



Northern Rural Training and  
Employment Consortium (NoRTEC)

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# Lassen County Labor Market Profile and Industry Sector Analysis

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Prepared for:

**NoRTEC Workforce Development Board**

Michael Cross, Executive Director

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# INTRODUCTION

The following is a labor market and industry/sector profile for Lassen County, California. This is an update to a prior version of the County Labor Market Profiles that were completed in the summer of 2017, which were completed using 2016 labor market data.



The quantitative data for the profile includes a geographic overview, demographic and labor force characteristics, industry analysis, occupation analysis, and labor force data. For the profile, the project team collected and analyzed data from Economic Modeling Specialists Int'l. (EMSI), U.S. Census Bureau, and the U.S. Bureau of Labor Statistics. Though 2019 is the current calendar year, 2018 labor market data are utilized as these represent the latest full calendar year of data available from federal statistical agencies.

## EXECUTIVE SUMMARY

The following are some of the most pertinent information and statistics uncovered in the process of creating this report.

### Social and Demographic Highlights

- Population growth in Lassen County significantly trails rates for California and the United States. Over the prior ten years, population decreased by 13% for Lassen County while population increased by 9% for the state and 8% for the nation.
- Lassen County has an aging population. Over the last ten years, individuals 65 years and older were the only age category to experience growth. Projections into 2023 show that population growth will continue to occur with those individuals and those aged 19 and younger.
- The highest level of educational attainment for most individuals in Lassen County is a High School Diploma. Lassen County has higher percentages of individuals with a High School Diploma and Associate's degree than those in the NoRTEC region, state, and nation.
- Over 4,200 individuals live and work in Lassen County. The commuting patterns show that the county gains a total of 35 workers with 2,729 commuting into the county and 2,694 commuting out.
- Income levels in Lassen County are higher than most counties in the NoRTEC region. Median household income in the county is \$54,083 and over 14% of the area population is in poverty. Likewise, 3% of the county population receives CalFresh.
- As of December 2018, there were 9,790 individuals in the Lassen County labor force, of which 461 were unemployed.
- Since the 2016 version of this report was released, the Lassen County economy has seen no net change in employment. The highest growth sectors include Government, and Agriculture, Forestry, Fishing, & Hunting. These sectors added 80 jobs, accounting for nearly half of the county's new job growth. Meanwhile, sectors that performed poorly in terms of employment change include Construction, and Accommodation & Food Service.

- Between 2016 and 2018, Lassen County's population decreased slightly by 1.0% (-295 in numeric terms). Although population decreased on the whole, certain population groups expanded while others contracted. The highest growth age groups included those ages 70 to 74 years, while the largest decrease was among 20 to 24 year old's. By race/ethnicity group White Hispanics increased in population, while White, Non-Hispanics saw the biggest decline.

## Industry & Occupation Highlights

- Lassen County's largest industry sectors include Government; Retail Trade; Health Care and Social Assistance; Agriculture, Forestry, Fishing and Hunting; and Accommodation and Food Services. Government has more jobs than the other remaining industries in Lassen County.
- Nearly all industries at the 2-digit NAICS level have declined in jobs over the last ten years with the exception of Agriculture, Forestry, Fishing and Hunting. The sectors that experienced the greatest decline include Other Services (except Public Administration); Government; and Health Care and Social Assistance.
- Individual (4-digit North American Industry Classification System (NAICS) Code) industries with strong growth prospects for the county include: Crop Production; Local Government, Excluding Education and Hospitals; and State Government, Excluding Education and Hospitals.

# ECONOMIC IMPACT OF 2018 FOREST FIRES

Thomas P. Miller & Associates (TPMA) conducted an economic impact analysis of the northern California forest fires of 2018 for NoRTEC in January 2019. TPMA's analysis started with a literature review and an empirical observation of the economic effects of wildfires in the United States. The literature review provided general and specific trends on the topic. For the empirical review, TPMA focused on other highly destructive fires in the United States in terms of acreage, structures, or both. Since few federal data sources have yet to reveal the specific effects of the Camp and Carr fires on Northern California, these analyses were primarily based on observations of past similar events. In addition, Dr. Robert Eyster of Sonoma State University, a renown regional economist, has summarized some of the recent effects of the Carr and Camp Fires on northern California.

In general, economic impacts are most severe upon those counties in which the fires occurred, namely, Shasta and Butte, though some impacts upon adjacent counties is expected. The following are a few pertinent points that relate to likely affects on Lassen County.

- In keeping with patterns of wildfire economic impact on adjacent counties, the results of the Carr fire on Lassen County likely resulted small bump in wages (typically less than 1% increase) and no impact on jobs in quarter four of 2018.
- Historically, areas near wildfires suffer a slight lag in land-dependent industry sectors, such as tourism and agriculture, over the next several seasons.
- Forest service suppression spending on contractors located in Lassen equated to \$1.5 million between October 2017 and December 2018.

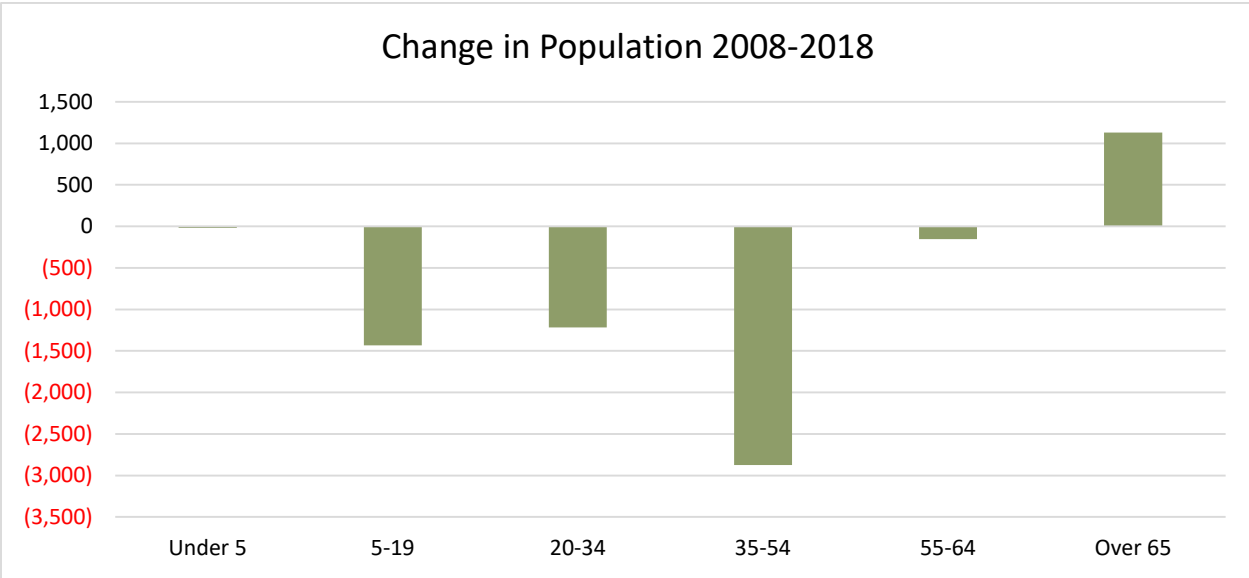
# DEMOGRAPHIC & LABOR FORCE CHARACTERISTICS

## Total Population

Lassen County is located along the eastern border of California. Between 2008 and 2018, the county has experienced a 13% decline in population, resulting in a loss of over 4,500 individuals. Over half of the population loss was concentrated in those between the ages of 35-54 (2,875) and the next five years paint a continual decline. The state and nation have experienced opposite trends in population change with increases of 9% and 8%, respectively.

The age cohorts that experienced the smallest percentage of population decline over the last ten years are those that are typically not in the labor force or preparing to exit the labor force. Individuals under the age of 5 experienced 1% decrease in population and those between the ages of 55-64 experienced a 4% decrease. However, individuals in Lassen County over 65 years of age experienced a 34% increase (1,128). Lassen County has an aging population that will affect the labor force as older individuals prepare to exit the workforce without a large enough cohort of younger individuals between the ages of 20-54 to fill those positions.

Age	2008 Population	2018 Population	Change 2008-2018	% Change 2008-2018	Projected Change 2018-2023	
Under 5	1,565	1,545	(20)	(1%)	2	0%
5-19	5,878	4,444	(1,434)	(24%)	23	1%
20-34	9,213	7,996	(1,217)	(13%)	(518)	(6%)
35-54	11,287	8,412	(2,875)	(25%)	(585)	(7%)
55-64	3,916	3,761	(155)	(4%)	(371)	(10%)
Over 65	3,367	4,495	1,128	34%	408	9%
Total	35,222	30,650	(4,572)	(13%)	(1,037)	(3%)



## Race/Ethnicity

The population of the region is predominately White, with 65% identifying as White in 2018, followed by 19% identifying as Hispanic. The top fastest growing race/ethnicity groups in the county are Native Hawaiian or Pacific Islander, Asian, and Two or More Races.<sup>1</sup> The fastest decline in race/ethnicity groups in Lassen County are Black (-23%), White (-16%), and American Indian or Alaskan Native (-14%). Although the county's population remains more than three-fifths White, increases in diverse populations could indicate a demand for more diverse community resource to best serve those populations.

Race/Ethnicity	2018 Population	Change 2008-2018	% Change 2008-2018
White	20,047	(3,808)	(16%)
Hispanic	5,870	(156)	(3%)
Black	2,362	(718)	(23%)
American Indian or Alaskan Native	859	(139)	(14%)
Two or More Races	865	84	11%
Asian	410	85	26%
Native Hawaiian or Pacific Islander	237	81	52%

## Educational Attainment

The percentage of individuals in Lassen County with a postsecondary degree trail those in the NoRTEC region and significantly trail those statewide and nationally. However, Lassen County has higher percentages of individuals with a High School Diploma and Associate's degree than those in the state and nation. The highest level of educational attainment for most individuals in Lassen County is a High School Diploma.

Education Level	2018 Lassen County Population	2018 Lassen County Percent	2018 Percent NoRTEC	2018 Percent California	2018 Percent US
Less Than 9th Grade	1,115	5.0%	4.9%	11.8%	6.8%
9th Grade to 12th Grade	2,472	11.1%	6.9%	7.0%	6.9%
High School Diploma	7,362	33.0%	25.3%	20.8%	27.6%
Some College	6,394	28.6%	30.5%	21.4%	20.7%
Associate's Degree	2,135	9.6%	9.8%	7.6%	8.0%
Bachelor's Degree	1,778	8.0%	15.0%	19.9%	18.6%
Graduate Degree and Higher	1,083	4.8%	7.6%	11.6%	11.3%

<sup>1</sup> The Hispanic population includes Hispanics in White, Black, Two or More Races, Asian, American Indian or Alaskan Native, Native Hawaiian, or Pacific Islander.

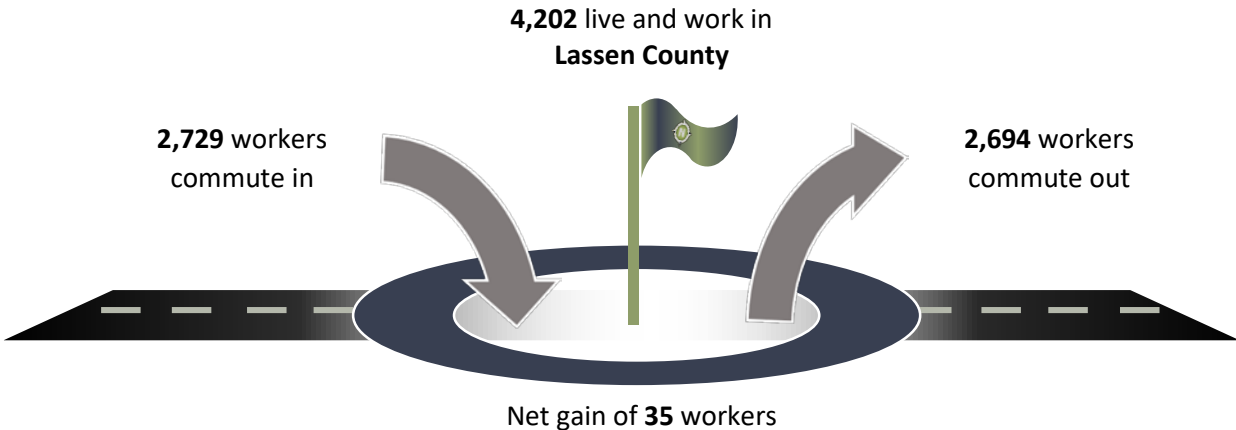
# Income

Compared with neighboring counties in the NoRTEC region, Lassen County has the second highest median household income of \$54,083, trailing Nevada County by \$6,527, however it still lags behind the state and national median household income. Lassen County also has the fourth lowest poverty rate of any county in the NoRTEC region at 14.6%. This is exactly on par with the national poverty rate and is lower than the state’s poverty rate of 15.1%.

County	Median Household Income 2013-2017	Poverty Rate
Butte	\$46,516	20.5%
Del Norte	\$41,287	23.2%
<b>Lassen</b>	<b>\$54,083</b>	<b>14.6%</b>
Modoc	\$39,296	18.1%
Nevada	\$60,610	12.1%
Plumas	\$50,266	13.3%
Shasta	\$47,258	18.1%
Sierra	\$44,190	12.3%
Siskiyou	\$40,884	20.7%
Tehama	\$42,512	20.9%
Trinity	\$36,563	19.9%
California	\$67,169	15.1%
United States	\$57,652	14.6%

# Commuting

The graphic below details the commuting patterns into and out of Lassen County in 2015. The county gains a net of 35 workers due to commuting patterns. Over 2,700 workers commute into the county and less than 2,700 commutes out. Over 4,200 individuals work and live in the county. Of those commuting into Lassen County for work, 59.7% are workers aged 30 to 54 and 54.4% of all commuting workers earn more than \$3,333 per month.





In addition to looking at commuting data by total population, it is also helpful to examine commuter statistics by occupational classification. The occupation groups that experienced the most in-commuters in 2018 included Protective Service Occupations (302 in-commuters) and Life, Physical and Social Science Occupations (228 in-commuters). Occupation groups with the most out-commuters included Food Preparation and Serving Related Occupations (151 out-commuters), Sales and Related Occupations (148 out-commuters), and Transportation and Material Moving Occupations (94 out-commuters).

Occupation Group	2018 Commuters
Protective Service Occupations	302 in-commuters
Life, Physical, and Social Science Occupations	228 in-commuters
Business and Financial Operations Occupations	83 in-commuters
Community and Social Service Occupations	66 in-commuters
Education, Training, and Library Occupations	56 in-commuters
Architecture and Engineering Occupations	35 in-commuters
Management Occupations	34 in-commuters
Installation, Maintenance, and Repair Occupations	14 in-commuters
Legal Occupations	12 in-commuters
Healthcare Practitioners and Technical Occupations	11 in-commuters
Computer and Mathematical Occupations	9 in-commuters
Arts, Design, Entertainment, Sports, and Media Occupations	5 in-commuters
Construction and Extraction Occupations	3 in-commuters
Office and Administrative Support Occupations	4 out-commuters
Healthcare Support Occupations	6 out-commuters
Production Occupations	15 out-commuters
Military-only occupations	21 out-commuters
Building and Grounds Cleaning and Maintenance Occupations	28 out-commuters
Farming, Fishing, and Forestry Occupations	49 out-commuters
Personal Care and Service Occupations	86 out-commuters
Transportation and Material Moving Occupations	94 out-commuters
Sales and Related Occupations	148 out-commuters
Food Preparation and Serving Related Occupations	151 out-commuters

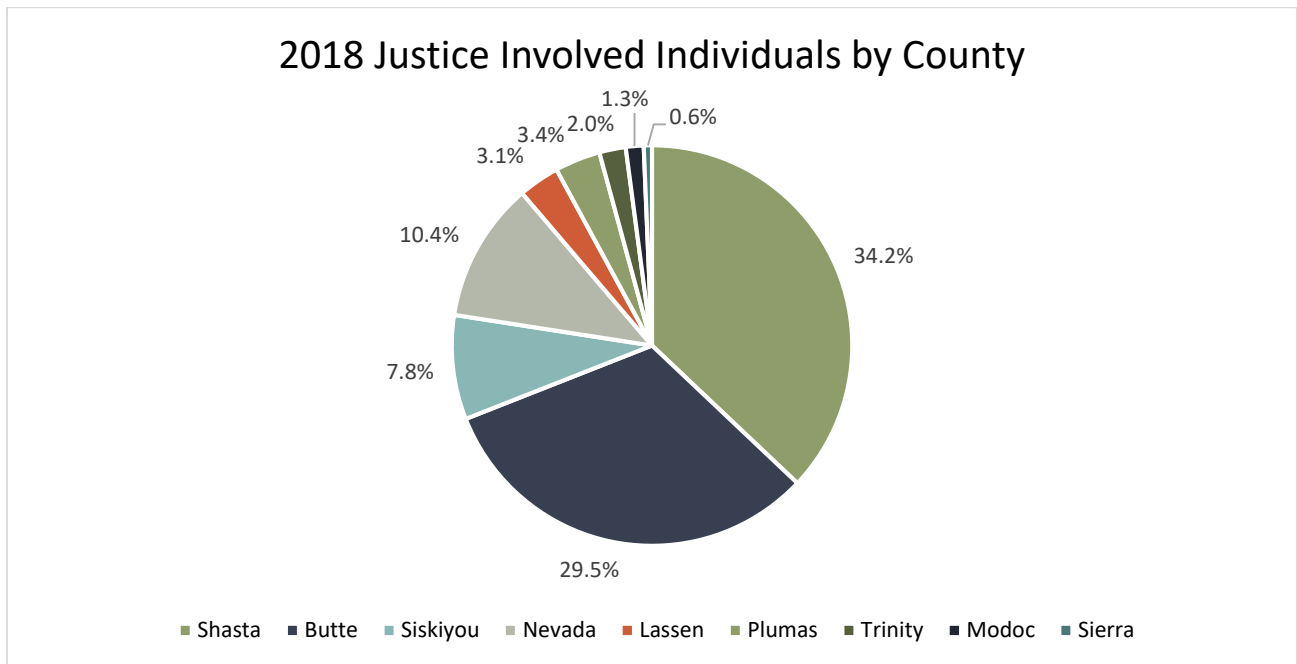
## Special Populations

With consideration of the state of California’s Regional and Local Planning Guidance for program year 2018-19, California counties are also concerned with quantifying and assisting certain sub-population groups, namely: formerly incarcerated and other justice-involved individuals and CalFresh recipients.

### Justice-Involved Individuals

The graph and table below detail the percentage of individuals involved in felony probations, misdemeanor probations, mandatory supervisions, and post-release community supervisions (PRCS) within the 11- county NoRTEC region.<sup>2</sup>

The largest share of activity stems from Shasta County (34.2%) followed by Butte County (29.5%) and Siskiyou County (7.8%). Lassen County contributed to 3.1% of the region’s activity. Of that figure, 126 individuals had felony probations, 75 had misdemeanor probations, 8 had mandatory supervision, and 17 had post-release community supervision (PRCS). In the NoRTEC region in 2017, there were a total of 7,372 individuals involved in felony probations, misdemeanor probations, or mandatory supervision.



<sup>2</sup> Data for this section of the report are derived from the Chief Probation Officers of California, <https://www.cpoc.org/data>.

	Felony Probation	Misdemeanor Probation	Mandatory Supervision	PRCS	Total
Shasta	1,976	0	156	389	2,521
Butte	1,339	272	165	401	2,177
Siskiyou	507	7	12	47	573
Tehama	N/A	N/A	N/A	N/A	N/A
Nevada	566	127	30	47	770
<b>Lassen</b>	<b>126</b>	<b>75</b>	<b>8</b>	<b>17</b>	<b>226</b>
Plumas	148	86	1	15	250
Trinity	111	17	4	13	145
Modoc	79	19	N/A	N/A	98
Del Norte	N/A	N/A	N/A	N/A	N/A
Sierra	28	15	1	1	45

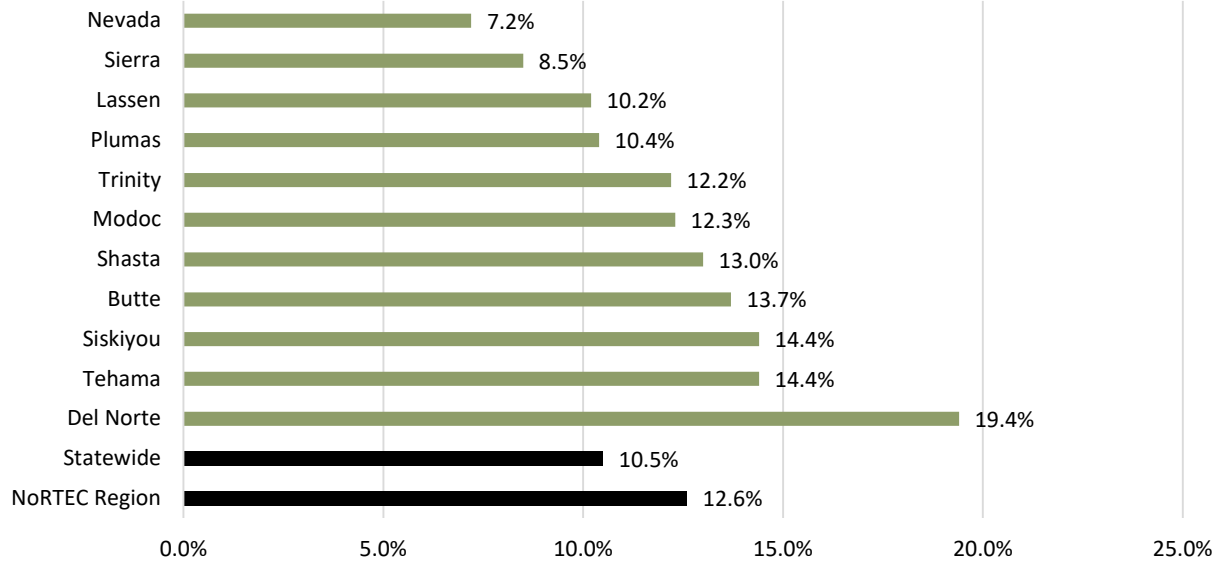
## CalFresh Recipients

CalFresh, the California implementation of Supplemental Nutrition Assistance Program (SNAP), is received by larger percentage of NoRTEC area residents than statewide residents.<sup>3</sup> In Lassen County, only 10.2% of individuals receive CalFresh. The only two counties with smaller percentage of individuals receiving CalFresh benefits are Sierra (8.5%) and Nevada (7.2%). The percentage of residents in Lassen County receiving CalFresh benefits is also lower than NoRTEC region.

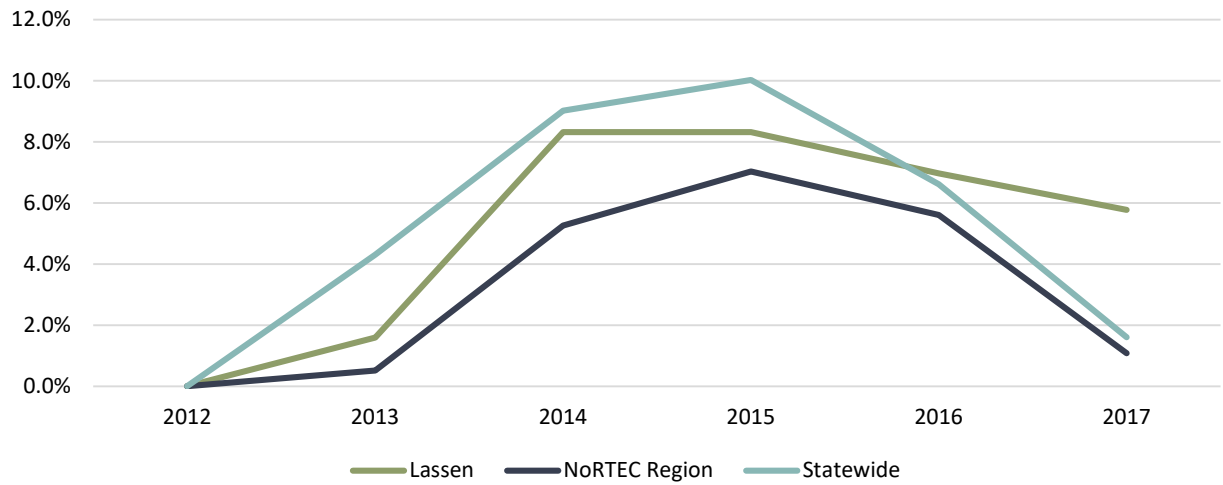
Between 2012 and 2015, the NoRTEC region experienced a rise in the number of individuals enrolled in CalFresh and then a considerable decrease between 2015 and 2017. Between 2012 and 2015, the number of individuals enrolled in CalFresh in Lassen County increased but the number has slowly declined since 2015.

<sup>3</sup> Data for this section are derived from the California Department of Social Services, CalFresh Data Dashboard, <https://www.cdss.ca.gov/inforesources/Data-Portal/Research-and-Data/CalFresh-Data-Dashboard>.

### Percent of Population Receiving CalFresh Benefits



### Cummulative Growth Rate in CalFresh Enrollment 2012-2017



# HUMAN CAPITAL

## Labor Force

**Labor Force Participation Rate**  
 The labor force participation rate represents the proportion of the population that is working or pursuing work, as opposed to those voluntarily not working or not pursuing work. The labor force participation rate is affected by various factors, including availability of jobs, socioeconomic composition of the population, demographics, as well as structural changes in the economy.

EMPLOYMENT IN LASSEN COUNTY 1998-2018 <sup>4</sup>		
Peak	October 2009 (12,623)	December 2018 (9,329 – 26% lower)
Trough	February 2017 (9,107)	December 2018 (9,329 – 2% higher)
December 2018	Employment: 9,329 Labor Force: 9,790 Unemployment rate: 4.7%	

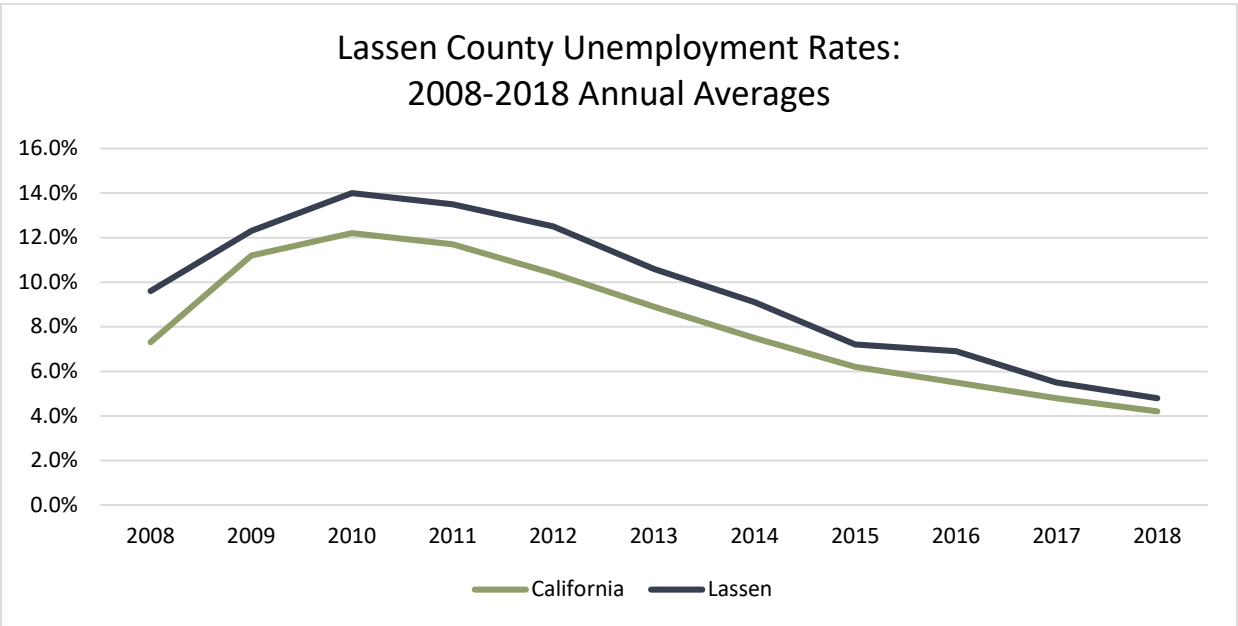
Labor force statistics include both the employed and the unemployed, excluding only those who have stopped looking for work (discouraged workers) and those who are voluntarily not in the labor force. In December 2018, 9,790 individuals participated in the Lassen County labor force, of these, 9,329 were employed and 461 were unemployed<sup>5</sup>. Over the last 20 years, employment in the county was at its highest in September October 2009 and lowest in February 2017. As of December 2018, the unemployment rate was 4.7%, higher than the unemployment rate of California (4.1%) and the United States (3.9%).

## Labor Force Participation Rate

The labor force participation rate is sensitive to demographic changes because participation rates vary across age, gender, income and race/ethnicity.<sup>6</sup> The national labor force participation rate has decreased since 2000, a trend that is expected to continue in the next decade in part due to the aging of the baby-boomer generation. In 2000, baby boomers were the heart of the workforce. However, as this large group of individuals moves closer to retirement, the overall workforce participation rate decreases. It is worth mentioning that the participation rate of older workers has been increasing in the past ten years, but it is still significantly lower than those of the young adult and middle-aged groups.

Workers in older age brackets and those who are retirement age, compose a considerable proportion of Lassen County’s population. The older worker population (55 to 64 years of age) was estimated to be 3,761 in 2018, which is equivalent to 12% of the county’s population.<sup>7</sup> A large number of these older workers are expected to retire in the next ten years. Even more notably, those who are 65 years and older were estimated to total 4,495, equivalent to 15% of the county’s population.

<sup>4</sup> U.S. Bureau of Labor Statistics, 1998.4-2018.4. <http://www.bls.gov/data/>  
<sup>5</sup> December of 2018 was used as comparison throughout the 1998-2008 timeframe.  
<sup>6</sup> For example, in 2015 the national labor force participation rate for individuals older than age 54 (40.0%) was significantly lower than for those between the ages of 25 and 54 (81.3%).



Generally, unemployment tends to spike during recessions and following major layoffs, eventually settling to a more normal and stable rate as individuals adjust to the new availability of employment opportunities. Prolonged periods of unusually high unemployment are typically a signal that the supply of workers is not in balance with demand for workers.

Since 2010, Lassen County’s unemployment rate has continued to decline to 4.8% in 2018. The unemployment rate for the county has been higher than California over the period analyzed, however 2018 shows a comparative figure – 4.8% for Lassen County and 4.2% for California.

# INDUSTRY SECTOR ANALYSIS

To this point, the analysis of Lassen County has focused on the socioeconomic characteristics of the region's population. Socioeconomic data are useful in understanding the economy, but to truly comprehend economic dynamics we must also analyze industry data. Industry data are classified according to the types of goods and services that are rendered by businesses. These data indicate past and projected growth trends by sector and reveal sectors in which Lassen County is well suited to be competitive.

A chart and several tables are displayed related to industry data. Each of the figures provide data that descend in order according to 2018 employment. Other data displayed include: employment growth over the past five years, forecasted growth over the next five years, growth due to competitive effect (CE), and location quotient (LQ).

The *competitive effect* helps to determine the amount of job growth that occurred due to the county's competitive advantages as compared to the national growth in general and the national growth rate for each sector. In other words, a positive number indicates that the county experienced more growth than was expected.

*Location Quotient (LQ)* measures how concentrated or specialized an industry is in a particular county and helps to demonstrate what makes a particular county's economy unique. A number greater than 1.25 indicates that the particular sector is considerably more concentrated than the national average. It also typically indicates that local demand for the products and/or services produced by that industry have been met and the industry is likely exporting products and/or services outside of the county. In other words, these may be industries that are bringing money into the county, rather than circulating money already present within the county.<sup>8</sup>

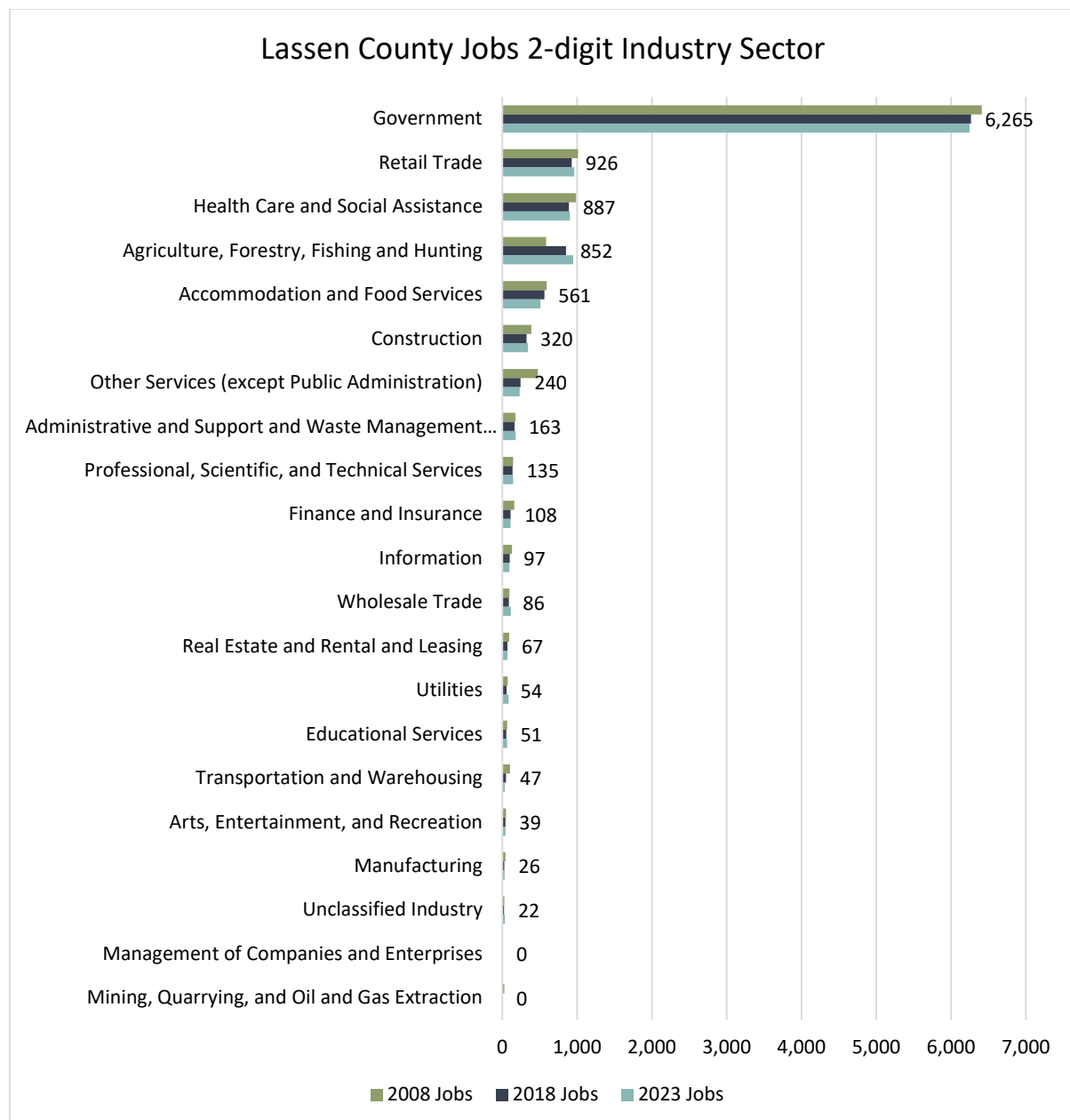
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<sup>8</sup> Data from this section are from Economic Modeling Specialists International (EMSI), 2019.2 Class of Worker.

## Industry Mix

The broad industry sectors in Lassen County employing the most workers are Government (6,265; 57%); Retail Trade (926; 8%); Health Care and Social Assistance (887; 8%); and Agriculture, Forestry, Fishing and Hunting (852; 8%). Of those sectors, Government experienced the greatest decline in jobs over the last ten years (-144 jobs). Agriculture, Forestry, Fishing and Hunting experienced the greatest (and only) increase in jobs over the last ten years (268 jobs).

Projections into the next five years indicate that the Agriculture, Forestry, Fishing and Hunting industry will add the most jobs (95 jobs), followed by Retail Trade (36 jobs); Utilities (29 jobs); and Wholesale Trade (26 jobs). Accommodation and Food Services, which experienced a decline of 31 jobs over the last ten years, is project to experience a greater decrease in jobs than any other industry by 2023 (-55 jobs).





Competitive effect explains how much of the change in a given industry is due to unique competitive advantages the region has. A deeper dive into the data reveals that Lassen County experienced increase growth in Retail Trade (56); Utilities (48); Construction (34); and Agriculture, Forestry, Fishing and Hunting (16) than would have been expected from non-local trends. However, Lassen County experienced decreased growth in Government (-275); Health Care and Social Assistance (-131); and Accommodation and Food Services (-118) than would have been expected from non-local trends

Location quotient (LQ) measures the relative importance of an industry's employment to a particular region. LQ's greater than 1.25 are considered to be the threshold for identifying a strong industry. In Lassen County, industries with an LQ score higher than 1.25 include Agriculture, Forestry, Fishing and Hunting (6.62); Government (3.80); and Utilities (1.44).

Industry	2013 Jobs	2018 Jobs	Change 2013 – 2018	% Change 2013-2018	Change 2018-2023	% Change 2018-2023	2018 LQ	Comp. Effect
Government	6,416	6,265	(151)	(2%)	(20)	(0%)	3.80	(275)
Retail Trade	831	926	95	11%	36	4%	0.84	56
Health Care and Social Assistance	920	887	(33)	(4%)	16	2%	0.64	(131)
Agriculture, Forestry, Fishing and Hunting	828	852	24	3%	95	11%	6.62	16
Accommodation and Food Services	600	561	(39)	(7%)	(55)	(10%)	0.60	(118)
Construction	242	320	78	32%	19	6%	0.52	34
Other Services (except Public Administration)	303	240	(63)	(21%)	(11)	(5%)	0.46	(82)
Administrative and Support and Waste Management and Remediation Services	151	163	12	8%	15	9%	0.24	(3)
Professional, Scientific, and Technical Services	182	135	(47)	(26%)	7	5%	0.19	(70)
Finance and Insurance	113	108	(5)	(4%)	0	0%	0.24	(13)
Information	93	97	4	4%	(2)	(2%)	0.48	(0)
Wholesale Trade	83	86	3	4%	26	30%	0.21	1
Real Estate and Rental and Leasing	67	67	0	0%	0	0%	0.36	(7)
Utilities	<10	54	Insf. Data	Insf. Data	29	54%	1.44	48
Educational Services	93	51	(42)	(45%)	13	25%	0.18	(50)
Transportation and Warehousing	74	47	(27)	(36%)	(14)	(30%)	0.12	(42)
Arts, Entertainment, and Recreation	47	39	(8)	(17%)	1	3%	0.21	(14)
Manufacturing	34	26	(8)	(24%)	2	8%	0.03	(10)
Unclassified Industry	<10	22	Insf. Data	Insf. Data	9	41%	1.46	10
Management of Companies and Enterprises	11	<10	Insf. Data	Insf. Data	Insf. Data	Insf. Data	0.01	(11)
Mining, Quarrying, and Oil and Gas Extraction	<10	0	Insf. Data	Insf. Data	0	0%	0.00	(5)

## Key Industries

The following table shows the 20 largest 4-digit NAICS industries in terms of employment in Lassen County in 2018. Between 2013 and 2018, over half of the top industries added. Subsectors that experienced the greatest growth in jobs over the last five years include General Medical and Surgical Hospitals (137; 180%); State Government, Excluding Education and Hospitals (102; 4%); and Local Government, Excluding Education and Hospitals (75; 8%).

Nursing Care Facilities (Skilled Nursing Facilities) added the most jobs with 138, followed by Traveler Accommodation (85) and General Merchandise Stores, including Warehouse Clubs and Supercenters (72). Projections into the next five years show that those same industries that experienced a decline in the last five years are expected to continue declining with the addition of Vocational Rehabilitation Services (-13) and Residential Building Construction (-3).

Industry	2018 Jobs	Change 2013-2018	% Change 2013-2018	Projected Change 2018-2023	Projected % Change 2018-2023
State Government, Excluding Education and Hospitals	2,581	102	4%	57	2%
Federal Government, Civilian	1,797	(138)	(7%)	29	2%
Local Government, Excluding Education and Hospitals	1,037	75	8%	83	8%
Education and Hospitals (Local Government)	815	(185)	(19%)	(185)	(23%)
Crop Production	667	4	1%	97	15%
Restaurants and Other Eating Places	471	(18)	(4%)	(42)	(9%)
Grocery Stores	222	33	17%	14	6%
General Medical and Surgical Hospitals	213	137	180%	18	8%
Individual and Family Services	176	38	28%	40	23%
Department Stores	161	(39)	(20%)	(24)	(15%)
Offices of Physicians	143	(64)	(31%)	(56)	(39%)
Services to Buildings and Dwellings	106	8	8%	0	0%
Residential Building Construction	96	21	28%	1	1%
Automotive Repair and Maintenance	90	(22)	(20%)	6	7%
Automotive Parts, Accessories, and Tire Stores	88	17	24%	5	6%
Logging	83	(14)	(14%)	(9)	(11%)
Gasoline Stations	77	2	3%	(1)	(1%)
Traveler Accommodation	72	(23)	(24%)	(19)	(26%)
Offices of Dentists	71	(10)	(12%)	(2)	(3%)
Psychiatric and Substance Abuse Hospitals	64	64	Insf. Data	43	67%

# OCCUPATION ANALYSIS

An examination of occupational demand is separate and distinct from industry analysis because industries require a mix of occupations to function. For example, the Manufacturing sector employs occupations that might be traditionally defined as “manufacturing occupations” – called Production occupations at the broadest level of occupation classification. The Manufacturing sector, however, also employs managers, accountants, maintenance and repair personnel, and many other occupational categories necessary for the industry’s operation. As a workforce development board, NoRTEC’s mission is to serve individual job seekers and businesses more than driving forward industry-specific economic development. As such, it’s important to understand the specific occupational roles that are required to keep local businesses functioning.

The occupational analysis that follows provides a view of the most critical occupations within the region from an overarching economic perspective and specifically related to some of the key industries that were highlighted previously.

## Occupational Groups

Lassen County’s top 2-digit Standard Occupational Classification (SOC) System categories include:

- Office and Administrative Support Occupations (1,333 jobs)
- Protective Service Occupations (1,150 jobs)
- Life, Physical, and Social Science Occupations (985 jobs)
- Management Occupations (725 jobs)

The median hourly earnings for all occupations range from \$11.63/hr. for Food Preparation and Serving Related Occupations to \$39.96/hr. for Legal Occupations.

As noted in the industry analysis section, location quotient scores can indicate fields where the county has a strong competitive advantage over other regions in United States. Occupational categories where Lassen County has a strong concentration of workers (above an LQ of 1.25) include

- Life, Physical, and Social Science Occupations (10.69)
- Farming, Fishing, and Forestry Occupations (7.21)
- Protective Service Occupations (4.69)
- Community and Social Service Occupations (2.19)

These are the occupation groups for which the region is highly specialized.

## Broad Occupation Mix

Occupation	2018 Employment	% of Total Employment	Median Hourly Earning	2018 Location Quotient
Office and Administrative Support Occupations	1,333	12.2%	\$17.33	0.84
Protective Service Occupations	1,150	10.5%	\$37.35	4.69
Life, Physical, and Social Science Occupations	985	9.0%	\$18.45	10.96
Management Occupations	725	6.6%	\$33.34	1.18
Education, Training, and Library Occupations	722	6.6%	\$20.66	1.16
Sales and Related Occupations	703	6.4%	\$13.08	0.65
Farming, Fishing, and Forestry Occupations	588	5.4%	\$14.54	7.21
Business and Financial Operations Occupations	586	5.4%	\$28.72	1.04
Food Preparation and Serving Related Occupations	568	5.2%	\$11.63	0.62
Construction and Extraction Occupations	484	4.4%	\$19.45	0.97
Healthcare Practitioners and Technical Occupations	447	4.1%	\$35.59	0.74
Community and Social Service Occupations	396	3.6%	\$22.51	2.19
Transportation and Material Moving Occupations	394	3.6%	\$17.53	0.53
Personal Care and Service Occupations	386	3.5%	\$12.06	0.82
Installation, Maintenance, and Repair Occupations	380	3.5%	\$21.46	0.89
Building and Grounds Cleaning and Maintenance Occupations	276	2.5%	\$13.21	0.69
Healthcare Support Occupations	200	1.8%	\$15.99	0.67
Production Occupations	195	1.8%	\$18.32	0.30
Architecture and Engineering Occupations	138	1.3%	\$33.86	0.74
Computer and Mathematical Occupations	125	1.1%	\$30.71	0.40
Arts, Design, Entertainment, Sports, and Media Occupations	83	0.8%	\$20.37	0.41
Legal Occupations	64	0.6%	\$39.96	0.71
Military-only occupations	18	0.2%	\$21.12	0.27

## Top Occupations by Employment

The following table displays the top occupational by total employment for the slightly more specific group of 4-digit Standard Occupational Classification (SOC) Codes. Median hourly earnings for these occupations range from \$11.25 for Fast Food and Counter Workers to \$47.31 for First-Line Supervisors of Law Enforcement Workers. Over the last five years, the greatest job growth was by Bailiffs, Correctional Officers, and Jailers (47 jobs) followed by Registered Nurses (24 jobs); Cashiers (16 jobs); and Retail Salesperson (13 jobs). The latter two occupations are amongst the lowest earning occupations while the former two occupations are amongst the highest earning occupations.

Projections over the next five years reveal a decline in over half of the occupations in Lassen County. The greatest decline is projected to be experienced by Secretaries and Administrative Assistants (31 jobs) followed by Bailiffs, Correctional Officers, and Jailers (17 jobs); Teacher Assistants (17 jobs); and Miscellaneous Teachers and Instructors (17 jobs). All education-related occupations in the table are projected to decline over the next five years which may become a concern for the region as it seeks to upskill and train future talent.

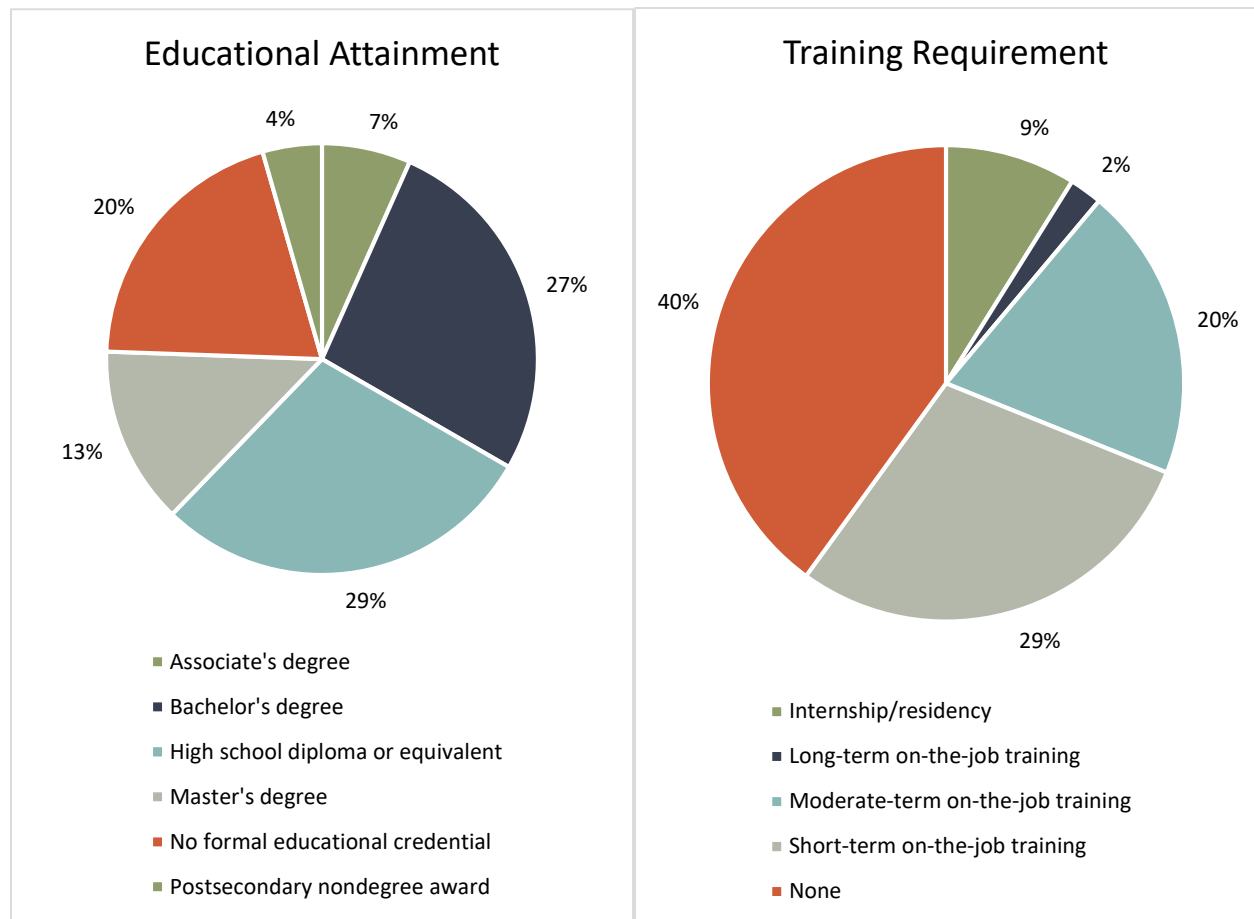
Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Projected Annual Openings	Median Hourly Earnings
Miscellaneous Life, Physical, and Social Science Technicians	734	(16)	(2%)	6	1%	92	\$16.52
Bailiffs, Correctional Officers, and Jailers	676	47	7%	(17)	(3%)	67	\$38.44
Miscellaneous Agricultural Workers	388	(1)	(0%)	49	13%	77	\$13.80
Secretaries and Administrative Assistants	331	(53)	(14%)	(31)	(9%)	42	\$17.64
Cashiers	286	16	6%	(5)	(2%)	59	\$11.59
Miscellaneous Business Operations Specialists	211	(10)	(5%)	6	3%	21	\$26.88
Fast Food and Counter Workers	208	4	2%	(15)	(7%)	48	\$11.25
Office Clerks, General	193	(24)	(11%)	(11)	(6%)	27	\$15.43
Miscellaneous Community and Social Service Specialists	176	9	5%	10	6%	21	\$22.37
Miscellaneous Teachers and Instructors	176	7	4%	(17)	(10%)	25	\$14.79
Farmers, Ranchers, and Other Agricultural Managers	168	2	1%	19	11%	17	\$23.80
Building Cleaning Workers	167	(47)	(22%)	(12)	(7%)	28	\$12.47
Retail Salespersons	156	13	9%	16	10%	27	\$12.89
Registered Nurses	136	24	21%	12	9%	13	\$42.48
Cooks	133	(18)	(12%)	(13)	(10%)	26	\$12.21
Teacher Assistants	130	(7)	(5%)	(17)	(13%)	16	\$13.56
First-Line Supervisors of Law Enforcement Workers	130	10	8%	(2)	(2%)	11	\$47.31

Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Projected Annual Openings	Median Hourly Earnings
Elementary and Middle School Teachers	126	15	14%	(9)	(7%)	14	\$32.71
Social Workers	124	14	13%	9	7%	15	\$22.64
General and Operations Managers	119	3	3%	6	5%	11	\$34.82

## Education & Training Requirements for High Demand Jobs

The top high demand jobs in Lassen County include Forest and Conservation Technicians (683 jobs); Correctional Officers and Jailers (676 jobs); Cashiers (284 jobs); and Farmworkers and Laborers, Crop, Nursery, and Greenhouse (225 jobs). Of all high demand jobs, 51% require some type of postsecondary educational attainment. Only 29% of Lassen County's high demand jobs require a high school diploma or equivalent and 20% do not require any formal educational credential.

Average hourly earnings for high demand jobs range from \$13.30/hr. for Personal Care Aides to \$43.07/hr. for Managers, All Other. Fifteen out of the twenty high demand jobs have an average hourly earning above \$15.00/hr.





Description	2023 Jobs	Change 2018 - 2023	Annual Openings	Avg. Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	253	28	42	\$13.67	No formal educational credential	Short-term on-the-job training
Personal Care Aides	142	25	23	\$13.30	High school diploma or equivalent	Short-term on-the-job training
Farmers, Ranchers, and Other Agricultural Managers	187	19	17	\$32.23	High school diploma or equivalent	None
Retail Salespersons	172	16	27	\$14.18	No formal educational credential	Short-term on-the-job training
Registered Nurses	148	12	9	\$40.83	Bachelor's degree	None
Emergency Medical Technicians and Paramedics	40	11	4	\$16.24	Postsecondary nondegree award	None
Farmworkers, Farm, Ranch, and Aquacultural Animals	97	10	16	\$14.84	No formal educational credential	Short-term on-the-job training
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	43	9	6	\$22.09	Bachelor's degree	Internship/residency
Police and Sheriff's Patrol Officers	126	9	10	\$38.41	High school diploma or equivalent	Moderate-term on-the-job training
Firefighters	109	8	8	\$21.73	Postsecondary nondegree award	Long-term on-the-job training
Stock Clerks and Order Fillers	105	7	14	\$14.30	High school diploma or equivalent	Short-term on-the-job training
Agricultural Workers, All Other	56	7	9	\$19.30	No formal educational credential	Short-term on-the-job training
Operating Engineers and Other Construction Equipment Operators	98	7	11	\$22.95	High school diploma or equivalent	Moderate-term on-the-job training
General and Operations Managers	125	6	11	\$41.74	Bachelor's degree	None
Managers, All Other	89	6	7	\$43.07	Bachelor's degree	None
Business Operations Specialists, All Other	217	6	20	\$27.85	Bachelor's degree	None
First-Line Supervisors of Retail Sales Workers	85	6	10	\$18.31	High school diploma or equivalent	None

Description	2023 Jobs	Change 2018 - 2023	Annual Openings	Avg. Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Forest and Conservation Technicians	688	5	80	\$17.74	Associate's degree	None
Child, Family, and School Social Workers	85	5	9	\$20.24	Bachelor's degree	None
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	26	5	3	\$20.78	High school diploma or equivalent	Moderate-term on-the-job training

## Industry and Occupation Connections

Industries drive economic growth, but the fuel that enables those industries to function are its workforce. Considering the importance of talent to supporting key regional industries, it is worth exploring the connections between significant industries and the occupations that are most critical to those industries.

The following table identifies the top ten high demand occupations by 5-digit SOC codes and how they are connected to some of Lassen County's key industries (2-digit NAICS). Note that half of the top occupations have a connection to Government industry.

Connection between Top Occupations and Key Industries	
Top Occupation	Key Industries
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	<ul style="list-style-type: none"> <li>• Agriculture</li> </ul>
Personal Care Aides	<ul style="list-style-type: none"> <li>• Health Care and Social Assistance</li> <li>• Government</li> </ul>
Farmers, Ranchers, and Other Agricultural Managers	<ul style="list-style-type: none"> <li>• Agriculture</li> </ul>
Retail Salespersons	<ul style="list-style-type: none"> <li>• Retail Trade</li> </ul>
Registered Nurses	<ul style="list-style-type: none"> <li>• Health Care and Social Assistance</li> <li>• Government</li> </ul>
Emergency Medical Technicians and Paramedics	<ul style="list-style-type: none"> <li>• Health Care and Social Assistance</li> </ul>
Farmworkers, Farm, Ranch, and Aquacultural Animals	<ul style="list-style-type: none"> <li>• Agriculture</li> </ul>
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	<ul style="list-style-type: none"> <li>• Health Care and Social Assistance</li> <li>• Government</li> </ul>
Police and Sheriff's Patrol Officers	<ul style="list-style-type: none"> <li>• Government</li> </ul>
Firefighters	<ul style="list-style-type: none"> <li>• Government</li> </ul>

# DETAILED INDUSTRY ANALYSIS

The following section provides an in-depth look at 4-digit NAICS sectors that are important to the Lassen County economy. These industry sectors include: Agriculture; Health Care; and Tourism. For each of these sectors the top employing sub-sectors are listed by 4-digit NAICS code, as well as the staffing patterns for each sector. Staffing patterns data show the top employing occupations at the 4-digit SOC level, along with past and projected growth, competitive effect, location quotient and average earnings.

## Employment for Top Agriculture Industries

The top agriculture industries in Lassen County include Crop Production (667 jobs); Logging (83 jobs); Support Activities for Forestry (36 jobs); and Animal Production (34 jobs). The highest average earning amongst these sectors is Logging, which has an average annual earning of \$79,421. Logging has experienced a decrease in jobs over the last five years and is projected to continue that decline into the next five years. Support Activities for Forestry has the highest LQ amongst top agriculture industries with a score of 24.68. Data was not available for the other remaining subsectors.

Industry	2018 Jobs	'13-'18 Change	CE '13-'18	'18-'23 Change	CE '18-'23	'18 LQ	Average Earnings
Crop Production	667	4	21	97	96	12.24	\$40,043
Logging	83	(14)	(8)	(9)	(2)	17.67	\$79,421
Support Activities for Forestry	36	Insf. Data	31	13	8	24.68	\$39,329
Animal Production	34	(10)	(11)	(9)	(9)	1.18	\$38,330
Support Activities for Crop Production	21	8	7	3	1	0.63	\$55,667
Support Activities for Animal Production	<10	Insf. Data	2	Insf. Data	(0)	2.01	Insf. Data
Fishing	<10	Insf. Data	0	Insf. Data	(0)	0.33	Insf. Data
Hunting and Trapping	<10	Insf. Data	2	Insf. Data	1	11.11	Insf. Data
Forest Nurseries and Gathering of Forest Products	0	0	0	0	0	0.00	\$0
Timber Tract Operations	0	0	0	0	0	0.00	\$0

## Staffing Patterns for Agriculture

Diving deeper into the staffing patterns for the Agriculture industry, the top occupations include Miscellaneous Agricultural Workers (384 jobs); Farmers, Ranchers, and Other Agricultural Managers (168 jobs); Logging Workers (59 jobs); First-Line Supervisors of Farming, Fishing, and Forestry Workers (29 jobs); and Driver/Sales Workers and Truck Drivers (29 jobs). The job growth for occupations over the last five years has not changed significantly but the top occupations within the industry are projected to experience larger growth. Most of the growth is concentrated in two groups – Miscellaneous Agricultural Workers (49 jobs); and Farmers, Ranchers, and Other Agricultural Managers (19 jobs).

Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Median Hourly Earnings
Miscellaneous Agricultural Workers	384	(3)	(1%)	49	13%	\$13.80
Farmers, Ranchers, and Other Agricultural Managers	168	2	1%	19	11%	\$23.80
Logging Workers	59	(8)	(12%)	(6)	(10%)	\$25.45
First-Line Supervisors of Farming, Fishing, and Forestry Workers	29	4	16%	4	14%	\$28.66
Driver/Sales Workers and Truck Drivers	29	(1)	(3%)	2	7%	\$18.31
Laborers and Material Movers, Hand	15	2	15%	3	20%	\$12.94
Graders and Sorters, Agricultural Products	12	0	0%	1	8%	\$24.55
Grounds Maintenance Workers	11	1	10%	2	18%	\$13.40
Construction Laborers	<10	0	0%	0	0%	\$13.79
Construction Equipment Operators	<10	0	0%	0	0%	\$22.49
Chemical Processing Machine Setters, Operators, and Tenders	<10	0	0%	0	0%	\$15.94
Cutting Workers	<10	1	Insf. Data	0	0%	\$27.06
Cooks	<10	0	0%	0	0%	\$12.21
Industrial Machinery Installation, Repair, and Maintenance Workers	<10	0	0%	0	0%	\$26.07
Production, Planning, and Expediting Clerks	<10	0	0%	0	0%	\$21.22
Carpenters	<10	0	0%	1	Insf. Data	\$15.55
Security Guards and Gaming Surveillance Officers	<10	0	0%	0	0%	\$15.14
Receptionists and Information Clerks	<10	0	0%	0	0%	\$13.21
Electricians	<10	0	0%	0	0%	\$22.67
Computer Support Specialists	<10	0	0%	0	0%	\$26.29

## Employment for Top Health Care Industries

The largest employing Health Care sectors in Lassen County include General Medical and Surgical Hospitals (213 jobs); Individual and Family Services (176 jobs); Offices of Physicians (143 jobs); and Offices of Dentists (71 jobs). Individual and Family Services employs a considerable number of individuals in the county, but it is associated with low average earnings of \$21,195. General Medical and Surgical Hospitals, which employs the most and is projected to add more jobs by 2023, has the highest average earnings with \$99,482. Psychiatric and Substance Abuse Hospitals has the highest LQ score at 7.82. This is worth noting since it represents how significant this subsector is to Lassen County.

Industry	2018 Jobs	'13-'18 Change	CE '13-'18	'18-'23 Change	CE '18-'23	'18 LQ	Average Earnings
General Medical and Surgical Hospitals	213	137	133	18	8	0.67	\$99,482
Individual and Family Services	176	38	1	40	1	1.00	\$21,195
Offices of Physicians	143	(64)	(78)	(56)	(72)	0.80	\$62,772
Offices of Dentists	71	(10)	(17)	(2)	(9)	1.06	\$55,843
Psychiatric and Substance Abuse Hospitals	64	64	64	43	34	7.82	\$87,103
Nursing Care Facilities (Skilled Nursing Facilities)	61	(191)	(185)	(32)	(32)	0.56	\$54,286
Child Day Care Services	50	(10)	(12)	(13)	(14)	0.60	\$17,356
Vocational Rehabilitation Services	29	(8)	(7)	(2)	(1)	1.27	\$31,063
Other Ambulatory Health Care Services	28	Insf. Data	24	15	11	1.22	\$60,818
Offices of Other Health Practitioners	20	(10)	(16)	(5)	(8)	0.28	\$41,749
Home Health Care Services	11	Insf. Data	8	7	4	0.10	\$40,023
Other Residential Care Facilities	<10	Insf. Data	6	Insf. Data	(4)	0.55	Insf. Data
Community Food and Housing, and Emergency and Other Relief Services	<10	Insf. Data	2	Insf. Data	(2)	0.26	Insf. Data
Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	<10	Insf. Data	2	Insf. Data	(1)	0.06	Insf. Data
Medical and Diagnostic Laboratories	<10	Insf. Data	(1)	Insf. Data	1	0.09	Insf. Data
Outpatient Care Centers	<10	Insf. Data	(30)	Insf. Data	4	0.13	Insf. Data
Specialty (except Psychiatric and Substance Abuse) Hospitals	0	0	0	0	0	0.00	\$0
Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly	0	0	0	0	0	0.00	\$0

## Staffing Patterns for Health Care

The top four highest employment 4-digit SOC categories for this industry sector include: Personal Care Aides (102 jobs); Miscellaneous Healthcare Support Occupations (77 jobs); Registered Nurses (76 jobs); and Secretaries and Administrative Assistants (61 jobs). Over half of the occupations in the health care industry have declined in jobs over the last five years and each of those occupations are projected to continue the decline in jobs or remain stagnant. Personal Care Aides experienced the greatest job growth between 2013-2018 and is also projected to add to most jobs by 2023 (24). However, this occupation is associated with relatively low median hourly earnings (\$12.56/hr.).

Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Median Hourly Earnings
Personal Care Aides	102	33	48%	24	24%	\$12.56
Miscellaneous Healthcare Support Occupations	77	(10)	(11%)	(10)	(13%)	\$17.79
Registered Nurses	76	25	49%	8	11%	\$42.48
Secretaries and Administrative Assistants	61	(3)	(5%)	(8)	(13%)	\$17.64
Nursing, Psychiatric, and Home Health Aides	39	(45)	(54%)	0	0%	\$14.46
Childcare Workers	36	(6)	(14%)	(10)	(28%)	\$10.50
Counselors	27	15	125%	9	33%	\$22.80
Dental Hygienists	24	(3)	(11%)	(1)	(4%)	\$49.73
Licensed Practical and Licensed Vocational Nurses	20	(25)	(56%)	(4)	(20%)	\$24.81
Emergency Medical Technicians and Paramedics	20	19	1900%	10	50%	\$14.30
Miscellaneous Community and Social Service Specialists	20	3	18%	2	10%	\$22.37
Building Cleaning Workers	19	(10)	(34%)	(1)	(5%)	\$12.47
Receptionists and Information Clerks	18	(6)	(25%)	(4)	(22%)	\$13.21
Physicians and Surgeons	16	(4)	(20%)	(4)	(25%)	\$76.20
Therapists	16	1	7%	1	6%	\$44.01
Office Clerks, General	14	(2)	(13%)	(1)	(7%)	\$15.43
Social Workers	14	5	56%	3	21%	\$22.64
Health Practitioner Support Technologists and Technicians	13	6	86%	2	15%	\$17.26
Diagnostic Related Technologists and Technicians	12	4	50%	(1)	(8%)	\$42.81
First-Line Supervisors of Office and Administrative Support Workers	10	(1)	(9%)	(1)	(10%)	\$21.75

## Employment for Top Tourism Industries

Data for employment within the tourism industry in Lassen County is very limited. The top industry subsectors include Restaurants and Other Eating Places (471 jobs); Traveler Accommodation (72 jobs); and Other Amusement and Recreation Industries (22 jobs). The data that was available shows average earnings for the tourism subsectors are less than \$30,000.

Industry	2018 Jobs	'13-'18 Change	CE '13-18'	'18-'23 Change	CE '18-23	'18 LQ	Average Earnings
Restaurants and Other Eating Places	471	(18)	(86)	(42)	(77)	0.65	\$19,734
Traveler Accommodation	72	(23)	(31)	(19)	(21)	0.55	\$22,261
Other Amusement and Recreation Industries	22	(5)	(10)	(1)	(3)	0.23	\$26,068
Gambling Industries	<10	Insf. Data	2	Insf. Data	1	0.55	Insf. Data
Special Food Services	<10	Insf. Data	(6)	Insf. Data	(0)	0.12	Insf. Data
Drinking Places (Alcoholic Beverages)	<10	Insf. Data	2	Insf. Data	1	0.18	Insf. Data
Museums, Historical Sites, and Similar Institutions	<10	Insf. Data	(3)	Insf. Data	(0)	0.05	Insf. Data
RV (Recreational Vehicle) Parks and Recreational Camps	<10	Insf. Data	5	Insf. Data	3	1.54	Insf. Data
Independent Artists, Writers, and Performers	<10	Insf. Data	(0)	Insf. Data	(1)	0.41	Insf. Data
Other Support Services	<10	Insf. Data	5	Insf. Data	3	0.23	Insf. Data

## Staffing Patterns for Tourism<sup>9</sup>

Within the Tourism industry in Lassen County, the top occupations include Fast Food and Counter Workers (170 jobs); Cooks (10 jobs); Waiters and Waitresses (59 jobs); Supervisors of Food Preparation and Serving Workers (30 jobs); and Dishwashers (28 jobs). Nearly all of the tourism-related occupations in Lassen County have been in decline over the last five years and all are projected to decline or stay the same by 2023. Median hourly earnings for Tourism occupations ranged from \$10.81/hr. for Dining Room and Cafeteria Attendants and Bartender Helpers to \$20.08 for Athletes, Coaches, Umpires, and Related Workers.

Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Median Hourly Earnings
Fast Food and Counter Workers	170	7	4%	(16)	(9%)	\$11.25
Cooks	100	(9)	(8%)	(11)	(11%)	\$12.21
Waiters and Waitresses	59	(10)	(14%)	(2)	(3%)	\$12.15
Supervisors of Food Preparation and Serving Workers	30	(2)	(6%)	(2)	(7%)	\$14.16
Dishwashers	28	(6)	(18%)	(2)	(7%)	\$11.46
Building Cleaning Workers	27	(9)	(25%)	(6)	(22%)	\$12.47
Cashiers	23	1	5%	(3)	(13%)	\$11.59
Food Preparation Workers	22	(4)	(15%)	(2)	(9%)	\$12.39
Dining Room and Cafeteria Attendants and Bartender Helpers	15	(1)	(6%)	(1)	(7%)	\$10.81
Bartenders	11	0	0%	0	0%	\$12.50
Food Service Managers	10	(4)	(29%)	0	0%	\$15.56
Athletes, Coaches, Umpires, and Related Workers	<10	0	0%	0	0%	\$20.08
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	<10	(1)	(11%)	0	0%	\$11.86
Miscellaneous Food Preparation and Serving Related Workers	<10	1	100%	(1)	(50%)	\$10.94
First-Line Supervisors of Building and Grounds Cleaning and Maintenance Workers	<10	0	0%	(1)	(50%)	\$16.19
Artists and Related Workers	<10	(1)	(33%)	0	0%	\$12.08
Gaming Services Workers	<10	0	0%	0	0%	\$16.29
Ushers, Lobby Attendants, and Ticket Takers	<10	0	0%	0	0%	\$10.61
First-Line Supervisors of Personal Service Workers	<10	(1)	(100%)	0	0%	\$19.22
First-Line Supervisors of Gaming Workers	<10	(1)	(100%)	0	0%	\$32.14

<sup>9</sup> The Tourism industry crosses over several industries, including NAICS 48 (Transportation and Warehousing); 56 (Administrative and Support Services); 71 (Arts, Entertainment, and Recreation); and 72 (Accommodation and Food Services).



# APPENDIX

## Data Sources and Glossary of Key Terms

### Data Sources

All data and analysis for this report are directly or indirectly derived from information provided by either the U.S. Bureau of the Census or U.S. Bureau of Labor Statistics:

- Economic Modeling Specialists International (EMSI), 2018.4 Class of Worker data (based on the U.S. Quarterly Census of Employment and Wages) and general demographic estimates
- U.S. Census American Community Survey 2012-2016 Estimates
- U.S. Census OnTheMap

### Competitive Effect

Used in conjunction with "Shift-Share Analysis" techniques<sup>10</sup>, *The Competitive Effect* metric seeks to isolate the influence of local dynamics from the influence of non-local factors on industries' employment growth or decline. A positive number indicates that the study area experienced more growth within a particular industry than would have been expected from non-local trends; the magnitude of *The Competitive Effect* indicates the strength of the purely local influence on the industry's employment change.

### Location Quotient

Location Quotient (LQ) measures the relative importance of an industry's employment to a particular region, and uses the straightforward formula:

$$LQ = [\% \text{ of total local employment} / \% \text{ of total national employment}]$$

Location Quotients are one of the most common and important indicators of local economic characteristics; LQ's greater than 1.25 are typically considered to be the threshold for identifying an industry as especially relatively strong.

### NAICS Codes (The North American Industry Classification System)

NAICS is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. The numbering structure is hierarchical in nature, meaning that fewer digits are broader in their meaning, while longer (up to six) digits provide greater specificity.

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<sup>10</sup> Shift share is a standard regional analysis method that attempts to determine how much of regional job growth can be attributed to national trends and how much is due to unique regional factors. Shift share helps answer why employment is growing or declining in a regional industry, cluster, or occupation.

## SOC Codes (Standard Occupational Classification)

The 2000 Standard Occupational Classification (SOC) System was developed in response to a growing need for a universal occupational classification system. Such a classification system allows government agencies and private industry to produce comparable data. Users of occupational data include government program managers, industrial and labor relations practitioners, students considering career training, job seekers, vocational training schools, and employers wishing to set salary scales or locate a new plant. It is used by federal agencies collecting occupational data, providing a standard means to compare such data across agencies. It is designed to cover all occupations in which work is performed for pay or profit, reflecting the current occupational structure in the United States.

As with NAICS, the SOC coding structure is hierarchical, with fewer digits provide broad data (occupational categories), while larger provide more specific data (specific professions).

# Industry Sector Definitions

## Agriculture

NAICS	Description
1110	Crop Production
1151	Support Activities for Crop Production
1120	Animal Production
1152	Support Activities for Animal Production
1153	Support Activities for Forestry
1142	Hunting and Trapping
1133	Logging
1131	Timber Tract Operations
1132	Forest Nurseries and Gathering of Forest Products
1141	Fishing

## Health Care

NAICS	Description
6241	Individual and Family Services
6211	Offices of Physicians
6214	Outpatient Care Centers
6212	Offices of Dentists
6242	Community Food and Housing, and Emergency and Other Relief Services
6244	Child Day Care Services
6213	Offices of Other Health Practitioners
6219	Other Ambulatory Health Care Services
6233	Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly
6215	Medical and Diagnostic Laboratories
6216	Home Health Care Services
6243	Vocational Rehabilitation Services
6239	Other Residential Care Facilities
6222	Psychiatric and Substance Abuse Hospitals
6221	General Medical and Surgical Hospitals
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals
6231	Nursing Care Facilities (Skilled Nursing Facilities)
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities

## Tourism

NAICS	Description
7225	Restaurants and Other Eating Places
4841	General Freight Trucking
4931	Warehousing and Storage
7211	Traveler Accommodation
4842	Specialized Freight Trucking
5617	Services to Buildings and Dwellings
7113	Promoters of Performing Arts, Sports, and Similar Events
4922	Local Messengers and Local Delivery
5629	Remediation and Other Waste Management Services
5611	Office Administrative Services
7139	Other Amusement and Recreation Industries
4884	Support Activities for Road Transportation
7115	Independent Artists, Writers, and Performers
5614	Business Support Services
7224	Drinking Places (Alcoholic Beverages)
5616	Investigation and Security Services
5619	Other Support Services
7223	Special Food Services
5621	Waste Collection
4821	Rail Transportation