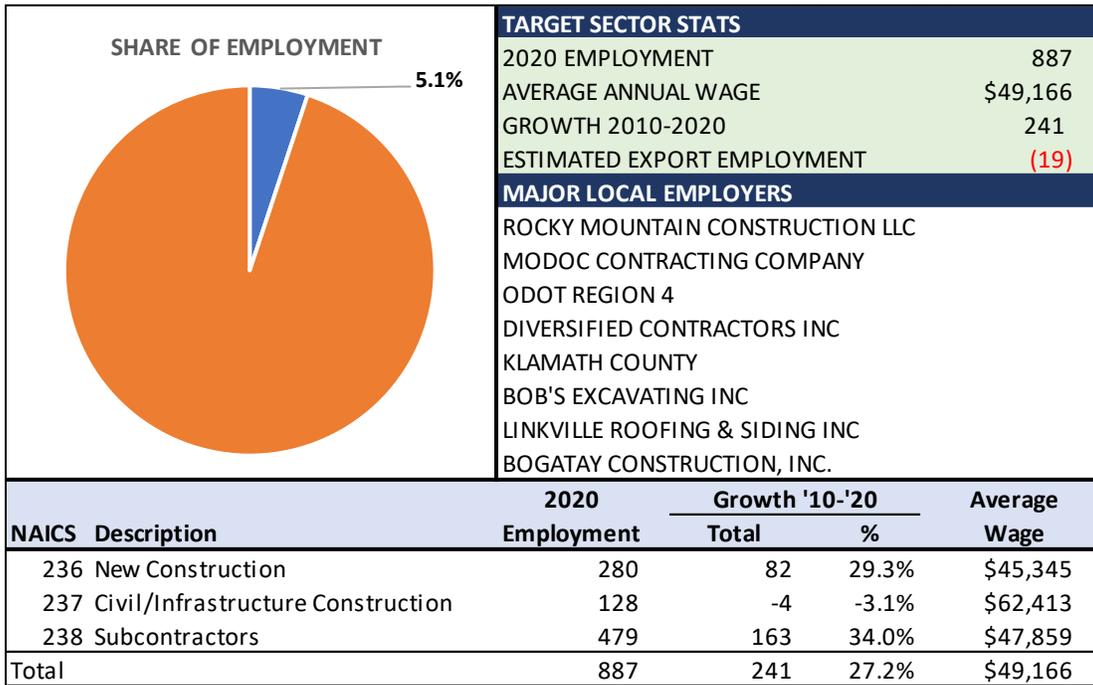
- Relatively low wage levels in the industry.
- Lack of commercial air service.

CONSTRUCTION

The construction sector accounted for 5.1% of total employment within the Klamath Falls UGB in 2000, representing 887 employees. The average annual wage in the sector was \$49,166 in 2020. The sector added 241 jobs over the last decade.



SECTOR SUMMARY: CONSTRUCTION



Employment in the sector is directly related to demographic and employment growth. Construction is not an export sector in Klamath Falls, with local employment levels generally consistent with national patterns.

Cluster Strengths

- Regional accessibility.
- Good wage levels.
- Strong recent growth.

Cluster Weakness

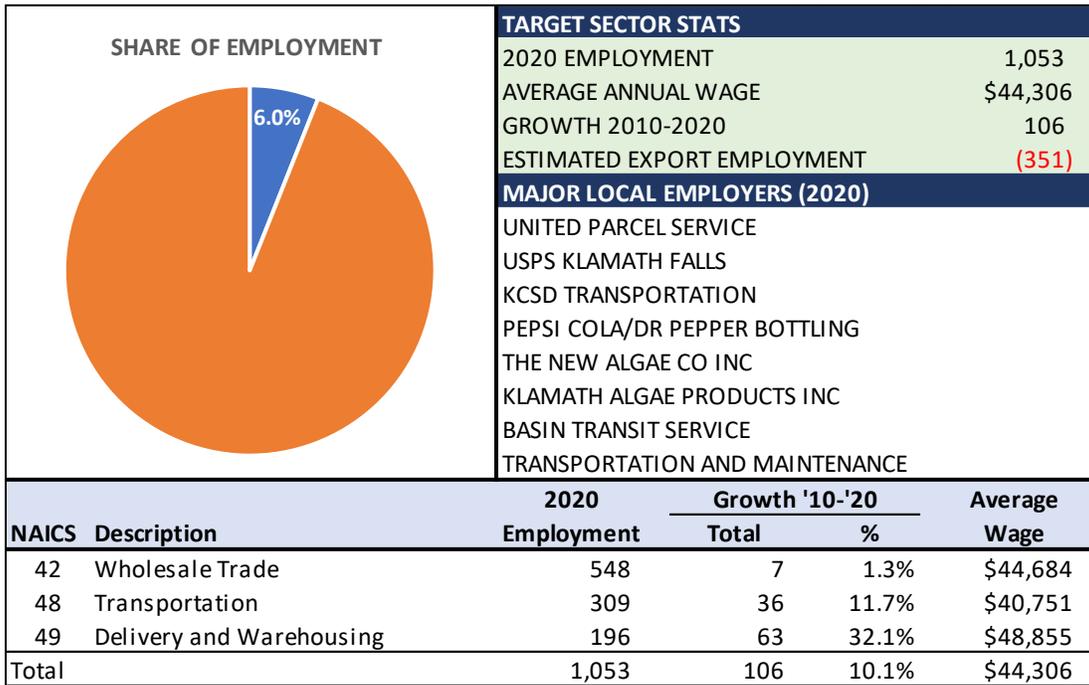
- Not a driver of growth.
- Limited availability of skilled workers/tradesmen.

WHOLESALE TRADE/LOGISTICS

Wholesale trade and logistics represented 6.0% of employment within the Klamath Falls UGB in 2020. Average annual wages in the industry were \$44,306, and growth over the last decade was 106 jobs. While not on the interstate network, the industry benefits from Klamath Falls’ access to multiple regional transportation corridors, including Highways 97, 39, 66, and 140, and both Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) rail mainlines. Shifting patterns have favored wholesale trade and logistics at a national level, led by the rise of online shopping and need for additional logistics.



SECTOR SUMMARY: WHOLESALE TRADE



Cluster Strengths

- Regional accessibility.
- Good wage levels.
- National shift in consumption patterns.
- Strong recent growth.
- Existing structures.

Cluster Weakness

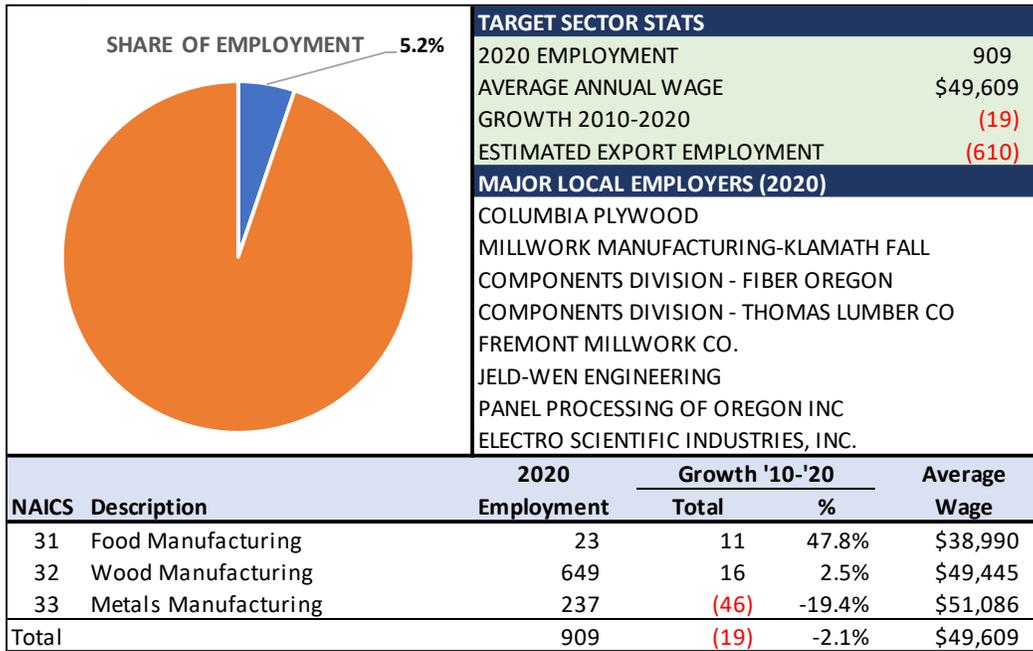
- Access to the interstate system (I-5)

MANUFACTURING

The manufacturing sector is typically a highly desirable sector, which creates considerable value and often exports the bulk of its output. Manufacturing accounts for only 5.2% of the overall employment base in Klamath Falls, with the bulk of employment in the sector in wood product manufacturing. Wage levels are relatively high, averaging \$49,609 in 2020. The sector reported an overall modest decline of 19 jobs over the last decade, with the decline concentrated in metals manufacturing.



SECTOR SUMMARY: MANUFACTURING



Cluster Strengths

- Existing wood products industry with workforce expertise.
- Rail access.
- Available and serviced land supply overall

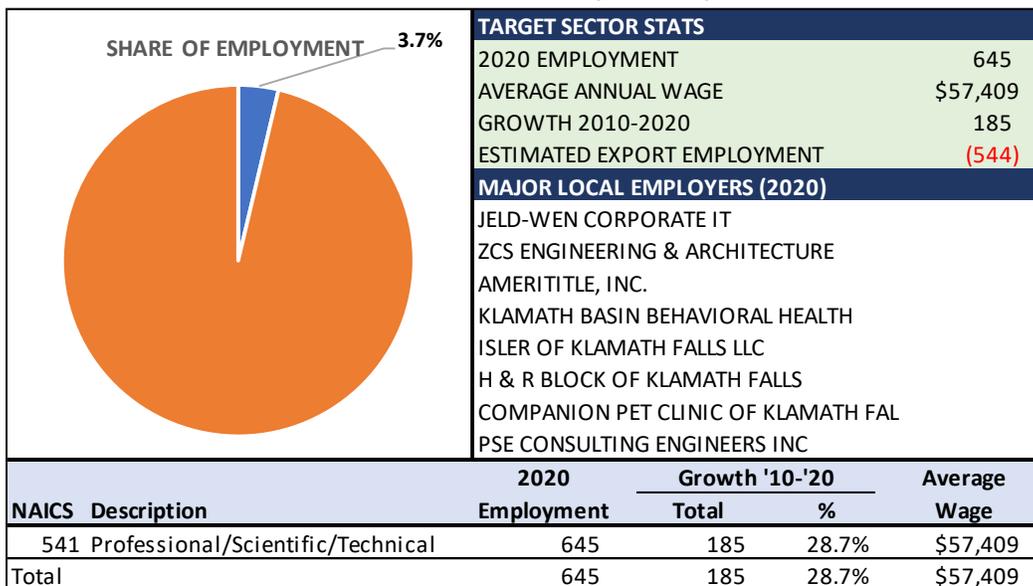
Cluster Challenges

- Geographic access to export markets.
- Lack of available and serviced large-lot industrial land supply

PROFESSIONAL/SCIENTIFIC/TECHNICAL

Employment in professional/scientific/technical fields represents only 3.7% of local employment (645 jobs) but accounted for net growth of 185 jobs over the last decade. The average annual wage in the industry was \$57,409 in 2020.

SECTOR SUMMARY: PROFESSIONAL/SCIENTIFIC/TECHNICAL



While many of these jobs are driven by the location of company headquarters, changing work patterns and the increased acceptance of remote working arrangements may allow a highly amenitized and relatively affordable area such as Klamath Falls to attract a greater share of this type of employment.

Cluster Strengths

- Quality of life advantages due to recreational amenities.
- General affordability.
- Access to broadband.

Cluster Weakness

- Accessibility to an airport with commercial service.

PARTNERS IN ECONOMIC DEVELOPMENT

Effective economic development entails a partnership of communities, businesses, public and non-profit agencies, and residents. The following is a partial list of major stakeholders in regional economic development who can partner in growing existing businesses and attracting new ones along with the appropriate workforce.

1. Klamath County Economic Development Association (KCEDA)

Klamath County Economic Development Association (KCEDA) is a collaborative leader in the planning and implementation of strategies that sprout economic development in the region. KCEDA has two major goals. The first of which is to be a resource for local businesses, so they have what they need to stay, expand, and succeed in Klamath County. KCEDA also works hard to draw a diverse mix of new employers, especially traded sector businesses, that will strengthen the area's economic footing. KCEDA has identified the following key goals as areas of emphasis:

- Create Jobs & Workforce Growth Opportunities
- Diversify & Expand Economic Footing
- Foster an Entrepreneurial and Innovation Habitat
- Retain Local Businesses & Help them Expand Here
- Remove Red Tape & Coordinate Resources
- Improve Value of Businesses and Properties
- Improve Our Quality of Life
- Maximize Tourism's Multiplier Effect

2. Klamath County Chamber of Commerce

The Chamber advocates on behalf of small businesses in Klamath County and is committed to advancing the area's livability and economic vitality. The Chamber serves as a portal into the community and a source of information on Klamath County promoting the area's recreation and relocation opportunities. The Klamath County Chamber of Commerce supports the business community by providing networking opportunities, strategic promotion/marketing assistance, and access to information, leadership, and skills development. It advocates for business-friendly legislation on local, state, and federal levels.

4. South Central Oregon Economic Development District (SCOEDD)

The South Central Oregon Economic Development District (SCOEDD) serves as the primary conduit for regional economic development resources for Klamath and Lake Counties Oregon. It provides the professional staff with support for economic development planning on a regional basis, and for the individual economic development efforts of Lake County and Klamath County. SCOEDD also manages and administers regional grant and loan programs. Current services include business planning, capital and financial resources, economic and site development, nonprofit and social enterprise, and feasibility studies.

5. Central Oregon Regional Solutions Team

Regional Solutions Centers are located across Oregon and are designed to recognize the unique challenges of each region and help implement the Governor’s economic development approach. The Regional Solutions Team helps coordinate the efforts of multiple State departments and other partners to ensure that efforts are cohesive. High focus priorities for the Central Oregon team including increasing workforce housing, ensuring land and infrastructure availability to support economic development, enhancing transit, supporting the regional creative economy, encouraging water conservation and restoration, and integrating workforce training opportunities.

6. Business Oregon

Business Oregon is the state economic development agency, looking to support and grow Oregon industries and workforce, and recruit new economic activity. Business Oregon is part of the Regional Solutions Team and serves similar regions across the state. The agency offers a broad range of economic development initiatives for businesses and communities, including guidance, education, analysis, funding, and referrals to other partners. Business Oregon is an excellent resource for economic development questions that can benefit from a statewide knowledge base.

7. Oregon Department of Land Conservation and Development (DLCD)

DLCD can provide guidance and sometimes funding for economic development planning efforts for local jurisdictions. The agency can assist with the technical aspects of updating the economic aspects of the Comprehensive Plan and development codes related to commercial and industrial land. A key aspect of local economic development (and the focus of this project) is ensuring the availability of the right types of sites with the proper zoning to accommodate projected economic growth.

8. Klamath Community College - Small Business Development Center (SBDC)

Klamath Community College’s Small Business Development Center (SBDC) provides expert business advice and education to help existing and future business owners grow and succeed in Klamath and Lake counties. The center supports new and experienced small business owners, and their goal is to help make small businesses thrive in the local economy. The SBDC serves innovators, entrepreneurs and small to medium for-profit businesses with two primary services: confidential no-cost business advising and training. Their advisers have owned their own businesses and share their experience with participants. The Klamath Community College SBDC is part of the Oregon SBDC network that connects local businesses to statewide resources.

9. Klamath IDEA (Inspire Development – Energize Acceleration)

The Klamath IDEA (opened in 2017) provides support to entrepreneurs for start-up, business expansion, product development and commercialization—with the long-term goal of sustainable job creation in Klamath County. This project continues to support the entrepreneurial spirit, particularly when it leads to new jobs and enriches the community and its economy. The IDEA is the starting point for a venture to grow, mature, and ultimately move on to become a successful member of the greater business community. Klamath IDEA brings education, economic development, private business, financial institutions, municipal, county, and state governments together with

entrepreneurs, innovators, and successful businesses to accelerate job creation and promote marketable commodities to expand the local and state economy. The concept behind Klamath IDEA was to bring education, economic development, private business, financial institutions, and municipal, county, and state governments together with entrepreneurs, innovators, and successful businesses to accelerate job creation and promote marketable commodities to expand the local and state economy. Project identification and recruitment efforts included forums and presentations to the community (including students), outreach to other start-up and accelerator programs to identify clients, and the creation of an innovation fair to showcase ideas from around the region.

10. Office of Small Business Assistance

The Office of Small Business Assistance serves as an advocate for small businesses and their interests from the Office of the Secretary of State. The office is meant to serve as an advocate outside of the executive and legislative branches, providing information on starting, growing, or closing a business. The office also can support small businesses who believe they may be facing unfair or excessive state regulatory action and help to find resolutions.

IV. FORECAST OF EMPLOYMENT AND LAND NEED

CITY OF KLAMATH FALLS UGB EMPLOYMENT FORECASTS

Oregon Statewide Planning Goal 9 requires that jurisdictions plan for a 20-year supply of commercial and industrial capacity to meet projected employment needs. 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 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 2022, the commencement year for the planning period. Employment growth will come as the result of net-expansion of 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 a major employer.

OVERVIEW OF EMPLOYMENT FORECAST METHODOLOGY

Our methodology starts with employment forecasts by major industry classification. 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).



The first analytical step of the analysis is to update covered employment to the 2022 base year. Quarterly Census of Employment and Wages (QCEW) data was used to determine the City of Klamath Falls UGB's covered employment by industry through 2020. To update these estimates, we use observed industry specific growth rates for Klamath County between 2020 and 2022. Trend data was not available at the geographic level of the Klamath Falls UGB.

The second step in the analysis is to convert “covered”³ 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 2010 through 2020. The adjusted 2022 total employment base for the City of Klamath Falls UGB is 18,871 jobs.

FIGURE 4.02: UPDATE TO 2020 BASELINE AND CONVERSION OF COVERED TO TOTAL EMPLOYMENT

Major Industry Sector	QCEW Employment			Total Emp. Conversion ²	2022 Estimate
	2020 Employment	'20-'22 County Δ ¹	2022 Estimate		
Construction	887	3.8%	921	82%	1,123
Manufacturing	909	4.9%	953	98%	975
Wholesale Trade	548	3.3%	566	98%	579
Retail Trade	2,741	3.0%	2,823	95%	2,963
T.W.U.	611	0.8%	616	91%	675
Information	139	-1.5%	137	95%	145
Finance & Insurance	447	0.8%	451	92%	491
Real Estate	193	0.8%	195	92%	212
Professional & Technical Services	645	0.9%	651	91%	715
Administration Services	834	0.9%	842	91%	925
Education	1,598	0.3%	1,603	96%	1,678
Health Care/Social Assistance	4,123	0.3%	4,136	96%	4,330
Leisure & Hospitality	1,853	7.3%	1,988	95%	2,103
Other Services	699	7.9%	754	86%	880
Government	1,094	-1.6%	1,076	100%	1,076
TOTAL	17,321	2.3%	17,713	94%	18,871

1/Growth rate calculated using CES data for Klamath County

2/ Bureau of Economic Analysis (2020 National Averages)

T.W.U. = Transportation, Warehousing, and Utilities

SCENARIO 1: 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 a methodological approach that will not be challenged. The most applicable for the City of Klamath Falls is 660-024-0040(9)(a)(A), which recommends reliance on the most recent regional forecast published by the Oregon Employment Department. This method applies industry specific growth rates for the South/Central Oregon Workforce Region (Klamath and Lake counties) to the City of Klamath Falls UGB 2022 base. This method results in an average annual growth rate of 1.2%, with total job growth of 4,875 jobs over the forecast period.

SCENARIO 2: ADJUSTED EMPLOYMENT FORECAST

The second forecast scenario was influenced by the research and analysis conducted in the EOA. This scenario formulates an employment growth trajectory based on identified trends, a more optimistic growth outlook for targeted industries, and input from the project technical advisory committee. Further, the alternative scenario recognizes that economic development efforts and public policy can influence realized growth in targeted sectors. This scenario considers the influence

³ 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.

of known or anticipated development over the near and medium-term horizon. This scenario forecasts an average annual growth rate of 1.7% for the period, yielding a net increase of 7,678 jobs through 2042.

FIGURE 4.03: COMPARISON OF ALTERNATIVE FORECASTS, CITY OF KLAMATH FALLS UGB

Industry	SCENARIO I (Regional Forecast)				SCENARIO II (Adjusted)			
	2022	2042	Chg.	AAGR	2022	2042	Chg.	AAGR
Construction	1,123	1,488	365	1.4%	1,123	1,753	630	2.3%
Manufacturing	975	986	11	0.1%	975	1,588	613	2.5%
Wholesale Trade	579	674	95	0.8%	579	674	95	0.8%
Retail Trade	2,963	3,242	279	0.5%	2,963	3,666	703	1.1%
T.W.U.	675	919	244	1.6%	675	919	244	1.6%
Information	145	125	-20	-0.7%	145	267	123	3.1%
Finance & Insurance	491	521	31	0.3%	491	521	31	0.3%
Real Estate	212	235	23	0.5%	212	235	23	0.5%
Professional & Technical Services	715	794	78	0.5%	715	893	178	1.1%
Administration Services	925	1,026	101	0.5%	925	1,138	213	1.0%
Education	1,678	2,168	490	1.3%	1,678	2,340	661	1.7%
Health Care	4,330	5,594	1,264	1.3%	4,330	6,036	1,706	1.7%
Leisure & Hospitality	2,103	3,519	1,415	2.6%	2,103	4,012	1,909	3.3%
Other Services	880	1,146	266	1.3%	880	1,196	316	1.5%
Government	1,076	1,310	234	1.0%	1,076	1,310	234	1.0%
TOTAL:	18,871	23,746	4,875	1.2%	18,871	26,549	7,678	1.7%

SUMMARY OF EMPLOYMENT FORECAST SCENARIOS

The two forecast scenarios in this analysis have average annual growth rates ranging from 1.2% to 1.7%. Employment growth estimates range from 4,875 to 7,678 net new jobs. The estimates in the preceding analysis are useful in creating a baseline understanding of growth prospects by industry. These are common and accepted approaches when looking at large geographic regions. Forecasts grounded in broad based economic variables do not account for 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 Klamath Falls, in which a single firm’s location and/or operational decision may substantively impact the rate of growth.

The forecasts were broken down into four five-year increments. The initial five year period was informed by known development prospects in the region while the remaining periods assumed a consistent rate of growth over the period. We would fully expect that a twenty-year forecast will include multiple business cycles, and that growth will be variable.

FIGURE 4.04: SUMMARY OF PROJECTION SCENARIOS, CITY OF KLAMATH FALLS UGB

Industry	Overall Employment					Net Change by Period				Total 22-42
	2022	2027	2032	2037	2042	22-27	27-32	32-37	37-42	
SCENARIO 1 (Regional Trends)										
Construction	1,123	1,385	1,293	1,387	1,488	262	-92	94	101	365
Manufacturing	975	978	980	983	986	3	3	3	3	11
Wholesale Trade	579	602	625	649	674	22	23	24	25	95
Retail Trade	2,963	3,030	3,099	3,170	3,242	67	69	71	72	279
T.W.U.	675	729	788	851	919	54	58	63	68	244
Information	145	139	134	129	125	-5	-5	-5	-5	-20
Finance & Insurance	491	498	506	514	521	8	8	8	8	31
Real Estate	212	217	223	229	235	6	6	6	6	23
Professional & Technical Services	715	734	753	773	794	19	19	20	20	78
Administration Services	925	949	974	1,000	1,026	24	25	26	26	101
Education	1,678	1,789	1,907	2,034	2,168	111	118	126	134	490
Health Care	4,330	4,616	4,921	5,247	5,594	286	305	325	347	1,264
Leisure & Hospitality	2,103	2,392	2,721	3,094	3,519	289	328	373	425	1,415
Other Services	880	940	1,005	1,073	1,146	60	64	69	73	266
Government	1,076	1,131	1,188	1,248	1,310	54	57	60	63	234
TOTAL:	18,871	20,131	21,117	22,379	23,746	1,260	987	1,262	1,367	4,875
SCENARIO 2 (Modified)										
Construction	1,123	1,435	1,534	1,640	1,753	312	99	106	113	630
Manufacturing	975	1,601	1,597	1,593	1,588	626	-4	-4	-4	613
Wholesale Trade	579	602	625	649	674	22	23	24	25	95
Retail Trade	2,963	3,245	3,380	3,520	3,666	282	135	140	146	703
T.W.U.	675	729	788	851	919	54	58	63	68	244
Information	145	269	268	268	267	124	0	0	0	123
Finance & Insurance	491	498	506	514	521	8	8	8	8	31
Real Estate	212	217	223	229	235	6	6	6	6	23
Professional & Technical Services	715	769	808	850	893	54	39	41	43	178
Administration Services	925	974	1,026	1,080	1,138	49	52	54	57	213
Education	1,678	1,824	1,982	2,153	2,340	145	158	172	186	661
Health Care	4,330	4,705	5,113	5,555	6,036	375	407	443	481	1,706
Leisure & Hospitality	2,103	2,590	2,997	3,467	4,012	486	407	471	545	1,909
Other Services	880	1,000	1,062	1,127	1,196	120	61	65	69	316
Government	1,076	1,131	1,188	1,248	1,310	54	57	60	63	234
TOTAL:	18,871	21,590	23,095	24,743	26,549	2,718	1,505	1,648	1,806	7,678

- T.W.U. (Transportation, Warehousing, Utilities)

EMPLOYMENT LAND FORECAST

The next analytical step in our analysis is to convert projections of employment into forecasts of land demand over the planning period. For this analysis we utilized Scenario II, which reflects observed trends and modifies some of the industry patterns based on the target industry analysis and known developments in the pipeline.

The generally accepted methodology for this conversion begins by allocating employment by sector into a distribution of building typologies those economic activities usually locate in. As an example, insurance agents typically locate in traditional office space, usually along commercial corridors. However, a percentage of these firms are 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 clearing 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 two acres to accommodate its structure, setbacks, parking,

and necessary yard/storage space. This building would have a FAR of roughly 0.29. Demand for space is then converted to net acres using a standard floor area ratio FAR for each development form.

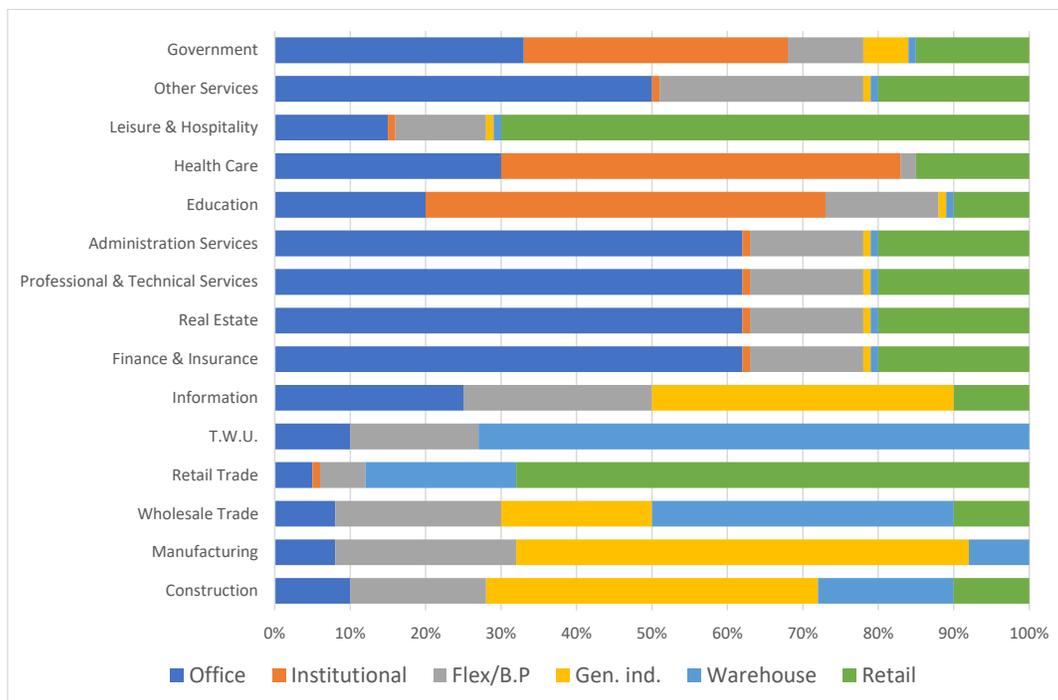
LAND DEMAND ANALYSIS – ADJUSTED FORECAST

In this analytical step we allocate employment growth to standard building typologies. The building typology matrix represents the share of sectoral employment that utilize various building types.

FIGURE 4.05: DISTRIBUTION OF EMPLOYMENT BY SPACE TYPE, CITY OF KLAMATH FALLS UGB

Industry Sector	20-year Job Forecast		BUILDING TYPE MATRIX					
	Number	AAGR	Office	Institutional	Flex/B.P	Gen. ind.	Warehouse	Retail
Construction	630	2.3%	10%	0%	18%	44%	18%	10%
Manufacturing	613	2.5%	8%	0%	24%	60%	8%	0%
Wholesale Trade	95	0.8%	8%	0%	22%	20%	40%	10%
Retail Trade	703	1.1%	5%	1%	6%	0%	20%	68%
T.W.U.	244	1.6%	10%	0%	17%	0%	73%	0%
Information	123	3.1%	25%	0%	25%	40%	0%	10%
Finance & Insurance	31	0.3%	62%	1%	15%	1%	1%	20%
Real Estate	23	0.5%	62%	1%	15%	1%	1%	20%
Professional & Technical Services	178	1.1%	62%	1%	15%	1%	1%	20%
Administration Services	213	1.0%	62%	1%	15%	1%	1%	20%
Education	661	1.7%	20%	53%	15%	1%	1%	10%
Health Care	1,706	1.7%	30%	53%	2%	0%	0%	15%
Leisure & Hospitality	1,909	3.3%	15%	1%	12%	1%	1%	70%
Other Services	316	1.5%	50%	1%	27%	1%	1%	20%
Government	234	1.0%	33%	35%	10%	6%	1%	15%
TOTAL	7,678	1.7%	22%	18%	12%	10%	7%	31%

FIGURE 4.06: ASSUMED DISTRIBUTION OF SPACE BY TYPE AND INDUSTRY SECTOR, CITY OF KLAMATH FALLS UGB



Under the adjusted employment forecast scenario, employment housed in retail, office, institutional, and flex/business park space accounts for the greatest share of growth, followed by employment housed in general industrial and warehouse/distribution space.

FIGURE 4.07: NET CHANGE IN EMPLOYMENT ALLOCATED BY BUILDING TYPE, CITY OF KLAMATH FALLS UGB

Industry Sector	NET CHANGE IN EMPLOYMENT BY BUILDING TYPE - 2022-2042						Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Retail	
Construction	63	0	113	277	113	63	630
Manufacturing	49	0	147	368	49	0	613
Wholesale Trade	8	0	21	19	38	10	95
Retail Trade	35	7	42	0	141	478	703
T.W.U.	24	0	41	0	178	0	244
Information	31	0	31	49	0	12	123
Finance & Insurance	19	0	5	0	0	6	31
Real Estate	14	0	3	0	0	5	23
Professional & Technical Services	110	2	27	2	2	36	178
Administration Services	132	2	32	2	2	43	213
Education	132	350	99	7	7	66	661
Health Care	512	904	34	0	0	256	1,706
Leisure & Hospitality	286	19	229	19	19	1,336	1,909
Other Services	158	3	85	3	3	63	316
Government	77	82	23	14	2	35	234
TOTAL	1,651	1,370	934	761	555	2,408	7,678

Employment growth estimates by building type are then converted to demand for physical space. This conversion assumes the typical space needed per employee. This step also assumes a market clearing 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 are assumed to have no vacancy.

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 4.08: NET ACRES REQUIRED BY BUILDING TYPOLOGY, CITY OF KLAMATH FALLS UGB, 20-YEAR

	DEMAND BY GENERAL USE TYPOLOGY, 2020-2040						Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Retail	
Employment Growth	1,651	1,370	934	761	555	2,408	7,678
Avg. SF Per Employee	350	600	990	600	1,500	500	627
Demand for Space (SF)	577,900	822,300	924,200	456,400	831,900	1,203,900	4,816,600
Floor Area Ratio (FAR)	0.25	0.25	0.25	0.25	0.27	0.20	
Market Vacancy	10.0%	0.0%	10.0%	5.0%	5.0%	10.0%	
Implied Density (Jobs/Acre)	28.0	18.1	9.9	17.2	7.4	15.7	15.3
Net Acres Required	59.0	75.5	94.3	44.1	74.5	153.5	500.9

Commercial office and retail densities are 28.0 and 15.7 jobs per acre, respectively. Industrial uses range from 17.2 for general industrial space to 7.4 jobs per acre for warehouse/distribution. The overall weighted employment density is 15.3 jobs per

acre, with the projected 7,678-job expansion in the local employment base through 2042 requiring an estimated 500.9 net acres of employment land.

In addition to assuring adequate capacity for employment-driven land needs over a twenty-year horizon, local jurisdictions are also required to demonstrate that they have an adequate capacity of readily available sites to meet their more immediate needs, which are defined as employment land needs over the next five years. As shown in the following table, that need is estimated at 176.2 net acres in the City of Klamath Falls UGB.

FIGURE 4.09: NET ACRES REQUIRED BY BUILDING TYPOLOGY, CITY OF KLAMATH FALLS UGB, 5-YEAR

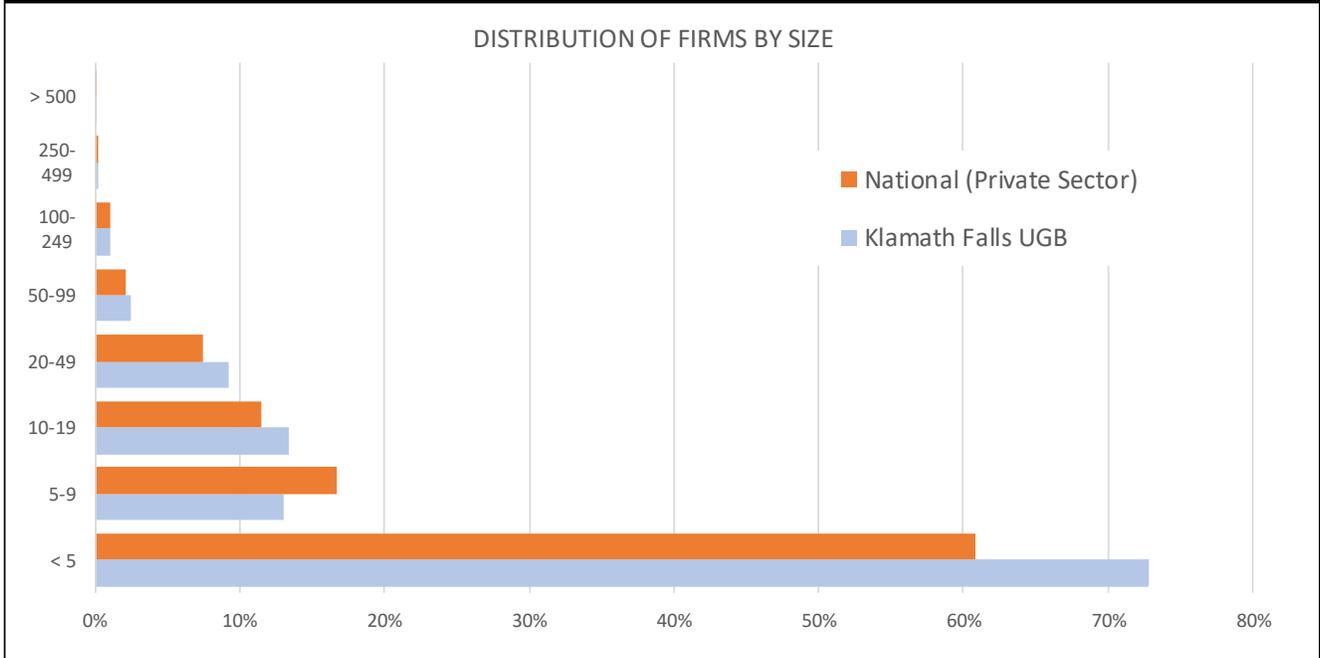
	DEMAND BY GENERAL USE TYPOLOGY, 2020-2025						Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Retail	
Employment Growth	596	305	329	571	188	730	2,718
Avg. SF Per Employee	350	600	990	600	1,500	500	628
Demand for Space (SF)	208,500	182,900	326,000	342,700	282,100	364,800	1,707,000
Floor Area Ratio (FAR)	0.25	0.25	0.25	0.25	0.27	0.20	
Market Vacancy	10.0%	0.0%	10.0%	5.0%	5.0%	10.0%	
Implied Density (Jobs/Acre)	28.0	18.1	9.9	17.2	7.4	15.7	15.4
Net Acres Required	21.3	16.8	33.3	33.1	25.2	46.5	176.2

There is a significant distinction between capacity and readily available site supply. The readily available inventory must currently have appropriate entitlements and infrastructure capacity to accommodate short-term development.

The local employment base is dominated by very small firms as well as a broad range of mid-sized firms, with the local economic base showing a higher proportion than the national average for firms below five employees and above ten employees. The local economy had 19 firms with more than 100 employees in 2020.

FIGURE 4.10: DISTRIBUTION OF FIRMS BY SIZE, CITY OF KLAMATH FALLS UGB - 2020

Industry	Size of Firm/Employees								Total
	< 5	5-9	10-19	20-49	50-99	100-249	250-499	> 500	
Agriculture, forestry, fishing, and hunting	14	2	2	1	1	0	0	0	20
Mining	0	0	0	1	0	0	0	0	1
Construction	107	19	11	8	3	0	0	0	148
Food Manufacturing	1	1	1	0	0	0	0	0	3
Wood Manufacturing	7	2	2	3	1	2	0	0	17
Metals Manufacturing	7	2	6	4	0	0	0	0	19
Utilities	3	1	3	0	1	0	0	0	8
Wholesale trade	31	7	10	6	2	0	0	0	56
Retail trade	95	31	33	18	3	3	2	0	185
Transportation	16	7	4	4	1	0	0	0	32
Delivery and warehousing	3	1	4	0	2	0	0	0	10
Information	20	1	4	2	0	0	0	0	27
Finance and Insurance	49	17	6	1	2	0	0	0	75
Real Estate and Rental	56	4	2	1	0	0	0	0	63
Professional, Scientific, and Technical Services	86	11	13	6	1	0	0	0	117
Management of Companies and Enterprises	4	0	0	2	2	1	0	0	9
Administrative and Waste Management	50	4	6	2	1	1	0	0	64
Educational services	11	4	9	9	5	2	1	0	41
Health care and social assistance	312	34	34	17	8	5	0	1	411
Arts, Entertainment, and Recreation	14	5	3	2	0	0	0	0	24
Accommodation and Food Services	62	16	36	33	1	0	0	0	148
Other services	136	21	10	4	1	0	0	0	172
Government	21	7	5	17	2	1	0	0	53
TOTAL	1,105	197	204	141	37	15	3	1	1,518



SOURCE: State of Oregon QCEW Data

ADDITIONAL CONSIDERATIONS IN LAND DEMAND

Beyond the consideration of gross acreage, there is a significantly broader range of site characteristics that industries would require to accommodate future growth. We summarize some key findings here:

- Industrial buildings are generally more susceptible to slope constraints due to larger building footprints. For a site to be competitive for most industrial uses, a 5% slope is the maximum for development sites. Office and commercial uses are generally smaller and more vertical, allowing for slopes up to 10%.
- Most industries require some direct access to a major transportation route, particularly manufacturing and distribution industries that move goods throughout the region and beyond. 10 to 20 miles to a major interstate is generally acceptable for most manufacturing activities, but distribution activities require 5 miles or less and generally prefer a direct interstate linkage. Visibility and access are important to most commercial activities and site location with both attributes from a major commercial arterial is commonly required.
- Access and capacity for water, power, gas, and sewer infrastructure is more important to industrial than commercial operations. Water/sewer lines of up to 10" are commonly required for large manufacturers. Appendix A details utility infrastructure requirements by typology.
- Fiber telecommunications networks are likely to be increasingly required in site selection criteria for many commercial office and manufacturing industries. Medical, high-tech, creative office, research & development, and most professional service industries will prefer or require strong fiber access in the coming business cycles.

V. BUILDABLE LANDS INVENTORY

INTRODUCTION

The Buildable Lands Inventory (BLI) is intended to identify commercial and industrial lands that are available for and suitable for development for employment uses within the Klamath Falls UGB. Information was compiled on buildable lands to meet the City's economic development objectives.⁴

METHODOLOGY

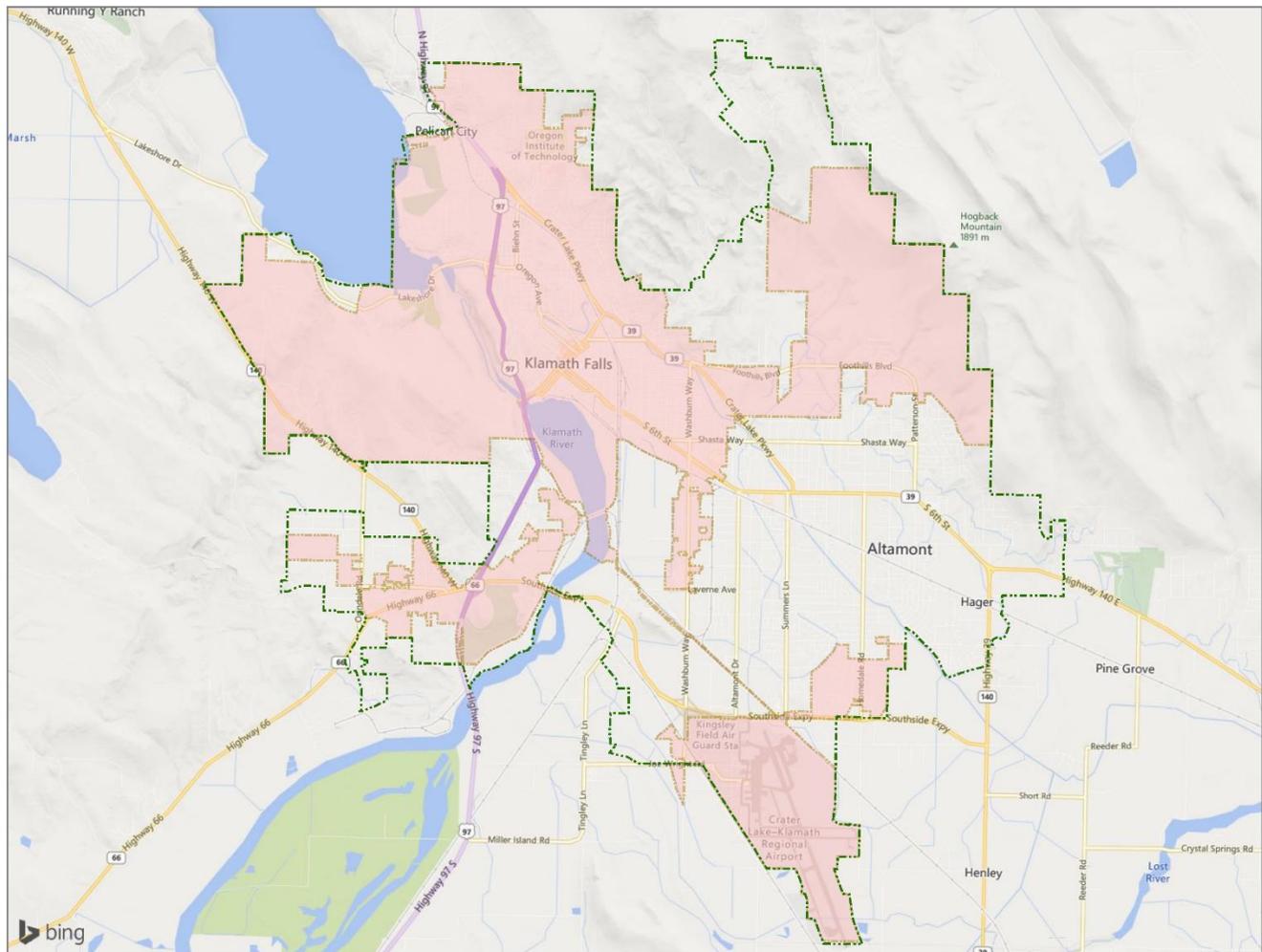
To determine the City's buildable lands, geographic information systems (GIS) data from the City, Klamath County, the Federal Emergency Management Agency (FEMA), Oregon Department of State Lands, and Bing Maps was used to review information on parcels, zoning, assessed value, and topographic conditions to:

- *Categorize land zoned 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.*

The study area includes the area within the City of Klamath Falls City Limits and the City of Klamath Falls Urban Growth Boundary. Areas within the UGB outside of the city limits are within unincorporated Klamath County.

⁴ Mackenzie., Technical Memo: City of Klamath Falls Employment Lands Buildable Lands Inventory, May12, 2023

FIGURE 5.1: CITY OF KLAMATH FALLS UGB



SOURCE: Mackenzie.

The areas noted in Table 5.1 were analyzed as part of this employment land BLI.⁵ Rather than use comprehensive plan designations, the commercial and industrial zoning classifications were based on their categories identified in the City of Klamath Falls Community Development Ordinance and Klamath County Land Development Code. This approach is consistent with the prior approach summarized in the City’s Comprehensive Plan⁶, which notes:

The Klamath County Comprehensive Plan and the Klamath Falls Urban Growth Management Agreement reference the 1981 City of Klamath Falls plan map (which applies to land within the City Limits) and the 1984 Klamath County plan map (which applies to the unincorporated area within the UGB). However, based on discussions with city and county staff, these maps are not maintained and rarely used because the city and county rely on their respective zoning maps to determine land use within the Urban Area. Since this is the case, it was decided (at least for the time being) that the Urban Area Plan should be implemented by a “one map” system – which means that the city and county

⁵ The Downtown Business (DB) Overlay was not used as the overlay does not affect permitted uses. The Special Reserve (SR) area is excluded from the analysis as the requirements of the zone are such that the SR zone is, in effect, conservation and open space area designed to meet Goal 5.

⁶ Klamath Falls Urban Area Comprehensive Plan, Volume I (2022). Prepared by Winterbrook Planning.

zoning maps function as both the comprehensive plan map and the zoning map within their respective jurisdictions.

TABLE 5.2: CITY OF KLAMATH FALLS UGB EMPLOYMENT AREAS

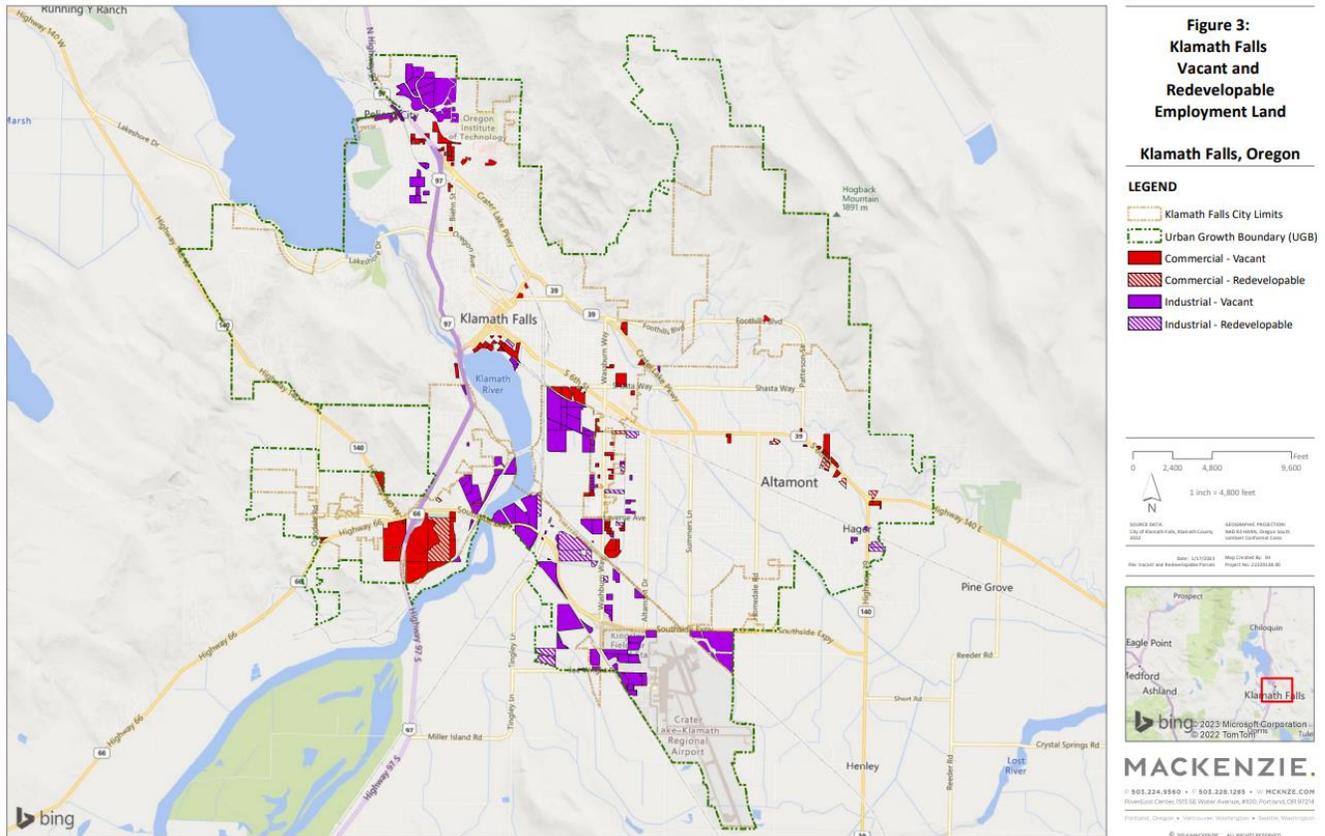
Areas in City Limits	
Zone Abbreviation	Zone Name
Commercial Zones	
NC	Neighborhood Commercial
GC	General Commercial
MU	Mixed Use
Industrial Zones	
I	Industrial
LI	Light Industrial
PUD	Planned Unit Development (Airport Business Park & Campus)
Areas in UGB (Unincorporated Klamath County)	
Commercial Zones	
CN	Neighborhood Commercial
CG	General Commercial
CR	Recreational Commercial
CT	Transportation Commercial
Industrial Zones	
IL	Light Industrial
IH	Heavy Industrial

Those employment areas listed in Table 6.2 are graphically depicted in Figure 5.3.

- 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 5.4.

FIGURE 5.4: CITY OF KLAMATH FALLS UGB VACANT AND REDEVELOPABLE PARCELS



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):

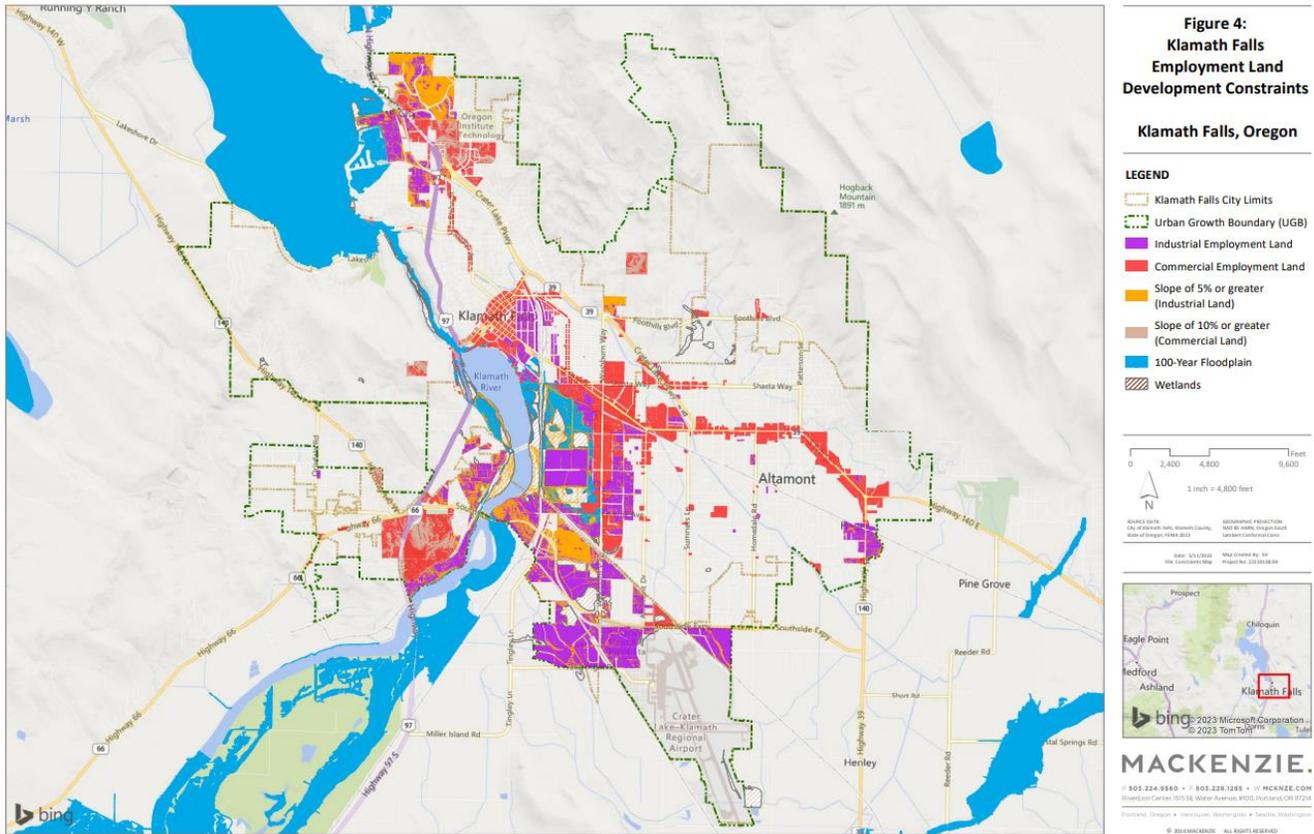
‘Development Constraints’ means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural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

Based on this definition, for the Klamath Falls 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 floodplain.^{7,8}
- Areas with slopes of 5% or greater in areas with industrial zoning.
- Area with slopes of 10% or greater in areas with commercial zoning.
- Wetlands identified in the Oregon Department of State Lands' (DSL) wetland data.

The resulting site constraints on employment land are depicted in Figure 5.5.

FIGURE 5.5: CITY OF KLAMATH FALLS UGB EMPLOYMENT LAND DEVELOPMENT CONSTRAINTS



BUILDABLE EMPLOYMENT LANDS

The areas with constraints (Figure 5.5) were then deducted from the vacant and redevelopable parcels (Figure 5.4) 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 small parcels less than 0.10 acres is not feasible (this removed two parcels from the inventory).

⁷ Per City Staff, the area south and east of the Union Pacific Railroad has not been mapped as floodplain, consistent with the ongoing Federal Emergency Management Agency (FEMA) Certification process.

⁸ The currently adopted FEMA FIRM Panel(s) were effective as of May 6, 1985. Recently, FEMA in cooperation with the State of Oregon, Klamath County, tribes, and local communities, has updated flood maps to represent the risk of flooding more accurately in Klamath County. The preliminary/proposed (FEMA) Floodplain Data, obtained from Klamath County, was used for the constraints analysis.

The results of this analysis for Klamath Falls UGB Limits are summarized in Table 5.6 and shown graphically in Figure 5.7.

TABLE 5.6: KLAMATH FALLS EMPLOYMENT BUILDABLE LANDS INVENTORY

Zone Abbreviation	Vacant		Redevelopable		Total	
	Number of Parcels	Net Buildable Acreage	Number of Parcels	Potential Acreage	Number of Parcels	Potential Acreage
Areas in City Limits						
Commercial Zones						
GC	53	173.44	3	44.07	56	217.51
MU	9	24.76	0	0	9	24.76
NC	0	0	0	0	0	0
PUD (Commercial)	1	0.27	0	0	1	0.27
<i>Commercial subtotal</i>	<i>63</i>	<i>198.47</i>	<i>3</i>	<i>44.07</i>	<i>66</i>	<i>242.54</i>
Industrial Zones						
LI	9	9.95	0	0	9	9.95
I	28	107.00	1	3.15	29	110.15
PUD (Industrial)	18	29.86	0	0	18	29.86
<i>Industrial subtotal</i>	<i>55</i>	<i>146.81</i>	<i>1</i>	<i>3.15</i>	<i>56</i>	<i>149.96</i>
Areas in UGB (Unincorporated Klamath County)						
Commercial Zones						
CG	29	65.64	5	33.88	34	99.52
CT	1	12.95	0	0	1	12.95
<i>Commercial subtotal</i>	<i>30</i>	<i>78.59</i>	<i>5</i>	<i>33.88</i>	<i>35</i>	<i>112.47</i>
Industrial Zones						
IH	17	91.16	6	70.85	23	162.01
IL	21	33.14	4	12.72	25	45.86
<i>Industrial subtotal</i>	<i>38</i>	<i>124.30</i>	<i>10</i>	<i>83.57</i>	<i>48</i>	<i>207.87</i>
Summary						
Commercial Zones	93	277.06	8	77.95	101	355.01
Industrial Zones	93	271.11	11	86.72	104	357.83
Total	186	548.17	19	164.67	205	712.84

TABLE 5.8: REDEVELOPABLE LAND COST ESTIMATES

Areas in City Limits			
Zone Abbreviation	Number of Parcels	Potential Acreage	Redevelopment Site Preparation Cost Estimate
Areas in City Limits			
Commercial Zones			
GC	3	61.52	\$42.8-59.9 million
MU	0	0	N/A
NC	0	0	N/A
PUD	0	0	N/A
<i>Commercial subtotal</i>	<i>3</i>	<i>0</i>	<i>\$42.8-59.9 million</i>
Industrial Zones			
LI	0	0	N/A
I	1	3.47	\$2.3-3.2 million
PUD	0	0	N/A
<i>Industrial subtotal</i>	<i>1</i>	<i>3.47</i>	<i>\$2.3-3.2 million</i>
Areas in UGB (Unincorporated Klamath County)			
Commercial Zones			
CG	5	34.87	\$22.8-31.9 million
CT	0	0	N/A
<i>Commercial subtotal</i>	<i>5</i>	<i>34.87</i>	<i>\$22.8-31.9 million</i>
Industrial Zones			
IH	10	71.35	\$46.6-65.3 million
IL	4	13.97	\$9.1-12.8 million
In	14	85.32	\$55.7-78.0 million
Summary			
Commercial Zones	8	96.39	\$65.6-91.8 million
Industrial Zones	15	88.79	\$58.0-81.2 million
Total	23	185.18	\$123.6-173.0 million

While these sites are technically redevelopable in the inventory, the industrial land has an estimated cost of roughly \$15 per square foot to be prepared for development. As this figure is significantly greater than the market price for industrial land in the Klamath Basin, the ability of the market to utilize the redevelopable portion of the BLI is highly questionable without significant public investments to address site requirements.

BUILDABLE EMPLOYMENT LANDS PARCEL SIZES

Based on the buildable parcels in City Limits shown in Figure 5.7 and tabulated in Table 5.6, Mackenzie has sorted the net buildable land supply by parcel size for each zone, the results of which are shown in Table 5.9. As noted in the table, available commercial sites and available industrial sites largely fall into the 1-to-4.99-acre category. There are no parcels in the inventory with buildable acres exceeding 50 acres.

TABLE 5.9: KLAMATH FALLS EMPLOYMENT NET BUILDABLE LANDS INVENTORY BY PARCEL SIZE

Areas in City Limits									
Zone Abbreviation	0 to 0.99 acres	1 to 4.99 acres	5 to 9.99 acres	10 to 19.99 acres	20 to 29.99 acres	30 to 49.99 acres	50 to 99.99 acres	100+ acres	TOTAL
Areas in City Limits									
Commercial Zones									
GC	24	22	6	1	0	3	0	0	57
MU	1	7	0	1	0	0	0	0	9
NC	0	0	0	0	0	0	0	0	0
PUD (Commercial)	1	0	0	0	0	0	0	0	1
<i>Commercial subtotal</i>	26	29	6	2	0	3	0	0	67
Industrial Zones									
LI	4	5	0	0	0	0	0	0	9
I	6	14	8	1	0	0	0	0	29
PUD (Industrial)	13	5	0	0	0	0	0	0	18
<i>Industrial subtotal</i>	23	24	8	1	0	0	0	0	56
City Total	49	53	14	3	0	3	0	0	123
Areas in UGB (Unincorporated Klamath County)									
CG	18	12	2	1	1	0	0	0	34
CT	0	0	0	1	0	0	0	0	1
<i>Commercial subtotal</i>	18	12	2	2	1	0	0	0	35
Industrial Zones									
IH	2	12	5	2	1	1	0	0	23
IL	12	12	1	0	0	0	0	0	25
<i>Industrial subtotal</i>	14	24	6	2	1	1	0	0	48
Areas in UGB (Unincorporated Klamath County) Total	32	36	8	4	2	1	0	0	83
City Limits and Areas in UGB Total									
Total	81	89	22	7	2	4	0	0	206

VI. RECONCILING FORECASTED NEED WITH CAPACITY

As outlined in the Buildable Lands Inventory (BLI), the City of Klamath Falls UGB has a significant inventory of available sites to accommodate employment uses. An estimated inventory of 712.8 gross acres of net developable land is available, yielding a net inventory of 570.3 acres. Roughly half of this land is in Commercial zones, while the remainder has Industrial zoning.

Comparing this inventory to the 20-year forecast of employment land need generated earlier in this analysis indicates that the City of Klamath Falls UGB has an adequate land capacity to accommodate its forecasted commercial needs over this horizon. The overall projected demand for employment land in aggregate is roughly 500 acres. While there is a significant surplus for commercial uses, the net industrial inventory is below the projected 20-year demand in aggregate.

A summary of the net developable acres and projected demand is presented below.

FIGURE 6.1: RECONCILIATION OF BLI CAPACITY AND PROJECTED DEMAND, CITY OF KLAMATH FALLS UGB, 20-YEAR

EMPLOYMENT ZONING DESIGNATION	NET DEVELOPABLE ACRES/BLI	PROJECTED 20 YR. DEMAND	AGGREGATE SURPLUS/ (DEFICIT)
COMMERCIAL (RETAIL AND OFFICE)	284.0	153.5	130.5
General Commercial (GC)	174.0		
Mixed Use (MU)	19.8		
Neighborhood Commercial (NC)	0.0		
Planned Unit Development (PUD)	0.2		
General Commercial (GC-County)	79.6		
Transportation Commercial (CT-County)	10.4		
INDUSTRIAL (INDUSTRIAL AND OFFICE)	286.3	347.3	(61.1)
Light Industrial (LI)	8.0		
Industrial (I)	88.1		
PUD (Industrial)	23.9		
Heavy Industrial (IH-County)	129.6		
Light Industrial (IL - County)	36.7		
TOTAL	570.3	500.9	69.4

It is important to recognize that the actual needed acreage would be expected to significantly exceed the aggregate net need. The profile of demand is highly unlikely to match the inventory of sites. This is particularly true for larger users that may have specific site requirements. In other words, demand for a 100-acre site with rail access cannot be met by 20 five acre sites that are not contiguous.

SITE NEEDS

As noted previously, the aggregate need for employment land inherently understates the actual need, as the profile of demand for sites will almost always vary from the characteristics of the available inventory. The inventory includes nine sites over twenty acres, only one site over fifty acres, and no sites over a hundred acres. The inventory includes a total of 164.7 acres of potentially redevelopable land, but the cost of preparing these sites for development is estimated to range from \$124 to \$173 million (Table 5.8). This reflects estimated costs ranging from \$15 to \$20 per net square foot, which is significantly higher than the market value of most of these parcels.

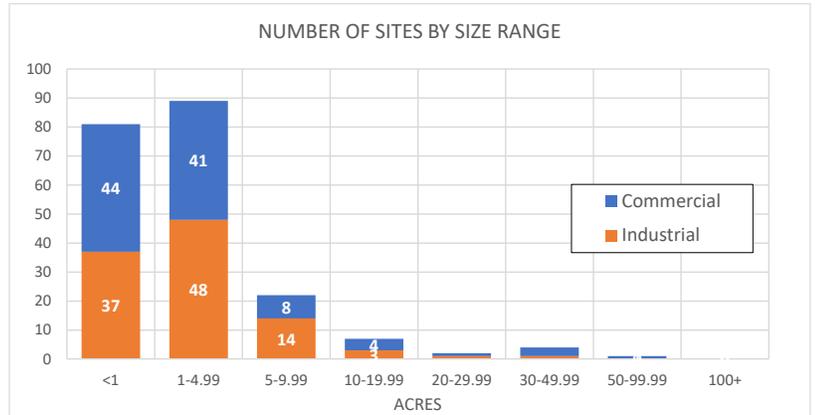


FIGURE 6.2: INVENTORY OF DEVELOPABLE PARCELS BY SIZE AND ZONING, CITY OF KLAMATH FALLS UGB

PLAN DESIGNATION	Vacant Acres	Redevelopable Acres	Total Potential Acreage	Estimated Net Acreage*	Parcels by Size							
					<1	1-4.99	5-9.99	10-19.99	20-29.99	30-49.99	50-99.99	100+
Commercial Zones	277.1	78.0	355.0	284.0	44	41	8	4	1	3	1	0
<i>General Commercial (GC)</i>	173.4	44.1	217.5	174.0	24	22	6	1	0	3	1	0
<i>Mixed Use (MU)</i>	24.8	0.0	24.8	19.8	1	7	0	1	0	0	0	0
<i>Neighborhood Commercial (NC)</i>	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0
<i>Planned Unit Development (PUD)</i>	0.3	0.0	0.3	0.2	1	0	0	0	0	0	0	0
<i>General Commercial (GC-County)</i>	65.6	33.9	99.5	79.6	18	12	2	1	1	0	0	0
<i>Transportation Commercial (CT-County)</i>	13.0	0.0	13.0	10.4	0	0	0	1	0	0	0	0
Industrial Zones	271.1	86.7	357.8	286.3	37	48	14	3	1	1	0	0
<i>Light Industrial (LI)</i>	10.0	0.0	10.0	8.0	4	5	0	0	0	0	0	0
<i>Industrial (I)</i>	107.0	3.2	110.2	88.1	6	14	8	1	0	0	0	0
<i>PUD (Industrial)</i>	29.9	0.0	29.9	23.9	13	5	0	0	0	0	0	0
<i>Heavy Industrial (IH-County)</i>	91.2	70.9	162.0	129.6	2	12	5	2	1	1	0	0
<i>Light Industrial (IL - County)</i>	33.1	12.7	45.9	36.7	12	12	1	0	0	0	0	0
TOTAL:	548.2	164.7	712.8	570.3	81	89	22	7	2	4	1	0

* Assumed 20% gross to net deduction

The forecasts also do not include the potential impact from any exogenous events, such as the recruitment of major employers not currently anticipated in the area. Examples would include employers such as chip manufacturers, major logistic hubs, and data centers.

The Technical Advisory Committee identified a need for additional large lot industrial sites, including sites with rail access. This perspective was shared by representatives from Business Oregon, the Klamath County Economic Development Association (KCEDA), and the South Central Oregon Economic Development District (SCOEDD). This would allow local economic development professionals to respond to the needs of firms requiring large acreage sites, which the current lack of inventory precludes. We project a need for five industrial sites over thirty acres in size over the next twenty years in the City of Klamath Falls UGB. The current BLI includes only one industrial site in this size range, indicating a need for four additional large acreage sites, preferably with rail access.

VII. ECONOMIC DEVELOPMENT STRATEGIES

This section discusses a range of strategies and/or action items that the city may consider that are consistent with the findings of this report.

ECONOMIC DEVELOPMENT OBJECTIVES AND POLICIES

Objectives are presented in UPPERCASE and related policies are in numbered lists below each objective.

- A **ACTIVELY STIMULATE ECONOMIC DEVELOPMENT AND GROWTH THAT WILL DIVERSIFY AND STRENGTHEN THE MIX OF ECONOMIC ACTIVITY IN THE LOCAL MARKETPLACE AND PROVIDE EMPLOYMENT OPPORTUNITIES FOR RESIDENTS.**
 - 1. The City and County will continually strive to strengthen the community’s industry, business, financial, medical, tourist and retail activities and to capitalize on its comparative advantages in the local and regional marketplace.
 - 2. Actively recruit and support companies, with a focus on targeted industries. Potential actions in support of this strategy include developing and updating marketing materials, attending industry tradeshows, following up on referrals by partner organizations, publicizing the success of local businesses, and highlighting competitive advantages of the area for proposals.
 - 3. Maintain and periodically update a list of targeted industries, with an emphasis on key traded sector industries providing relatively high wages.
 - 4. Coordinate business incubator opportunities and small business services. There are many agencies offering small business services, including Business Oregon, the SBA, the USDA, and local entities such as the Klamath Community College Small Business Development Center (SBDC) and Klamath IDEA. Complete on-going coordination and communication to ensure that agencies are leveraging each other’s resources and not duplicating services
 - 5. Continue regional economic development coordination. Economic development efforts, including promotion and marketing campaigns, can be coordinated at the state and multi-county level to take some burden off scarce local resources.
 - 6. Actively market the Klamath Falls enterprise zone and opportunity zone. Expand zones as required to capitalize on opportunities for job creation and diversification. Renew the zones as required and encourage local sponsors to offer additional incentives. Explore additional State and Federal zone designations, if applicable, that encourage localized investment.

- B **RETAIN AND SUPPORT THE EXPANSION OF THE EXISTING BUSINESSES IN KLAMATH FALLS.**
 - 1. The City and County shall seek ways to partner with the business, medical and educational communities to implement the Economic Element and advance common objectives.
 - 2. The City and County recognize that the expansion and/or redevelopment of existing employment sites is often more challenging than the development of vacant sites and shall consider ways to encourage the expansion and/or redevelopment of existing employment sites.
 - 3. The City and County will coordinate with Federal and State agencies and other stakeholders to plan its employment land base in ways that best balance the needs of business, other stakeholders, and the environment.
 - 4. The City and County, together with area economic development partners, will meet with all interested companies in Klamath Falls to identify opportunities and challenges. Survey companies during interviews and meetings to determine systematic roadblocks and opportunities to catalyze growth and expansion.

Provide rapid and responsive follow-up to all company meetings to resolve issues and capitalize on opportunities.

- C ASSURE AN ADEQUATE COMMERCIAL AND INDUSTRIAL LAND BASE TO ACCOMMODATE THE TYPES AND AMOUNT OF ECONOMIC DEVELOPMENT AND GROWTH ANTICIPATED IN THE FUTURE, WHILE ENCOURAGING EFFICIENT USE OF LAND AND PUBLIC FACILITIES WITHIN THE KLAMATH FALLS URBAN AREA.
1. The City and County will rely upon its Adjusted Employment Forecast in the City's 20-year Employment Projections, Land Demand Projections, Site Demand Projections, and feedback from statewide and regional economic development professionals when planning its employment land base.
 2. The City and County will utilize the short-term (five-year) employment land demand contained in the EOA.
 3. The City and County will maintain an adequate Short-Term Supply of employment land consistent with the EOA.
 4. The City and County recognize important differences among sites with respect to the characteristics demanded by respective industries, both for the expansion of existing businesses and new business attraction.
 5. The City and County may assist in the identification of sites for businesses that have unique requirements.
 6. The City and County shall place limits on commercial uses that are or can be permitted in industrial zones.
 7. The City and County shall place limits on low-density residential uses that are or can be permitted in commercial zones and all residential uses in industrial zones.
 8. The City and County shall designate lands in the vicinity of the Airport for uses that will take advantage of the airport infrastructure and related services.
 9. Consider funding industry-required public roads and infrastructure using innovative techniques.
 10. Regularly assess economic performance vis-à-vis projections. As part of the regular updating process, assess the local economic performance relative to the forecasts contained in the EOA. The EOA findings can be updated as required to reflect more current information and observed development patterns. The City should actively monitor the consumption of employment lands from the Buildable Lands Inventory to assure that adequate and appropriate short- and long-term capacity is maintained for employment needs.
- D TO DEVELOP LOCATION CRITERIA AND SITE DEVELOPMENT STANDARDS FOR COMMERCIAL AND INDUSTRIAL DEVELOPMENT WHICH ENCOURAGE EFFICIENT USE OF LAND AND PUBLIC FACILITIES, PARTICULARLY THE CITY AND COUNTY'S TRANSPORTATION SYSTEMS.
- E THE LIVABILITY OF A COMMUNITY IS AN IMPORTANT FACTOR IN THE LOCATION CHOICE OF BUSINESSES. THE CITY OF KLAMATH FALLS AND KLAMATH COUNTY SHALL CONTINUE TO STRIVE, MAINTAIN, AND ENHANCE THE LIVABILITY OF THE COMMUNITY.
1. The City and County recognizes that community amenities and quality of life considerations factor highly into the site location choice of business seeking to start new or relocate.
 2. Prioritize childcare as a workforce readiness issue. Childcare is a commonly identified need for working households if all adults are working, or working unusual hours, etc. Childcare is increasingly being raised as an important part of attracting and maintaining an available workforce. Home-based childcare businesses are also usually a category of self-employment.
 3. Maintain an adequate supply of affordable and available housing, so workforce housing is not a limiting factor in economic development.

IMPLEMENTATION

The City and County commercial and industrial zoning districts directly implement these objectives and policies. The following are non-binding implementation measures:

- **A-1(a)** Identify opportunities and incentives to encourage value-adding, family-wage business to expand or locate in the community.
- **A-1(b)** Support the retention and attraction of firms with high wage rates for all industries, but also encourage the attraction and retention of firms with high wage rates within their respective industry classifications.
- **A-1(c)** Encourage commercial uses and services which are not presently available to Klamath Falls residents to locate in the community.
- **A-1(d)** Participate in a joint public/private business development program to provide retention services and identify opportunities for the growth of existing businesses and the attraction of new firms to the community, in order to diversify the mix of employment opportunities.
- **A-1(e)** In recruiting new companies to the area, market comparative advantages, such as city-owned utilities, renewable energy, sales tax benefits, enterprise/opportunity zone and education/research infrastructure.
- **A-1(f)** Work with OIT and KCC to strategically encourage labor-training programs that match the personnel needs of firms now operating in the community and those industries which the city aspires to bring in.
- **A-1(g)** Work with OIT and KCC to encourage retraining programs to transition the current workforce to match skills needed in the firms operating in the community and those industries which the city aspires to bring in.
- **A-1(h)** Maintain good relations and frequent contact with Kingsley Field/the 173rd Fighter Wing, in effort to maintain and boost local military spending and to identify complementary and support companies seeking to locate in the area.
- **A-1(i)** Foster regional economic development relationships to identify spill-over opportunities from economic growth in targeted industries in Bend and/or Medford which cannot be accommodated.
- **A-1(j)** Target medium-scale general manufacturers as part of a comprehensive recruiting plan.
- **A-1(k)** Foster relationships with the medical community to create opportunities for additional local health care services and health care training with area education partners.
- **A-1(l)** Coordinate the city's economic development program with the citizens of the City of Klamath Falls, and community development-based organizations, Klamath County, and other local regional, State and Federal agencies such as KCEDA and SCOEDD.
- **B-1(a)** Identify opportunities and incentives to encourage local industry growth related to the area's competitive advantages.
- **B-1(b)** Increase the retention of retail commerce by providing opportunities to increase the diversity of the city's retail landscape.
- **B-1(c)** Partner with regional and State agencies as well as national industry groups to identify new potential for emerging renewable energy industries, related to solar, geothermal, or other resources.
- **B-2(a)** Consider adopting regulations that differentiate between the development of vacant sites and the expansion and/or redevelopment of existing sites.
- **B-2(b)** Support additional investment in existing infill employment areas, rather than greenfield development, including programs supporting adaptive reuse.
- **B-2(c)** Continue to improve development review processes and regulations to provide a review system that is timely, nimble, and predictable.
- **C-2(a)** Update the Buildable Lands Inventory every five years to ensure adequate employment sites are available.
- **C-3(a)** Pursue means to rectify the EOA's projected deficit of buildable large lot industrial land through actions such as the redesignation of residential lands or possible UGB amendment to bring-in new lands suitable for large lot industrial use.
- **C-3(b)** Evaluate wetland and/or other environmental mitigation to increase developable land inventory.
- **C-5(a)** Assure demand projections for medium and large commercial and industrial sites are captured in aggregate land demand projections.
- **C-5(b)** The City and County shall protect large commercial and industrial sites by limiting land divisions except where part of larger development.
- **C-5(c)** The City and County shall protect large commercial and industrial sites by limiting the development of non-accessory solar farms/facilities within the urban area except when located on constrained lands that are otherwise non-buildable.
- **C-5(d)** Consider the transportation infrastructure needs of target industry opportunities when preparing Transportation System Plan updates and corridor plans to implement the city's Goal 9 objectives.

- **C-9(a)** Explore special assessments, such as local improvement districts to either fund or recapture the value created by major public or private investments in infrastructure.
- **D-1(a)** Encourage the creation of master planned employment districts that integrate industrial and/or commercial uses.
- **D-1(b)** Encourage utilizing Special Area Plans, master planned employment districts, Neighborhood Plans and Planned Unit Developments (PUDs) to integrate and mix residential development with employment development patterns. This may take the form of mixed-use overlay zones.
- **D-1(c)** Pursue the development of higher-intensity use of employment land in areas with planned or existing enhanced transportation connectivity, access to transit, and utility infrastructure.
- **D-1(d)** Evaluate current zoning and development standards, to ensure they are supportive of desired development outcomes.
- **E-1(a)** Support area school district and secondary learning’s pursuit of capital improvements and introduction/expansion of job-oriented training and curriculum.
- **E-1(b)** Continue efforts to enhance Klamath Falls’ reputation and image, both internally within the community, and outside the area.
- **E-1(c)** Market Klamath Falls quality of life amenities to incentivize the relocation of both individual workers (remote workers) and firms from larger urban areas.
- **E-1(d)** Focus on community beautification efforts and specific projects within high traffic corridors or highway gateways into Klamath Falls and downtown.
- **E-1(e)** The City and County shall continue to promote and preserve open space within the community and surrounding areas.
- **E-1(f)** The City and County shall continue to develop park, trail, and other outdoor recreation opportunities that are utilized by residents and visitors alike and that add to area amenities and quality of life.
- **E-1(g)** Partner with business owners, property owners, and business promotion groups such as the Klamath Falls downtown Association (KFDA) to support continuing development and redevelopment of the downtown area.
- **E-1(h)** The City shall encourage the renovation of and rehabilitation of buildings in the downtown area, especially those with historical significance, unique design, and vacant upper-stories.
- **E-1(i)** Evaluate opportunities to incentivize vertical mixed-use developments, especially in the downtown area, using techniques such as public parking, system development charge/permitting fee flexibility, and limited multifamily tax abatement.
- **E-1(j)** Encourage additional industrial and commercial development in areas that will not have a detrimental effect on living conditions and established residences.
- **E-2(a)** The City and County recognize the importance of childcare and shall support efforts to develop childcare services for the labor force.
- **E-3(a)** Evaluate and implement City and County code amendments that lower the barrier to single-family residential lot creation and unit development while maintaining standards.
- **E-3(b)** Evaluate and implement City and County code amendments that accommodate and lower the barrier to the development of middle housing types, such as multifamily (plexes and apartments), cottage cluster housing, and accessory dwelling units.
- **E-3(c)** Pursue the listed implementation measures from the 2019 Housing Needs Analysis (HNA), which have been incorporated into Goal 10 – Housing of the Comprehensive Plan.